# Product Guide | 2016 / 17

neutriCON

nanoCON

miniCON

maxCON

speakON

etherCON

powerCON

silentPLUG

crystalCON

convertCON

timbrePLUG

ultimatePLUG

opticalCON

opticamSWITCH

NEUTRIK®

# The Neutrik® Line


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# About Liechtenstein

**The Principality of Liechtenstein is located in the middle of Europe, situated between Switzerland and Austria, snow-covered mountains and sunny valleys.**

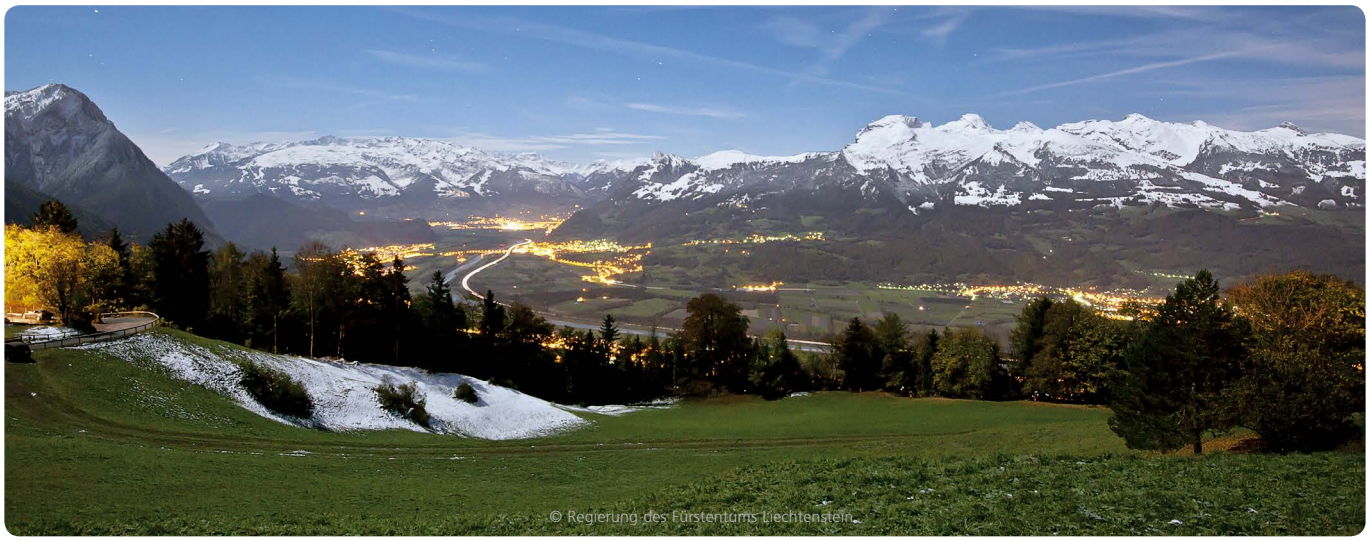
**With a total area of only 160 km² Liechtenstein is the fourth smallest country in Europe.**

Liechtenstein's economy has a significant emphasis on industrial production. The production sector provides about 40% of the jobs, which in comparison with other European countries is extraordinarily high.

The jobs of the industrial sector are provided by 593 enterprises. They are active in a large number of specialised market niches and contribute to the broad diversification of Liechtenstein's economy. Due to Liechtenstein's limited domestic market, especially the larger enterprises are heavily export-oriented. A vast majority of their goods production is sold abroad.

The most important export countries of Liechtenstein's industry are Switzerland, Germany and the USA.

Liechtenstein in brief:
Area: 160.5 km² | Capital: Vaduz | Inhabitants: 36,942
Currency: Swiss franc | Neighboring countries: Switzerland, Austria
Official language: German | Time zone: CET | System of State: constitutional hereditary monarchy on a democratic and parliamentary basis



# About Neutrik®

**Neutrik is an international corporation with four decades of know-how and experience in the manufacture of innovative electrical and electronic interconnection products and systems.**

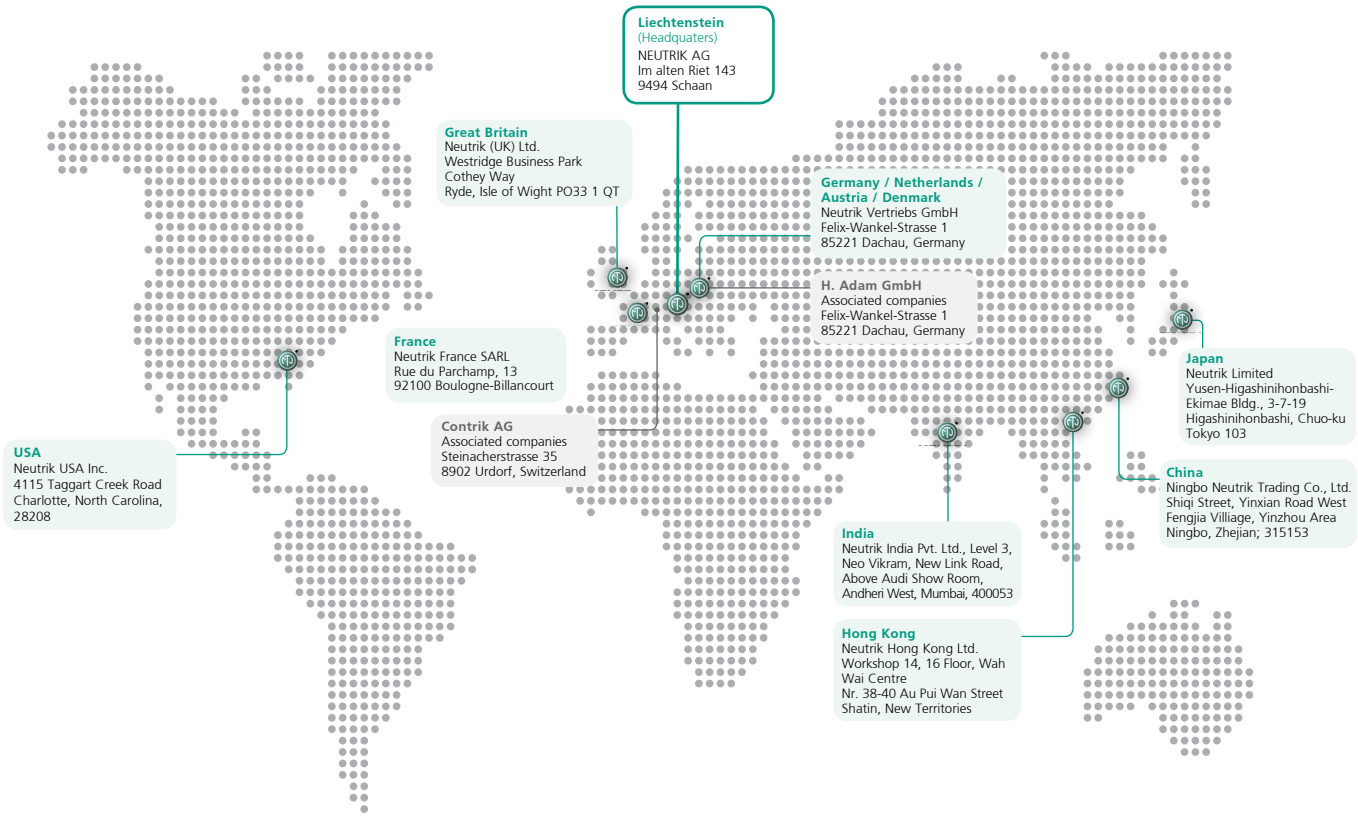
The company was founded in 1975 as a two man operation with the idea to creating innovative products utilizing the latest in mechanical and electronic know-how and creativity. Today we are the world leader in the design, manufacture and marketing of audio, coaxial, power and circular connectors. Our main priority is to be „one step ahead", i. e. to understand the future market needs before they become obvious and to accommodate demands before they occur.
From the beginning Neutrik has concentrated on the development of innovative audio connector products. Today Neutrik leads the way in the professional audio market.

Our audio range includes XLR connectors, plugs, jacks, speaker connectors, patch bays and fiber optic connection systems. Many patents granted, numerous patents pending and the many license agreements since our beginning in 1975, evidence Neutrik's innovation and creative achievements. No doubt, our customers have the confidence in having high quality products at an unsurpassed cost/performance ratio whenever they come across Neutrik.

Neutrik's strong market position results from the ability to be aware of market needs at an early stage and to meet these requirements quickly by innovative and customized designs and stage-of-the-art production technologies. Neutrik is committed to excellence in innovation, quality based on ISO 9001-2008 and fair partnership with customers.

The Neutrik story started in a barn. The first shipments were made ready for dispatch in this building which was the home of Neutrik until 1984 (left). In 2004 the Neutrik team moved into the new multifunctional premises "Im alten Riet 143" in Schaan (right).

Neutrik AG Liechtenstein




**Worldwide distribution network**

Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Bahrain, Belarus, Belgium, Bosnia-Herzegovina, Brazil, Brunei, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Curacao, Cyprus, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Ecuador, Fiji Islands, Finland, France, Germany, Great Britain, Greece, Guatemala, Hungary, Hong Kong, Iceland, India, Indonesia, Iran, Israel, Italy, Japan, Jordan, South Kore, Kuwait, Latvia, Lebanon, Liechtenstein, Lithuania, Luxenburg, Macau, Macedonia, Malaysia, Maldives, Malta, Morocco, Mauritius, Mexico, Myanmar, Netherlands, New Caledonia, New Zealand, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Syria, Tahiti, Taiwan, Thailand, Trinidad & Tobago, Tunisia, Turkey, Ukraine, United Arabian Emirates, Uruguay, USA, Venezuela, Vietnam

## Neutrik® Group

The Neutrik Group consists of strategically placed subsidiaries in the United States of America, Great Britain, France, Japan, China, India and Germany. A network of exclusive distributors in more than 80 countries worldwide provides international sales, technical support and distribution.

The corporate headquarters is located in Schaan in the Principality of Liechtenstein where all operations such as management, R&D, logistics, manufacturing and finance are situated.

## Customer Service

It is the Neutrik philosophy to be customer-oriented and to stay in close contact with our customers all over the world, using an international network of subsidiaries, associated companies and distributors.

## Environmental Compatibility

Neutrik is committed to the protection of environmental resources and to the development and production in an environmentally acceptable manner with respect to health and safety.

We comply with all relevant government laws and directions which relate to environmental protection. We support with all means the protection of natural resources by economizing the use of materials and by recycling waste. We develop products and processes which are safe, conserve energy and make use of materials which have a minimum impact on the environment and, where possible, permit recycling.

All production methods are based on environmentally sound handling and the elimination of hazardous material. Some time before the amended EU Directive RoHS (Reduction of Hazardous Substances) came into force on July 1st 2006, Neutrik already complied with these requirements laid down therein and stopped using lead in the soldering process at the end of 2004. In addition Neutrik conforms to the following EU Directives and regulations:

- EU 1907/2006EC (REACH)
- EU 2011/65/EC (RoHS2)
- EU 2002/95/EC (RoHS1)
- EU 2002/96/EC (WEEE)
- Sony Technical Standard SS-00259 (Sony Green Partner)

## Innovation

Neutrik's innovations are based on the sum of our long-term experience.

The use of intelligent technologies, state-of-the-art materials and standardized processes are a tradition at Neutrik. Out of Neutrik`s visionary ideas unique products and solutions arise continuously which set new standards around the world, evidenced by our innumerable patents.

With Neutrik`s continuous efforts in research and development we will offer our customers added value with innovative developments in the future as well.

## Continuity

In a fast moving world Neutrik focuses on sustainable concepts, long-term relationships and reliable promises.

Continuous innovation, brilliant inventions and consistent customer orientation made us successful. Our products have set the standards for more than 40 years.

Today as in the past, we are characterized by the ability to accept changes, to identify and realize customer demands and market trends. The future of our company is built on our successful past.

Neutrik remains the company everyone knows and relies upon – Neutrik is more than a supplier – we are a reliable partner whose name stands for innovative solutions, superior quality and continuity.

## Quality

Highly trained employees, state-of-the-art production facilities and standardized workflows ensure superior quality.

Every product Neutrik sends out to its customers fulfils the highest functional and reliability requirements. The use of high class materials, proven production processes incorporating continuous manufacturing and final tests guarantee a consistent high quality level.

Neutrik`s up-to-date management system with clearly defined workflows, rigorous quality control and continuous improvement of all processes is the basis for our customers satisfaction.

The interaction of reliability, innovation and superior quality results in tangible benefits for our customers.

# setting standards

Zertifiziertes Managementsystem SQS ISO 9001

Corporate Governance SQS Best Board Practice®

CERTIFIED IQNet MANAGEMENT SYSTEM

Zertifiziertes Managementsystem LQS ISO 9001

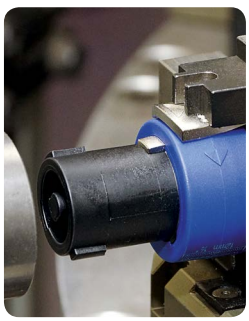
Certificate GreenPartner
Neutrik Limited Liechtenstein Works
SONY

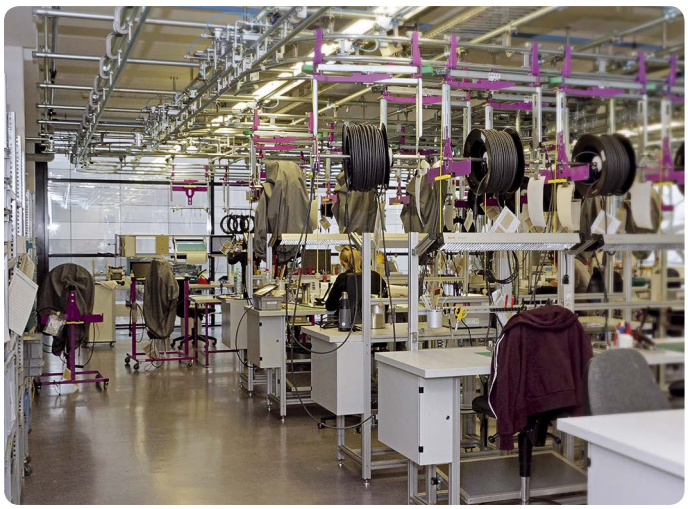
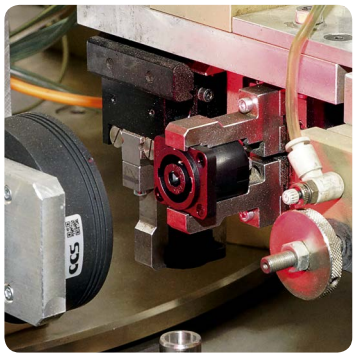
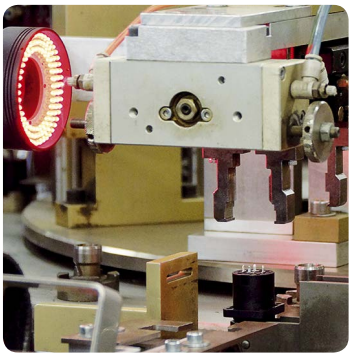
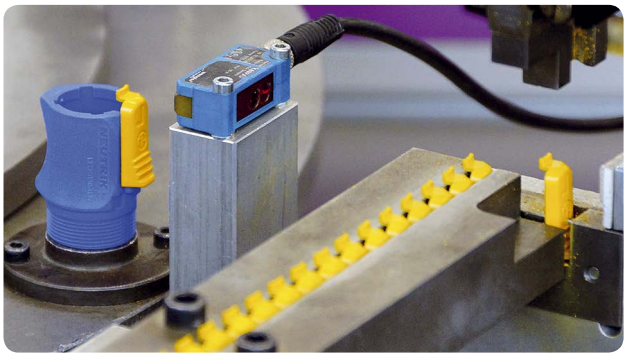
## Production

The professional entertainment industry depends on reliable components - night in, night out. Neutrik® – the world's leading manufacturer of professional connector systems – sets the standards in technical reliability, warranty and durability. Availability of products as well as technical support and excellent service are to be understood as priority objectives. Besides cutting-edge precision, functionality and design make the difference and build the basis for our complex demand for high quality standards.

To realize our innovative product ideas and to meet the requirements of our customers we make use of all possibilities which modern R&D and production technologies can offer. Neutrik has developed and proven its own automated manufacturing methods. The professional mechanics of the automation department work with state-of-the-art technologies like video control systems and robotics.

Together with the systematic quality control the high precision robotic production processes ensure continuous quality and efficient delivery of goods to the right place at the right time.



NC3FXX-B

TRUST
THE
ORIGINAL
TRUST
THE
ORIGIN

## Neutrik® Part Number Guide

**NC3FAH1-B-0-D**

| | | |
|---|---|---|
| **Packaging:** | **D** | Cable connector: bulk packed |
| **Assembly:** | **D** | Chassis connector: disassembled push latch |
| **Retention:** | **w/o** | Latch lock |
| | **-0** | Retention spring |
| **Shell:** | **B** | Black shell, gold contacts |
| | **BAG** | Black shell, silver contacts |
| **Grounding:** | **0** | Separate ground contact connected to shell, male only |
| | **1** | Pin 1 & panel & shell connected, no separate ground contact |
| | **2** | Separate ground contact connected to shell & panel, separate Pin 1 |
| | **E** | Additional ground contacts |
| | **w/o number** | No ground /shell contact (except 4/5 pole), female only |
| **Termination:** | **H** | Horizontal PCB mount |
| | **HL** | Laterial left PCB mount |
| | **HR** | Laterial right PCB mount |
| | **L** | Solder cups |
| | **V** | Verticale PCB mount |
| | **Y** | IDC for wires (no ground) |
| | **M3** | Mounting holes with M3 thread |
| | **M25** | Mounting holes with M2.5 thread |
| | **-** | Not applicable |
| **Series:** | **A, AA, B, D, DL, DLX, MPR, P, PX, RX, X, XX** | |
| **Gender:** | **F** | Female |
| | **M** | Male |
| **Number of Contacts:** | **2, 3, 4, 5, 6, 7, 8, 12** | |
| **Connector Type:** | **A** | Adapter |
| | **AC** | powerCON |
| | **B** | BNC |
| | **C** | XLR |
| | **D** | dummyPLUG |
| | **E** | etherCON - RJ45 |
| | **F** | RCA / CINCH |
| | **J (MJ, RJ, SJ)** | Jack |
| | **K** | Cable Assembly |
| | **L** | speakON - Loudspeaker |
| | **M** | Module |
| | **O** | opticalCON - Fiber Optic Connector |
| | **P** | Plug |
| | **PP** | Patch Panel |
| | **R** | Circular Connector |
| | **T** | Transformer |

Definitions, abbreviations & useful information see page 186.

# XLR Connectors

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**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA® ,XIRIUM®, are registered trademarks of Neutrik AG.**

## Introduction

Neutrik XLR connectors are the most well known series of products manufactured by Neutrik, and have provided the professional audio industry a simple, yet striking, concept in connector features. We introduced our first XLR product 40 years ago. Today it is the accepted standard worldwide.

XLR connectors are part of almost every aspect of professional audio; as a microphone connector, in lighting systems, and found in almost any piece of sound equipment in the entertainment industry. The outstanding success of our XLR products is Neutrik's blend of innovation with the highest quality performance.

# A glance into the future: maxCON® – the new XLR standard

Neutrik's success story began with the construction of the first prototype of a new XLR female cable connector.

The first NC3FC products were delivered in October 1975. During the years 1976, 1977 and 1978 this product range was continuously reworked and improved. In 1983 a new concept was introduced with the X series that has become a world standard.

The further development of the X series leading to the XX series with the unique protection against copying, the hologram, is based on this hundred million times sold X series.

The next generation of audio connectors – maxCON® – will offer unique features and benefits based on the small and innovative design.

| Prototype | C-Series | | |
|---|---|---|---|
| 1975 | 1975 | 1976 | 1977 |

1978

X-Series

1983

XX-Series

2004

maxCON®

A glance into the future.

Ergonomic latch design

White painted housing

Circumferential ground shield contact

Neutrik hologram

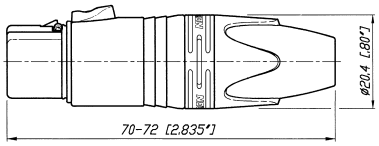
## XX Series

NC3FXX

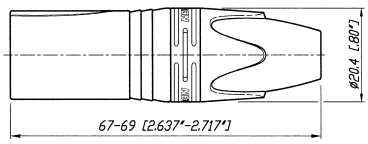
NC6MXX-B

- The next generation of the worldwide accepted standard
- Unique cage type female contact – increases conductivity
- Female contact with "solder stop" for ease of soldering
- Male connector without locking "window" – more robust housing, increases durability
- Improved chuck type strain relief - increases retention force and makes assembly easier and faster
- New ground contact – excellent contact integrity between chassis and cable connector
- Customized branding using translucent ring
- Sleek and ergonomic design – valuable and handy
- Unique hologram – guarantees genuineness and protects against counterfeits
- Internal thread on shell is well protected against any damage

**NC*FXX**




**NC*MXX**



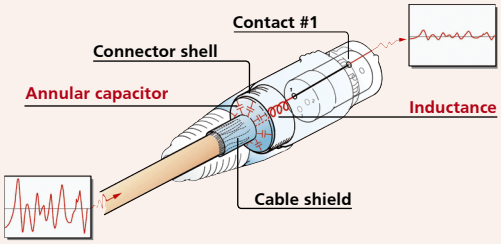

*: 3 - 7 contacts

## EMC-XLR Series

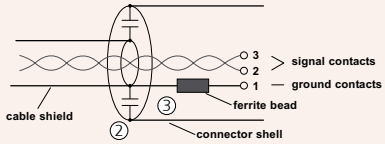
NC3FXX-EMC

NC3MXX-EMC

- 3 pole male / female XLR cable connector with integrated capacitive shield to shell connection to avoid RF-interference and LF-noise
- 360° shield contact on female connector ensures best possible shielding and chassis contact
- Avoid ground loops as there is no LF-shield connection to ground
- Patented




① Design guarantees a continuous RF-shield connection but avoids ground loops (no LF-shield connection)
② Circular capacitor enables low-inductive shield connection to connector housing
③ Cable shield - PIN 1 connection includes EMI suppression bead (blocks high frequencies)



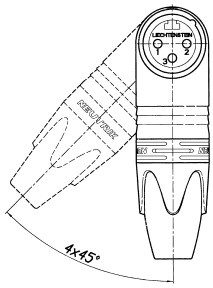
Right angle male connector

High temperature resistant insulator

Velour chromium housing

## RX Series

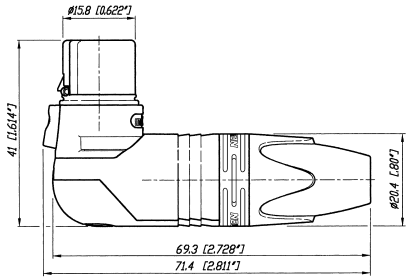
NC3FRX-BAG



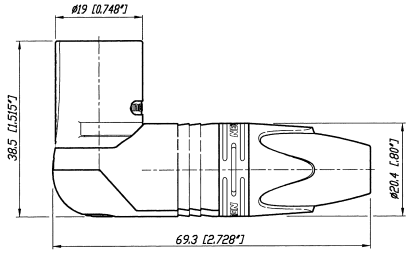

Outlet position

- Right angle version of the XX Series – only 20 mm wide
- Extra slim right-angle connector
- Neutrik chuck type strain relief
- 5 selectable cable outlet positions on female & 7 position on male connectors

**NC*FRX**




**NC*MRX**




*: 3 - 7 contacts

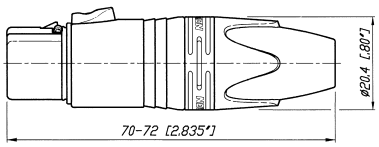
## XX-HE Series

NC3FXX-HE

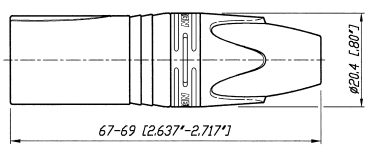
NC3MXX-HE

- Exclusive "High End" version of standard XX Series
- Premium velour chromium plating provides soft satin finish
- Extra high temperature resistant insulator material rated to 280 °C (536 °F)
- Machined female contacts standard
- Insert is dark grey to distinguish it from standard XX-Series insulators
- Flammability UL 94V-0

**NC3FXX-HE**

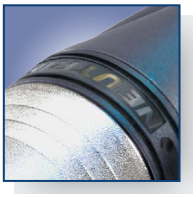



**NC3MXX-HE**



Large cable outlet

Ergonomic latch design



Neutrik hologram

## XX-14 Series

NC3FXX-14

NC3MXX-14-B

- Special version of the XX Series XLR cable connector for large diameter cables
- Incorporates all the features of the XX product series
- Rear boot features large opening for use with cable O.D. 8.0 – 10.0 mm
- Bulk packed; must be ordered in multiples of 100

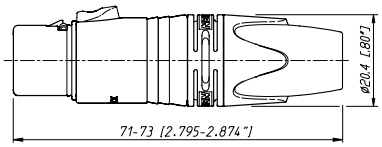
## XX Crimp Series

NC3FXX-HA-BAG

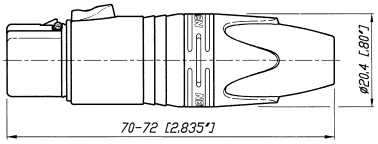
NC3MXX-HA

- 3 pin XX Series with crimp contacts
- Accommodates wire size AWG 24 - 22 or 0.22 – 0.34 $mm^2$
- Utilize standard B-type crimp tool (acc. IEC 60352-2)
- Absolute leadfree and solderless connection:
  - RoHs compliance
  - health and eco-friendly
- Fast and easy assembly
- Gas-tight connection offers a constant contact resistance
- Ideal solution for field and on-site termination

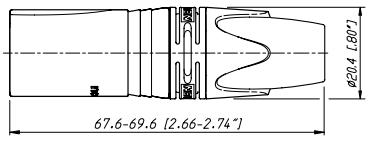
**NC3FXX-14**



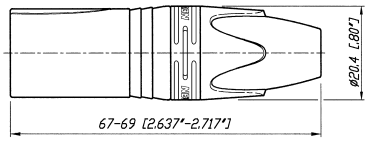

**NC3FXX-HA**

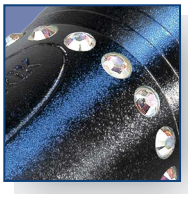



**NC3MXX-14**




**NC3MXX-HA**





CRYSTALLIZED™ – Swarovski Elements

convertCON position male – female

## crystalCON

NC3FXX-B-CRYSTAL NC3MXX-B-CRYSTAL

- 3 pole XLR XX-Series embellished with CRYSTALLIZED™ – *Swarovski Elements*
- Exclusively with gold plated contacts, and black chrome housing
- Fancy, noble, valuable, attractive package – an eye-catcher
- With all benefits of the XLR XX-Series

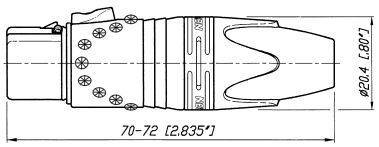
## convertCON

NC3FM-C-B NC3FM-C

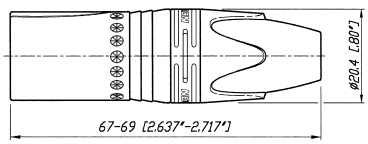
- World's first Unisex XLR cable connector
- 3 pole male and female cable connector in one housing
- Easy selectable gender – converted by sliding housing back and forth
- Substitutes adapters, ideal as an emergency kit
- Exclusively with gold plated contacts
- With all benefits of the XLR XX-Series

Convert
**male – female**
and vice versa

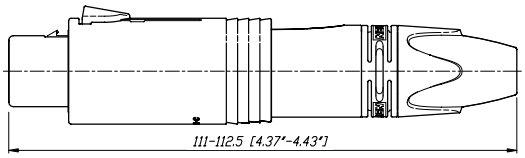
**NC3FXX-B-CRYSTAL**



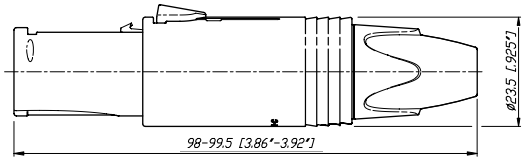

**NC3MXX-B-CRYSTAL**




**NC3FM-C: Position Female**




**NC3FM-C: Position Male**



Rubber sealing protection

Neutrik original design

Female locking

Male metal locking window

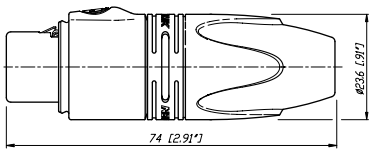
## XX-HD Series

NC3FXX-HD-D

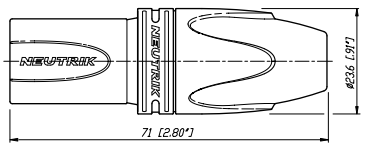
NC3MXX-HD-B-D

- "Heavy duty" cable connector for outdoor use
- Rubber sealing jacket protects against water ingress and mechanical shock
- Dust and water resistant according to IP 67 in the following combinitions:
  - NC3FXX-HD and NC3MPR-HD
  - NC3FXX-HD and NC3MXX-HD
- Gold contacts
- Chuck type strain relief system for secure clamping of cables
- Rugged zinc diecast shell, longlasting and dependable

**NC3FXX-HD-D**




**NC3MXX-HD-D**



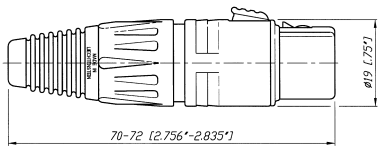

## X Series

NC3FX

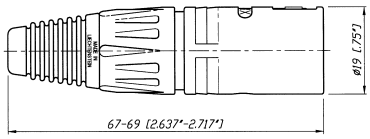
NC3MX + BSX-5

- The XLR connector standard worldwide
- Available in 3 – 7 pin configurations including 6 pin Switchcraft® configuration
- Assembly is quick and easy – no screws or special tools required
- Unique Neutrik chuck type internal strain relief
- Female shell features rubber ring for secure mating to male XLR or microphone
- Sleek profile and compact design
- Rugged diecast shell
- UL recognized components

**NC*FX**




**NC*MX**




*: 3 - 7 contacts

Rubber sealing protection

Metal bushing

Coding ring

## X-HD Series

NC5FX-HD

NC4MX-HD

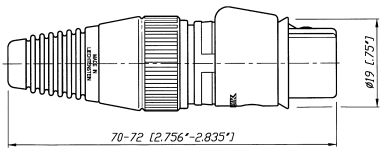
- "Heavy duty" cable connectors for outdoor use
- All metal design, male stainless steel
- NC*FX-HD mates with NC*MPR-HD chassis connector and NC*MX-HD
- Dust and water resistant according IP 65 in mated condition
- Available in 3 – 5 pin configuration
- Metal bushing including O-ring

## XCC Series

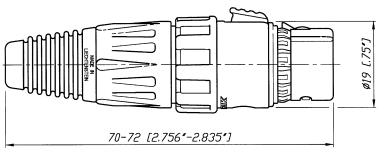
NC3FXCC

- Coaxial ground spring and hex crimp ferrule at cable entrance allow continuous (360°) ground connection to shell which is essential when transmitting low level audio signals
- Includes Zebra coding ring to indicate digital AES signals
- Ground contact uses 6.5 mm (.255") size "E" hex crimp (IEC 60803). Use part # HX-R-BNC with DIE-R-BNC-PT

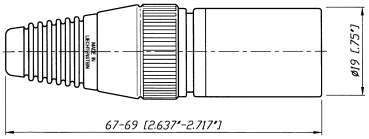
**NC*FX-HD**



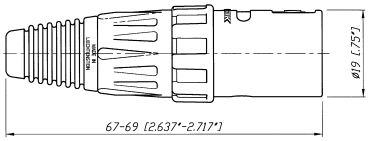

**NC3FXCC**




**NC*MX-HD**




**NC3MXCC**




*: 3 - 5 contacts

Switch activating ring

Locking ring

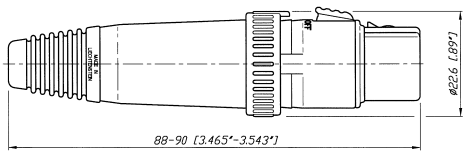
## FXS Series

NC3FXS

NC3FXS-B

- Available exclusively in a 3 pin female configuration
- Features a noiseless ON/OFF switch which shorts pins 2 and 3 together muting the signal voltage between conductors
- For use with a microphone that does not have its own On / Off switch
- Rugged zinc diecast shell, long lasting and durable
- Chuck type strain relief system for secure clamping of cables
- Boot with rubber gland gives high protection against bending stresses

**NC3FXS**

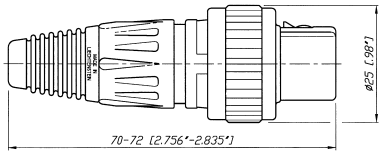



## FX-SPEC Series

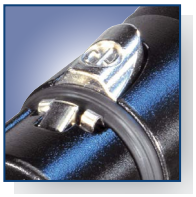
NC3FX-SPEC

- Available in a 3 pin female standard configuration with gold plated contacts
- Features a locking ring which is secured with a M 2.5 screw and 1.27 mm allen wrench
- Offers the highest security protection for your microphones
- Protects against accidental disconnects and theft
- Black chrome housing and locking ring
- Eliminates movements and noises

**NC3FX-SPEC**



NEW 8 + 2 pole cable connector



Ergonomic latch design

New 8 + 2 pole D-size receptacle

Solder termination

## XLR Type Data Power Connectors – 8 + 2 pole

NEW

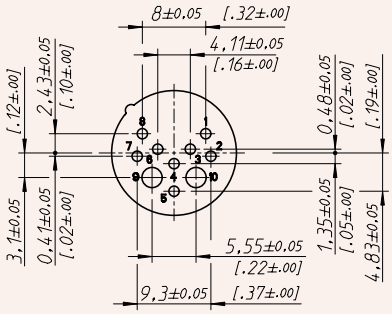
NC10FXX-14-B

NC10FRX-14-B

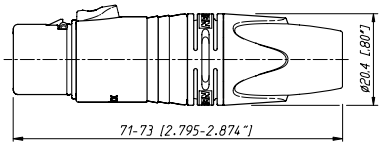
NC10MD-LX-B

- Suitable for data offering CAT 5e performance and power up to 16 A and 50 V - exceeds PoE+ capabilities
- Superior ruggedness compared to RJ45 type connectors
- All metal housing offers best overall RF protection and electromagnetic shielding
- D-size housing provides installation compatibility with industry standard D mounting dimensions
- Receptacle with duplex ground contact for excellent signal integrity

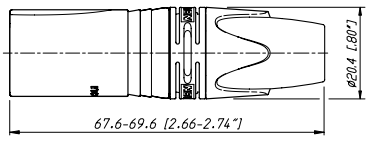
**8 + 2 pole Contact Arrangements:**



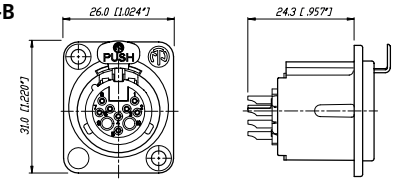

**NC10FXX-14-B**



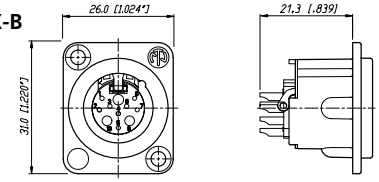

**NC10MXX-14-B**




**NC10FD-LX-B**




**NC10MD-LX-B**



| Specification | | XX & XX-14 & CRYSTAL | EMC Series | XX-HD Series | XX-HE Series | RX Series | XX Crimp Series | convert-CON Series |
|---|---|---|---|---|---|---|---|---|
| **Electrical** | | | | | | | | |
| Number of contacts | | 3 - 7 [1] | 3 | 3 | 3 | 3 - 7 | 3 | 3 |
| Contact resistance | ≤ 3 mΩ | ● | ● | ● | ● | ● | ● | ● |
| Insulation resistance - initial: | > 10 GΩ | ● | ● | ● | ● | ● | ● | ● |
| - after damp heat test: | > 1 GΩ | ● | ● | ● | ● | ● | ● | ● |
| Dielectric strength | 1.5 kV dc | ● | ● | ● | ● | ● | ● | ● |
| Cable shield-shell connection | choosable | ● | - | ● | ● | ● | ● | ● |
| | determined | - | capacitive | - | - | - | - | - |
| Shielding effectiveness | > 55 dB @ 1.3 GHz | - | ● | - | - | - | - | - |
| Lossy ferrite bead on PIN 1 | | - | ● | - | - | - | - | - |
| Rated current per contact | @ 35°C | | | | | | | |
| 3 pole: | 16 A | ● | 5 A | ● | ● | ● | 1 A | ● |
| 4 pole: | 10 A | ● | - | - | - | ● | - | - |
| 5, 6 pole: | 7.5 A | ● | - | - | - | ● | - | - |
| 7 pole: | 5 A | ● | - | - | - | ● | - | - |
| Capacitance between contacts | | | | | | | | |
| 3 pole: | ≤ 4 pF | ● | ● | ● | ● | ● | ● | ● |
| 4, 5, 6 pole: | ≤ 7 pF | ● | - | - | - | ● | - | - |
| 7 pole: | ≤ 9 pF | ● | - | - | - | ● | - | - |
| Rated Voltage | < 50 V ac | ● | ● | ● | ● | ● | ● | ● |
| **Mechanical** | | | | | | | | |
| Lifetime | > 1`000 cycles | ● | ● | ● | ● | ● | ● | ● |
| Insertion / withdrawal force | ≤ 20 N | ● | ● | ● | ● | ● | ● | ● |
| Cable O.D. range | 3.5 - 8.0 mm | ● [2] | ● | 6.0 - 8.0 mm | ● | ● | ● | ● |
| Max. wire size 3 pole: | 2.5 mm² / AWG 14 | ● | AWG 20 | ● | ● | ● | - | ● |
| 4 pole: | 1.5 mm² / AWG 16 | ● | - | - | - | ● | - | - |
| 5, 6, 7 pole: | 1.0 mm² / AWG 18 | ● | - | - | - | ● | - | - |
| Crimp tool: 6.5 mm Hex die (size "E" acc. to IEC 60352-2) | | - | - | - | - | - | ● | - |
| Crimp XX: | 0.22 - 0.34 mm² / AWG 24 - 22 | - | - | - | - | - | ● | - |
| **Material** | | | | | | | | |
| Shell | Zinc diecast (ZnAl4Cu1) | ● | ● | - | ● | ● | ● | ● |
| | Stainless steel | - | - | - | - | - | - | - |
| Shell plating | gal Ni or black Cr | ● | gal Ni | - | velour Cr | ● | ● | ● |
| Insert | Polyamide PA 6.6 30% GR | ● | ● | ● | PPS 40% GR | ● | ● | ● |
| Contacts - female 3 pole: | Bronze (CuSn8) | ● | ● | ● | ● | ● | ● | ● |
| - female 4 – 7 pole & male: | Brass (CuZn39Pb3) | ● | ● | ● | ● | ● | - | - |
| Contact surface Silver | gal 2 µm Ag | ● | - | - | - | ● | ● | - |
| or Gold | gal 0.2 µm Au hard alloy over 2 µm Ni | ● | ● | ● | ● | ● | - | ● |
| Latch lock | St3K32 (latch) / Ck 67 (spring) | - | - | - | - | - | - | - |
| | Zinc diecast (ZnAl4Cu1) / CK67 (Spring) | ● | ● | ● | ● | ● | ● | ● |
| Strain-relief clamp | POM | ● | ● | ● | ● | ● | ● | ● |
| Bushing | PA / PU | ● | ● | ● | ● | ● | ● | ● |
| Circumferential ground spring | Bronze (CuSn6), Ni plated | - | ● | - | - | - | - | - |
| Crimp ferrule | Brass (CuZn39Pb3), Ni plated | - | - | - | - | - | - | - |
| Coding ring | Polyamide PA 6 15% GR | - | - | - | - | - | - | - |
| Sealing jacket | EPDM | - | - | ● | - | - | - | - |
| Securing ring | Brass (CuZn39Pb3) | - | - | - | - | - | - | - |
| **Environmental** | | | | | | | | |
| Operating temperature | -30 °C to +80 °C | ● | ● | ● | ● | ● | ● | ● |
| Flammability | UL 94 HB | ● | ● | ● | V-0 | ● | ● | ● |
| Protection class | IP 40 | ● | ● | IP 67 | ● | ● | ● | ● |
| Solderability complies with | IEC 68-2-20 | ● | ● | ● | ● | ● | ● | ● |
| Manufacturing Standard | IEC 61076-2-103 | ● | ● | ● | ● | ● | ● | ● |

[1] : XX-14, CRYSTAL: 3 pole

[2] : XX-14: Cable O.D. 8.0 – 10.0 mm

| Specification | | X Series | XCC Series | X-HD Series | FXS Series | FX-SPEC Series | Data Power XLR |
|---|---|---|---|---|---|---|---|
| **Electrical** | | | | | | | |
| Number of contacts | | 3 - 7 | 3 | 3 - 5 | 3 | 3 | 8 + 2 |
| Contact resistance | ≤ 3 mΩ | ● | ● | ● | ● | ● | ● |
| Insulation resistance - initial: | > 10 GΩ | ● | ● | ● | ● | ● | ● |
| - after damp heat test: | > 1 GΩ | ● | ● | ● | ● | ● | 0.1 GΩ |
| Dielectric strength | 1.5 kV dc | ● | ● | ● | ● | ● | 1 kV dc |
| Cable shield-shell connection | choosable | ● | - | ● | - | ● | ● |
| | determined | - | crimp | - | - | - | - |
| Shielding effectiveness | > 55 dB @ 1.3 GHz | - | ● | - | - | - | - |
| Lossy ferrite bead on PIN 1 | | - | - | - | - | - | - |
| Rated current per contact | @ 35°C | | | | | | |
| 3 pole: | 16 A | ● | ● | ● | ● | ● | 2 A (power pins) |
| 4 pole: | 10 A | ● | - | ● | - | - | - |
| 5, 6 pole: | 7.5 A | ● | - | ● | - | - | - |
| 7 pole: | 5 A | ● | - | - | - | - | 3 A (data pins) |
| Capacitance between contacts | | | | | | | |
| 3 pole: | ≤ 4 pF | ● | ● | ● | ● | ● | - |
| 4, 5, 6 pole: | ≤ 7 pF | ● | - | ● | - | - | - |
| 7 pole: | ≤ 9 pF | ● | - | - | - | - | - |
| Rated Voltage | < 50 V ac | ● | ● | ● | ● | ● | - |
| Transmission Performance | CAT 5e | - | - | - | - | - | ● |
| **Mechanical** | | | | | | | |
| Lifetime > 1`000 cycles | | ● | ● | ● | ● | ● | ● |
| Insertion / withdrawal force | ≤ 20 N | ● | ● | ● | ● | ● | ● |
| Cable O.D. range | 3.5 – 8.0 mm | ● | 5.4 - 6.2 mm | ● | 3.5 - 7.0 mm | ● | 8.0 - 10.0 mm |
| Max. wire size 3 pole: | 2.5 mm² / AWG 14 | ● | ● | ● | ● | ● | ● |
| 4 pole: | 1.5 mm² / AWG 16 | ● | - | ● | - | ● | - |
| 5, 6, 7 pole: | 1.0 mm² / AWG 18 | ● | - | ● | - | - | ● |
| Crimp tool: | 6.5 mm Hex die (size "E" acc. to IEC 60803) | - | ● | - | - | - | - |
| Crimp XX: | 0.22 - 0.34 mm² / AWG 24 - 22 | - | - | - | - | - | - |
| **Material** | | | | | | | |
| Shell | Zinc diecast (ZnAl4Cu1) | ● | ● | female | ● | ● | ● |
| | Stainless steel | - | - | male | - | - | - |
| Shell plating | gal Ni or black Cr | - | ● | female | ● | ● | black Cr |
| Insert | Polyamide PA 6.6 30% GR | ● | ● | ● | ● | ● | ● |
| Contacts - female 3 pole: | Bronze (CuSn8) | ● | ● | ● | ● | ● | - |
| - female 4 – 7 pole & male: | Brass (CuZn39Pb3) | ● | ● | ● | - | - | ● |
| Contact surface Silver | gal 2 µm Ag | ● | ● | Au | ● | Au | - |
| or Gold | gal 0.2 µm Au hard alloy over 2 µm Ni | - | - | - | - | - | ● |
| Latch lock | St3K32 (latch) / Ck 67 (spring) | ● | ● | ● | ● | ● | - |
| | Zinc diecast (ZnAl4Cu1) | - | - | - | - | - | ● |
| Strain-relief clamp | POM | ● | ● | ● | ● | ● | ● |
| Bushing | PA / PU | ● | ● | PU | PU | ● | ● |
| Circumferential ground spring | Bronze (CuSn6), Ni plated | - | ● | - | - | - | - |
| Crimp ferrule | Brass (CuZn39Pb3), Ni plated | - | ● | - | - | - | - |
| Coding ring | Polyamide PA 6 15% GR | - | ● | - | - | - | - |
| Sealing jacket | EPDM | - | - | ● | - | - | - |
| Securing ring | Brass (CuZn39Pb3) | - | - | - | - | ● | - |
| **Environmental** | | | | | | | |
| Operating temperature | -30 °C to +80 °C | ● | ● | ● | ● | ● | ● |
| Flammability | UL 94 HB | ● | ● | ● | ● | ● | ● |
| Protection class | IP 40 | ● | ● | IP 65 | ● | ● | ● |
| Solderability complies with | IEC 68-2-20 | ● | ● | ● | ● | ● | ● |
| Manufacturing Standard | IEC 61076-2-103 | ● | ● | ● | ● | ● | ● |

## Ordering Information for Cable Connectors

| Female | Male | Shell | Contact - plating | 3 pole | 4 pole | 5 pole | 6 pole | 7 pole |
|---|---|---|---|---|---|---|---|---|
| **XX Series** | | | | | | | | |
| NC*FXX | NC*MXX | Nickel | Silver | ● | ● | ● | ● | ● |
| NC*FXX-B | NC*MXX-B | Black Cr | Gold | ● | ● | ● | ● | ● |
| NC*FXX-BAG | NC*MXX-BAG | Black Cr | Silver | ● | ● | ● | ● | ● |
| NC3FXX-WT | NC3MXX-WT | White painted | Silver | ● | - | - | - | - |
| NC3FXX-**-D[1] | NC3MXX-**-D[1] | Nickel / Black Cr | Silver / Gold | ● | - | - | - | - |
| NC6FSXX[2] | NC6MSXX[2] | Nickel | Silver | - | - | - | ● | - |
| NC6FSXX-B[2] | NC6MSXX-B[2] | Black Cr | Gold | - | - | - | ● | - |
| NC6FSXX-BAG[2] | NC6MSXX-BAG[2] | Black Cr | Silver | - | - | - | ● | - |
| **XX-EMC Series** | | | | | | | | |
| NC3FXX-EMC | NC3MXX-EMC | Nickel | Gold | ● | - | - | - | - |
| NC3FXX-EMC-B | - | Black Cr | Gold | ● | - | - | - | - |
| **RX Series** | | | | | | | | |
| NC*FRX | NC*MRX | Nickel | Silver | ● | ● | ● | ● | ● |
| NC*FRX-B | NC*MRX-B | Black Cr | Gold | ● | ● | ● | ● | ● |
| NC*FRX-BAG | NC*MRX-BAG | Black Cr | Silver | ● | ● | ● | ● | ● |
| **XX-HE Series** | | | | | | | | |
| NC3FXX-HE | NC3MXX-HE | Velour Chromium | Gold | ● | - | - | - | - |
| **XX-14 Series** | | | | | | | | |
| NC3FXX-14-D | NC3MXX-14-D | Nickel | Silver | ● | - | - | - | - |
| NC3FXX-14-B-D | NC3MXX-14-B-D | Black Cr | Gold | ● | - | - | - | - |
| NC3FXX-14-BAG-D | NC3MXX-14-BAG-D | Black Cr | Silver | ● | - | - | - | - |
| **XX Crimp Series** | | | | | | | | |
| NC3FXX-HA | NC3MXX-HA | Nickel | Silver | ● | - | - | - | - |
| NC3FXX-HA-BAG | NC3MXX-HA-BAG | Black Cr | Silver | ● | - | - | - | - |
| **convertCON Series** | | | | | | | | |
| | NC3FM-C | Nickel | Gold | ● | - | - | - | - |
| | NC3FM-C-B | Black Cr | Gold | ● | - | - | - | - |
| **Crystal XLR** | | | | | | | | |
| NC3FXX-B-CRYSTAL | NC3MXX-B-CRYSTAL | Black Cr | Gold | ● | - | - | - | - |
| **XX-HD Series** | | | | | | | | |
| NC3FXX-HD-D | NC3MXX-HD-D | Nickel | Gold | ● | - | - | - | - |
| NC3FXX-HD-B-D | NC3MXX-HD-B-D | Metal Black | Gold | ● | - | - | - | - |

## Ordering Information for Cable Connectors

| Female | Male | Shell | Contact - plating | 3 pole | 4 pole | 5 pole | 6 pole | 7 pole |
|---|---|---|---|---|---|---|---|---|
| **X Series** | | | | | | | | |
| NC*FX | NC*MX | Nickel | Silver | ● | ● | ● | ● | ● |
| NC*FX-B | NC*MX-B | Black Cr | Gold | ● | ● | ● | ● | ● |
| NC*FX-BAG | NC*MX-BAG | Black Cr | Silver | ● | ● | ● | ● | ● |
| NC3FX-**-D[1] | NC3MX-**-D[1] | Nickel / Black Cr | Silver / Gold | ● | - | - | - | - |
| NC6FSX[2] | NC6MSX[2] | Nickel | Silver | - | - | - | ● | - |
| NC6FSX-B[2] | NC6MSX-B[2] | Black Cr | Gold | - | - | - | ● | - |
| NC6FSX-BAG[2] | NC6MSX-BAG[2] | Black Cr | Silver | - | - | - | ● | - |
| **X-HD Series** | | | | | | | | |
| NC*FX-HD | NC*MX-HD | Nickel | Gold | ● | ● | ● | - | - |
| NC3FX-HD-B | NC3MX-HD-B | Metal Black | Gold | ● | - | - | - | - |
| **XCC Series** | | | | | | | | |
| NC3FXCC | NC3MXCC | Nickel | Gold | ● | - | - | - | - |
| **FXS Series** | | | | | | | | |
| NC3FXS | - | Nickel | Gold | ● | - | - | - | - |
| NC3FXS-B | - | Black Cr | Gold | ● | - | - | - | - |
| **FX-SPEC Series** | | | | | | | | |
| NC3FX-SPEC | - | Black Cr | Gold | ● | - | - | - | - |

## Ordering Information for 8 + 2 pole Data Power Connectors

| Female | Male | Shell | Contact - plating | 8 + 2 pole |
|---|---|---|---|---|
| **Cable Connector** | | | | |
| NC10FXX-14-B | NC10MXX-14-B | Black Cr | Gold | ● |
| NC10FRX-14-B | NC10MRX-14-B | Black Cr | Gold | ● |
| **Receptacle** | | | | |
| NC10FD-LX-B | NC10MD-LX-B | Black Cr | Gold | ● |

## Accessories and Assembly Tools

Detailed information on page 38 and 43.

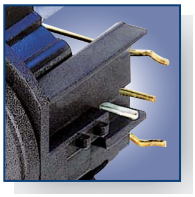
* : Number of Contacts

**: Nickel or Black

–D[1]: Bulk packed, to be ordered in multiples of 100 pcs.

[2] : Switchcraft Equivalent

Smallest receptacle



Lateral right PCB mount

Locking release tab

Ground contact

## A Series

NC3FAH

NC3MAV

- Smallest XLR receptacles, highest packing density
- Plastic housing
- Various grounding options
- "Tulip" type female contact design with high contact pressure
- Selective gold plated contact and PCB termination area for best conductivity and solderability
- Plastic housing flammability UL 94V-0

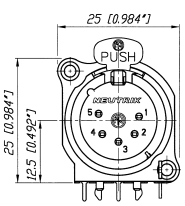
## AA Series

NC3FAAV2

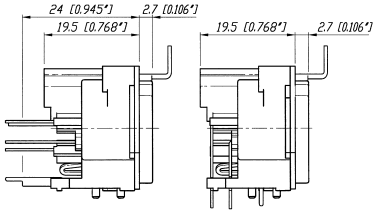
NC3MAAH-1

- Front panel cutout and PCB layout 100% compatible to the A Series
- Most cost-effective series
- "Tulip" type female contact design with high contact pressure
- Selective gold plated contact and PCB termination area for best conductivity and solderability
- Plastic housing flammability UL 94 HB

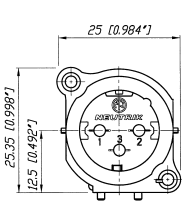
**NC5FAV**



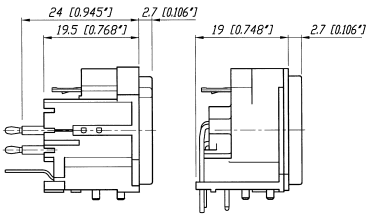

**NC5FAH**



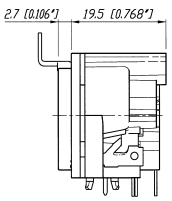

**NC3MAV-0**



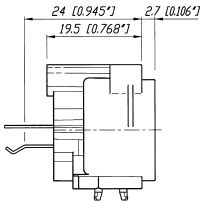

**NC5MAH**




**NC3FAAH**




**NC3FAAV-0**




### Grounding Options (A / AA / B Series):

**Female:**

1: Pin 1 & Panel & Shell connected, no separate ground contact
2: Separate ground contact connected to shell & panel, separate Pin 1
w/o number: No ground / Shell contact (except 4 / 5 pole)

**Male:**

0: Separate ground contact, connected to shell, separate Pin 1
1: Pin 1 & Panel & Shell connected, no separate ground contact
w/o number: Separate ground contact connected to shell & panel, separate Pin 1

Circumferential metal ring

Front panel grounding

Tear drop contact design

## B Series

NC3FBV1

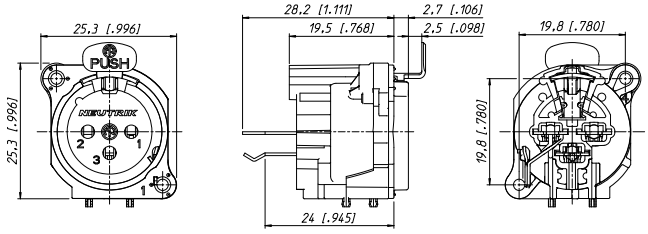
NC3MBV

NC4FBH

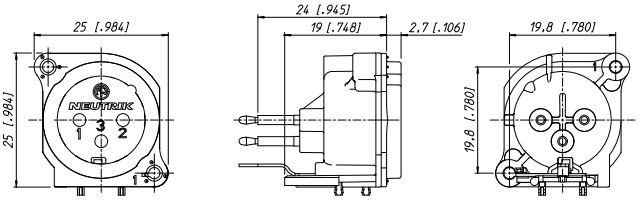
NC4MBV

- The B Series XLR receptable offers the same features as our A Series product line with the added feature of a metal ring
- Metal ring on shell (nickel or black) offers complete EMC and RF protection
- Female versions available latchless
- Rear mount only
- "Tulip" type female contact
- Plastic housing flammability UL 94V-0

**NC3FBV1**




**NC3MBV**



Incorporated switch

Insert removable

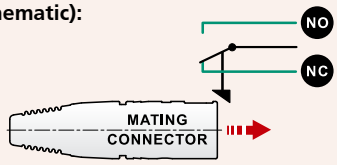
## A/B Series - Switch

NC3FBV2-SW

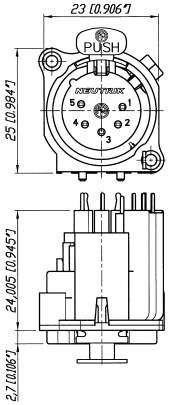
NC3MBV-SW

- A and B Series connector with additional switch
- Normally open, normally closed (NO – NC) contact
- Switch activated by mating XLR cable connector

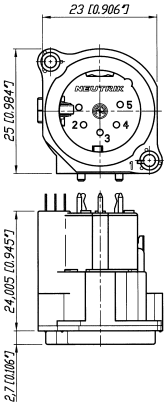
**Inserting (Schematic):**




**NC5FAV-SW**




**NC5MBV-SW**



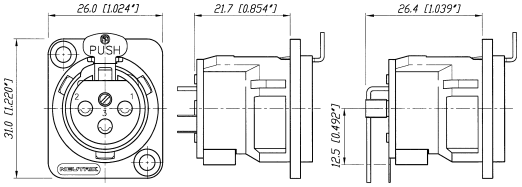

## D Series

NC3FDM3-H-B

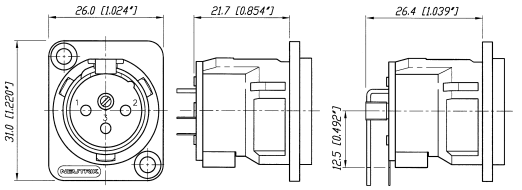
NC3MD-V

- "D" Shape metal shell
- Optimal RF protection using 3 shield contacts
- Horizontal and vertical PCB mount with separate ground contact
- Mounting holes with M3 threads available
- 2 piece connector, insert is removable from shell
- Front locked / unlocked insert
- Special version with screw termination (*M3)

**NC3FD-V / NC3FD-H**




**NC3MD-V / NC3MD-H**



Locking release tab

Horizontal PCB mount

Ground shielding

White painted housing

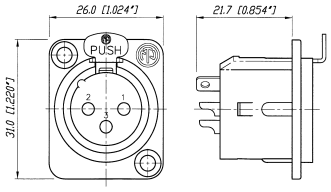
## DL Series

NC3FD-L-1

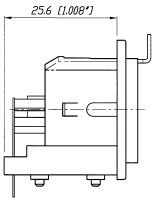
NC7MD-L-B-1

- Unified "D" metal shell
- Solder cups on 3 – 7 pole version
- Additional PCB mount on 4 and 5 pole
- Front and rear mountable

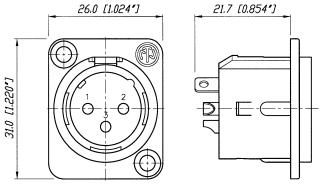
**NC3FD-L-1**



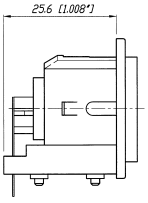

**NC*FDM3-H**




**NC3MD-L-1**




**NC*MDM3-H**




*: 3 - 5 contacts

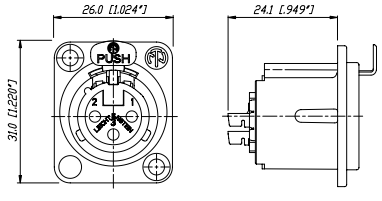
## DLX Series

NC3FD-LX-HE

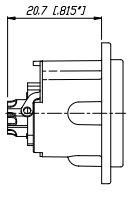
NC5MD-LX

- Next generation of the popular DL Series with greater functionality
- All metal housing works in combination with a new duplex ground contact yielding the best RF protection and ground conductivity in a chassis mount XLR
- Male connector's retention bar replaces plastic design with all metal version
- Unique cage type female contacts on 3 pole version for increased conductivity
- Machined male and female contacts on 4 - 7 pole versions
- D-style housing provides installation compatibility with industry standard D mounting dimensions

**NC3FD-LX**




**NC*MD-LX**




*: 3 - 7 contacts

Crimp type contact

Circumferential ground spring

## DLX Crimp Series

NC3FD-LX-HA

NC3MD-LX-BAG-HA

- 3 pole DLX Series with crimp contacts
- Accommodates wire size AWG 24 – 22 or 0.22 – 0.34 mm²
- Utilizes standard B-type crimp tool (acc. IEC 60352-2)
- Absolute leadfree and solderless connection:
  - RoHs compliance
  - Health and eco-friendly
- Fast and easy assembly
- Gas-tight connection offers a constant contact resistance
- Ideal solution for field and on-site termination

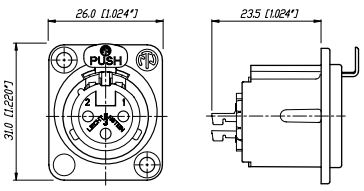
## EMC Series

NC3FDX-EMC-SPEC

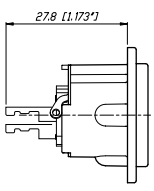
- 3 pole female XLR chassis connector with integrated capacitive shield to shell connection to avoid RF-interference and LF-noise
- 360° shield contact ensures best possible shielding and chassis contact
- D flange chassis for panel mount applications
- Includes the locking nut of the NC3FX-SPEC for secure fastening of a gooseneck for instance
- Special flange for large openings available
- Patent pending

Detailed information of RF-shielding see page 18 – EMC cable connector.

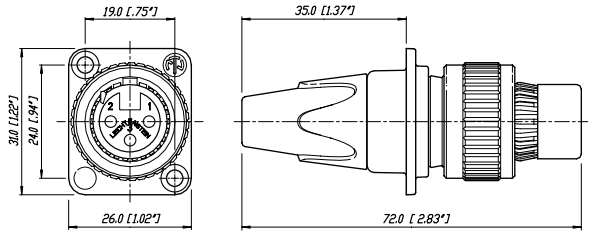
**NC3FD-LX-HA**

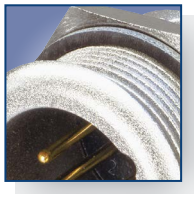



**NC3MD-LX-HA**

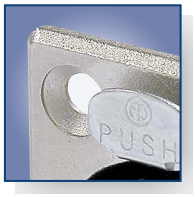



**NC3FDX-EMC-SPEC**





Sealing Gasket



Through hole fastening

## MPR-HD Series

NC3MPR-HD

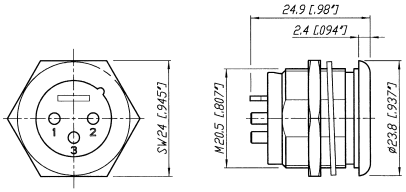
NC5MPR-HD

- IP 65 – in combination with NC*FX-HD cable connectors
- Perfect for outdoor applications
- Sealing gasket for water tight panel mount
- Gold plated contacts

NC5MPR-HD

NC5FX-HD

**NC3MPR-HD**




*: 3 - 5 contacts

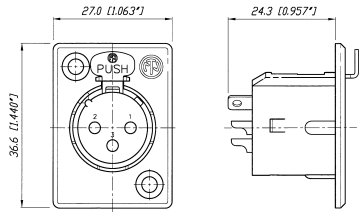
## P Series

NC3FP-1

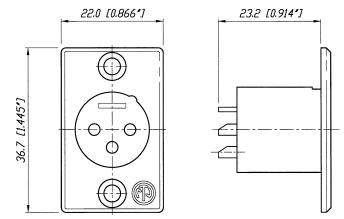
NC6MP-B

- Male and female available in 3 – 6 pin configurations; 7 pin version available in female only
- Smallest available hard wiring receptacles with large solder cups
- Male and female use different mounting hole dimensions and do not fit in same mounting hole
- Front mountable only
- One piece version – insert is NOT removable from shell
- Short female receptacle
- Compatible with Switchcraft® DxM, DxF; Cannon XLRx31, XLRx32
- 6 pole female version available with Switchcraft contact arrangement

**NC3FP-1**




**NC3MP**



Front end design

Solder termination

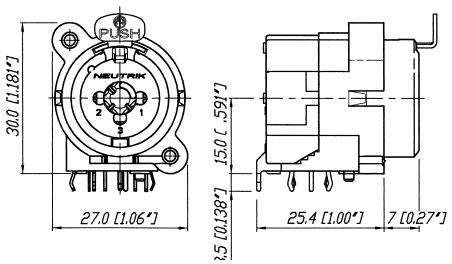
## Combo Series

NCJ9FI-V

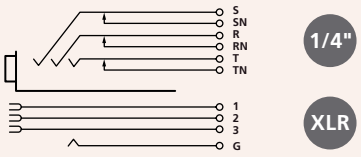
NCJ10FI-S

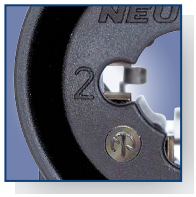
- Combined XLR receptacle and 1/4" phone jack
- Attractive "front end" design
- Saves rack space by combining 2 connectors in one housing
- Horizontal or vertical PCB mount or hard wire soldering
- Fully normalled
- Stereo or mono version
- Very low conductor capacitance, therefore suitable for digital audio
- Fastening: Self-tapping Plastite® screws with thread 2.9 x 1.06 and tri-rondular configuration (A screw)

**NCJ10FI-H**




**Wiring: Example of NCJ9FI-H**





Hologram

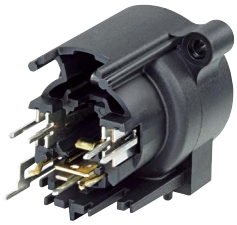
Horizontal PCB mount

Vertical PCB mount

## Combo A Series

NCJ6FA-V-0

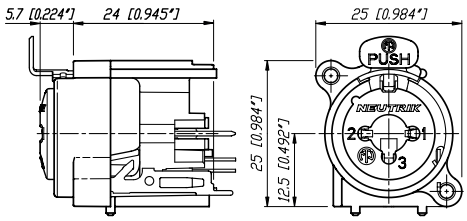
NCJ6FA-H



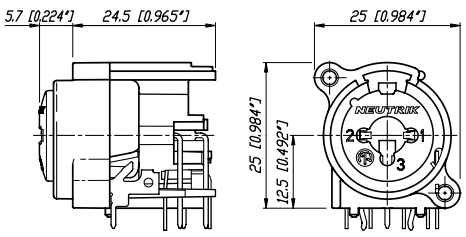
NCJ6FA-V-0

- Combined 3 pole XLR receptacle and 1/4" phone jack for balanced mic and line or instrument inputs in one XLR housing
- Dramatic space saving – 15 % over the predecessor Combo
- Two connectors in one housing – substantial cost, material and labour saving
- Horizontal and vertical PCB mount available
- 3 pole female XLR combined with stereo TRS jack
- Very low conductor capacitance – ideal for digital audio
- Front panel cut-out compatible with Neutrik XLR A Series
- Branded with unique hologram – guarantees genuine and authentic Neutrik product

**NCJ6FA-V**




**NCJ6FA-H**



## Colour Coded Accessories

| Part No. | Description | Black 0 | Brown 1 | Red 2 | Orange 3 | Yellow 4 | Green 5 | Blue 6 | Violet 7 | Grey 8 | White 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **XLR Cable Connectors** | | | | | | | | | | | |
| BSX-* | Colored bushing for X Series | | | | | | | | | | |
| BXX-* | Colored bushing for XX Series | | | | | | | | | | |
| XCR-* | Colored coding ring for X Series | | | | | | | | | | |
| XXR-* | Colored coding ring for XX Series | | | | | | | | | | |
| **XLR Chassis Connectors** | | | | | | | | | | | |
| ACRF-* | Colored ring for female 4 pole A Series and 4 + 5 pole B Series. | | | | | | | | | | |
| ACRM-* | Colored ring for male 4 pole A Series and 4 + 5 pole B Series | | | | | | | | | | |
| DSS-* | Lettering plate for D Series | | | | | | | | | | |

## Accessories

### XLR Cable Connectors

| | |
|---|---|
| BXX-CR | Bushing with translucent coding ring |
| BXX-14 | Large bushing set (cable O.D. 8.5 mm) |
| XXCR | Translucent coding ring for XX Series |
| | Label Dimensions: 57.9 mm x 6.35 mm – 2.25" W x 0.25" H) |

BXX-CR

XXCR Example

### XLR Chassis Connectors

| | |
|---|---|
| A-Screw-1-8 | Plastite® screw 2.9 x 8 |
| B-Screw-1-8 | TAPTITE® screw 2.5 x 8 |
| DBA | Dummy-plate for D Series panel cut outs |
| FDR1 | Round panel mounting flange for NC3FDX-EMC-SPEC |
| HA-3FXX | Set of 50 female spare contacts for crimp XLR |
| HA-3MXX | Set of 50 male spare contacts for crimp XLR |
| MFD | M3 mounting frame for D-size chassis |
| ND* | dummyPLUG for female / male XLR chassis connector |
| NZP1RU-8 | Panel 1RU with 8 D-shape housing cutouts |
| NZP1RU-12 | Panel 1RU with 12 D-shape housing cutouts |
| SC* | Rubber sealing cap for female and male XLR receptacles |
| SCDP-* | D Size sealing gaskets, color coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |
| SCDR | Rear end protection cover for D size chassis connectors |
| SCDX | Hinged cover seals D-size chassis connectors, IP42 rated |
| SCCD-W | Spring-loaded cover to seals D size chassis connectors, IP65 rated |
| SFAV | Rubber frame for A / B Series to mount between front plate and rear vertical print |

A Screw

B Screw

DBA

FDR1

MFD Example

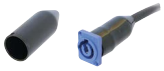
NDF

NDM

SCF

SCM

NZP1RU-12


SCDR Example

SCDX Example

SCCD-W

SCDP-*

SFAV

Example

| Specification | | A Series | AA Series | B Series | D Series | DL / DLX Series | DLX Crimp | DLX-HE Series |
|---|---|---|---|---|---|---|---|---|
| **Electrical** | | | | | | | | |
| Number of contacts | | 3 - 5 | 3 | 3 - 5 | 3 | 3 - 7 | 3 | 3 |
| Contact resistance | ≤ 6 mΩ | ● | ● | ● | ● | ● | ● | ● |
| Insulation resistance - initial: | > 10 GΩ | ● | ● | ● | ● | ● | ● | ● |
| - after damp heat test: | > 1 GΩ | ● | ● | ● | ● | ● | ● | ● |
| Dielectric strength | 1.5 kV dc | ● | ● | ● | ● | ● | ● | ● |
| Rated voltage | < 50 V ac | ● | ● | ● | ● | ● | ● | ● |
| Rated current per contact | | | | | | | | |
| 3 pole: | 6 A | ● | ● | ● | ● | 16 A | 1 A | 16 A |
| 4 pole: | 6 A | ● | - | ● | - | 10 A | - | - |
| 5, 6 pole: | 3 A | ● | - | ● | - | 7.5 A | - | - |
| 7 pole: | 5 A | - | - | - | - | ● | - | - |
| Combo XLR + Jack contact | 7.5 A | - | - | - | - | - | - | - |
| Capacitance between contacts | | | | | | - | | |
| 3 pole: | ≤ 4 pF | ● | ● | ● | - | ≤ 4 pF | ≤ 4 pF | ≤ 4 pF |
| 4, 5, 6 pole: | ≤ 7 pF | ● | - | ● | - | ● | - | - |
| 7 pole: | ≤ 9 pF | - | - | - | - | ● | - | - |
| **Mechanical** | | | | | | | | |
| Lifetime | > 1`000 mating cycles | ● | ● | ● | ● | ● | ● | ● |
| Insertion / withdrawal force | ≤ 20 N | ● | ● | ● | ● | ● | ● | ● |
| Retention method | | | | | | | | |
| - standard: | latch lock | ● | ● | ● | ● | ● | ● | ● |
| - "0" Version: | ≥ 20 N separating force | ● | ● | ● | ● | ● | - | - |
| Crimp XX: | 0.22 - 0.34 mm² / AWG 24 - 22 | - | - | - | - | - | ● | - |
| **Material** | | | | | | | | |
| Insert Polyamide | PA 6.6 30% GR | ● | ● | ● | ● | ● | ● | PSS 40% GR |
| Shell Zinc diecast | ZnAl4Cu1 | - | - | - | ● | ● | ● | ● |
| Shell plating | gal Ni or black Cr | - | - | ● | ● | ● | ● | velour Cr |
| Ring Zinc diecast | ZnAl4Cu1 | - | - | ● | - | - | - | - |
| Contacts - female 3 pole: | Bronze CuSn6 | ● | ● | ● | ● | ● | ● | ● |
| 4 – 5 pole: | Bronze CuSn6 | ● | - | - | - | - | - | - |
| 4 – 7 pole: | Brass CuZn39Pb3 | - | - | - | - | ● | - | - |
| - male: | Brass CuZn35Pb2 | ● | ● | ● | ● | ● | ● | ● |
| Contact surface | gal 0.2 µm AuCo over 2 µm NiP15 (Tribor®) | ● | ● | ● | - | - | - | ● |
| | gal 2 µm Ag or gal 0.2 µm Au hard alloy over 2 µm Ni | - | - | - | ● | ● | ● | - |
| Latch lock & spring | Ck 67 steel, treated | ● | ● | ● | ● | ● | ● | ● |
| **Environmental** | | | | | | | | |
| Operating temperature | -30 °C to +80 °C | ● | ● | ● | ● | ● | ● | ● |
| Protection class | IP 40 | ● | ● | ● | ● | ● | ● | ● |
| Flammability | UL 94 HB | ● | ● | - | ● | ● | ● | - |
| | UL 94 V-0 | 3 pole | - | ● | - | - | - | ● |
| Solderability complies with | IEC 68-2-20 | ● | ● | ● | ● | ● | ● | ● |
| Mounting screw | | A | A | 1) | - | - | - | - |
| Color coding | | ACR* 2) (4 + 5 pole only) | - | ACR* 2) | DSS | DSS | DSS | DSS |

1) : B Series 3 pole connectors > B-screw, 4 & 5 pole versions > A-screw

2) : 4 + 5 pole A series, 5 pole B series

| Specification | | | MPR-HD Series | P Series | Combo Series | A Combo |
|---|---|---|---|---|---|---|
| **Electrical** | | | | | | |
| Number of contacts | | | 3 - 5 | 3 - 7 (6*) | 5 - 10 | 3 / 3 |
| Contact resistance | XLR: | ≤ 6 mΩ | ● | ● | ≤10 mΩ | ≤10 mΩ |
| | 1/4": | ≤ 20 mΩ | - | - | ● | ● |
| Insulation resistance | - initial: | > 10 GΩ | ● | ● | ● | ● |
| | - after damp heat test: | > 1 GΩ | ● | ● | >500 mΩ | ● |
| Dielectric strength | | 1.5 kV dc | ● | ● | ● | ● |
| Rated voltage | | 50 V ac | ● | ● | ● | ● |
| Rated current per contact | | | | | | |
| | 3 pole: | 6 A | 16 A | 16 A | - | 3 A |
| | 4 pole: | 6 A | 10 A | 10 A | - | - |
| | 5, 6 pole: | 3 A | 7.5 A | 7.5 A | - | - |
| | 7 pole: | 5 A | - | ● | - | - |
| Combo XLR + Jack contact | | 7.5 A | - | - | ● | ● |
| Capacitance between contacts | | | | | | |
| | 3 pole: | ≤ 7 pF | ≤ 4 pF | ≤ 4 pF | ≤ 2 pF | ≤ 2 pF |
| | 4, 5, 6 pole: | ≤ 7 pF | ● | ● | - | - |
| | 7 pole: | ≤ 9 pF | - | ● | - | - |
| **Mechanical** | | | | | | |
| Lifetime | | > 1`000 mating cycles | ● | ● | ● | ● |
| Insertion / withdrawal force | | ≤ 20 N | ● | ● | 25 N | ● |
| Retention method | | | | | | |
| | - standard: | latch lock | ● | ● | ● (XLR) | ● (XLR) |
| | - "0" Version: | ≥ 20 N separating force | ● | ● | 25 N | 25 N |
| **Material** | | | | | | |
| Insert | Polyamide | PA 6.6 30% GR | ● | ● | ● | ● |
| Shell | Zinc diecast | ZnAl4Cu1 | ● | ● | - | - |
| Shell plating | | gal Ni or black Cr | Ni | ● | - | - |
| Ring | Zinc diecast | ZnAl4Cu1 | - | - | - | - |
| Contacts | - female 3 pole: | Bronze CuSn6 | - | ● | ● | ● |
| | 4 – 5 pole: | Bronze CuSn6 | - | - | - | - |
| | 4 – 7 pole: | Brass CuZn39Pb3 | - | ● | - | - |
| | - male: | Brass CuZn35Pb2 | ● | ● | - | - |
| Contact surface | gal 0.2 µm AuCo over 2 µm NiP15 (Tribor®) | | - | - | ● | ● |
| | gal 2 µm Ag or gal 0.2 µm Au hard alloy over 2 µm Ni | | Au | ● | - | - |
| Latch lock & spring | | Ck 67 steel, treated | - | ● | ● | ● |
| **Environmental** | | | | | | |
| Operating temperature | | -30 °C to +80 °C | ● | ● | ● | ● |
| Protection class | | IP 40 | IP 65 | ● | ● | ● |
| Flammability | | UL 94 HB | ● | ● | ● | ● |
| | | UL 94 V-0 | - | - | - | - |
| Solderability complies with | | IEC 68-2-20 | ● | ● | ● | ● |
| Mounting screw | | | - | - | A | A |
| Color coding | | | - | - | - | - |

* : P Series male 3 – 6 pole

## Ordering Information for Receptacles

| Female | Male | Shell | Contact | 3 pole | 4 pole | 5 pole |
|---|---|---|---|---|---|---|
| **A Series** | | | | | | |
| NC*FAH-D | | Black Plastic | Gold | - | ●[1)] | ●[1)] |
| | NC*MAH | Black Plastic | Gold | ● | ● | ● |
| NC*FAH-0 | | Black Plastic | Gold | ● | ●[1)] | ●[1)] |
| | NC3MAH-0 | Black Plastic | Gold | ● | - | - |
| NC3FAHL-0 | | Black Plastic | Gold | ● | - | - |
| NC3FAHR-0 | | Black Plastic | Gold | ● | - | - |
| NC3FAH1-D | | Black Plastic | Gold | ● | - | - |
| NC3FAH1-0 | | Black Plastic | Gold | ● | - | - |
| NC3FAHL1-D | | Black Plastic | Gold | ● | - | - |
| | NC3MAHL | Black Plastic | Gold | ● | - | - |
| NC3FAHL1-0 | | Black Plastic | Gold | ● | - | - |
| NC3FAHR1-D | | Black Plastic | Gold | ● | - | - |
| | NC3MAHR | Black Plastic | Gold | ● | - | - |
| NC3FAHR1-0 | | Black Plastic | Gold | ● | - | - |
| NC3FAH2-D | | Black Plastic | Gold | ● | - | - |
| NC3FAH2-0 | | Black Plastic | Gold | ● | - | - |
| NC3FAHR2-D | | Black Plastic | Gold | ● | - | - |
| NC3FAHR2-0 | | Black Plastic | Gold | ● | - | - |
| NC*FAV-D | | Black Plastic | Gold | - | ●[1)] | ●[1)] |
| | NC*MAV | Black Plastic | Gold | ● | ● | ● |
| NC*FAV-0 | | Black Plastic | Gold | ● | ●[1)] | ●[1)] |
| | NC3MAV-0 | Black Plastic | Gold | ● | - | - |
| NC3FAV1-D | | Black Plastic | Gold | ● | - | - |
| NC3FAV1-0 | | Black Plastic | Gold | ● | - | - |
| NC3FAV2-D | | Black Plastic | Gold | ● | - | - |
| NC3FAV2-0 | | Black Plastic | Gold | ● | - | - |
| NC5FAV-SW-D | NC5MAV-SW | Black Plastic | Gold | - | - | ● |

| Female | Male | Shell | Contact | 3 pole |
|---|---|---|---|---|
| **AA Series** | | | | |
| NC3FAAH | NC3MAAH | Black Plastic | Gold | ● |
| NC3FAAH-0 | | Black Plastic | Gold | ● |
| NC3FAAH1 | NC3MAAH-1 | Black Plastic | Gold | ● |
| NC3FAAH1-0 | | Black Plastic | Gold | ● |
| | NC3MAAH-0 | Black Plastic | Gold | ● |
| NC3FAAH2 | | Black Plastic | Gold | ● |
| NC3AAH2-0 | | Black Plastic | Gold | ● |
| NC3FAAV | NC3MAAV | Black Plastic | Gold | ● |
| NC3FAAV-0 | | Black Plastic | Gold | ● |
| NC3FAAV1 | NC3MAAV-1 | Black Plastic | Gold | ● |
| NC3FAAV1-0 | | Black Plastic | Gold | ● |
| | NC3MAAV-0 | Black Plastic | Gold | ● |
| NC3FAAV2 | | Black Plastic | Gold | ● |
| NC3FAAV2-0 | | Black Plastic | Gold | ● |

A Series – D version come with disassembled Push latch, version with assembled latch omit -D.

AA Series comes with Push Latch assembled.

A / AA Series rear mount only, all PCB mount except Y version = IDC

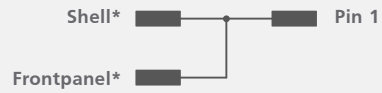
[1)]: Grounding Option "2"
0: Retention Spring

## Grounding Options

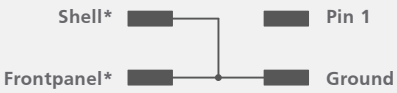
### A / AA Series and B Series

**Female - 3 pole**

**"1"**

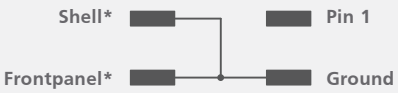



**"2"**



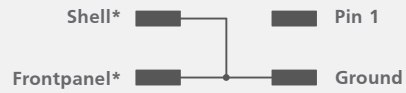

**Female 4 & 5 pole**

**w/o number**

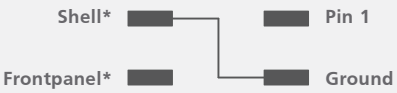



**Male - 3, 4 & 5 pole**

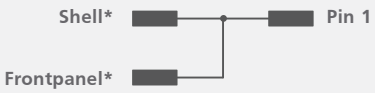
**w/o number**




**"0" and L + R version**




**"1"**




**Shell*** : Contact to shell of mating connector
**Frontpanel*** : Connection to frontpanel by fastening screw

## Ordering Information for Receptacles

### B Series

| Female | Male | Flange | Contact | 3 pole | 4 pole | 5 pole |
|---|---|---|---|---|---|---|
| NC*FBH | | Metal | Gold | - | ● | ● |
| | NC*MBH | Metal | Gold | ● | ● | ● |
| NC5FBH-B | NC5MBH-B | Black Metal | Gold | - | - | ● |
| | NC3MBH-B | Black Metal | Gold | ● | - | - |
| | NC3MBH-0 | Metal | Gold | ● | - | - |
| NC3FBH1 | NC3MBH-1 | Metal | Gold | ● | - | - |
| NC3FBH1-B | | Black Metal | Gold | ● | - | - |
| NC3FBHL1 | | Metal | Gold | ● | - | - |
| | NC3MBHL | Metal | Gold | ● | - | - |
| | NC3MBHL-B | Black Metal | Gold | ● | - | - |
| NC3FBH2 | | Metal | Gold | ● | - | - |
| NC3FBH2-B | | Black Metal | Gold | ● | - | - |
| | NC3MBHR | Metal | Gold | ● | - | - |
| | NC3MBHR-B | Black Metal | Gold | ● | - | - |
| NC3FBH1-E | NC3MBV-E | Metal | Gold | ● | - | - |
| NC3FBH2-E | | Metal | Gold | ● | - | - |
| | NC3MBH-E | Metal | Gold | ● | - | - |
| | NC*MBV | Metal | Gold | ● | ● | ● |
| | NC3MBV-B | Black Metal | Gold | ● | - | - |
| NC*FBV | | Metal | Gold | - | ● | ● |
| NC5FBV-B | NC5MBV-B | Black Metal | Gold | - | - | ● |
| NC3FBV1 | | Metal | Gold | ● | - | - |
| NC3FBV1-B | | Black Metal | Gold | ● | - | - |
| NC3FBV2 | | Metal | Gold | ● | - | - |
| NC3FBV2-B | | Black Metal | Gold | ● | - | - |
| | NC3MBV-0 | Metal | Gold | ● | - | - |
| | NC3MBV-1 | Metal | Gold | ● | - | - |
| NC3FBV2-SW | NC3MBV-SW | Metal | Gold | ● | - | - |
| NC5FBV-SW | NC5MBV-SW | Metal | Gold | - | - | ● |

D: version come with disassembled Push latch, version with assembled latch omit -D.
B: Series rear mount only
0: Retention spring on request

### D Series

| Female | Male | Shell | Contact | 3 pole | 4 pole | 5 pole | 6 pole | 7 pole |
|---|---|---|---|---|---|---|---|---|
| NC3FD-V | NC3MD-V | Nickel | Silver | ● | - | - | - | - |
| NC3FD-V-B | NC3MD-V-B | Black Cr | Gold | ● | - | - | - | - |
| NC3FD-V-BAG | NC3MD-V-BAG | Black Cr | Silver | ● | - | - | - | - |
| NC3FDM3-V | NC3MDM3-V | Nickel | Silver | ● | - | - | - | - |
| NC3FDM3-V-B | NC3MDM3-V-B | Black Cr | Gold | ● | - | - | - | - |
| NC3FD-H | NC3MD-H | Nickel | Silver | ● | - | - | - | - |
| NC3FD-H-B | NC3MD-H-B | Black Cr | Gold | ● | - | - | - | - |
| NC3FD-H-BAG | NC3MD-H-BAG | Black Cr | Silver | ● | - | - | - | - |
| NC3FDM3-H | NC3MDM3-H | Nickel | Silver | ● | - | - | - | - |
| NC3FDM3-H-B | NC3MDM3-H-B | Black Cr | Gold | ● | - | - | - | - |
| NC3FDM3-H-BAG | NC3MDM3-H-BAG | Black Cr | Gold | ● | - | - | - | - |

### DLX Series

| Female | Male | Shell | Contact | 3 pole | 4 pole | 5 pole | 6 pole | 7 pole |
|---|---|---|---|---|---|---|---|---|
| NC*FD-LX | NC*MD-LX | Nickel | Silver | ● | ● | ● | ● | ● |
| NC*FD-LX-B | NC*MD-LX-B | Black Cr | Gold | ● | ● | ● | ● | ● |
| NC*FD-LX-BAG | NC*MD-LX-BAG | Black Cr | Silver | ● | ● | ● | ● | - |
| NC*FD-LX-M3 | NC*MD-LX-M3 | Nickel | Silver | ● | ● | ● | - | - |
| NC3FD-LX-HE | NC3MD-LX-HE | Velour Cr | Gold | ● | - | - | - | - |
| NC3FD-LX-WT | NC3MD-LX-WT | White | Silver | ● | - | - | - | - |
| NC6FSD-LX | NC6MSD-LX | Nickel | Silver | - | - | - | ● | - |

### DL Series

| Female | Male | Shell | Contact | 3 pole | 4 pole | 5 pole | 6 pole | 7 pole |
|---|---|---|---|---|---|---|---|---|
| NC*FD-L-1 | NC*MD-L-1 | Nickel | Silver | ● | ● | ● | ● | ● |
| NC*FD-L-B-1 | NC*MD-L-B-1 | Black Cr | Gold | ● | ● | ● | ● | ● |
| NC*FD-L-BAG-1 | NC*MD-L-BAG-1 | Black Cr | Silver | ● | ● | ● | ● | - |
| NC*FDM3-L-1 | NC*MDM3-L-1 | Nickel | Silver | ● | ● | ● | - | - |
| NC3FDM3LBAG-1 | NC3MDM3LBAG-1 | Black Cr | Silver | ● | - | - | - | - |
| NC3FD-L-1-HE | NC3MD-L-1-HE | Velour Cr | Gold | ● | - | - | - | - |
| NC*FDM3-H | NC*MDM3-H | Nickel | Silver | - | ● | ● | ● | - |
| NC*FDM3-H-B | NC*MDM3-H-B | Nickel | Silver | - | ● | ● | - | - |
| NC*FDM3-H-BAG | NC*MDM3-H-BAG | Black Cr | Silver | - | ● | ● | - | - |
| NC3FD-S-1-B | NC3MD-S-1-B | Black Cr | Silver | ● | - | - | - | - |

0: Retention spring on request

### DLX Crimp Series

| Female | Male | Shell | Contact | 3 pole | 4 pole | 5 pole | 6 pole | 7 pole |
|---|---|---|---|---|---|---|---|---|
| NC3FD-LX-HA | NC3MD-LX-HA | Nickel | Silver | ● | - | - | - | - |
| NC3FD-LX-HA-BAG | NC3MD-LX-HA-BAG | Black Cr | Silver | ● | - | - | - | - |

## Ordering Information for Receptacles

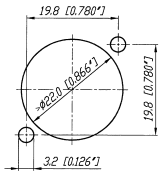
| Female | Male | Shell | Contact | 3 pole | 4 pole | 5 pole | 6 pole | 7 pole |
|---|---|---|---|---|---|---|---|---|
| **EMC XLR** | | | | | | | | |
| NC3FDX-EMC-SPEC | | Black Cr | Gold | ● | - | - | - | - |
| **Accessories** | | | | | | | | |
| FDR-1 | | Black round panel mounting flange with screws for larger panel cut-outs | | | | | | |
| **P Series** | | | | | | | | |
| NC*FP-1 | | Nickel | Silver | ● | ● | ● | ● | ● |
| | NC*MP | Nickel | Silver | ● | ● | ● | ● | - |
| NC*FP-B-1 | | Black Cr | Gold | ● | ● | ● | ● | ● |
| | NC*MP-B | Black Cr | Gold | ● | ● | ● | ● | - |
| NC*FP-BAG-1 | NC*MP-BAG | Black Cr | Silver | ● | ● | ● | ● | - |
| **MPR-HD Series** | | | | | | | | |
| - | NC*MPR-HD | Nickel | Gold | ● | ● | ● | - | - |

| | Shell | Contact | 5 pole | 6 pole | 9 pole | 10 pole |
|---|---|---|---|---|---|---|
| **Combo A Series** | | | | | | |
| NCJ6FA-H | Black plastic | Gold | - | ● | - | - |
| NCJ6FA-H-0 | Black plastic | Gold | - | ● | - | - |
| NCJ6FA-V | Black plastic | Gold | - | ● | - | - |
| NCJ6FA-V-0 | Black plastic | Gold | - | ● | - | - |
| **Combo Series** | | | | | | |
| NCJ*FI-H | Black plastic | Gold | ● | ● | ● | ● |
| NCJ*FI-H-0 | Black plastic | Gold | ● | ● | ● | ● |
| NCJ*FI-S | Black plastic | Gold | ● | ● | ● | ● |
| NCJ*FI-S-0 | Black plastic | Gold | ● | ● | ● | ● |
| NCJ*FI-V | Black plastic | Gold | ● | ● | ● | ● |
| NCJ*FI-V-0 | Black plastic | Gold | ● | ● | ● | ● |

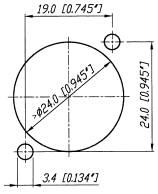
| Contact # | 1 | 2 | 3 | T | R | S | TN | RN | SN | G | GN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NCJ5FI-* | x | x | x | x | | x | | | | x | |
| NCJ6FI-* | x | x | x | x | x | x | | | | x | |
| NCJ9FI-* | x | x | x | x | x | x | x | x | x | x | |
| NCJ10FI-* | x | x | x | x | x | x | x | x | x | x | x |

## Panel Cutouts

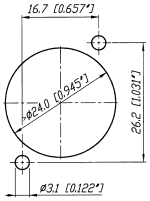
A / AA / B Series



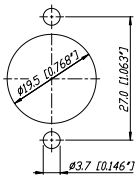

D / DL / DLX Series



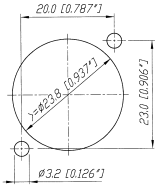

P Series Female




P Series Male




Combo




MPR Series

## Assembly Tools

HTXP

BTXX

HX-R-BNC

DIE-R-BNC-PT

| | |
|---|---|
| HTXP | Hand tool to tighten the XX and PX-bushing |
| HTXX-14 | Hand tool to tighten the XX-14 and 8 + 2 pole bushing |
| BTXX | Speed boot assembly tool to press the XX boot onto shell |
| HX-R-BNC | Crimp tool for XCC Series |
| DIE-R-BNC-PT | Crimp die for XCC Series (6.5 mm HEX) |
| DIE-R-HA-1 | Crimp die for XX-HA Series |

# MORE THAN JUST CONNECTORS

## XLR & Plugs

More than just connectors. We put 40 years of experience and our passion into our products. Whether it's a rock band, stage lighting, or a broadcast studio – Neutrik offers innovative connector solutions, mating passion with perfection. **www.neutrik.com**

NEUTRIK®

# Plugs & Jacks

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**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA® ,XIRIUM®, are registered trademarks of Neutrik AG.**

## Introduction

The Neutrik® plug and jack program offers a wide range of professional phone connectors including 1/4", 3.5 mm, MIL/B-gauge style and TT or bantam style plugs. The jack range offers an exceptional "slim" 1/4" PCB jack that is almost 20 % smaller than most other designs. The heavy duty M line combines a wide range of options such as three different nose forms and four styles of contacts including 3 PCB and one solder tab. It also includes a 1/4" chassis and cable jack line with the secure locking feature, well known from the XLR range. All jacks are manufactured from strong high-grade thermoplastics and are available in all common versions which make them suitable for audio and industrial applications.

The plug line features:

- Mono (TS) and Stereo (TRS) plugs
- Straight and right-angle versions
- Rugged diecast shell in nickel or black chromium
- Nickel or gold plated contacts
- Chuck type strain relief
- Precision machined plugfinger without rivets
- Coloured boots and rings for coding
- Silent Plug , timbrePLUG and ultimatePLUG for instrument (guitar) applications

All plugs and jacks are specified to IEC 60603-11 and EIA RS-453 or the respective MIL standard.

Neutrik® also offers a special jack version which is a combined 3 pole XLR receptacle and a 1/4" phone jack for balanced mic or line inputs in one XLR shell. This "one for two" panel mount offers substantial cost, labour and material savings. For more information on the Combo products see page 36 and 37 or visit our website at www.neutrik.com.

Neutrik brand

Anti-kink bushing

Chuck type strain relief

White painted housing

Right angle plug

## 1/4" Phone Plug - PX and PRX Series

NP2X

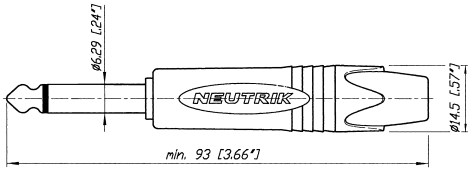
NP3X-B

NP2X-WT

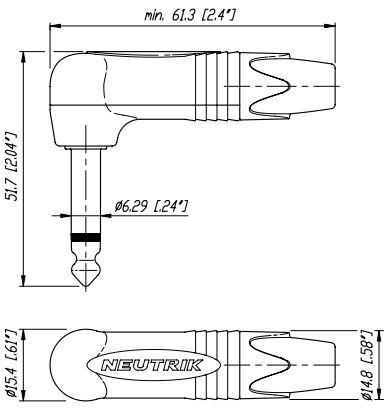
NP3RX-B

- Slim 1/4" plug with million fold proven chuck type strain relief
- Precision machined one piece contacts – no rivets
- Sleek attractive design for best handling convenience
- 14.5 mm only in diameter (right angle 15.4 mm) – serves highest packing density of 15.88 mm jack pitch
- Nickel or gold plugfinger in mono (TS) and stereo (TRS)
- Screwless assembly (PRX series as well)
- L-D version available which accommodates cable O.D.s up to 8 mm

**NP2X**




**NP2RX**



CRYSTALLIZED™ –
Swarovski Elements

**crystal**CON

Robust metal
housing

Big bushing for
cable up to 10 mm

**jumbo**PLUG

## crystalCON

NP2X-B-CRYSTAL

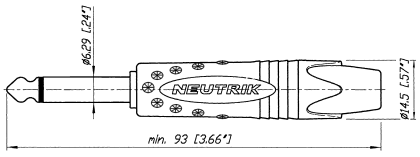
- Mono 1/4" phone plug embellished with CRYSTALLIZED™ – *Swarovski Elements*
- Fancy, noble, valuable, attractive package – an eye-catcher

## jumboPLUG

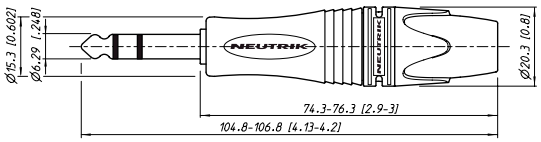
NP2XL

- 2 or 3 pole 1/4" professional phone plug
- Up to 10 mm cable O.D.
- Robust diecast shell in stylish design
- Proven chuck type strain relief for reliable cable retention
- Ergonomic design for best handling convenience
- Precision machined one piece contacts – avoid hook up of tip contact

**NP2X-B-CRYSTAL**




**NP3XL**



Moving magnet

Right angle plug

**Attention!**
For use with instrument (guitar) applications only. Damage may occur if connected to amplifier output.

silentPLUG

## silentPLUG – 1/4" Phone Plug

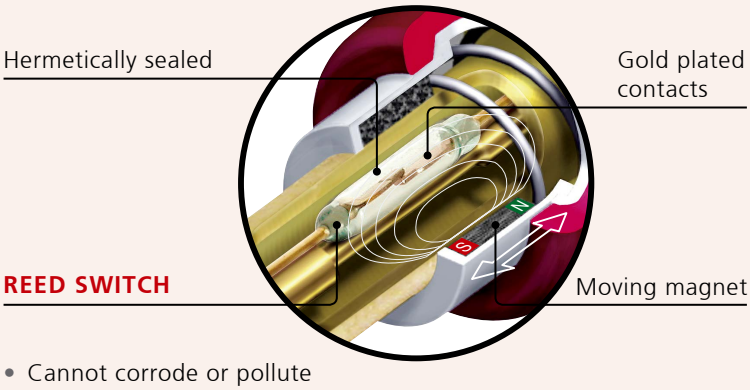
NP2X-AU-SILENT

NP2RX-AU-SILENT

### Design Criteria

The silentPLUG automatically mutes (shorts) an instrument (guitar) cable to avoid pops and squeals when changing the instrument (guitar) under load.
The integrated silent switch (pat. pending) is based on REED-technology and guarantees a lifetime beyond 10'000 mating cycles. The PX silentPLUG features a rugged metal shell enhanced with a rubber cushion overlay for improved shock protection.

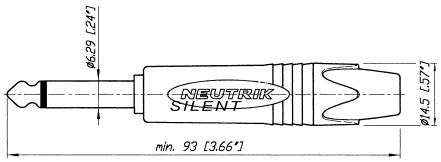
**Detail Silent Switch:**




- Cannot corrode or pollute
- No wear, constant contact resistance
- Decoupled from switching mechanism

- Avoids pops and squeals
- Hermetically sealed switching contacts
- Lifetime beyond 10'000 mating cycles
- Slim right-angle plug with industry proven and reliable chuck type cable strain relief
- Sleek attractive design for convenient handling and connections
- Rubber overlay on straight housing for best shock-protection and reliability
- L-D version available accommodating up to 8 mm

**NP2X-AU-SILENT**



Rotary knob to change the timbre

Right angle plug

timbrePLUG

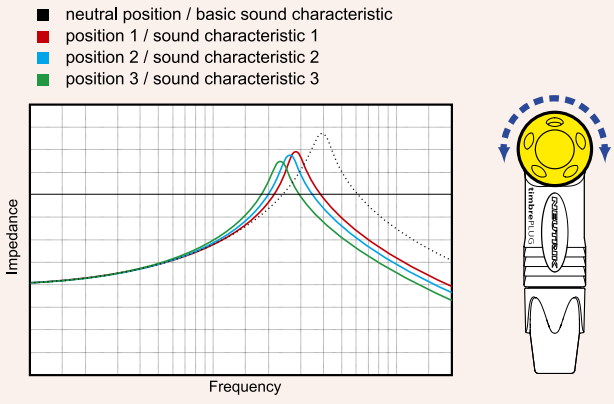
## timbrePLUG – 1/4" Guitar Plug

NP2RX-TIMBRE

### Design Criteria

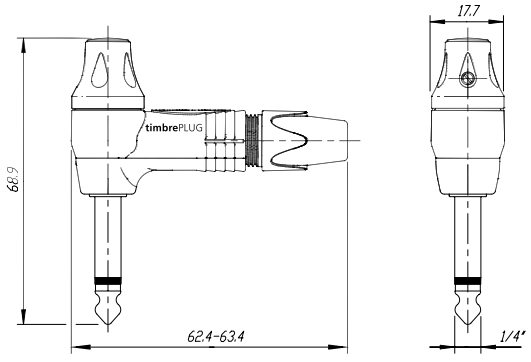
The characteristic sound of a guitar is not only influenced by the guitar (strings, pickups, body) alone but also by the attached instrument cable and the following guitar amp.
The timbrePLUG provides the possibility to change the timbre of your guitar sound from neutral, clear sound to warm characteristics.

**timbre**PLUG **- charakteristic**




- Standard timbre of your cable plus 3 additional sound characteristics
- Slim right-angle plug with industry proven and reliable chuck type cable strain relief
- Sleek attractive design for convenient handling
- Gold plug finger, precision machined one piece contacts

**NP2RX-TIMBRE**



Rotary knob to change the timbre

Right angle plug

Moving magnet

**Attention!**
For use with instrument (guitar) applications only. Damage may occur if connected to amplifier output.

ultimatePLUG

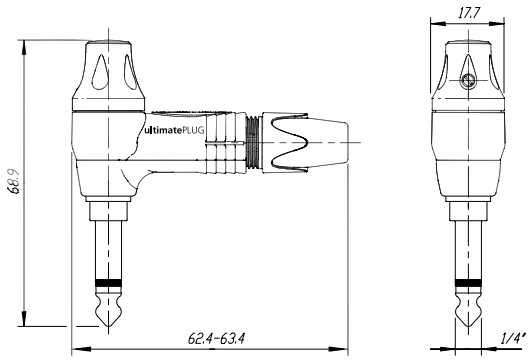
## ultimatePLUG – 1/4" Guitar Plug

NP2RX-ULTIMATE

- 2 in 1 – combines timbrePLUG & silentPLUG
- Change of timbre and avoiding of pop and squeals are combined in one plug
- The ultimate guitar plug
- Slim right-angle plug with industry proven and reliable chuck type cable strain relief
- Sleek attractive design for convenient handling
- Gold plug finger, precision machined one piece contacts

Details of **silent**PLUG on page 50 and **timbre**PLUG charakteristics on page 51.

**NP2RX-ULTIMATE**



The standard of professional phone plugs

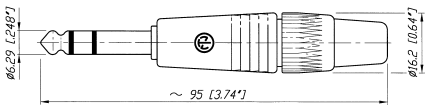
B-Gauge type

## C Series

NP2C + BSP-3

- Available in mono (TS) or stereo (TRS)
- Meets EIA / IEC standards
- Unique plug finger design without rivets
- Sturdy diecast metal shell
- Excellent Neutrik® chuck type strain relief

**NP3C**




## MIL/B-Gauge Type Plugs

NP3TB-R

NP3CM-B

- 1/4" "B-Gauge" and "MIL" Type Plugs
- All metal design, chuck type strain relief, no rivets
- Meet all prevailing standards
- Available as plug fingers only for overmolding

**NP3TB-B**

**NP3CM-B**

Bantam plug

Dual bantam plug

Gold plated contacts

Easy connector assembly

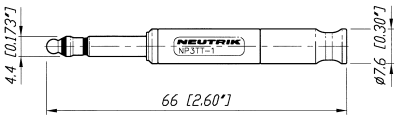
## 0.173" Bantam Type Miniature Plugs

NP3TT-1-B

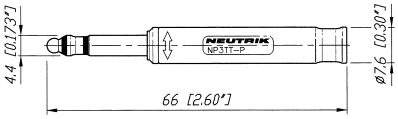
NP3TT-2

- Very robust ergonomic design
- Gold contact version in combination with the NJ3TTA jack eliminates contact problems due to corrosion or dirt
- The single plug NP3TT-P and the dual bantam plug NP3TT-2 are made for assembling with a standard HEX crimping tool as used with coax cables
- Solder termination for T + R, crimp termination for sleeve contact

**NP3TT-1**




**NP3TT-P**



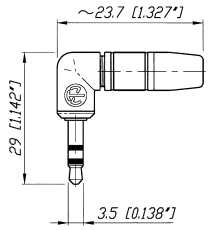

## 3.5 mm Right-Angle Stereo Plug

NTP3RC

NTP3RC-B

- The only available 3.5 mm plug with chuck type strain relief
- All metal housing – reliable and robust
- Easy to assemble, simple to use
- Slim design – space saving
- Excellent cable protection
- All nickel or black housing, available with gold plated contacts

**NTP3RC**



| Specifications | | | 1/4" Phone Plugs SILENT & CRYSTAL timbrePLUG & ultimatePLUG jumboPLUG | MIL / B-Gauge Type | 0.173" Bantam Type | 3.5 mm Stereo Plugs |
|---|---|---|---|---|---|---|
| **Electrical** | | | | | | |
| Rated current: | depends on mating connector | | ● | ● | ● | ● |
| Contact resistance: | depends on mating connector | | ● | ● | ● | ● |
| Insulation resistance: | - initial: | > 2 GΩ | ● | ● | ● | ● |
| | - after damp heat test: | ≥ 1 GΩ | ● | ● | ● | ● |
| | | > 0.1 GΩ | ULTIMATE + TIMBRE | ● | ● | ● |
| Dielectric strength | | 1 kV dc | ● | - | - | - |
| | | 200 V dc | SILENT | - | - | - |
| | | 100 V dc | ULTIMATE + TIMBRE | - | - | - |
| **Mechanical** | | | | | | |
| Lifetime | > 1'000 mating cycles | | ● | ● | ● | ● |
| Wiring: | solder terminals | | ● | ● | ● | ● |
| Wire size | | $mm^2$ | 1 | 1 (NP3CM: 0.5) | 0.25 | 0.22 |
| | | AWG | 18 | 18 (NP3CM: 20) | 24 | 24 |
| Cable O.D.: | | mm | 4 – 7 (≤ 10: NP*XL) | 4 – 7 | 4 – 4.8 | 2 – 4.5 |
| **Materials** | | | | | | |
| Shell: | | | Zinc diecast (ZnAl4Cu1) Ni or black Cr plated | Brass (CuZn39Pb3) black or red coated | Brass (CuZn39Pb3) 2 µm Ni (Su) plated PA 6 30 % GR | Zinc diecast (ZnAl4Cu1) Ni or black Cr plated |
| Insulation: | Polyamide (PA 6.6 30 % GR) | | ● | ● | ● | PA 6.6 15% GR |
| Contacts: | Brass (CuZn39Pb3) | | ● | ● | ● (Tip: CuSn6) | ● |
| | 2 µm Ni (Su) or Au plated | | ● | ● or Brass | 2 µm TRIBOR® (NiP-AuCo) | ● |
| Chuck: | | | POM | POM | - | POM |
| Bushing: | | | POM + PU | - | - | CuZn39Pb3 + PU (Ni or black Chrome) |
| Rubber shell-overlay: | | | EPDM | - | - | - |
| **Environmental** | | | | | | |
| Temperature range: | -20 °C to +65 °C | | ● | ● | ● | ● |
| Solderability complies with | IEC 68-2-20 | | ● | ● | ● | ● |

## Ordering Information

| Part Number | | Shell | Contacts | Standards Compatibility | Remarks |
|---|---|---|---|---|---|
| **1/4" Professional Phone Plugs - PX and PRX Series** | | | | | |
| NP2X | NP2RX | Nickel | Nickel | IEC 60603-11 / EIA RS-453 | Mono plug, black bushing |
| NP2X-BAG | NP2RX-BAG | Black Cr | Nickel | • | Mono plug, black bushing |
| NP2X-B | NP2RX-B | Black Cr | Gold | • | Mono plug, black bushing |
| NP2X-WT | - | White painted | Nickel | • | Mono plug, white bushing |
| NP3X | NP3RX | Nickel | Nickel | • | Stereo plug, black bushing |
| NP3X-BAG | NP3RX-BAG | Black Cr | Nickel | • | Stereo plug, black bushing |
| NP3X-B | NP3RX-B | Black Cr | Gold | • | Stereo plug, black bushing |
| *-D | *-D | | | | Bulk packed to be ordered in multiples of 100 |
| **silentPLUG - special Guitar Plug** | | | | | |
| NP2X-AU-SILENT | | Rubber overlay | Gold | IEC 60603-11 / EIA RS-453 | Mono plug, silent switch |
| NP2RX-AU-SILENT | | red coated | Gold | IEC 60603-11 / EIA RS-453 | Right angle mono plug, silent switch |
| **timbrePLUG - special Guitar Plug** | | | | | |
| NP2RX-TIMBRE | | red coated | Gold | IEC 60603-11 / EIA RS-453 | Right angle mono plug, timbre switch |
| **ultimatePLUG - special Guitar Plug** | | | | | |
| NP2RX-ULTIMATE | | Black Cr | Gold | IEC 60603-11 / EIA RS-453 | Right angle mono plug, timbre switch & silent switch |
| **crystalCON - 1/4" Professional Phone Plug** | | | | | |
| NP2X-B-CRYSTAL | | Black Cr | Gold | IEC 60603-11 / EIA RS-453 | Mono plug, black bushing, equipped with CRYSTALLIZED™ – *Swarovski Elements* |
| **jumboPLUG - 1/4'' plug for thick instrument and loudspeaker cables** | | | | | |
| NP2XL | | Nickel | Nickel | IEC 60603-11 / EIA RS-453 | Mono plug, black bushing |
| NP3XL | | Nickel | Nickel | • | Stereo plug, black bushing |
| **1/4" Professional Phone Plugs - PC Series** | | | | | |
| NP2C | | Nickel | Nickel | IEC 60603-11 / EIA RS-453 | Mono plug, black bushing |
| NP2C-BAG | | Black Cr | Nickel | • | Mono plug, black bushing |
| NP2C/B | | Black Cr | Gold | • | Mono plug, black bushing and gold contacts |
| NP3C | | Nickel | Nickel | • | Stereo plug, black bushing |
| NP3C-BAG | | Black Cr | Nickel | • | Stereo plug, black bushing |
| NP3C/B | | Black Cr | Gold | • | Stereo plug, black bushing and gold contacts |
| NP2C-BAG-T-AU | | Black Cr | Nickel + T: Gold | • | Mono plug, black bushing with gold tip |
| NP2C-T10AA | | Nickel | Nickel | • | Mono plug, red bushing, with built-in 1:10 transformer to convert microphone levels to guitar inputs |
| NP2RCS | | Nickel + black plastic | Nickel | • | Mono right-angle plug, black bushing |
| NP3RCS | | Nickel + black plastic | Nickel | • | Stereo right-angle plug, black bushing |
| NP*C-D | | | | | Bulk packed to be ordered in multiples of 100 |

## Ordering Information

| Part Number | Shell | Contacts | Standards Compatibility | Remarks |
|---|---|---|---|---|
| **MIL/B-gauge Type Phone Plugs** | | | | |
| NP3TB-B | Black | Nickel | B-GAUGE BP0316 | 1/4" B-Gauge plug |
| NP3TB-R | Red | Nickel | • | 1/4" B-Gauge plug |
| NP3TM-B | Black | Nickel | MIL-P-642/2 | 1/4" MIL plug |
| NP3TM-R | Red | Nickel | • | 1/4" MIL plug |
| NP2CM-B | Black | Brass | MIL-P-642/4 | Mono 1/4" MIL plug |
| NP2CM-R | Red | Brass | • | Mono 1/4" MIL plug |
| NP3CM-B | Black | Brass | MIL-P642/5A | Stereo 5.23 mm (0.206") MIL plug |
| NP3CM-R | Red | Brass | • | Stereo 5.23 mm (0.206") MIL plug |
| **0.173" Bantam Type Miniature Plugs** | | | | |
| NP3TT-1-B | Nickel + black plastic | Nickel | MIL-P-642/13 | 4.4 mm (0.173") Bantam plug with solder contacts, black sleeve |
| NP3TT-1-R | Nickel + red plastic | Nickel | • | 4.4 mm (0.173") Bantam plug with solder contacts, red sleeve |
| NP3TT-AU-B | Nickel + black plastic | Gold | • | 4.4 mm (0.173") Bantam plug with solder contacts, black sleeve |
| NP3TT-AU-R | Nickel + red plastic | Gold | • | 4.4 mm (0.173") Bantam plug with solder contacts, red sleeve |
| NP3TT-P-B | Black plastic | Nickel | • | 4.4 mm (0.173") Bantam plug with solder contacts, black sleeve |
| NP3TT-P-R | Red plastic | Nickel | • | 4.4 mm (0.173") Bantam plug with solder contacts, red sleeve |
| NP3TT-P-AU-B | Black plastic | Gold | • | 4.4 mm (0.173") Bantam plug with solder contacts, black sleeve |
| NP3TT-P-AU-R | Red plastic | Gold | • | 4.4 mm (0.173") Bantam plug with solder contacts, red sleeve |
| NP3TT-2 | Black plastic | Nickel | • | 4.4 mm (0.173") Twin Bantam plug with solder contacts, black sleeve |
| **3.5 mm Right-Angle Stereo Plug** | | | | |
| NTP3RC | Nickel | Nickel | IEC 60603-11 | 3.5 mm audio plug with chuck and bushing |
| NTP3RC-B | Black Cr | Gold | IEC 60603-11 | 3.5 mm audio plug with chuck and bushing |

## Accessories

BSP-*

BPX-*

BSTT-*

BSTP-*

PXR-*

PCR-*

| | |
|---|---|
| BSP-* | Colored bushing for NP*C Series |
| BPX-* | Colored bushing for NP*X Series |
| BPX-L | Large bushing for NP*X Series up to 8.0 mm cable O.D. |
| BSTT-* | Colored sleeves for NP3TT Series |
| BSTP-* | Colored sleeves for NP3TT-P Series |
| PXR-* | Colored marking rings for NP*X Series |
| PCR-* | Colored marking rings for NP*C Series |

*: Must be ordered in multiples of 100.

| Black | Brown | Red | Orange | Yellow | Green | Blue | Violet | Grey | White |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | | 7 | 8 | 9 |

## Assembly tool

HX-TT-1

HX-R-BNC

HX-R-BNC-PJ

HTXP

HTPXS

| | |
|---|---|
| HX-TT-1 | Assembly and crimp tool for NP3TT-1/AU |
| HX-R-BNC | HEX crimp tool for NP3TT-P* |
| DIE-R-BNC-PJ | HEX crimp die for NP3TT-P* (5.4 mm) |
| HTXP | Hand tool to tighten the PX and XX-bushing |
| HTPXS | Hand tool to hold shell of PX Plug |

1/4" cable jack with locking

Neutrik cable retention

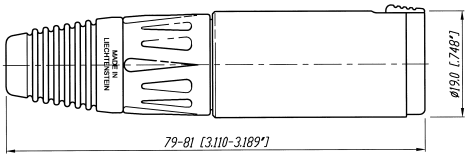
## Locking 1/4" Cable Jacks

NJ3FC6

NJ3FC6-BAG

- Securely locking cable jack
- Mates with all mono or stereo plugs specified to EIA RS-453
- Extremely robust and reliable
- Excellent Neutrik cable retention
- Colored boots available in 10 colors
- For cable O.D.s up to 8 mm

**NJ3FC6**



Release latch

Standard D mounting dimensions

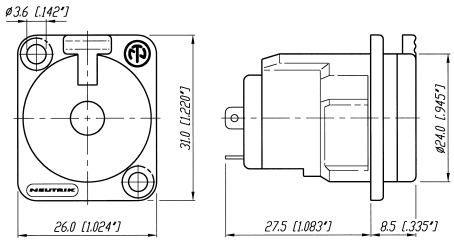
## Locking 1/4" Chassis Jacks

NJ3FP6C

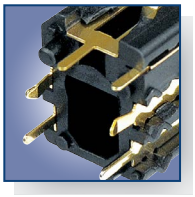
NJ3FP6C-BAG

- Mates with all mono or stereo plugs specified to EIA RS-453
- Dimensionally compatible with D Series (31 x 26 mm)
- Securely locking chassis jack
- Solder terminals
- Special version with black plastic shell
- Choice of grounding option (see on www.neutrik.com)

**NJ3FP6C**

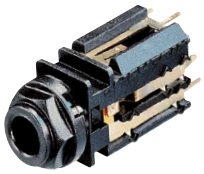


Snapping cap

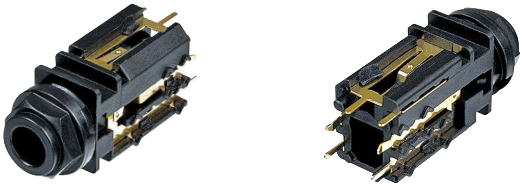


Solder tags

## 1/4" Vertical Jacks



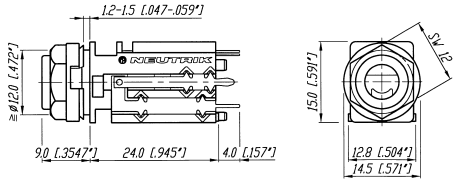
NJ*FD-V



NJ6TB-V

- Neutrik 1/4" Vertical PCB Jacks come in either standard 1/4" (FD) or mil gauge (TB) versions
- They feature a snap on/twist off cap which drastically reduces assembly times
- Retention force is provided by a special spring element independent of the contacts which results in optimal contact force with minimal contact wear
- Gold plated contact area for long durability and reliable, corrosion free operation
- High packing density compact design allows for more jacks in less space
- Available in Stereo switching and non-switching versions, and Mono non-switching version
- More than 10'000 insertion / withdrawal cycles

**NJ*FD-V**




*: 2, 3, 5, 6

Half threaded nose

Chrome ferrule

Plastic nut

## M Jacks

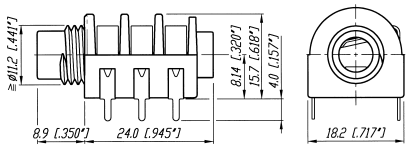
NMJ4HHD2

NMJ2HC-S

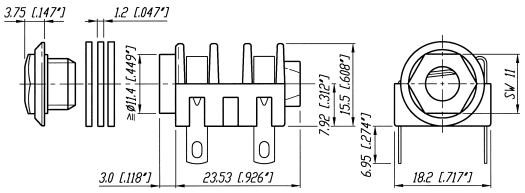
NMJ6HFD2

- Wide body and extremely durable contacts
- Available in all common versions:
  - mono
  - stereo
  - switched
  - unswitched
- Hardwire and PCB version
- Nose type in
  - half threaded
  - fully threaded
  - chrome ferrule
- Full threaded and chrome nose M Jacks are supplied with washer and fixing nut
- Mounting hardware for half threaded nose must be ordered separatly
- Fascia appearance in plastic or chrome

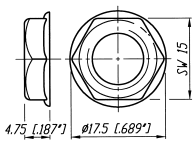
**NMJ6HHD2**



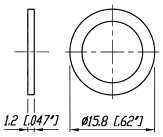

**NMJ4HC-S**



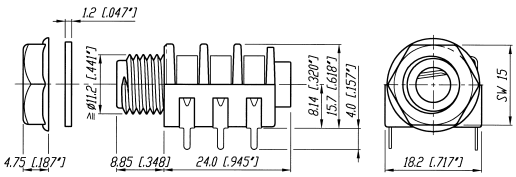

**NRJ-NUT-B**




**NRJ-WB (washer)**



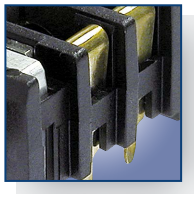

**NMJ6HFD2**



Half threaded nose

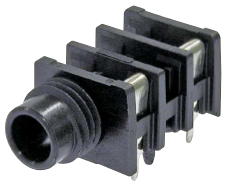
Chrome nose

Chassis ground contact

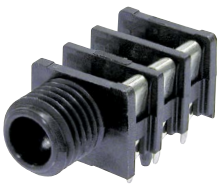


Gold plated contacts

## Slim Jacks



NRJ4HH-1



NRJ6HF-1

NRJ6HM-1

NRJ-NUT-B

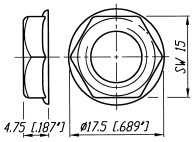
NRJ-NUT-MK

NRJ-NUT-MS

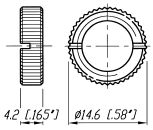
NRJ-NUT-MN
(Metal Nose only)

- High board packing density
- Nose type in
  - half thread
  - fully threaded
  - metal
- *-1 versions meet the requirements of EMC rules through efficient chassis grounding system
- Retention spring ensures optimal grip on inserted plugs, avoiding the chance of lost connection
- All Slim line jacks have PCB horizontal mount pins
- Mounting nuts in different versions available – must be ordered separatly

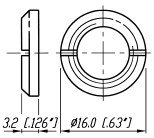
**NRJ-NUT-B**




**NRJ-NUT-MK**

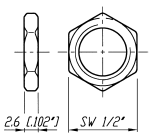



**NRJ-NUT-MS**

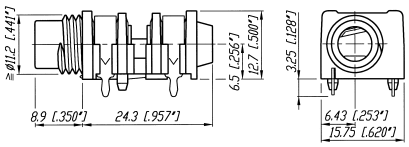



**NRJ-NUT-MN**

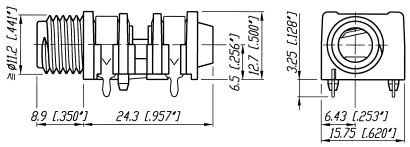
(Only compatible with metal nose).
Thread pitch is a 3/8" 32 UNEF 2A.



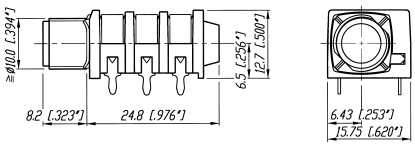

**NRJ4HH-1**




**NRJ4HF-1**




**NRJ6HM-1**



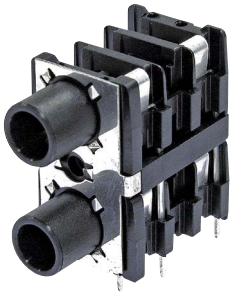
Plane nose

Quick fix nose

Quick fix nut

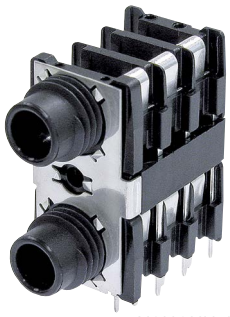
Fully threaded nose

## Stacking Jacks



NSJ8HC

NSJ12HL

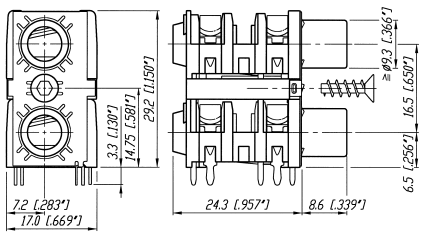


NSJ12HH-1

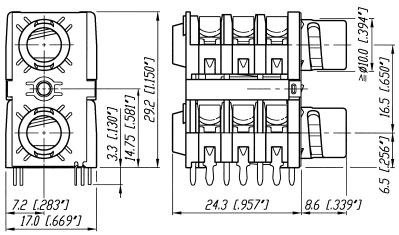
NSJ12HF-1

- Mono and stereo dual slim jack socket for PCB mounting with switch contacts
- Mounting method by either two quick fix or threaded nuts or one single center screw
- Highest board packing density as two jacks are in a single footprint, fit in 1 RU
- Version with fully and half threaded nose, full nose, quick-fit and plane

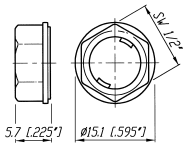
**NSJ8HC**



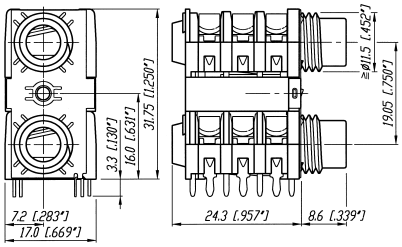

**NSJ12HL**



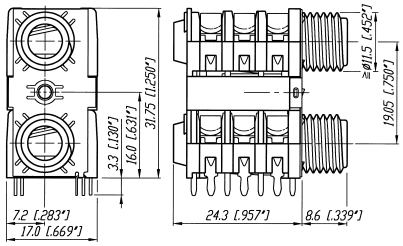

**NSJ-NUT-B**
(Quick fix nut)



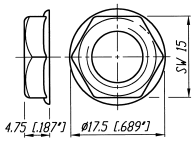

**NSJ12HH-1**




**NSJ12HF-1**



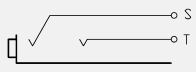

**NRJ-NUT-B**



| Specifications | | | Vertical Jack | Locking Cable & Chassis Jack | M Jack | Slim Jack | Stacking Jack |
|---|---|---|---|---|---|---|---|
| **Electrical** | | | | | | | |
| Contact resistance | - initial | | < 10 mΩ | < 6 mΩ | < 15 mΩ | < 10 mΩ | - |
| | - Top row | | - | - | - | - | < 15 mΩ |
| | - Bottom row | | - | - | - | - | < 10 mΩ |
| Switch contact resistance | - for silver | | - | - | < 30 mΩ | < 25 mΩ | - |
| | - for gold | | < 15 mΩ | - | - | < 10 mΩ | - |
| | - Top row | | - | - | - | - | < 15 mΩ |
| | - Bottom row | | - | - | - | - | < 10 mΩ |
| Insulation resistance | ≥ 1GΩ @ 500 V dc | | ● | ● | ● | ● | ● |
| Dielectric strength | 1 kV dc | | ● | ● | ● | ● | ● |
| Rated current | | | 3 A | 10 A | 3 A | 3 A | 3 A |
| Rated switch contact current | | | 0.25 A @ 12 V | - | 0.5 A @ 50 V | 0.5 A @ 50 V | 0.5 A @ 50 V |
| **Mechanical** | | | | | | | |
| Lifetime | > 10`000 cycles | | ● | ● | ● | ● | ● |
| Insertion / withdrawal force | | | < 20 N / > 8 N | < 30 N / > 20 N | < 30 N / > 10 N | < 30 N / > 10 N | < 30 N / > 10 N |
| Cap opening torque | | | 25 N cm / 9.84 N in | - | - | - | - |
| Locking force | | | - | > 80 N | - | - | - |
| Wire size | | | - | 1 mm² / 18 AWG ① | - | - | - |
| Cable O.D. (FC6 only) | | | - | 3.5 - 8.0 mm | - | - | - |
| Panel thickness | | | 1.2 - 1.5 mm [0.047 - 0.06"] | - | - | - | - |
| | - Full nose type | | - | - | < 3.0 mm | < 3.0 mm | - |
| | - Half nose type | | - | - | < 1.0 mm | < 1.0 mm | - |
| | - Chrome nose | | - | - | < 4.7 mm | - | - |
| | - NSJ*HL | | - | - | - | - | 1.0 - 1.6 mm |
| | - NSJ*HC | | - | - | - | - | > 1.0 mm |
| **Material** | | | | | | | |
| Shell / Handle | | | PA 6.6 30% GR | ZnAl4Cu1 | PA 6.6 15% GR | PA 6 15% GR | PA 6 15% GR |
| | | | | Ni or black | | | |
| | - FP6P | | - | PA 6.6 30% GR | - | - | - |
| Insulation | | | - | PA 6.6 30% GR | - | | |
| Contacts | | | CuSn6 | CuBe2/CuZn37 (ground) | CuSn6 | CuSn6 | CuSn6 |
| Contact surface | | | 0.2 µm Au | 2 µm Ag | gal 2 µm Ag/0.2 µm Au | gal 2 µm Ag/0.2 µm Au | gal 2 µm Ag |
| Cap / Nut / Washer | | | POM | - | PA 6.6 15% GR | PA 6.6 15% GR | PA 6.6 15% GR |
| Ring Nut | | | - | - | - | Brass (Ni plated) | Brass (Ni plated) |
| Chuck | | | - | POM | - | - | - |
| Bushing | | | - | PA 6.6 15% GR + PUR | - | - | - |
| ①... max. for soldering tag | | | | | | | |
| **Environmental** | | | | | | | |
| Solderability complies with | IEC 68-2-20 | | ● | ● | ● | ● | ● |
| Standard Compatibility | | | | | | | |
| | EIA RS 453 + IEC 60603-11 | NJ*FD | ● | ● | ● | ● | |
| | B-GAUGE BPO 316, MIL-J-641/3 | NJ*TB | - | - | - | - | |
| Temperature range | -25 °C to +70 °C | | ● | ● | ● | ● | ● |

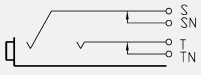
**Circuits:**

Mono unswitched



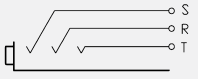

N*J2**

Mono switched



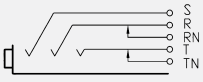

N*J4**

Stereo unswitched



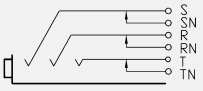

N*J3**

2x switching (normalling) Stereo




N*J5**

3x switching (normalling) Stereo




N*J6**

EXCEPTION: NRJ*HM-1-PRE & NRJ*HH(F)-1 ..... Sleeve not switched

## Ordering Information

| Part Number | Shell | Contacts | Terminations | Standards Compatibility | Remarks |
|---|---|---|---|---|---|
| **Slim Jack** | | | | | |
| **PCB Mount Sockets - Switched** | | | | | |
| NRJ3HF-1 | Black/Plastic | Silver | Horizontal PCB mount | IEC 60603-11/EIA RS 453 | Stereo, full threaded nose, chassis ground contact |
| NRJ4HF | ● | ● | ● | ● | Mono, full threaded nose |
| NRJ4HF-1 | ● | ● | ● | ● | Mono, full threaded nose, chassis ground contact |
| NRJ6HF | ● | ● | ● | ● | Stereo, full threaded nose |
| NRJ6HF-1 | ● | ● | ● | ● | Stereo, full threaded nose, chassis ground contact |
| NRJ4HH | ● | ● | ● | ● | Mono, half threaded nose |
| NRJ4HH-1 | ● | ● | ● | ● | Mono, half threaded nose, chassis ground contact |
| NRJ6HH | ● | ● | ● | ● | Stereo, half threaded nose |
| NRJ6HH-1 | ● | ● | ● | ● | Stereo, half threaded nose, chassis ground contact |
| NRJ6HF-AU | ● | Gold | ● | ● | Stereo, full threaded nose, gold plated contacts |
| NRJ6HF-1-AU | ● | Gold | ● | ● | Stereo, full threaded nose, chassis ground contact, gold plated contacts |
| NRJ6HH-AU | ● | Gold | ● | ● | Stereo, half threaded nose, gold plated contacts |
| NRJ-NUT-B | ● | - | - | - | Hexagonal black plastic nut |
| NRJ-NUT-R | Red/Plastic | - | - | - | Hexagonal red plastic nut |
| NRJ-NUT-MK | Metal/Ni plated | - | - | - | Metal ring nut, knurled |
| NRJ-NUT-MS | Metal/Ni plated | - | - | - | Metal ring nut |
| **PCB Mount Sockets - Switched with Metal Nose** | | | | | |
| NRJ6HM-1 | Black/Plastic | Silver | Horizontal PCB mount | IEC 60603-11/EIA RS 453 | Stereo, metal threaded nose |
| NRJ6HM-1-AU | ● | Gold | ● | ● | Stereo, metal threaded nose, gold plated contacts |
| NRJ-NUT-MN | Metal | - | - | - | Hexogonal metal nut (for metal nose jack only) |
| **Stacking Jack** | | | | | |
| NSJ8HL | Polyamid PA 6.6 GR | Silver | Horizontal PCB mount | IEC 60603-11/EIA RS 453 | Mono, quick fix nose |
| NSJ12HL | ● | ● | ● | ● | Stereo, quick fix nose |
| NSJ8HC | ● | ● | ● | ● | Mono, full nose |
| NSJ12HC | ● | ● | ● | ● | Stereo, full nose |
| NSJ12HF-1 | ● | ● | ● | ● | Full threaded nose |
| NSJ12HH-1 | ● | ● | ● | ● | Half threaded nose |
| NSJ-NUT-B | Black/Plastic | - | - | - | Quick fix nut |

All Slim jacks are for PCB mount only.
Mounting nuts must be ordered separately, except for Stacking Jack type NSJ8HL and NSJ12HL.

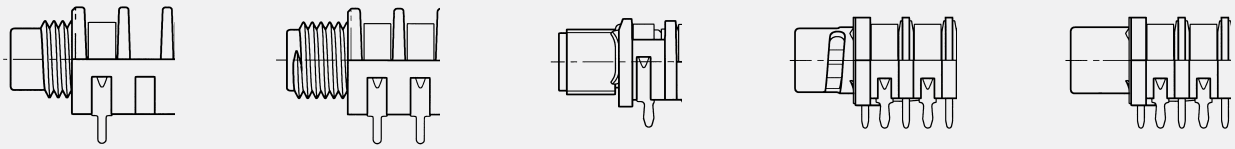
### Ordering Key:

**NRJ*H**

| | |
|---|---|
| | NEUTRIK Jack Horizontal |
| **H** | half threaded nose |
| **F** | full threaded nose |
| **L** | quick fix nose |
| **M** | metal threaded nose |
| **C** | plane nose |
| **-1** | chassis ground contact |

| | |
|---|---|
| ***** | number of contacts: |
| **2** | mono unswitched |
| **4** | mono switched |
| **6** | stereo switched |
| **8** | mono stacking jack |
| **12** | stereo stacking jack |

**Nose:** **-H** **-F** **-M** **-L** **-C**



| Part Number | Shell | Contacts | Terminations | Standards Compatibility | Remarks |
|---|---|---|---|---|---|
| **1/4" Locking Jack** | | | | | |
| NJ3FC6 | Nickel | Silver | Wire soldering | IEC 60603-11/EIA RS 453 | Cable Jack |
| NJ3FC6-BAG | Black | ● | ● | ● | ● |
| NJ3FP6C | Nickel | ● | ● | ● | Chassis Jack |
| NJ3FP6C-B | Black | Gold | ● | ● | ● |
| NJ3FP6C-BAG | Black | Silver | ● | ● | ● |
| NJ3FP6F-P | Black/Plastic | ● | ● | ● | Plastic Chassis |
| NJ3FP6P-BAG | Black/Plastic | ● | ● | ● | Plastic Chassis |

## Accessories

DSS

SCDR

NDJ

NZP1RU-12

SCDX

SCCD-W

SCDP-*

| | | | |
|---|---|---|---|
| NZP1RU-8 | Panel 1RU housing with 8 D-shape cutouts | SCDX | Hinged cover seals locking 1/4 chassis jack, IP42 rated |
| NZP1RU-12 | Panel 1RU housing with 12 D-shape cutouts | SCCD-W | Spring-loaded cover to seals locking 1/4 chassis jack, IP 65 |
| DSS-* | Lettering plate, colored plastic | SCDP-* | D-Size sealing gaskets, color coding |
| SCDR | Rear end protection cover for locking 1/4"chassis jack | | |
| NDJ | dummyPLUG for 1/4" chassis jack | | (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |

| | | | | | |
|---|---|---|---|---|---|
| **1/4" Vertical Jack** | | | | | |
| NJ2FD-V | Black/Plastic | Gold | Vertical PCB mount | IEC 60603-11/EIA RS 453 | Non-switching Mono Jack (T/S) |
| NJ3FD-V | ● | ● | ● | ● | Non-switching Stereo Jack (T/R/S) |
| NJ5FD-V | ● | ● | ● | ● | 2 x switching (normalling) Stereo jack (T/TN/R/RN/S) |
| NJ6FD-V | ● | ● | ● | ● | 3 x switching (normalling) Stereo jack (T/TN/R/RN/S/SN) |
| NJ6TB-V | ● | ● | ● | B-Gauge BPO316 Mil-J-641/3 | 3 x switching (normalling) Stereo jack (T/TN/R/RN/S/SN) |
| **M Jack** | | | | | |
| NMJ2HF-S | Black/Plastic | Silver | Horizontal PCB mount | IEC 60603-11/EIA RS 453 | Mono, unswitched, full threaded nose, solder tags |
| NMJ3HF-S | ● | ● | ● | ● | Stereo, unswitched, full threaded nose, solder tags |
| NMJ4HF-S | ● | ● | ● | ● | Mono, switched, full threaded nose, solder tags |
| NMJ2HC-S | ● | ● | ● | ● | Mono, unswitched, Chrome ferrule, solder tags |
| NMJ4HC-S | ● | ● | ● | ● | Mono, switched, Chrome ferrule, solder tags |
| NMJ4HFD2 | ● | ● | ● | ● | Mono, switched, full threaded nose, PCB mount |
| NMJ4HFD3 | ● | ● | ● | ● | Mono, switched, full threaded nose, offset PCB mount |
| NMJ4HCD2 | ● | ● | ● | ● | Mono, switched, Chrome ferrule, PCB mount, |
| NMJ4HHD2 | ● | ● | ● | ● | Mono, switched, half threaded nose, PCB mount, without nut and washer |
| NMJ6HF-S | ● | ● | ● | ● | Stereo, switched, full threaded nose, solder tags |
| NMJ6HC-S | ● | ● | ● | ● | Stereo, switched, Chrome ferrule, solder tags |
| NMJ6HCD2 | ● | ● | ● | ● | Stereo, switched, Chrome ferrule, PCB mount |
| NMJ6HHD2 | ● | ● | ● | ● | Stereo, switched, half threaded nose, PCB mount, without nut and washer |
| NMJ6HFD2 | ● | ● | ● | ● | Stereo, switched, full threaded nose, PCB mount |
| NMJ6HFD3 | ● | ● | ● | ● | Stereo, switched, full threaded nose, offset PCB mount |
| NMJ6HCD3 | ● | ● | ● | ● | Stereo, switched, Chrome ferrule, offset PCB mount |
| NMJ6HFD4 | ● | ● | ● | ● | Stereo, switched, full threaded nose, tear drop PCB mount |

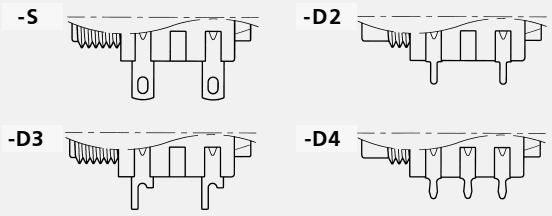
Full threaded and Chrome nose M-Jacks are supplied with fixing nut and washers.
Mounting hardware for half threaded nose must be ordered separately.

### Ordering Key:

**NMJ*H**

| | |
|---|---|
| | NEUTRIK M Jack Horizontal |
| **H** | half threaded nose |
| **F** | fully threaded nose |
| **C** | chrome nose |
| **-S** | solder tag |
| **D2** | PCB pins 02 |
| **D3** | PCB pins 03 |
| **D4** | PCB pins 04 |

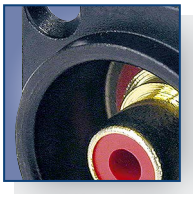
| | |
|---|---|
| * | number of contacts: |
| **2** | mono unswitched |
| **3** | stereo unswitched |
| **4** | mono switched |
| **5** | stereo switched (T/S) |
| **6** | stereo switched (T/R/S) |



Gold plated contacts

Soft-touch surface

Profi®



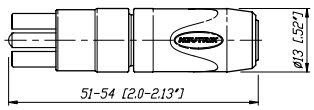
Phono socket

## Profi® RCA Series

NF2C-B2

- Makes ground before signal contact and breaks signal before ground
- No more disturbing noise and broken speaker cones
- Precisely machined to our demanding quality standards
- Neutrik unique chuck type strain relief
- Gold plated contacts
- Sleek barrel with soft touch surface and colored shrink sleeve
- Improved ground solder lug for ease soldering

**NF2C-B2**



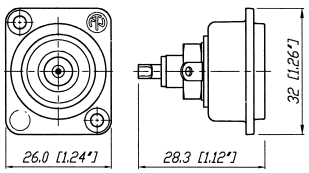

## Phono Socket

NF2D-4

NF2D-B-6

- Precisely machined to our demanding quality standards
- Gold plated contacts

**NF2D-***




*: available in 9 colors see page 69

| Specification | | Profi® | Phono Socket |
|---|---|---|---|
| **Electrical** | | | |
| Rated current per contact | 10 A rms continuous | ● | ● |
| Rated insulation voltage | 50 V ac | ● | ● |
| Insulation resistance | | > 100 GΩ | < 5 GΩ |
| Dielectric strength | | 1.5 kV dc | 0.5 kV dc |
| Capacitance (pin to shell) | | 7 pf | 9 pf |
| **Mechanical** | | | |
| Life time (mating cycles) | > 2000 | ● | ● |
| Cable O.D. range | 3.0 – 7.3 mm | ● | - |
| Wiring | soldering | ● | ● |
| Max. wire size | 2.5 m² / AWG 14 | ● | - |
| Cable anchoring | Neutrik® chuck type strain relief | ● | - |
| **Material** | | | |
| Housing | Brass (CuZn39Pb3) | ● | - |
| | Zinc diecast (ZnAlCu1) | - | ● |
| Insert | PBTP 20% GR | ● | - |
| Contacts | Brass (CuZn39Pb3) | ● | ● |
| Contact plating | 0.05 µm Au plated over 2 µm Ni | ● | ● |
| Chuck | Polyacetal (POM) | ● | - |
| **Environment** | | | |
| Temperature range | -30 °C to +80 °C | ● | ● |
| Protection class | IP 40 | ● | ● |
| Flammability | UL 94 HB | ● | ● |
| Solderability | complies with IEC 68-2-20 | ● | ● |

## Ordering Information

### Phono Profi®

| | |
|---|---|
| NF2C-B2 | Professional "phono Plug" (RCA or CINCH type), two plugs with red and black coding, two strain relief chucks for a second cable diameter |

### Phono (RCA) Socket

| | |
|---|---|
| NF2D-* | Chassis Phono (RCA) socket in D Shape housing |
| NF2D-B-* | Chassis Phono (RCA) socket in black D Shape housing |
| | * color coding: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White |

### Accessories

| | |
|---|---|
| NDP | Dummy plug for phone socket |
| NZP1RU-8 | Panel 1RU housing with 8 D-shape cutouts |
| NZP1RU-12 | Panel 1RU housing with 12 D-shape cutouts |
| SCL | Plastic sealing cover to protect the connector sockets against dust and moisture |
| SCDP-* | D-Size sealing gaskets, colour coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |
| SCDX | Hinged cover seals D-size chassis connectors, IP 42 rated |
| SCCD-W | Spring-loaded cover to seals D-size chassis connectors, IP 65 rated |

Simple housing



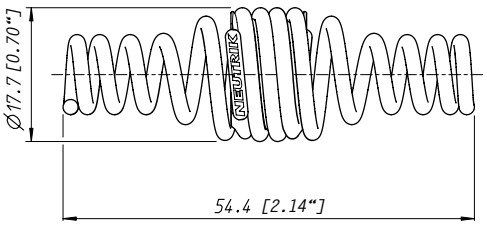
## plug2PLUG

NA2JJ

Application: 1/4" Phone Plug to 1/4" Phone Plug

- The plug2PLUG is a simple yet sophisticated plug adapter for a quick and easy connection of two mono TS plugs.

**NA2JJ**




## Ordering Information

| plug2PLUG | |
|---|---|
| NA2JJ | 2 pole coupler to extend two 2 pole 1/4" Phone Plugs |

# Loudspeaker Connectors

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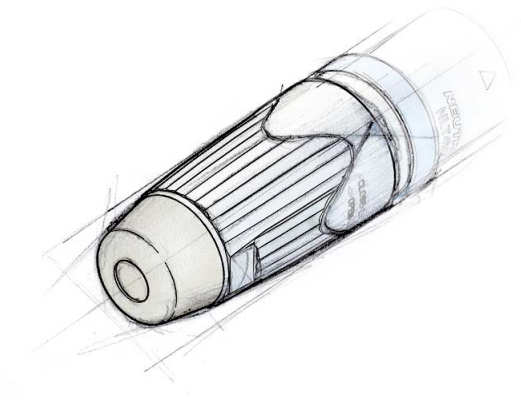
**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA®, XIRIUM®, are registered trademarks of Neutrik AG.**

# speakON

## Introduction

The Neutrik speakON® Series, known in the professional audio industry as "The loudspeaker connector" has become the state of the art in speaker and amplifier connectivity. Introduced in 1987 speakON was invented by Neutrik as a result of customer demand for a reliable speaker connection. The pro audio market quickly realized the advantages of this completely new connection system.

The design is optimized for loudspeaker applications with an outstanding cost-performance ratio. As market leader for speaker connections we are proud to offer an all-encompassing product line for the specific needs of today's market. Recent designs such as the STX series and the speakON Combo offer solutions for nearly every speaker application.



## Integrated Design

One of Neutrik's goals is to create products that are easily distinguished from other manufacturers. We have successfully achieved this in our engineering efforts as well as the patent and trademark protection granted for our unique products. To further establish a clear difference between Neutrik and our competitor's products we give our customer the means to easily identify original Neutrik products. Therefore all of our new products such as the SPX and the STX series are designed according to the protected integrated design. (EU-Pat.: DM/057 379, US-Pat. Pending, CHINA-Pat.: 02305192.2 / 193.0/194.9 / 195.7)

## Features & Benefits

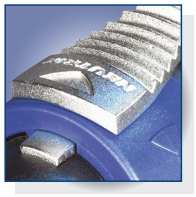
Today's speakON series is a result of a continuous product improvement process. The principal idea has been kept and optimized with material and design modifications over the years.

A traditional speakON stands for:

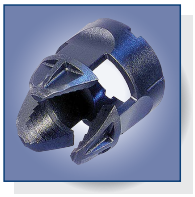
- Reliable and robust, easy and fast to assemble
- 2, 4 and 8 pole cable and chassis connectors in various versions
- Optimal "Quick Lock" system for speaker applications
- Neutrik proven and unique chuck type cable strain relief
- Outstanding cost-performance ratio
- De facto standard
- Meets all worldwide safety requirements (IEC, UL, ...)

Beyond that, the latest designs as the SPX and STX series offer:

- Up to 50 A current rating
- Only 3 parts with 1 piece strain relief design for even easier assembly
- Convertable right-angle version
- Weatherproof and extremely robust



Quick lock



Chuck type strain relief

Right angle conversion

## speakON® SPX Series 2 & 4 Pole Cable Connector

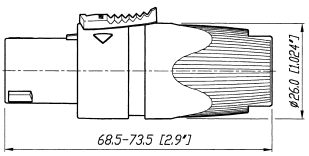
NL2FX

NL4FX

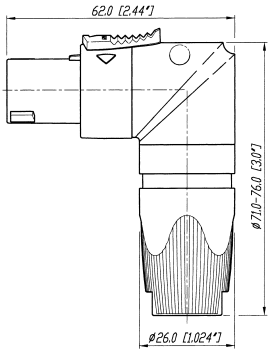
NL4FRX

- Current rating 40 A rms continuous
- Up to 50 A audio signal, duty cycle 50%
- Only 3 parts, easy to assemble
- High impact materials – long-lasting and reliable
- Easy and extremely precise locking system "Quick Lock"
- Improved grip on latch
- 1 piece strain relief, chuck for 7 to 14.5 mm cable O.D.
- Color coding possible
- Improved screw-type termination for highest pull-out force
- Integrated design guarantees "Made by NEUTRIK®"

**NL4FX**

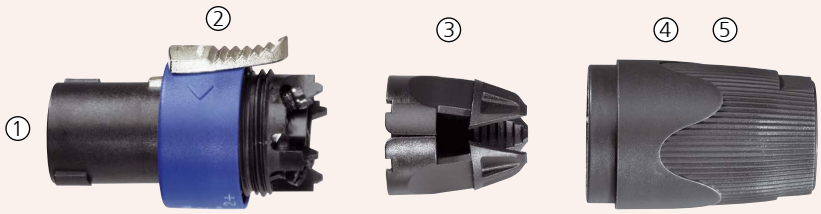



**NL4FRX**



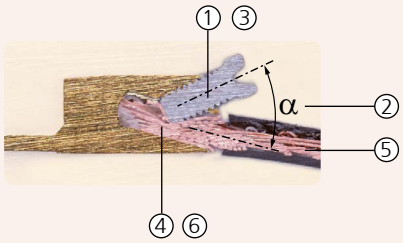
## Design Criteria

This second generation of speakON connectors features higher current rating for the operation of high power speakers and amplifiers carrying more than 1`000 Watts. Only 3 parts make it fast and easy to assemble with a more reliable performance. Our unique design makes it possible to change easily and quickly from a straight connector to the right-angle version, even without disconnecting the cable.




① Easy and extremely precise locking system "Quick Lock"
② Improved grip on latch
③ 1 piece strain relief, chuck for 7 to 14.5 mm cable O.D., with accessory NLRR 5-8 mm
④ Color coding possible
⑤ Integrated design guaranties "Made by NEUTRIK®"

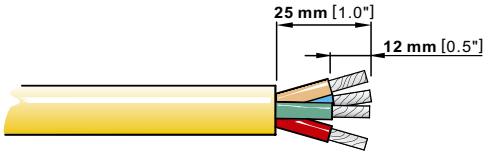
**Improved SPX-Series screw contacts!** (Wire position after assembly)




① Progressive clamping as wire is pushed forward
② Acts as screw locking device due to side forces
③ Large combi drive - M4 screw
④ Wire size 1.5 - 4 mm² (AWG 12) for 6 mm² (AWG 10) remove screw & solder
⑤ Pull out force > 200 N @ 80 cNm
⑥ Gas tight connection

## Assembly

Prepare cable as shown.




**HINT:**

For easy wiring especially of thick cables, first screw on the inner contacts 1+ and 2+ and afterwards the outer contacts 1- and 2- !

Use screwdriver Pozidriv #1 only.

Glass reinforced housing

Quick lock

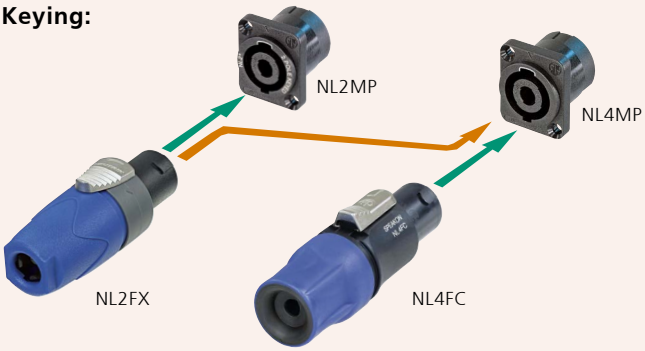
## speakON® FC Cable Connector Series

NL4FC

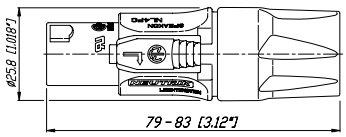
NL8FC

- 4 pole – branded with unique hologram – guarantees genuine and authentic Neutrik product
- Up to 30 A rms current rating
- Glass reinforced materials for housing and inserts
- Unique Neutrik chuck type strain relief
- Precise keyway for secure mating
- Accurate twist lock latching system
- 4 pole in new design with more ergonomic latch

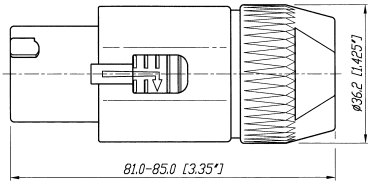
**Keying:**




**NL4FC**




**NL8FC**



1/4" Jack adapter

Extention coupler

## speakON® Adapter

NA4LJX

NL4MMX

NL8MM

**NL4MMX:**

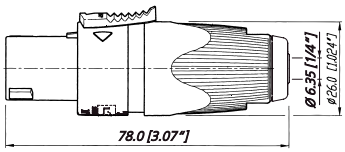
Features permanent secure connection on a speakON cable connector using 2nd lock.

**Secure Lock!**

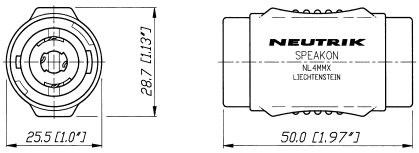
**NL4MMX + NL4FX:**
(locked on the cable)

Changes gender to male when permanently locked on the cable.

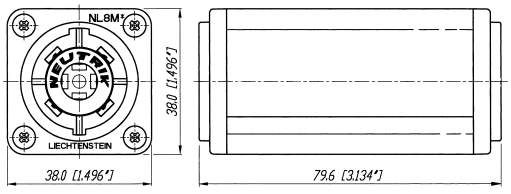
**NA4LJX**




**NL4MM**

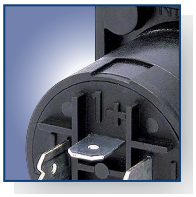



**NL8MM**



Reinforced locking area

Nickel housing



3/16" flat tabs

Vertical PCB mount

## speakON® Chassis Connector

NL2MP

NL4MD-H-1

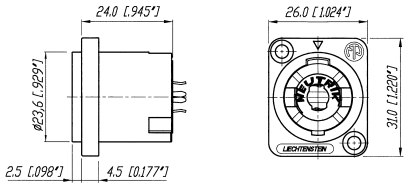
NL4MD-H-3

NL4MPR

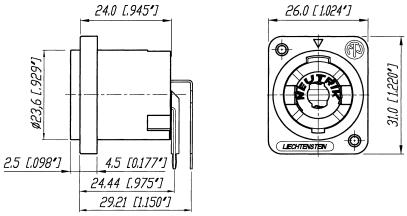
NL8MPR

- Standard version up to 30 A rms, ultra high current version up to 50 A audio current
- Glass reinforced materials
- Precise keyway for secure mating
- Accurate twist lock latching system
- Metal front plate (8 pole) or metal insert in locking area (2 & 4 pole)
- Various mounting and wiring possibilities
- "Air tight design", optimized for speaker applications
- D or G panel cutouts to be easily mounted on audio industry standard panels
- 4 pole branded with unique hologram

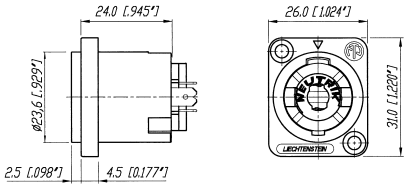
**NL4MD-V**



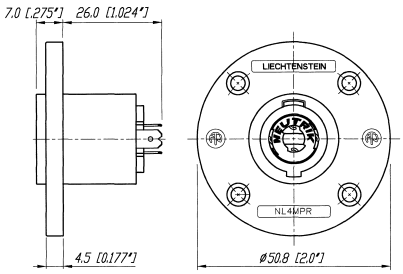

**NL4MD-H**



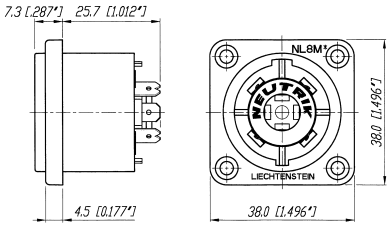

**NL4MP**




**NL4MPR**




**NL8MPR**



Locking key

PCB solder pins

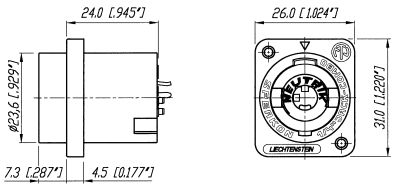
## speakON® Combo

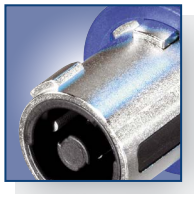
NLJ2MD-V

- D-size flange
- Compatible PCB layout and panel mount to NL4MD-V-1 (NL4MD-H)
- Cost saving – combines two connectors in one housing
- Mates with all 2, 4 pole speakON® and 1/4" Phone Plugs
- PA-wiring: 1+ is connected to TIP, 1- to the SLEEVE
- PCB layout of NLJ2MD-V is compatible with NL4MD-V and PCB layout of NLJ2MD-H is compatible with NL4MD-H

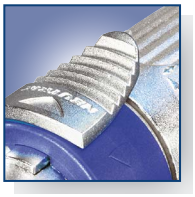
**Combines a speakON® and 1/4" Phone Jack – one for two**

**NLJ2MD-V**





Reinforced locking



Latch lock

XL-solder contacts

Protected latch

## speakON® STX Series Cable Connectors

NLT4FX-BAG

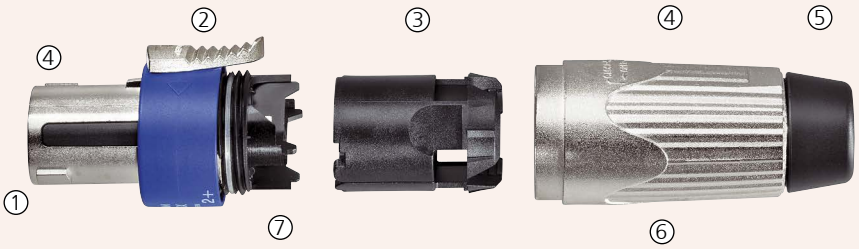
NLT4MX

NLT8FX

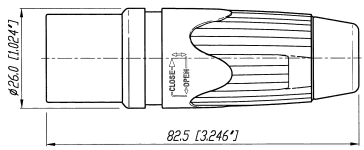
NLT8MX-BAG

- Up to 50 A current rating
- Robust and durable all metal housing
- Sealing ring provides weatherproof IP 54 rating in mated condition on 4 pole version
- Reinforced metal quick lock system for ease and precise locking
- Extra large solder contacts for up to 6 mm² (AWG 10) wires
- Compatible with all available speakON products

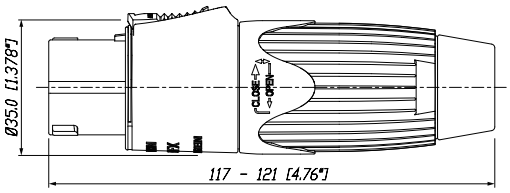
① Easy and extremely precise locking system "quick look", reinforced with metal
② Improved grip on latch
③ 1 piece strain relief, chuck for cables from 9 to 16 mm O.D.
④ Extreme rugged "Touring Approved"
⑤ Rubber sealing boot
⑥ Integrated Design garanties "Made by NEUTRIK®"
⑦ X-large solder contacts for up to 6 mm² (AWG 10) wires




**NLT4MX**




**NLT8FX**



Robust metal housing

XL-solder contacts

1/4" flat tabs

## speakON® STX Series Chassis Connectors

NLT4FP-BAG

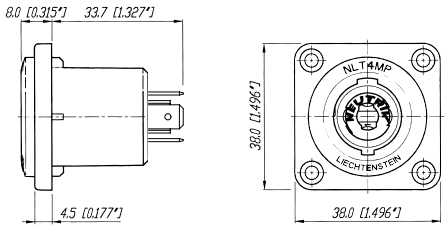
NLT4MD-V

NLT4MP-BAG

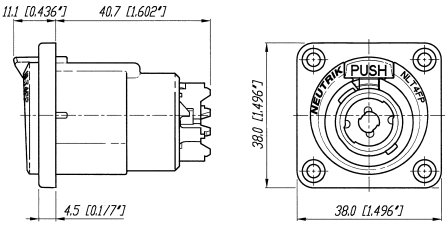
NLT8MP-BAG

- Extremely robust metal housing designed for harsh and demanding environment
- Weatherproof design features sealing gaskets
- 4 type range – also male cable connector and female receptacle on 4 pole version
- All-metal housing makes the STX Series rugged and durable
- Weatherproof built-in gasket meets IP 54 protection class (4 pole)
- Ideal product for touring applications and harsh environments
- Best electrical performance up to 50 A audio current
- Uses precise "Quick Lock" system
- Compatible with all currently available speakON products
- 4 pole version has UL recognized components, CSA listed

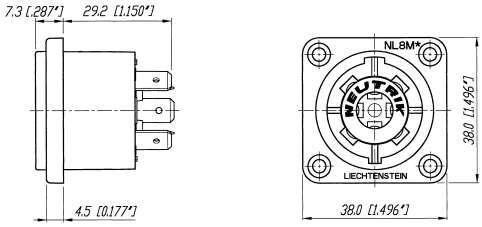
**NLT4MP**




**NLT4FP**




**NLT8MP**



| Specification | | SPX Series Cable Con. | STX Series Cable Con. | speakON FC Cable Con | speakON Chassis + Combo | Adapter | STX Series Chassis |
|---|---|---|---|---|---|---|---|
| **Electrical** | | | | | | | |
| Number of contacts | | 2 + 4 | 4 + 8 | 4 + 8 | 2, 4, 8 | 2, 4, 8 | 4 + 8 |
| Rated current per contact | 40 A rms continuous | ● | ● | 30 A | 30 A** | 15 A | ● |
| CSA approved rating | 25 A (4 pole) rms continuous | ● | ● | - | 10 A | - | - |
| | 50 A audiosignal, duty cycle 50% | ● | ● | 40 A | 40 A | 30 A | ● |
| Combo | 15 A rms continuous | - | - | - | ● | - | - |
| Rated insulation voltage | 250 V ac | ● | ● | ● | ● | ● | ● |
| Contact resistance after lifetime | < 2 mΩ | ● | ● | ≤ 3 | ≤ 3 | ≤ 3 | ● |
| Insulation resistance | > 1 GΩ | ● | > 100mΩ | ● | ● | ● | > 100mΩ |
| Dielectric strength | 4 kV peak | ● | ● | ● | ● | ● | ● |
| 1/4" Jack | 1.5 kV peak | - | - | - | - | ● | - |
| **Mechanical** | | | | | | | |
| Locking System | Quick lock (latch) | ● | ● | ● | ● | ● | ● |
| Life time (mating cycles) | > 5'000 | ● | ● | ● | ● | ● | ● |
| Cable O.D. range (mm) | 2 pole | 6 - 10 | - | - | - | - | - |
| | 4 pole | 7 - 14.5 | 9 - 16 | 6 - 15 | - | - | - |
| | 8 pole | - | 8 - 20 | 8 - 20 | - | - | - |
| Wiring | screw type terminals | 4 mm² (AWG 12) | - | 4 mm² (AWG 12) | ● (ST) | - | - |
| | soldering | 6 mm² (AWG 10) | 6 mm² (AWG 10) | 4 mm² (AWG 12) | ● | - | ● |
| | flat tabs for 3/16" FASTON® (4.8 x 0.5 mm) | - | - | - | ● | - | - |
| | flat tabs for 1/4" FASTON® (6.3 x 0.8 mm) | - | - | - | ● (UC) | - | ● |
| | PCB-version | - | - | - | ● | - | ● |
| Insertion / withdrawal force | Combo Jack: ≤ 20 N / > 10 N | - | - | - | ● | - | - |
| Cable retention force | ≥ 220 N* | ● | ● | ● | - | - | - |
| **Material** | | | | | | | |
| Housing | Polyamide PA 6 30% GR | - | - | ● | ● | ● | - |
| | PBTP 20% GR | ● | - | - | - | - | - |
| | Zinc diecast (ZnAl4Cu1) | - | ● | - | - | - | ● |
| Insert | Polyamide PA 6 30% GR | - | ● | - | - | ● | ● |
| | PBTP 20% GR | ● | - | ● | - | - | - |
| Contacts | Brass (CuZn39Pb3) | ● | ● | ● | - | - | - |
| | Bronze (CuSn6) | - | - | - | ● | ● | - |
| | Spring copper | - | ● | - | ● (UC) | - | ● |
| Contact plating | 4 µm Ag | ● | ● | ● | ● | ● | ● |
| Locking Element | Zinc diecast (ZnAl4Cu1) | ● | ● | ● | - | - | ● (FP) |
| Chuck | Polyacetal (POM) | ● | ● | ● | - | - | - |
| Bushing | Polyamide (PA 6 15% GR) | ● | ● | ● | - | - | - |
| **Environment** | | | | | | | |
| Temperature range | -30 °C to +80 °C | ● | ● | ● | ● | ● | ● |
| Protection class | IP 54 (mated condition) | - | ● | - | - | - | ● |
| | IP 50 (8 pole, mated cond.) | - | ● | - | - | - | ● |
| Flammability | UL94HB | ● | ● | ● | ● | ● | ● |
| Finger- Safety | IP2X/IEC 61984 | ● | ● | ● | ● | ● | ● |
| Approvals | UL-Recognized, CSA listed | ● | 4 pole | ● | ● | ● | 4 pole |
| Solderability | complies with IEC 68-2-20 | ● | ● | ● | ● | ● | ● |

*: subject to cable O.D. and material
**: NL4MD-V-S - Rated current per contact: 20A

## Ordering Information Cable Connectors

### SPX Series

| | | |
|---|---|---|
| NL2FX | 2 pole | Cable connector with chuck and blue bushing, intermates with 4 pole chassis connector and makes contact with +1/-1 |
| NL4FX | 4 pole | Cable connector with chuck and black bushing |
| NL4FX-2 | 4 pole | Cable connector with chuck and red bushing |
| NL4FX-4 | 4 pole | Cable connector with chuck and yellow bushing |
| NL4FX-5 | 4 pole | Cable connector with chuck and green bushing |
| NL4FX-9 | 4 pole | Cable connector with chuck and white bushing |
| NL4FRX | 4 pole | Right-angle cable connector with chuck and black bushing |

### FC Series

| | | |
|---|---|---|
| NL4FC | 4 pole | Cable connector with latch lock |
| NL8FC | 8 pole | Cable connector with latch lock |

### Adapters

| | | |
|---|---|---|
| NA4LJX | 4/2 pole | Adapter from speakON cable connector to 2 pole 1/4" Jack, wiring: +1 to TIP and -1 to SLEEVE |
| NL4MMX | 4 pole | Lockable coupler to extend two 4 pole cables |
| NL8MM-BAG | 8 pole | Coupler to extend two 8-pole cables, black-chrome metal housing, chuck and bushing |

### STX Series

| | | |
|---|---|---|
| NLT4FX | 4 pole | Female cable connector,nickel metal housing, chuck and bushing |
| NLT4FX-BAG | 4 pole | Female cable connector, black-chrome metal housing, chuck and bushing |
| NLT4MX | 4 pole | Male cable connector, nickel metal housing, chuck and bushing |
| NLT4MX-BAG | 4 pole | Male cable connector, black-chrome metal housing, chuck and bushing |
| NLT8FX | 8 pole | Female cable connector, nickel metal housing, chuck and bushing |
| NLT8FX-BAG | 8 pole | Female cable connector, black-chrome metal housing, chuck and bushing |
| NLT8MX-BAG | 8 pole | Male cable connector, black-chrome metal housing, chuck and bushing |

## Accessories

LCR-*

LRX

NLRR

BSL-*

### SPX Series

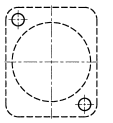
| | |
|---|---|
| LCR-* | Colored coding rings for the right-angle version of the SPX Series. |
| | Available in blue (Standard), white, red, green and yellow. |
| LRX | Right-angle speakON conversion kit for changing the straight connector into a right-angel version without removing the cable from the insert. |
| NLRR | Strain relief reduction ring for NL4FX for thin loudspeaker cables with an O.D. of 5 to 8 mm |

### FC Series

| | |
|---|---|
| BSL-* | Colored 2 component bushing for NL4FC |
| | *: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White; Must be ordered in multiples of 100. |

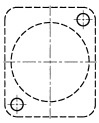
## Ordering Information Chassis Connectors

Flange layout:



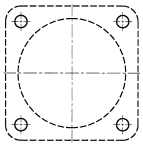
D-size standard hole

Ⓐ



D-size mirrored hole position

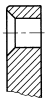
Ⓑ



G-size flange with four holes

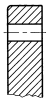
Ⓒ

Hole layout:



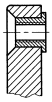
Thru holes

Ⓓ



Self tapping screw holes (A-screw)

Ⓔ



Metal M3 thread

Ⓕ

| | Pole | Flange size | Flange layout | Hole layout | Color | Wiring | Remarks |
|---|---|---|---|---|---|---|---|
| **Traditionally** | | | | | | | |
| NL2MP | 2 | D-size | A | D | black | 3/16" flat tabs* | Does not intermate with 4-pole cable connector |
| NL2MD-H | 2 | D-size | A | D | grey | horizontal PCB | Does not intermate with 4-pole cable connector |
| NL2MD-V | 2 | D-size | A | D | black | vertical PCB | Does not intermate with 4-pole cable connector |
| NL4MP | 4 | D-size | A | D | black | 3/16" flat tabs* | |
| NL4MP-1 | 4 | D-size | A | E | grey | 3/16" flat tabs* | |
| NL4MP-2 | 4 | D-size | B | E | black | 3/16" flat tabs* | |
| NL4MP-3 | 4 | D-size | A | E | black | 3/16" flat tabs* | |
| NL4MP-M3 | 4 | D-size | A | F | black | 3/16" flat tabs* | |
| NL4MD-H | 4 | D-size | A | E | grey | horizontal PCB | |
| NL4MD-H-1 | 4 | D-size | A | D | black | horizontal PCB | |
| NL4MD-H-2 | 4 | D-size | B | E | black | horizontal PCB | |
| NL4MD-H-3 | 4 | D-size | A | E | black | horizontal PCB | |
| NL4MD-V | 4 | D-size | A | D | black | vertical PCB | |
| NL4MD-V-1 | 4 | D-size | A | E | grey | vertical PCB | |
| NL4MD-V-2 | 4 | D-size | B | E | black | vertical PCB | |
| NL4MD-V-S | 4 | D-size | A | E | black | vertical PCB | switched contacts |
| NL4MP-ST | 4 | D-size | A | D | black | screw terminal | |
| NL4MP-UC | 4 | D-size | A | D | black | 1/4" flat tabs* | Ultra high current, up to 40 A rms |
| NL4MPR | 4 | round G-size flange | C | D | black | 3/16" flat tabs* | |
| NL8MD-V | 8 | square G-size flange | C | D | Ni | vertical PCB | |
| NL8MD-V-BAG | 8 | square G-size flange | C | D | black chrome | vertical PCB | |
| NL8MD-V-1 | 8 | square G-size flange | C | E | Ni | vertical PCB | |
| NL8MPR | 8 | square G-size flange | C | D | Ni | 3/16" flat tabs* | |
| NL8MPR-BAG | 8 | square G-size flange | C | D | black chrome | 3/16" flat tabs* | |
| **STX Series** | | | | | | | |
| NLT4MP | 4 | square G-size flange | C | D | nickel | 1/4" flat tabs* | |
| NLT4MP-BAG | 4 | square G-size flange | C | D | black chrome | 1/4" flat tabs* | |
| NLT4MD-V | 4 | square G-size flange | C | E | nickel | vertical PCB | |
| NLT4MD-V-1 | 4 | square G-size flange | C | D | nickel | vertical PCB | |
| NLT4FP | 4 | square G-size flange | C | D | nickel | solder contacts | |
| NLT4FP-BAG | 4 | square G-size flange | C | D | black chrome | solder contacts | |
| NLT4FD-V-BAG | 4 | square G-size flange | C | D | black chrome | vertical PCB | |
| NLT8MP | 8 | square G-size flange | C | D | nickel | 1/4" flat tabs* | |
| NLT8MP-BAG | 8 | square G-size flange | C | D | black chrome | 1/4" flat tabs* | |
| NLT8FP-BAG | 8 | square G-size flange | C | D | black chrome | solder contacts | |

*: flat tabs to be used with FASTON® connectors or to solder the wire (FASTON® is a trademark of AMP Inc.)

## Ordering Information Chassis Connectors

| | Pole | Flange size | Flange layout | Hole layout | Color | Wiring | Remarks |
|---|---|---|---|---|---|---|---|
| **Combo Series** | | | | | | | |
| NLJ2MD-V | 2 | D-size | A | E | green | vertical PCB | |
| NLJ2MD-V-1 | 2 | D-size | A | E | grey | vertical PCB | |
| NLJ2MD-H | 2 | D-size | A | E | green | horizontal PCB | |

## Accessories

A-Screw-1-8

NLFASTON

MFD

NDL

SCL

SCDR

SCDX

SCCD-W

SCDP-*

SCNLT

Example: SCNLT + NL4MP

NZP1RU-12

| | |
|---|---|
| A-Screw-1-8 | Black self tapping PLASTITE® screw 2.9 x 8 for rear panel mount |
| NLFASTON | FASTON® receptacle for tabs with "positiv lock" for use with NL4MP, NL4MPR, NL8MPR, Pack of 100 pcs. |
| MFD | M3 mounting frame for D-size chassis |
| NDL | dummyPLUG for 2 & 4 Pole chassis connector |
| NZP1RU-8 | Panel 1RU housing with 8 D-shape cutouts |
| NZP1RU-12 | Panel 1RU housing with 12 D-shape cutouts |
| SCL | Plastic sealing cover to protect the connectors against dust and moisture |
| SCDR | Rear end protection cover for D-size chassis connectors |
| SCDP-* | D-Size sealing gaskets, color coding |
| SCDX | Hinged cover seals D-size chassis connectors, IP 42 rated |
| SCCD-W | Spring-loaded cover to seals for D-size chassis Connectors, IP 65 rated |
| SCNLT | Gasket for NLT4MP |
| | (To make a cabinet with an Amphenol EP cutout airtight, use the rubber sealing which covers the entire hole.) |

(*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white)

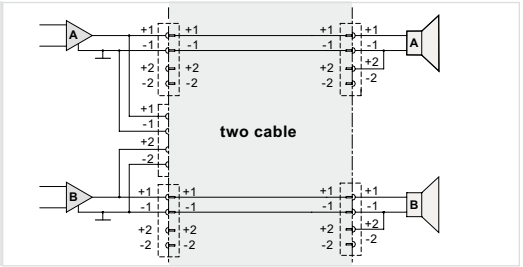
## Wiring Suggestion

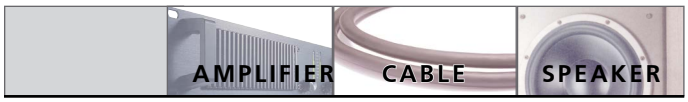
Positive signal on speaker pin "+" produces positive wave-form from driver (moves cone outwards)

"+" = In phase (high) "-" = Ground (out of phase, low)
Lower numbers for lower frequencies.

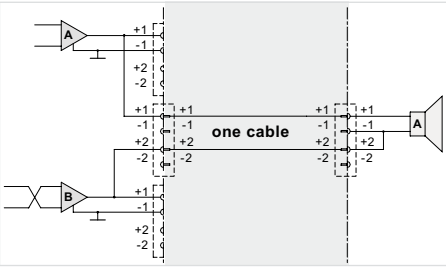
| | AMPLIFIER | CABLE | SPEAKER |
|---|---|---|---|
| **Stereo ("HiFi")** | one NL4MP socket<br>left channel pins 1+/1-<br>right channel pins 2+/2- | NL4FC on amplifier end, four conductor cable splits into two pairs with NL4FX on each end | one NL4MP per speaker<br>left speaker pins 1+/1-<br>right speaker pins 2+/2- |
| **POWER ("PA") Standard** | three NL4MP sockets<br>"A" socket:<br>left channel pins 1+/1-<br>"B" socket:<br>right channel pins 1+/1- | a two-conductor cable for each channel with NL4FX on both ends | NL4MP pins 1+ to speaker coil "+"<br>NL4MP pins 1- and 2+ to speaker coil "-" |
| **Bridged mono** | "M" socket:<br>left channel pins 1+/1-<br>right channel pins 2+/2- | a special two-conductor cable, on both ends wired to pin 1+/2+ of NL4FX | NL4MP pin 1+ to speaker coil "+"<br>NL4MP pins 1- and 2+ to speaker coil "-" |
| **Bi-Amp** | one NL4MP socket<br>low frequency pins 1+/1-<br>high frequency pins 2+/2- | a four-conductor cable on both ends wired to pins 1+/1-, 2+/2- of NL4FX | one NL4MP socket<br>low frequency pins 1+/1-<br>high frequency pins 2+/2- |
| **4 Way System** | one NL8MPR socket<br>low frequency pins 1+/1-<br>low mid frequency pins 2+/2-<br>high mid frequency pins 3+/3-<br>high frequency pins 4+/4- | an eight-conductor cable wired on both ends to pins 1+/1-, 2+/2-, 3+/3-, 4+/4- of NL8FC | one NL8MPR socket<br>low frequency pins 1+/1-<br>low mid frequency pins 2+/2-<br>high mid frequency pins 3+/3-<br>high frequency pins 4+/4- |

**Power "PA"** - 2 channel wiring

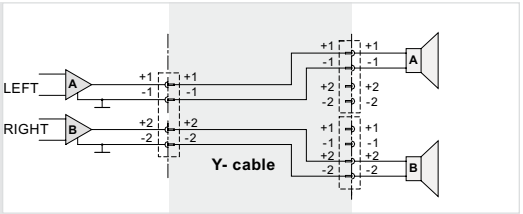


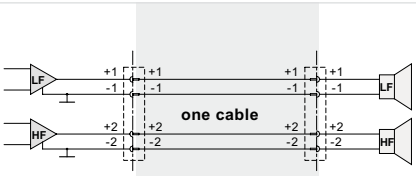

**Power "PA"** - Mono briged wiring



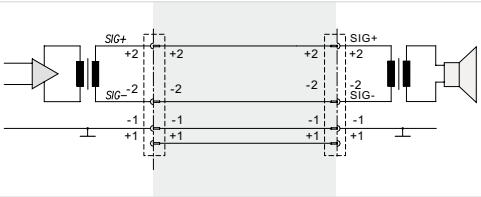

**Stereo "HiFi"**




**Bi-Amp**




**"100V application"**



# Data Connectors

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# Introduction

Neutrik's continuously growing range of data connectors copes with the increasing and versatile demand of digital connections in the professional audio, broadcast and entertainment industry.

Networking and computerized controls have to be equipped with reliable and rugged interconnection systems, since conventional data connectors can not meet the demanding requirements of live / rental or broadcast applications.

Neutrik early understood this trend and realized a range of ruggedized connection systems based on standard digital interconnection products like fiber optic and network interconnections as well as Digital Interfaces HDMI, USB, D-SUB and Firewire to suit the high demands of professional users in the entertainment industry.

**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA®, XIRIUM®, are registered trademarks of Neutrik AG.**

## Fiber Optic

A few years ago, fiber optic cables were used for specific applications only. With the transition to HD-signals and the upcoming 4K / 8K technology the need for fiber optics has increased significantly. Today, fiber optic cables are widely-used for various applications in the fields of professional broadcast, pro audio and touring/rental industries.

- Digital HD video transmissions > 15m (e.g. DVI, HDMI or KVM projection) using fiber optic media converters
- Increased bandwidth, especially for professional broadcast applications
- Efficient handling due to smaller and lighter cables
- Minimized cabling by embedding multiple data signals in single cables
- Future-proof installations designed to eliminate distance limitations, noise and EMI protection on audio or video (LED walls) applications

With the increased use of fiber optics for pro audio and broadcast new connections had to be developed. Conventional data-communication connectors (ST, SC, LC, etc.) are optimized for permanent, one-time connections and cannot cope with the harsh and demanding environment occurring in the entertainment business.

Neutrik solved the various problems associated with mobile fiber optic connectivity by launching the opticalCON series in 2005.

The simple and rugged design of opticalCON provides low fiber maintenance, high mating cycles and easy handling. Well known professional equipment manufacturers as well as key users in the pro broadcast and touring industry trust in the opticalCON system for years. It's Neutrik´s goal to turn opticalCON into an industry standard comparable to the widely used etherCON series.

## Design Criteria

Neutrik solved the various problems associated with mobile fiber optic connectivity with the launch of the opticalCON DUO fiber optic connection system in 2005.
opticalCON's reliable and simple concept, with ruggedness and low maintenance at its core, has gained wide acceptance in the pro audio and broadcast industries. Well-known professional equipment manufacturers as well as key users in broadcast and rental/ touring trust in opticalCON for years. It is Neutrik goal to turn opticalCON into an industry standard comparable to the widely used etherCON series.

**optical**CON **DUO** is most typically used for equipment connections, including various audio, lighting, and video applications. Typical uses include audio and DMX networks (ring switch), video projection based on fiber optic DVI, HDMI, or KVM signal converters, mobile LED panels, and various broadcast applications.

Following on the success of opticalCON DUO, the newer **optical**CON **QUAD** series doubles the fiber count to four per cable and is designed with point-to-point connections in mind. opticalCON QUAD has been successfully deployed in such applications as data routing for big and, especially, OB outdoor broadcast applications.

The **optical**CON **MTP®** increases the numbers of fibers in one connector to 12 and is the ideal solution for multi-fiber point-to-point applications as often required for broadcast applications.
Alternatively SPLIT cables, assembled with opticalCON DUO or QUAD, support a connector standardization and offers advantages with regard to field assembly and repair costs.

With the brand new **optical**CON **LITE**, a cost effective lightweight connector based on LC based ferules. Neutrik offers a high performance fiber connection system for permanent and temporary installations like server rooms, patch fields and indoor cabling.

# opticalCON ADVANCED

- MOBILE USE
- RUGGED
- LOW MAINTENANCE
- SIMPLE INTEGRATION

UHD 4K8K

# opticalCON DUO

# opticalCON QUAD

# opticalCON MTP®

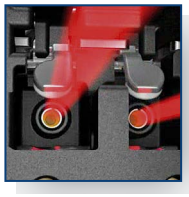
Rugged metal housing

Cable drum

Rubber coated protection cover

Rear LC connection

Chassis with transceiver adapter



Sealing shutters

## Cable Connector Assembly

NKO2S-A*

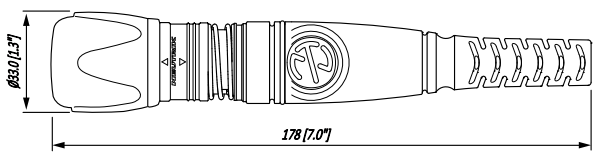
- Ruggedized and dirt-protected 2 channel fiber optic connection system
- Waterproof acc. to IP 65 in mated condition
- Color-coded cable connector comes pre-assembled with a choice of mobile field cables
- Accommodates standard optical LC-Duplex connectors
- Dust and dirt protection due to automatic sealing shutter with silicone gasket
- Reliable Push-Pull locking mechanism
- Easy to clean, no tools required
- Field repairable
- Hybrid assembly available

## Chassis Connector

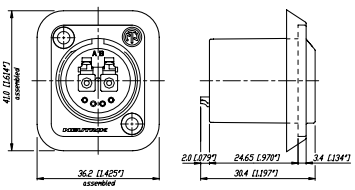
NO2-4FDW-A with SCDP-0

- Suggested OEM equipment connectors due to LC front compatibility
- Accommodates standard LC connectors on the rear for simple installation
- Automatic shutter with silcone gasket protects optical connection from dust and dirt
- Waterproof acc. to IP 65 ingress protection in mated condition
- Connection on the front side either with rugged opticalCON or standard LC connector
- Compatible with opticalCON ADVANCED, LITE and standard LC connector

**NKO2***




**NO2-4FDW-A**

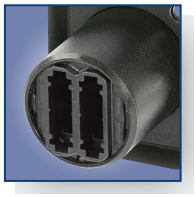


Colour Coding

Sealed and rugged housing

Sealing shutter

Sealed housing



Rear LC connection

## Cable Connector Assembly

NKO4S-A*

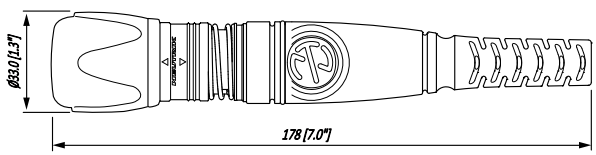
- Ruggedized and dirt protected 4 channel fiber optic connection system
- Designed for POINT-TO-POINT multichannel routing
- Innovative shutter guarantees low maintenance
- Dust and water resistant according to IP 65 in mated condition
- Color-coded cable connector comes pre-assembled with a choice of mobile field cables
- Field repairable

## Chassis Connector

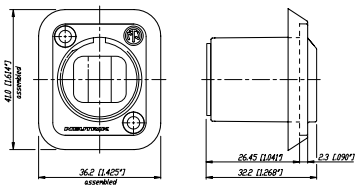
NO4FDW-A with SCDP-0

- Rugged 4 channel POINT-TO-POINT multi-channel routing solution
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- Waterproof acc. IP 65 in mated condition
- Accommodates standard LC connectors on the rear for cost effective and simple installations
- Compatible with opticalCON ADWANCED, and LITE connector

**NKO4***

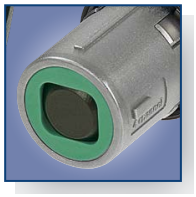



**NO4FDW-A**




Find more details in the opticalCON Guide and on www.neutrik.com.

Rugged metal housing



Spherical shutter

Rubber sealing gasket

Rear MTP® connection

## Cable Connector Assembly

NKO12S*

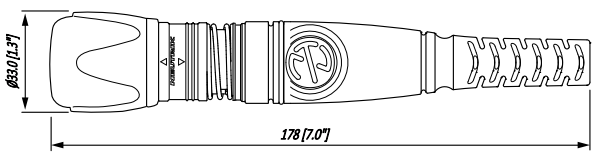
- Ruggedized and dirt-protected 12 channel fiber optic connection system
- For POINT-TO-POINT multichannel routing based on MTP® technology
- Cable connector features rugged all-metal housing and heavy-duty cable retention
- Innovative shutter guarantees low maintenance
- Dust and water resistant according to IP 65 in mated condition
- Enhanced maintenance
- Reliable Push-Pull locking mechanism

## Chassis Connector

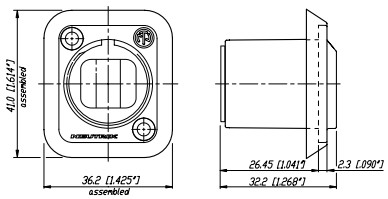
NO12FDW-A with SCDP-0

- Ruggedized and dirt-protected 12 channel fiber optic connection system
- For POINT-TO-POINT multichannel routing
- Laser protective metal shutter seals dust-proof with two-component rubber gasket
- Dust and water resistant according to IP 65 in mated condition
- Accommodates standard MTP® connectors on the rear for simple installation
- Rubber sealing gasket (black, blue, green to identify fiber mode)
- Compatible with opticalCON ADVANCED, and LITE connector

**NKO12***




**NO12FDW-A**



Color coding

DUO, QUAD & MTP® Couplers

Frame with opticalCON

Individual frame application

## Breakout Boxes & Coupler

NO12SABB6D-A

NAO2S-H1W-A

- Breakout boxes are used to split multichannel connections like the opticalCON QUAD and MTP® to either dual or single channels
- Dust and waterproof according to IP 65 in mated condition
- Weather proof opticalCON DUO, QUAD and MTP® coupler (adapter) for cable extensions

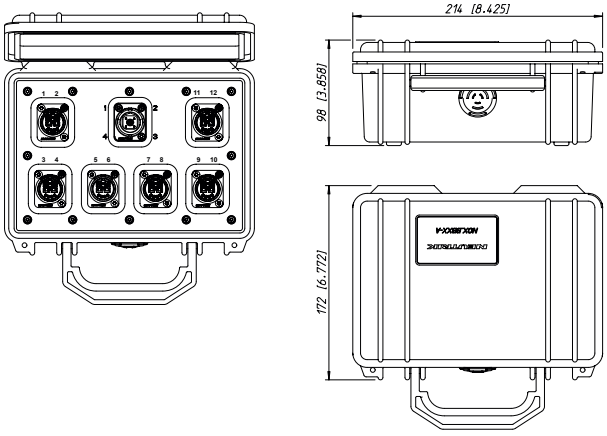
## 19" Z-Panel & Plates

NZPF1RU

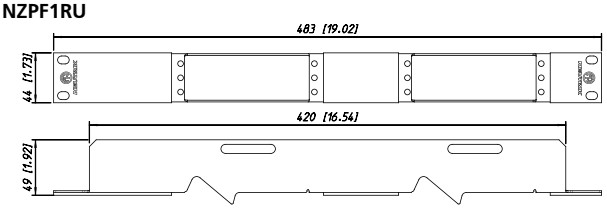
NZPF3RU equipped with frame plates

- Space saving design, ideal for cramped rack applications such as OB truck I/O panels
- Frame plate can be loaded with opticalCON DUO or QUAD and E2000, ST or SC
- Frames can be equipped with frame plates (D-shape) or blind plates
- Best cable bend protection
- 1 RU or 3 RU frame

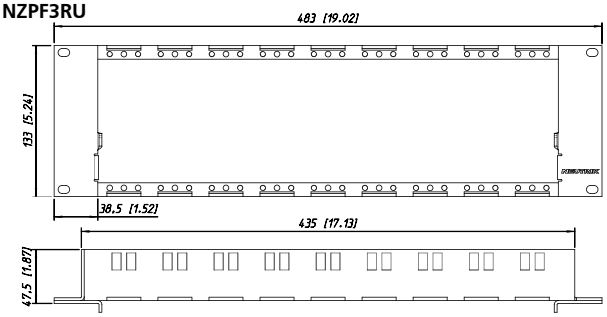
**NO12SABB6D-A**




**NZPF1RU**




**NZPF3RU**




Find more details in the opticalCON Guide and on www.neutrik.com.

Breakout Box with powerMONITOR

3RU frame with up to 9 powerMONITORs

1RU rack mount

Robust rear connection

## powerMONITOR

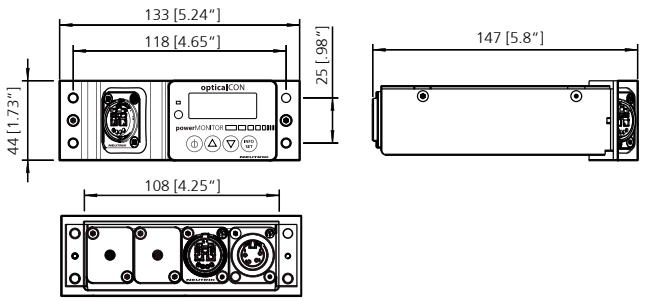
NO4S-4F-2R-PM-A

The opticalCON powerMONITOR is a cost-saving, purpose-built measurement (monitoring) device for professional fiber optic broadcast, audio and video applications.

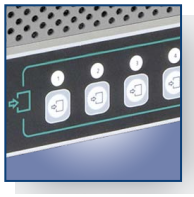
With simultaneous monitoring of attenuation for up to 4 transmission channels, powerMONITOR provides an immediate, "on air" view into fiber optic signal strength. Visual and audible alarms can be set individually for each fiber channel, based on each channel's power budget. powerMONITOR provides clear status information, delivers early warnings for potential problems, and assists with maintenance scheduling.

- On-air monitoring of fiber optic transmission quality
- Simultaneous power measurement (+0.0 / -0.1 dB measurement accuracy) of up to 4 channels
- Programmable threshold alarms
- Rack mount and mobile units
- Operates on rechargeable battery power or on mains power with fail-safe battery backup in case of unexpected mains power interruption
- Low loss (0.5 dB maximum split loss)
- Wavelength selectable: multimode 850 nm or 1'300 nm, single mode 1'310 nm, 1'550 nm or WDM (wave division multiplexing)
- External output for alarm signal

**NO4S-4F-2R-PM-A**



19" x 1 1/2 RU Rack unit



Ergonomic panel

Wieland rear connection

Coupler NAO4MW-A

Breakout Cable

opticalCON Field assembly

## Accessories & opticamSWITCH

opticamSWITCH

CAS-FOCD-ADV

CAS-FOMD

NAOBO

The opticamSWITCH is the ultimate solution for fiber optic camera routing within broadcast studios. The device allows switching of unlimited camera positions between several studios and control rooms, eliminating the need for high-maintenance, risky matrix patch fields using SMPTE patch cables. The device works on trendsetting, silica-based PLC (planar lightwave circuits) equipped with TO (thermo optic) switches. The innovative design guarantees rugged and safe non-blocking fiber plus camera power switching without any moving parts. The LAN-based remote control software simplifies work, shows switching and camera status, and enables broadcast production automation.

- Thermo Optic PLC Switch
- 8 x 4 Non Blocking Structure
- Intelligent Power Working Circuit
- LAN Remote Control

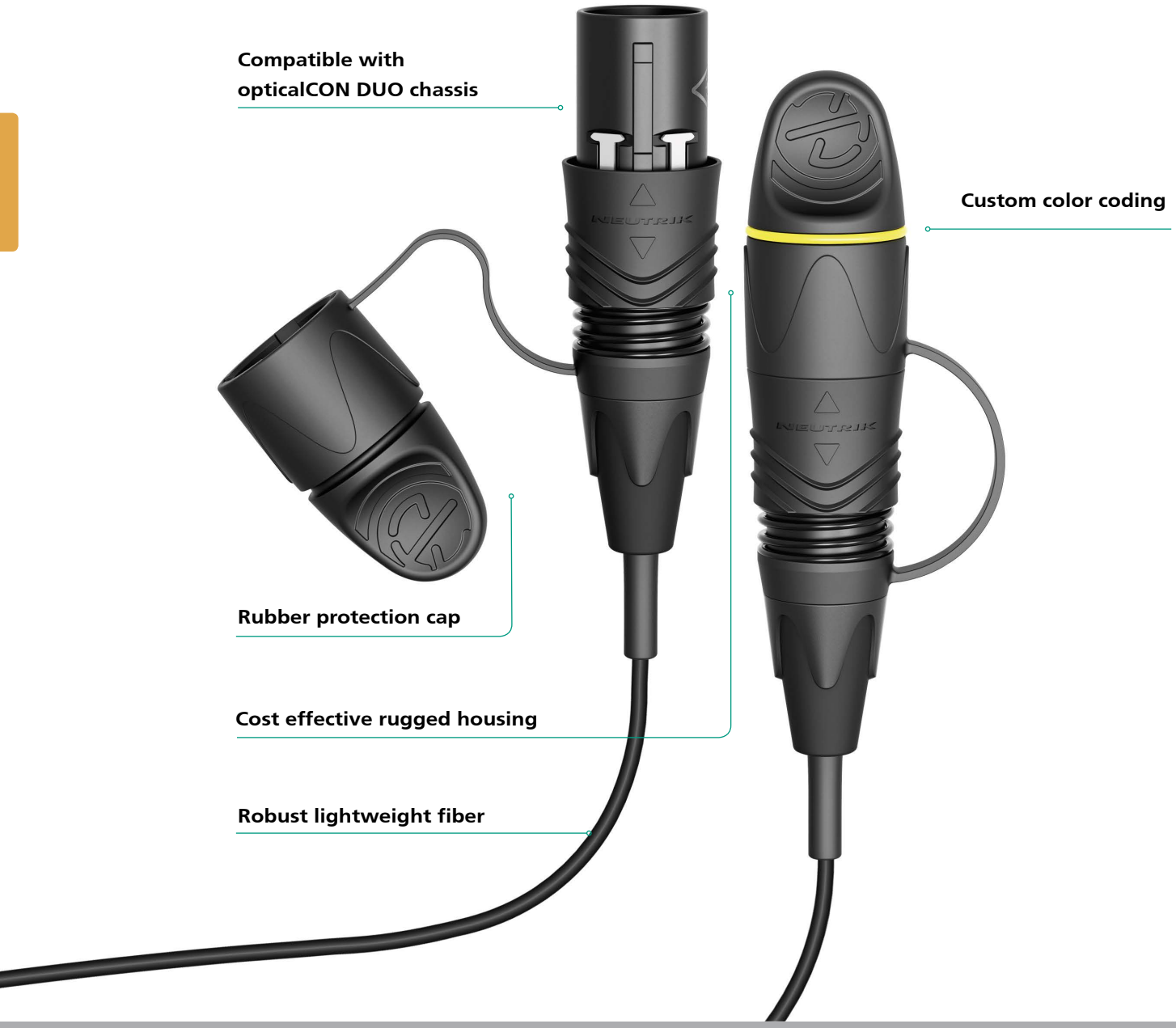
- Rugged couplers to extend two opticalCONs
- Breakout cables
- NAOBO Kit – for flexible chassis mounting solution
- Assembly Tools:
  - Case for opticalCON field assembly
  - Fiber Optic Cleaning Devices (CAS-FOCD-ADV)
- Transceiver adapter connects opticalCON chassis and multi / singlemode transceivers
- Color coding
- Sealing covers

**Find more details in the opticalCON Guide and on www.neutrik.com.**

# opticalCON LITE

- SMALL FORM FACTOR
- TACTICAL PATCH CABLE
- SAFE CONNECTION
- COST EFFECTIVE

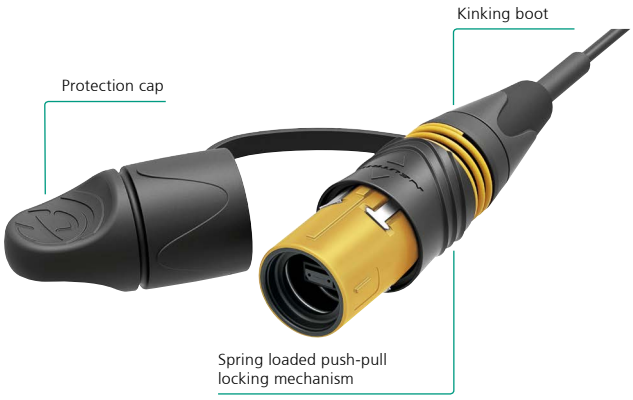
UHD 4K8K

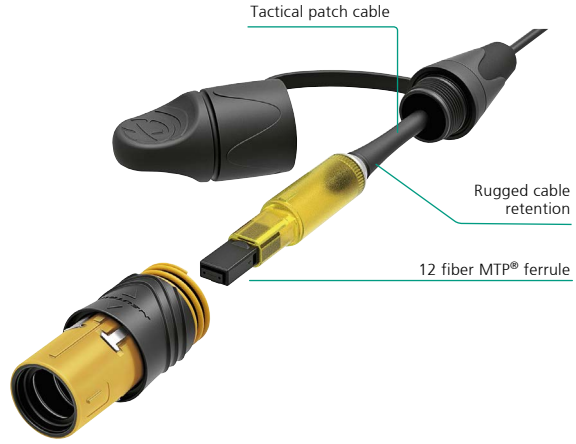


# opticalCON DUO LITE

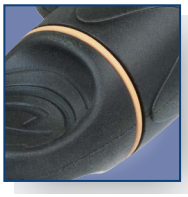
# opticalCON QUAD LITE

# opticalCON MTP® LITE



Push-pull locking



Custom color Coding

Color-coded cable connector

4 channel fiber optic

Color coded cable connector

## opticalCON DUO LITE

NKO2M-L-0-*

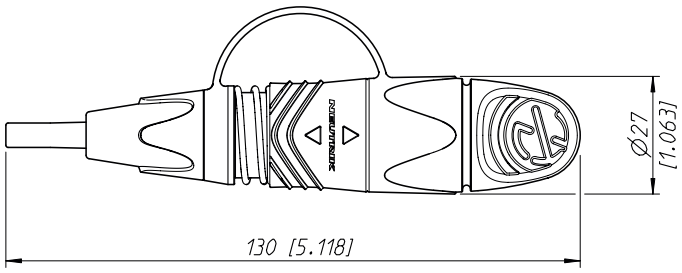
- 2 channel fiber optic connection system
- Cost optimized fiber connection for semi and permanent installations
- Waterproof acc. to IP65 safety standard in mated condition
- Space saving design
- Push-Pull locking mechanism for save connection
- Easy to clean, no special tools required
- Compatible with standard opticalCON DUO chassis NO2-4FDW-A*

## opticalCON QUAD LITE

NKO4M-L-0-*

- 4 channel fiber optic connection system
- Waterproof acc. to IP65 safety standard in mated condition
- Push-pull locking mechanism
- Recommended for POINT-TO-POINT connection
- Easy to clean, no special tools required
- Tactical patch cable
- Compatibel with standard opticalCON QUAD NO4FDW-A chassis

**NKO2M-L-0-***



12 channel MTP®

Color coded cable connector

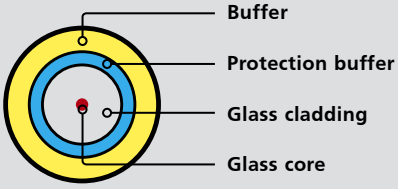
## opticalCON MTP® LITE

NKO12M-L-0-*

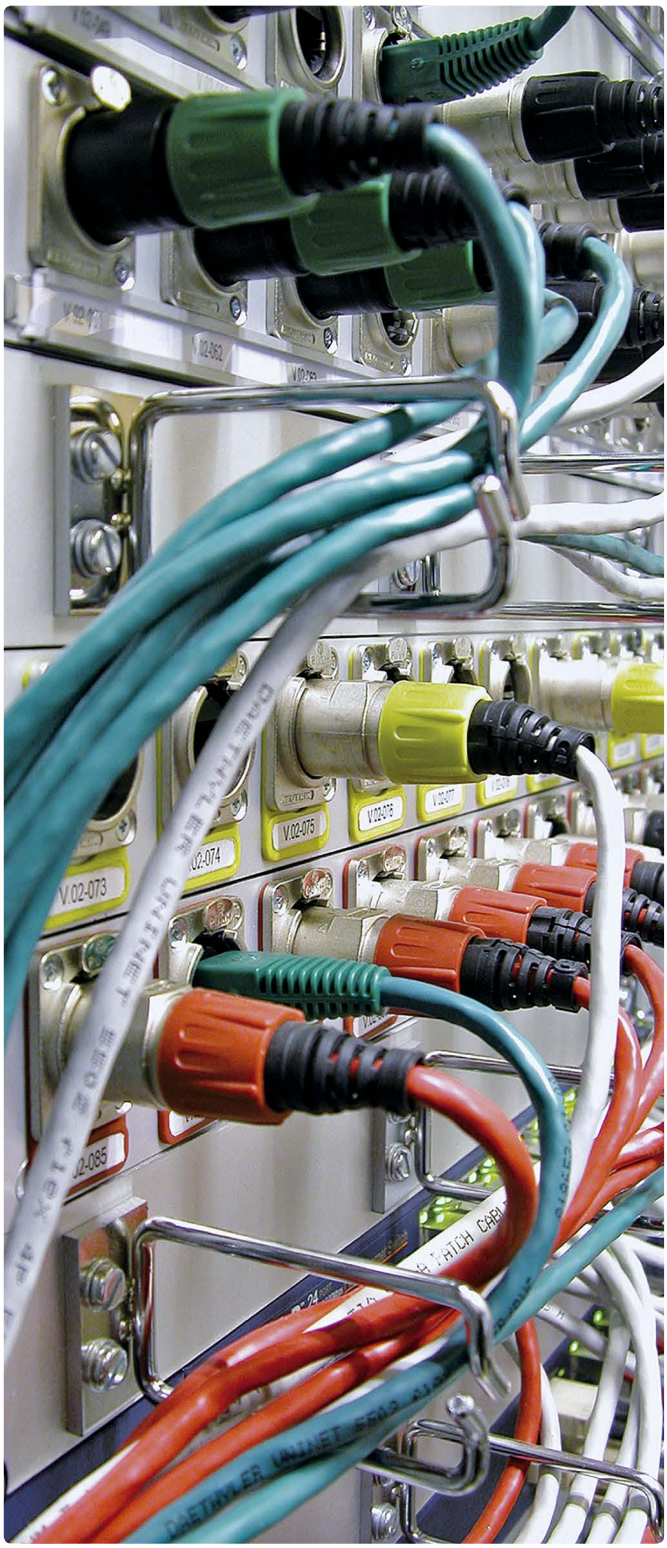
- 12 channel MTP® based fiber optic connection system
- Waterproof acc. to IP65 safety standard in mated condition
- Recommended for multi-signal transmission
- Push-pull locking mechanism
- Custom color coding
- Rugged plastic housing
- Rubber protection cap

### Tactical Patch Cable

Conventional patch cables are sensitive in terms of undercutting the minimum bending radius and lateral pressure. Neutrik's tactical patch cables feature unique fiber design including a protection buffer which allows bendings with minimal radius and increased lateral pressure. Therefore the tactical patch cables are the right choice for permanent or semi-permanent applications.



Find more details in the opticalCON Guide and on www.neutrik.com.



# etherCON

## Ruggedized RJ45 Data Connector

etherCON provides solutions for data transfer in harsh and demanding applications. These connectors are especially applicable for Ethernet networking in audio, commercial, entertainment, live stage production, DMX lighting, industrial and outdoor internet access environments.

The etherCON series offers tailor-made products to suit all state-of-the art transmission classes like CAT6A, CAT6, CAT5e as well as class D according to TIA / EIA 568C.2 and ISO / EC 11801 respectively EN 50173-1 standard. The broadly based product range includes male cable carriers, assembled female receptacles, feedthrough jacks, cable couplers and shielded versions with or without illumination possibilities by LEDs. For pre-assembled RJ45 cables Neutrik offers a rugged diecast metal shell as a male cable carrier, which does not require the re-termination of the cable assembly.

Female chassis receptacles are based on the well known Neutrik "A & B" series as well the "D" series of XLR receptacles with either secure latching system or push pull locking (CAT6) – features not found on other RJ45 receptacles. Terminations available do include horizontal and vertical PCB mount or IDC. Ingress protection of IP 54 is achived on the CAT 5 version by assembling the waterproof sealing kit SE8FD while CAT 6 versions are IP 65 rated as standard and at the new CAT6A range it is customers choice to use the IP 65 protected receptacles or the unprotected versions.

Rugged diecast shell

Feedthrough

IDC Version

IP 65 Protected

etherCON

## etherCON CAT6A Series

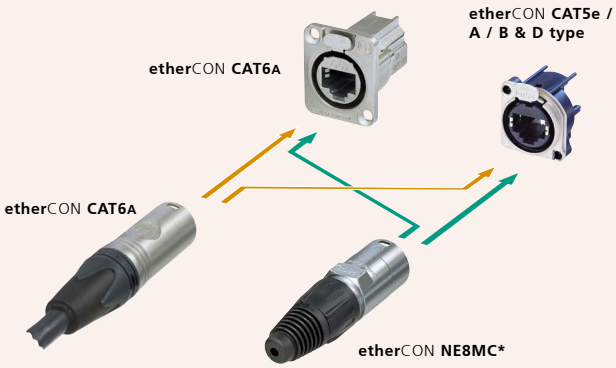
NE8MX6

NE8FDX-P6

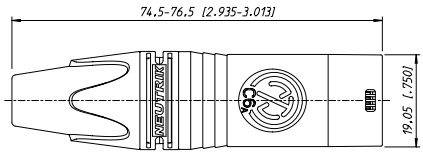
NE8FDX-Y6-W

- Ruggedized connector range with CAT6A component compliance according to ISO / IEC 11801 respectively EN50173-1 and CAT6A according to TIA / EIA 568-C.2
- D-size chassis connector for IDC self-termination or as feedthrough adapter
- IP 65 protected version available
- PoE+ compliant according to 802.3at Type2
- Downwards compatible with the existing etherCON CAT5 range

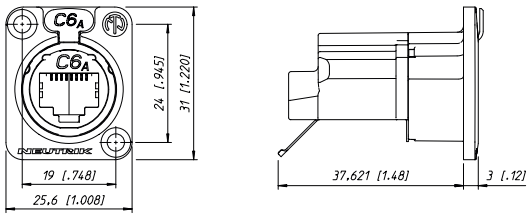
**CAT6A / CAT5* compatibility:**



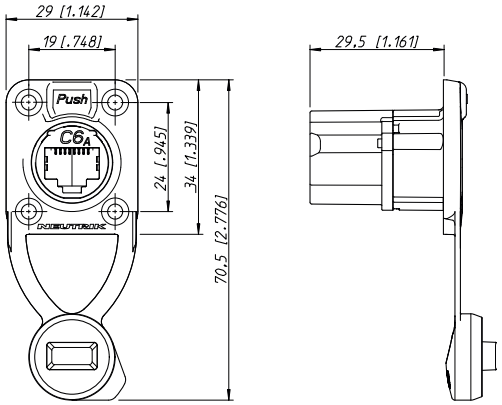

**NE8MX6**




**NE8FDX-Y6**




**NE8FDX-P6-W**



## Technical Data

| | | | Receptacle | | Cable connector |
|---|---|---|---|---|---|
| **Electrical** | | | | | |
| Number of contacts | 8 | | ● | | ● |
| Rated current per contact | 1.5 A | | ● | | ● |
| TIA / EIA rating | CAT6A | | ● | | ● |
| IEC / ISO / EN rating | CAT6A | | ● | | ● |
| Input to output resistance | < 200 mΩ | | - | | - |
| Insulation resistance | > 500 MΩ | | ● | | ● |
| Dielectric strength | 1 kV dc | | ● | | ● |
| PoE + acc. IEEE 802.3at | | | ● | | ● |
| **Materials** | | | | | |
| Housing | Zinc diecast | | ● | | ● |
| Adapter | Polyamide PA 6 | | - | | - |
| Strain relief clamp | POM | | - | | ● |
| Contacts | Bronze CuSn | | - | | - |
| | Spring steel | | ● | | ● |
| Contact surface | Gold | | ● | | ● |
| Bushing | PU / PA | | - | | ● |
| **Mechanical** | | | | | |
| Retention method | Latch Lock | | ● | | ● |
| Life time (mating cycles) | > 1`000 | | ● | | ● |
| Cable O.D. range | 7.0 - 9.5 mm | | ● | | ● |
| Wire size | solid | NE8FDX-Y6(-B)(-W): | AWG 26/1 -22/1 | NE8MX6(-B): | AWG 24/1 - 22/1 |
| | stranded wire | | AWG 26/7 -22/7 | | AWG 24/7 - 22/7 |
| Insulation diameter | | | > 0.85 -1.6 mm | | > 1.10 -1.60 mm |
| Wire size | solid | | - | NE8MX6(-B)-T | AWG 26/1 -24/1 |
| | stranded wire | | - | | AWG 27/7 -24/7 |
| Insulation diameter | | | - | | > 0.85 -1.10 mm |
| **Environmental** | | | | | |
| Operating temperature / Storage temperature | | -40 °C to +70 °C | ● | | ● |
| Flammability | UL94V-0 | | ● | | ● |
| Protection class | IP 65 in combination with "-W" receptacle | | ● | | ● |

## Ordering Information

| Cable Connector | | Receptacle | |
|---|---|---|---|
| NE8MX6 | CAT6A, nickel plating, ≥ AWG 24 | NE8FDX-P6 | CAT6A shielded feedthrough, nickel plating |
| NE8MX6-B | CAT6A, black plating, ≥ AWG 24 | NE8FDX-P6-B | CAT6A shielded feedthrough, black plating |
| NE8MX6-T | CAT6A, nickel plating, ≤ AWG 24 | NE8FDX-Y6 | CAT6A shielded IDC, nickel plating |
| NE8MX6-B-T | CAT6A, black plating, ≤ AWG 24 | NE8FDX-Y6-B | CAT6A shielded IDC, black plating |
| | | NE8FDX-P6-W | CAT6A shielded feedthrough, with integrated rubber sealing cap, IP 65 |
| | | NE8FDX-Y6-W | CAT6A shielded IDC, with integrated rubber sealing cap, IP 65 |

### Accessories and Assembly Tools

| | | | |
|---|---|---|---|
| HTXX-14 | Handtool to tighten the NE8MX6* bushing | XXR* | Colored coding ring (see page 38) |
| HX-CAT6A | Parallel press tool for etherCON CAT6A Series | XXCR | Translucet coding ring (see page 38) |

IDC Terminals

Horizontal PCB

Vertical PCB with lightpipes

D shape metal shell

PCB Version

## etherCON CAT5e A/B & D type Receptacle

NE8FAH-C5

NE8FBH-C5-LED

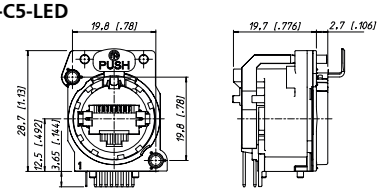
NE8FBV-C5-LED-S

NE8FDV-Y110-B

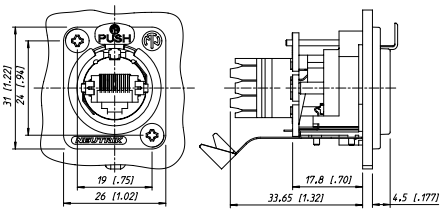
NE8FDH-C5E

- Space saving A or B type receptacles - horizontal or vertical PCB design available
- Vertical PCB design at 24 mm distance to front panel - fits the widely accepted industry standard dimensions for XLRs, 1/4" jacks etc.
- PoE+ compliant according to 802.3at Type2
- CAT5e performance according to ISO/IEC 11801 and TIA/EIA 568-C.2
- Shielded or non-shielded versions available
- Two types of light pipes available to accommodate through hole LEDs or SMD-LEDs
- Accommodates rugged etherCON NE8MC* cable carriers or any standard RJ45 plug
- D type receptacles - horizontal PCB or punch terminal (Krone or 110) design available

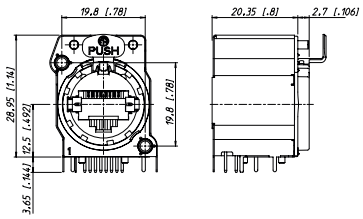
**NE8FBH-C5-LED**



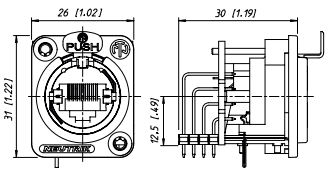

**NE8FDV-Y110**

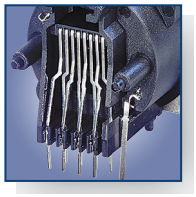



**NE8FBV-C5-LED-S**

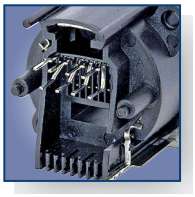



**NE8FDH-C5E**





Horizontal PCB



Vertical PCB

NE8FDV-SE – Vertical PCB receptacle combined with waterproof kit

## etherCON – Receptacles

NE8FAV + ACRF-2

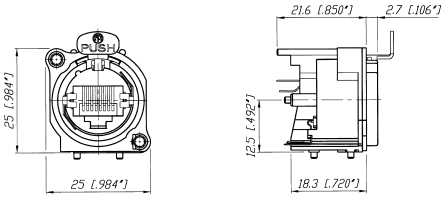
NE8FBH

NE8FDV

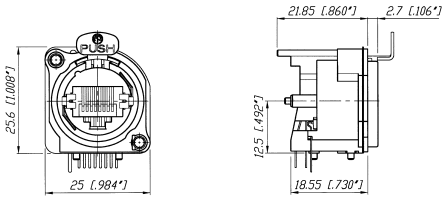
NE8FDV-SE

- "A / B" and "D" sized receptacles available in vertical and horizontal PCB or IDC terminations
- Accommodates NE8MC carriers or any standard RJ45 Plug
- D-versions with unified metal flange equal to "D" series-XLR, speakON, powerCON and BNC Bulkhead
- Receptacles comply with Class D (PCB versions) or CAT 5e (IDC versions and NE8FDH-C5E) according to TIA / EIA 568B and ISO / IEC 11801 standard
- Version with screw domes to fix connector onto PCB securely (NE8FAV-SD)

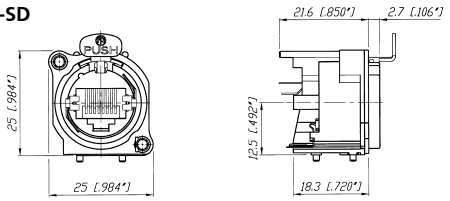
**NE8FAV**



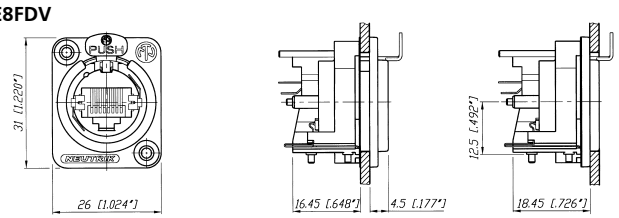

**NE8FBH**




**NE8FAV-SD**

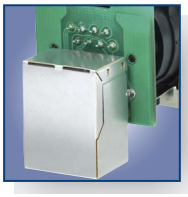



**NE8FDV**



Completely closed housing

Light pipe



NE8FDP-R rear side

Locking latch

Rugged aluminium extrusion housing

## Shielded & Lighted

NE8FBH-S

NE8FBH-LED

- Comprehensive shielding granted by completely closed metal housing
- Improves EMC performance of appliance even in unmated condition
- Light pipes illuminated by standard 3 mm LEDs – to be mounted on PCB by customer
- Receptacles comply with class D Link performance.

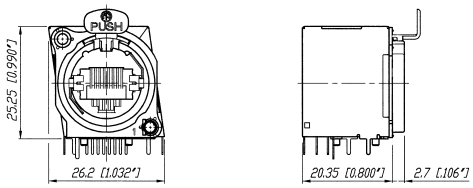
## Feedthrough

NE8FDP-R

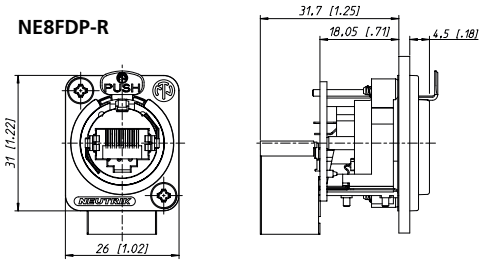
NE8FF

- Feedthrough as panel mount receptacle and as cable coupler
- NE8FDP feedthrough connector in D series housing for use in patchfields – rear side accommodates standard RJ45 plug.
- New: Right angle version available (NE8FDP-R).
- NE8FF coupler (adapter) for cable to cable mating – use with NE8MC carriers or any standard RJ45 plugs

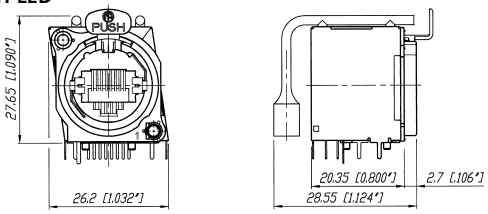
**NE8FBH-S**



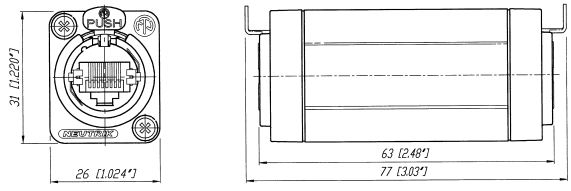

**NE8FDP-R**




**NE8FBH-LED**




**NE8FF**



Rugged diecast shell

Colored coding
Bushing

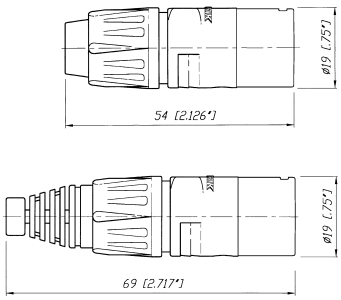
## etherCON – Cable Carriers

NE8MC-1

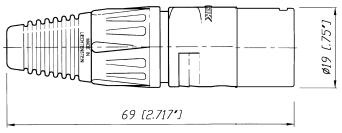
NE8MC-B

- The RJ45 system for harsh and demanding environment
- Cable connector carrier accepts the most common RJ45 plugs
- Cable connector carrier has rugged diecast shell and unique chuck type strain relief
- NE8MC-1 version with weatherproof Chromium plating and O-ring gasket
- Protects Ethernet connections in a variety of commercial type applications and is designed to prevent breakage of the fragile components of standard RJ45 connectors
- Cable connector carrier does not include RJ45 plug

**NE8MC**




**NE8MC-1**



| Specification | | NE8MC* Cable Con. | NE8FA/B* (A + B Series) | NE8FD* (D Series) |
|---|---|---|---|---|
| **Electrical** | | | | |
| Number of contacts | 8 | - [1] | ● | ● |
| Rated current per contact | < 1.5 A | - [1] | ● | ● |
| Rated voltage | < 50 V ac | - [1] | ● | ● |
| Contact resistance | < 10 mΩ | - [1] | ● | ● |
| Insulation resistance | > 500 MΩ | - [1] | ● | ● |
| Dielectric strength | > 1`000 V ac rms | - [1] | ● | ● |
| Frequency bandwidth | 1 - 100 MHz | - [1] | ● | ● |
| Transmission class acc. TIA / EIA 568B or IEC 11801 | - CAT 5e | - [1] | NE8*-C5* / NE8FA*-Y* | NE8FD*-C5e / NE8FD*-Y* |
| | Class D | - [1] | ● | ● |
| PoE + acc. IEEE 802.3at | | - [1] | ● | ● |
| **Mechanical** | | | | |
| Retention method | latch lock | ● | ● | ● |
| Life time (mating cycles) | > 1`000 mating cycles | ● | ● | ● |
| | > 200 mating cycles | - | - | SE8FD |
| Insertion / withdrawal force | ≤ 20 N | ● | ● | ● |
| Cable O.D. range | 3.5 - 8 mm | ● | - | - |
| Wire size | AWG 26 – 20 | - [1] | NE8*-Y* | NE8*-Y* |
| Panel thickness | max. 3 mm / 0.12" | - | ● | 4 mm / 0.16" |
| **Material** | | | | |
| Housing | PBT D202G30 | - | ● | ● |
| | Zinc diecast (ZnAlCu1, gal Ni / bl Cr / Chromium) | ● | - | - |
| B / D-flange | Zinc diecast (ZnAlCu1, gal Ni / bl Cr) | - | ● | ● |
| Strain relief clamp | POM | ● | - | - |
| | CuZn35Pb2, Tin plated | - | NE8*-Y* | NE8*-Y* |
| Contacts | Bronze (CuSn8) | - [1] | ● | ● |
| | Spring steel | NE8*C5* | ● | ● |
| Contact surface | Au (gal 0.2 µm over Ni plating) | - [1] | ● | ● |
| Locking Element | Ck 67 steel, treated | - | ● | ● |
| Bushing | Polyamide (PA 6 15% GR) | ● | - | - |
| Boot | Polyamide (PA 6) | ● | - | - |
| Sealing gasket | EPDM | - | - | SE8FD |
| **Environment** | | | | |
| Operating Temperature | -30 °C to +80 °C | ● | ● | ● |
| | -20 °C to +60 °C | - | - | SE8FD |
| Protection class | IP 54 | - | - | SE8FD |
| Flammability | UL94V-0 | UL94 HB | ● | ● |
| Solderability complies with | IEC 68-2-20 | - | PCB Version | PCB Version |
| Mating screw | | - | A screw | E screw |
| Color coding | | BSE-* / BSX-* | ACRF-* | DSS-* |

[1]: Specs depend on type of RJ45 plugs used

## Ordering Information

| | Shape | | | Termination | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | D | H | V | IDC | IDC 110 | LED | S | |
| **CAT 5e Receptacle** | | | | | | | | | | |
| NE8FAH-C5 | ● | | | ● | | | | | | |
| NE8FAV-C5 | ● | | | | ● | | | | | |
| NE8FAV-YK* | ● | | | | | ● | | | | |
| NE8FAV-Y110* | ● | | | | | | ● | | | |
| NE8FBH-C5 | | ● | | ● | | | | | | |
| NE8FBH-C5-S | | ● | | ● | | | | | ● | |
| NE8FBH-C5-LED | | ● | | ● | | | | ● | | through hole LED |
| NE8FBH-C5-LED1 | | ● | | ● | | | | ● | | SMD LED |
| NE8FBH-C5-LED-S | | ● | | ● | | | | ● | ● | through hole LED |
| NE8FBH-C5-LED1-S | | ● | | ● | | | | ● | ● | SMD LED |
| NE8FBV-C5 | | ● | | | ● | | | | | |
| NE8FBV-C5-S | | ● | | | ● | | | | ● | |
| NE8FBV-C5-LED | | ● | | | ● | | | ● | | through hole LED |
| NE8FBV-C5-LED1 | | ● | | | ● | | | ● | | SMD LED |
| NE8FBV-C5-LED-S | | ● | | | ● | | | ● | ● | through hole LED |
| NE8FBV-C5-LED1-S | | ● | | | ● | | | ● | ● | SMD LED |
| NE8FDH-C5e | | | ● | ● | | | | | | |
| NE8FDH-C5e-SE | | | ● | ● | | | | | | with sealing kit SE8FD |
| NE8FDV-YK* | | | ● | | | ● | | | | |
| NE8FDV-Y110* | | | ● | | | | ● | | | |
| NE8FDP*; NE8DFP-B | | | ● | | | | | | | feedthrough; black plating |
| NE8FDP-SE | | | ● | | | | | | | with sealing kit SE8FD |
| NE8FDP-R* | | | ● | | | | | | | right angle port, feedthrough |
| NE8FDP-R-B* | | | ● | | | | | | | right angle port, feedt., black plating |
| NE8FF | | | ● | | | | | | | coupler, black plating |
| **CLASS D Receptacle** | | | | | | | | | | |
| NE8FAH | ● | | | ● | | | | | | |
| NE8FAV | ● | | | | ● | | | | | |
| NE8FAV-SD* | ● | | | | ● | | | | | Screw dome |
| NE8FBH | | ● | | ● | | | | | | |
| NE8FBV | | ● | | | ● | | | | | |
| NE8FDV | | | ● | | ● | | | | | |
| NE8FDV-SE | | | ● | | ● | | | | | with sealing kit SE8FD |

| **Cable Carriers** | |
|---|---|
| NE8MC | Cable housing with chuck and bushing (two antikink boots, one up to 5 mm and one up to 8 mm cable O.D.) |
| | (standard bushing in black, 9 different coding colours on request) |
| NE8MC-B | Black chromium housing with chuck and bushing (two antikink boots, one for 5 mm and one for 8 mm cable O.D.) |
| | (standard bushing in black, 9 different coding colours on request) |
| NE8MC-1 | Cable housing with chuck and X-series bushing, Collinox plating and O-ring gasket |
| | (perfect for waterproof applications, standard bushing in black, 9 different coding colours on request) |
| NE8MC-B-1 | Black chromium housing with chuck and X-series bushing |
| | (standard bushing in black, 9 different coding colours on request) |
| IMPORTANT: | Cable connectors do not include RJ45 plug. RJ45 cable assembly must be provided by end-user! |

| | | | |
|---|---|---|---|
| INFORMATION: | A ..... A-shape receptacle (all plastic) | IDC ..... | IDC terminals |
| | B ..... B-shape receptacle (Nickel ring) | IDC 110 .. | IDC 110 punch down terminals |
| | D ..... D-shape receptacle | LED ..... | Light pipe |
| | H ..... Horizontal PCB mount | S ..... | shielded metal housing |
| | V ..... Vertical PCB mount | * ..... | Including 2 mounting screws |

## Accessories

A screw

E screw

E screw Nickel

ACRF-*

DSS-*

BSE-*

BSX-*

SCDP-*

SCDX

SCCD-W

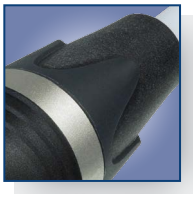
| | |
|---|---|
| A-Screw | Mounting screw for A / B -shape (black self-tapping PLASTITE® screw 2.9 x 8, panhead) |
| E-Screw | Mounting screw for D-shape (black self-tapping PLASTITE® screw 2.9 x 12, countersunk) |
| E-Screw-Ni | Mounting screw for D-shape (Nickel self-tapping PLASTITE® screw 2.9 x 12, countersunk) |
| ACRF-* | Colored coding rings for A-shape receptacles (Box of 100 pcs.) |
| BSE-* | Colored boot for cable connector carrier (Box of 100 pcs.) |
| BSX-* | Colored bushing for NE8MC-1 and NE8MC-B-1 cable connectors |
| DSS-* | Lettering plate for D series, colored plastic |
| NZP1RU | Panel1RU D-shape housing |
| SCDP-* | D-Size sealing gaskets, color coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |
| SCDX | Hinged cover seals D-size chassis connectors, IP 42 rated |
| SCCD-W | Spring-loaded cover to seals for D-size chassis connectors, IP 65 rated |
| | *: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White |

## Waterproof kit for etherCON D-Series

Waterproof assembly kit - SE8FD

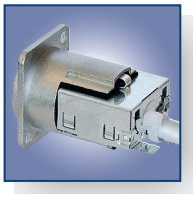
| | |
|---|---|
| SE8FD | Waterproof kit, IP 54, consists of push, gasket, frontplate Suitable for all NE8FD*, perfect in combination with NE8MC-1 (with Chromium plating and sealing gasket) |

Push Pull locking



IP65 in mated condition

D-shape metal shell



Closed shielding

## CAT6 Patch Cable

NKE6S-*

NE8MC6-MO

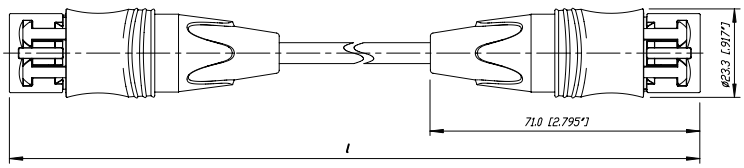
## CAT6 Receptacles

NE8FDY-C6

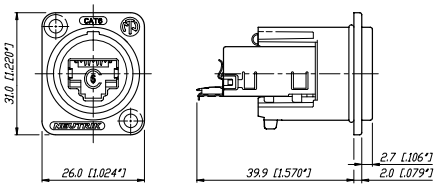
NE8FDY-C6-B

- CAT6 compliant – according to ISO / IEC 11801, TIA / EIA 568C.2, EN50173-1
- Dust and water resistant according IP 65 in mated condition
- Push Pull mating design provides secure locking system
- Shielded system – high noise immunity and EMI protection
- IDC contacts for tool-free assembly offer gas-tight termination
- Ready made patch cables or cable connector for self termination with rugged diecast cable carrier and unique chuck-type strain relief

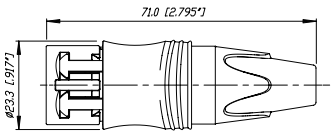
**NKE6S-***




**NE8FDY-C6**




**NE8MC6-MO**



## Technical Data

| | | Receptacle | Patch Cable |
|---|---|---|---|
| **Electrical** | | | |
| Number of contacts | 8 | ● | ● |
| Rated current per contact | 1.5 A | ● | ● |
| TIA / EIA rating | CAT6 | ● | ● |
| IEC / ISO / EN rating | CAT6A | - | - |
| Input to output resistance | < 200 mΩ | ● | ● |
| Insulation resistance | > 500 MΩ | ● | ● |
| Dielectric strength | 1 kV dc | ● | ● |
| PoE + acc. IEEE 802.3at | | - | - |
| **Materials** | | | |
| Housing | Zinc diecast | ● | ● |
| Adapter | Polyamide PA 6 | ● | ● |
| Strain relief clamp | POM | - | ● |
| Contacts | Bronze CuSn | ● | ● |
| | Spring steel | - | - |
| Contact surface | Gold | ● | ● |
| Bushing | PU / PA | - | ● |
| **Mechanical** | | | |
| Retention method | Push-Pull | ● | - |
| Life time (mating cycles) | > 1`000 | ● | ● |
| Cable O.D. range | 5.5 - 6.5 mm | ● | ● |
| Wire size (solid) | 0.205 - 0.324 mm² (AWG 24 - AWG 22) | ● | ● |
| Stranded wire | 0.141 - 0.355 mm² (AWG 26 / 7 - 22 / 7) | ● | ● |
| **Environmental** | | | |
| Operating temperature | -10 °C to +60 °C | ● | ● |
| Storage temperature | -40 °C to +70 °C | ● | ● |
| Flammability | UL94HB | ● | ● |
| Protection class | IP 65 | ● | ● |

## Ordering Information CAT6

| | |
|---|---|
| **Cable Connector** | |
| NE8MC6-MO | RJ45 cable plug with carrier offering a robust metal shell with Push-Pull locking system |
| **Patch Cable** | |
| NKE6S-* | Standard lengths: 0.5, 1, 2, 3, 5, 10, 30 m |
| NKE6S-*-WOC | Equipped on one side with metal shell, standard lengths: 1, 2, 3, 5, 10, 30 m |
| | Custom length in meter steps on request |
| **Receptacle** | |
| NE8FDY-C6 | CAT6 with Nickel D-shell |
| NE8FDY-C6-B | CAT6 with Black Chrome D-shell |
| **Accessories** | see page 111 / 116 / 120 |

Push Pull locking

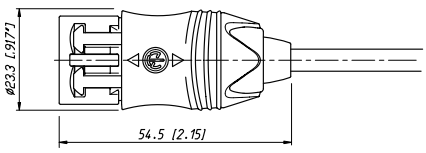
USB type B

## USB Patch Cable

NKUSB-*

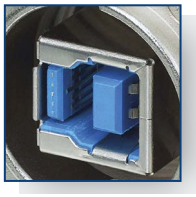
- USB 2.0 compliant – data rate up to 480 MBit/s
- Dust and water resistant sealing in combination with NAUSB-W*
- Push Pull mating design provides secure locking system if mated with NAUSB-W*
- Shielded connection – high noise immunity and EMI protection
- Ready made patch cables (1 m, 3 m and 5 m) with removable rugged diecast cable carrier
- Mates with conventional USB receptacles if cable carrier is removed

**NKUSB**



D-shape metal housing

USB type B



USB 3.0 Type B

Rugged housing

## USB 2.0 Receptacle

NAUSB-W

NAUSB-W-B

- USB 2.0 gender changer type A-B (B-A)
- Ideal for audio networking and integration of computerbased equipment into audio systems
- Lockable connection and water protection if mated with Neutrik USB cable NKUSB-*
- Optional screen to chassis grounding
- Reversible insert offering type A or B on front or rear end
- Universally accepted standard D-shape housing

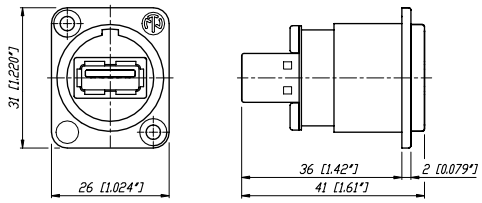
## USB 3.0 Receptacle

NAUSB3

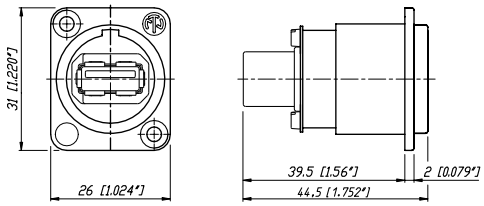
NAUSB3-B

- Rugged USB 3.0 feedthrough adapter
- Standardized D-shape housing
- Reversible insert offering type A or B on front or rear end
- Optional screen to chassis grounding
- Nickel and black chrome plating available

**NAUSB-W**




**NAUSB3**



## Technical Data

| Mechanical and Electrical | | Receptacle | Patch Cable |
|---|---|---|---|
| Conform with USB 2.0 Standard | | ● | ● |

| Material | | | |
|---|---|---|---|
| Shell | Zinc diecast (ZnAl4Cu1) | ● | ● |
| Shell plating | Nickel or black Chrome | ● | Nickel |
| Insert | | PBTP 15% GR | PVC |
| Contacts | Brass (CuZn39Pb3) | ● | ● |
| Contact finish | Gold | ● | ● |

| Environmental | | | |
|---|---|---|---|
| Operating temperature | -25 °C to +85 °C | ● | ● |
| Flammability | UL94 V-0 | ● | ● |
| Protection class | IP 65 | ● | ● |

## Ordering Information

### Chassis

| | |
|---|---|
| NAUSB-W | USB 2.0: USB A – USB B Adapter (reversible), sealing ring, optional grounding, nickel housing |
| NAUSB-W-B | USB 2.0: USB A – USB B Adapter (reversible), sealing ring, optional grounding, black housing |
| NAUSB3 | USB 3.0: USB A – USB B Adapter (reversible), sealing ring, optional grounding, nickel housing |
| NAUSB3-B | USB 3.0: USB A – USB B Adapter (reversible), sealing ring, optional grounding, black housing |

### Patch Cable

| | |
|---|---|
| NKUSB-* | USB 2.0 cable with overmolded flex relief and metal cable carrier, standard lengths: 1, 3, 5 m |

### Accessories

DSS-*

SCM

SCDX

SCCD-W

SCD-W

SCDP-*

| | |
|---|---|
| DSS-** | Lettering plate for D series, colored plastic |
| SCM | Plastic sealing cover to protect the Firewire connectors against dust and moisture. |
| SCDP-* | D-Size sealing gaskets, color coding |
| | (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |
| SCDX | Hinged cover seals D-size chassis connectors, IP 42 rated |
| SCCD-W | Spring-loaded cover seals for D-size chassis connectors, IP 65 rated |
| SCD-W | D-Size sealing cap, IP 65 rated |
| NZP1RU-8 | Panel1RU housing with 8 D-shape cutouts |
| NZP1RU-12 | Panel1RU housing with 12 D-shape cutouts |
| | **: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White |

Push Pull locking

HDMI 1.4

D-shape metal housing

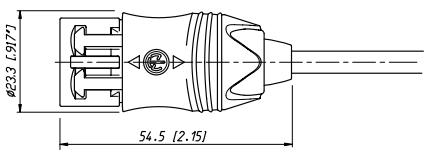
HDMI 1.4 receptacle

## HDMI Patch Cable

NKHDMI-*

- HDMI 1.4 – data rate up to 10.2 GBit/s
- Push Pull mating design provides secure locking system if mated with NAHDMI-W*
- Shielded connection – high noise immunity and EMI protection
- Ready made patch cables (0.6 m, 1 m, 3 m, 5 m and 10 m) with removeable rugged diecast cable carrier
- Mates with conventional HDMI receptacles if cable carrier is removed
- Dust and water resistant sealing in combination with NAHDMI-W*

**NKHDMI-***

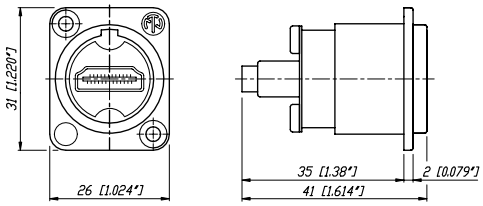


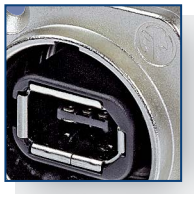

## HDMI Receptacles

NAHDMI-W

- Audio / Video interface to transmit any digital TV and PC Video format including high-definition video (HDTV).
- HDMI 1.4 feedthrough adapter with 19 pole HDMI receptacle at both ends
- Optional screen to chassis grounding
- Universally accepted standard D-shape housing

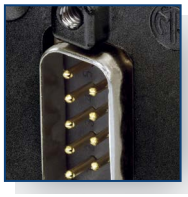
**NAHDMI-W**





D-shape metal housing

IEE 1394 receptacle



D-SUB data connector

D-shape metal housing

9 pole or 15 pole available

## Firewire Receptacle

NA1394-6-W-B

NA1394-6-W

- Ideal for audio networking and integration of digital equipment into audio systems
- Firewire feedthrough adapter with 6 pole IEEE 1394 receptacle at both ends
- Optional screen to chassis grounding
- Universally accepted standard D-shape housing

## D-SUB Feedtrough

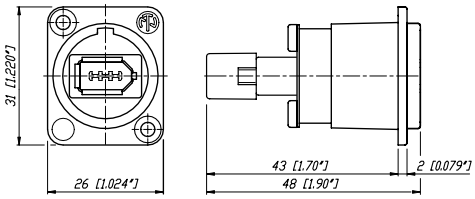
NEW

NADB9MF-B

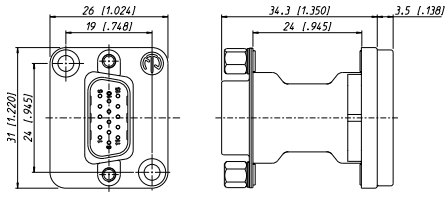
NADB15FF

- D-SUB feedthrough adapter
- Optimized ground connection
- Standardized D-shape housing
- 9 pole and 15 pole versions available
- "Male – Female" and "Female – Female" versions available
- Nickel and black chrome plating available

**NA1394-6-W**




**NADB9MF**



## Technical Data

| Mechanical and Electrical | | HDMI Receptacle | HDMI Patch Cable | Firewire | D-SUB |
|---|---|---|---|---|---|
| Conform with Standards | | HDMI 1.4 | HDMI 1.4 | IEEE | - |
| **Material** | | | | | |
| Shell | Zinc diecast (ZnAl4Cu1) | ● | ● | ● | ● |
| Shellplating | Nickel or black Chrome | ● | ● | ● | ● |
| Insert | | ABS | Nickel | PBTP 15% GR | Steel, tin plated |
| | | - | PVC | - | PBT |
| Contacts | Brass (CuZn39Pb3) | ● | ● | ● | ● |
| Contact finish | Gold | ● | ● | ● | ● |
| **Environmental** | | | | | |
| Operating temperature | -25 °C to +85 °C | ● | ● | ● | ● |
| Flammability | UL94 V-0 | ● | ● | ● | ● |
| Protection class | IP 65 | ● | ● | - | - |

## Ordering Information Firewire

| | |
|---|---|
| NA1394-6-W | 6 pole Firewire Adapter (IEEE 1394), sealing ring, optional grounding, nickel housing |
| NA1394-6-W-B | 6 pole Firewire Adapter (IEEE 1394), sealing ring, optional grounding, black housing |

## Ordering Information HDMI

### Chassis

| | |
|---|---|
| NAHDMI-W | HDMI – HDMI Adapter, sealing ring, optional grounding, nickel housing |
| NAHDMI-W-B | HDMI – HDMI Adapter, sealing ring, optional grounding, black housing |

### Patch Cable

| | |
|---|---|
| NKHDMI-* | HDMI 1.4 cable with overmolded flex relief and metal cable carrier, standard lengths: 0.6, 1, 3, 5, 10 m |

## Ordering Information D-SUB

| | |
|---|---|
| NADB9MF | 9 pole D-SUB feedthrough male-female, D-shape nickel housing |
| NADB9MF-B | 9 pole D-SUB feedthrough male-female, D-shape black chrome housing |
| NADB9FF | 9 pole D-SUB feedthrough female-female, D-shape nickel housing |
| NADB9FF-B | 9 pole D-SUB feedthrough female-female, D-shape black chrome housing |
| NADB15MF | 15 pole D-SUB feedthrough male-female, D-shape nickel housing |
| NADB15MF-B | 15 pole D-SUB feedthrough male-female, D-shape black chrome housing |
| NADB15FF | 15 pole D-SUB feedthrough female-female, D-shape nickel housing |
| NADB15FF-B | 15 pole D-SUB feedthrough female-female, D-shape black chrome housing |

## Accessories

DSS-*

SCM

SCDX

SCCD-W

SCD-W

SCDP-*

| | |
|---|---|
| DSS-** | Lettering plate for D series, colored plastic |
| SCM | Plastic sealing cover to protect the Firewire connectors against dust and moisture. |
| SCDP-* | D-Size sealing gaskets, color coding |
| | (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |
| SCDX | Hinged cover seals D-size chassis connectors, IP 42 rated |
| SCCD-W | Spring-loaded cover seals for D-size chassis connectors, IP 65 rated |
| SCD-W | D-Size sealing cap, IP 65 rated (not suitable for NADB*) |
| NZP1RU-8 | Panel1RU housing with 8 D-shape cutouts |
| NZP1RU-12 | Panel1RU housing with 12 D-shape cutouts |
| | **: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White |

# BNC Connectors

Content Page

UHD BNC - rearTWIST Cable Connectors ..... 124
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rearTWIST HD Cable Connectors ..... 125
Cable to Connector Guide ..... 126
Connector to Cable Guide ..... 128
HD BNC Chassis & Cable Jack Panel Version ..... 130
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**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA® ,XIRIUM®, are registered trademarks of Neutrik AG.**

# NEUTRIK®
# 75 Ω BNC Connectors

Neutrik offers a variety of 75 Ω cable and chassis BNC connectors. The rearTWIST cable connectors are easy to handle in high density applications such as video patchbays and switches, provide a tactile and fast assembly and offer colour coding as a standard. All parts of our BNC series are precisely machined to our high quality standards.

NEW

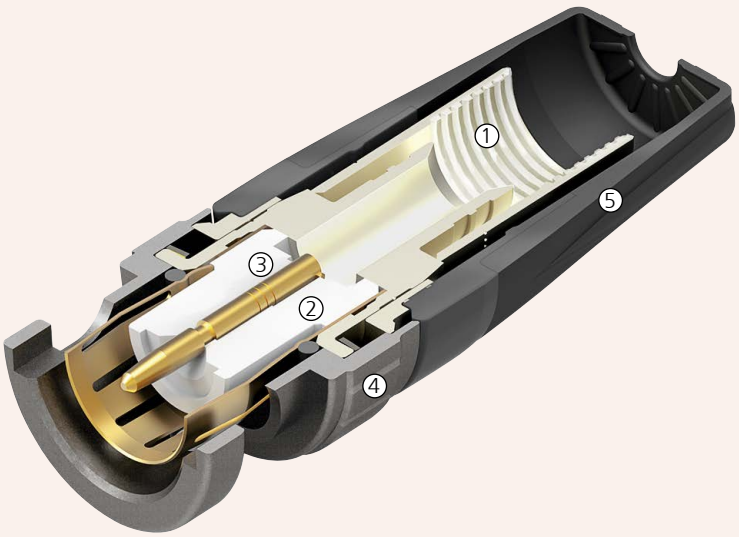
# rearTWIST UHD – BNC Connector

With the transition to 4K or even 8K-signals the impedance of BNC connectors became more important than ever. Every deviate impedance has a negative influence on return loss and VSWR (Voltage Standing Wave Ratio) which are important measurements for reflected signals in a transmission line. Especially on high data rates up to 24 Gb/s, as they occur when transmitting ultra high definition (UHD) signals, an impedance mismatch results in high return loss.

Neutrik´s new rearTWIST UHD-BNC connector is a specificlally for high frequencies optimized BNC connector; based on the proven rearTWIST technology. The unique insulator design in combination with the reduced crimp diameter of the gold plated center pin allows UHD-data transmission within the required return loss limits.

UHD

4K8K




## Features & Benefits

① Screen and cable jacket crimp instead of screen crimp only. Grooved inner surface holds the cable jacket to prevent tearing braids.
② High frequency optimized insulator design for UHD-transmissions.
③ Reduced pin crimp diameter for performance improvement (return loss values).
④ Swiss antraloy plating
⑤ rearTWIST boot for easy access in high density applications.

Gold plated contacts

Precise Swiss machined parts

UHD 4K8K

## rearTWIST UHD & Panel Version

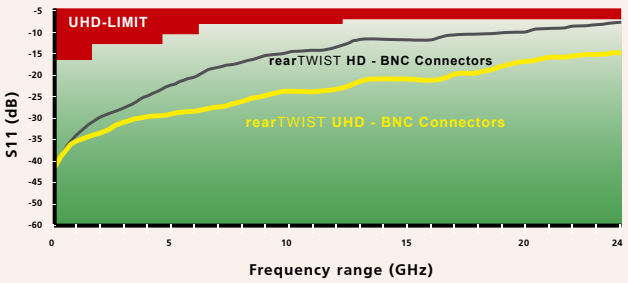
NEW

NBNC75BFG7X

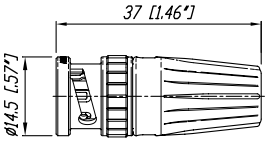
NBB75DFGX

- Optimized contact pin and insulator design for UHD-data transmission
- Proven rearTWIST technology
- Swiss antraloy plating
- Available for common cable types
- Fully compatible with conventional BNC chassis connectors
- D-size feedthrough chassis connectors

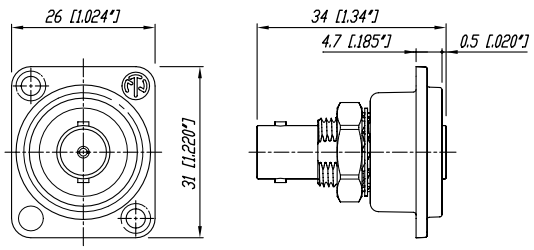
**Neutrik BNCs – High return loss!**




**NBNC75***




**NBB75DFG**



Bayonet locking

Gold plated contacts

9 different colors available

Female cable jack

## rearTWIST HD

NBNC75BFG7

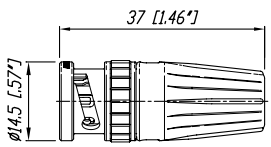
NBNC75BLP7

NBNB75GLP9

NBTB75CFI4

- "rearTWIST Principle" locking / unlocking using the easily accessible soft touch boot (Patent DE 100 48507)
- Ideal for recessed bulkheads where access to the "head" of the connector might be an issue. These connectors turn from the back and not the front.
- Snug-fit center pin insert provides tactile feedback
- Shield and jacket crimp technology prevents the problem of an exposed grounding braid on cable assemblies
- Large version for RG 11 cable
- Precise Swiss machined brass parts for outstanding durability
- Accessories include color coded boots in 10 standard colors, crimp tool and dies
- Sleek female cable jack e.g. for Y-cables

**NBNC75***



| | rearTWIST UHD | rearTWIST HD | rearTWIST HD Tiny | Cable Jack & Panel | Pin Crimp in mm | | Hex Crimp in mm | Stripping Tool | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | UHD | HD | | CS-BNC-RT | CS-BNC-LCS | CS-BNC-LCV | + CS-BNC-TCI |
| **Belden** | | | | | | | | | | | |
| Belden 1277R, 1278R, 1279R | | | NBTC75BNN5 | | | 1.6 | 4.53 | ● | - | - | ● |
| Belden 1406B, 1407B, 1417B | | | NBTC75BVV5 | | | 1.6 | 5.00 | ● | - | - | ● |
| Belden 1426A, 1505A (ANH) | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Belden 1505F | NBNC75BJP9X | NBNC75BJP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Belden 1506A | | NBNC75BIJ9 | | | | 1.6 | 5.41 | ● | - | - | - |
| Belden 1520A, 1521A, 1522A, 179DT | | | NBTC75BFI4 | NBTB75CFI4 | | 1.6 | 4.06 | ● | - | - | ● |
| Belden 1694A (ANH) | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| | NBNC75BTUP11X | | | | 1.07 | | 7.06 | ● | - | - | - |
| Belden 1694F | | NBNC75BRU11 | | | | 1.6 | 7.36 | ● | - | - | - |
| Belden 1695A | | NBNC75BQP11 | | | | 1.6 | 6.47 | ● | - | - | - |
| Belden 1855A | NBNC75BDD6X | NBNC75BDD6 | | | 1.07 | 1.6 | 4.53 | ● | - | - | - |
| Belden 1865A | | | NBTC75BXX6 | | | 1.6 | 5.00 | ● | - | - | ● |
| Belden 1855ENH | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Belden 7731A (ANH) | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| Belden 8218 | | | NBTC75BXX5 | | | 1.6 | 5.00 | ● | - | - | ● |
| Belden 8241 | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Belden 8241F | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Belden 8281 | | NBNC75BXY9 | | | | 1.6 | 8.23 | ● | - | - | - |
| Belden 8281F | | NBNC75BYY9 | | | | 1.6 | 8.23 | ● | - | - | - |
| Belden 9221 | | | NBTC75BLI4 | | | 1.6 | 4.06 | ● | - | - | ● |
| Belden 1794A | | NBNC75BZV14 | | | | 1.6 | 8.23 | ● | - | - | - |
| **Canare** | | | | | | | | | | | |
| Canare L-3CFB, L-3C2VS | | NBNC75BHK7 | | | | 1.6 | 5.41 | ● | - | - | - |
| Canare L-4CFB | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Canare L-4.5CHD, L-4.5CHWS | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Canare L-5CFB | | NBNC75BYY11 | | | | 1.6 | 8.23 | ● | - | - | - |
| Canare LV-61S | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Canare LV-77S | | NBNC75BYY9 | | | | 1.6 | 8.23 | ● | - | - | - |
| Canare V(3-5)-3C | | NBNC75BGG7 | | | | 1.6 | 5.00 | ● | - | - | - |
| Canare V(3-5)-4CFB | | NBNC75BJJ9 | | | | 1.6 | 5.41 | ● | - | - | - |
| Canare V(3-5)-5C | | NBNC75BRS9 | | | | 1.6 | 7.01 | ● | - | - | - |
| Canare V(3-5)-5CFB | | NBNC75BWS11 | | | | 1.6 | 7.01 | ● | - | - | - |
| Canare L-1.5C2VS | | | NBTC75BLI4 | | | 1.6 | 4.06 | ● | - | - | ● |
| Canare L-3CFW | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Canare L-5CFW | | NBNC75BYY11 | | | | 1.6 | 8.23 | ● | - | - | - |
| **Canford** | | | | | | | | | | | |
| Canford SDV-M | | NBTB75CNN5 | | | | 1.6 | 4.53 | ● | - | - | ● |
| Canford SDV, SDV-X, SDM | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Canford SDV-L, SDV-F | | NBNC75BWS11 | | | | 1.6 | 7.01 | ● | - | - | - |
| Canford SDV-HD | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| Canford SDV-F-HD | | NBNC75BWU13 | | | | 1.6 | 7.36 | ● | - | - | - |
| Canford VCS (BBC PSF1/3) | | NBNC75BLS7 | | | | 1.6 | 7.01 | ● | - | - | - |
| **Clark** | | | | | | | | | | | |
| Clark CD7559-0, CD7559F-0 | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Clark CD7523-7 | NBNC75BDD6X | NBNC75BDD6 | | | 1.07 | 1.6 | 4.53 | ● | - | - | ● |
| Clark CD7506-0 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Clark CD7506F-0 | | NBNC75BRU11 | | | | 1.6 | 7.36 | ● | - | - | - |
| **Commscope** | | | | | | | | | | | |
| Commscope 2065V | | NBNC75BIJ9 | | | | 1.6 | 5.41 | ● | - | - | - |
| Commscope 2279V | | NBNC75BQP11 | | | | 1.6 | 6.47 | ● | - | - | - |
| Commscope 5563 | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Commscope 5565 | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Commscope 5765 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Commscope 7536 (03-05) | | | NBTC75BXX6 | | | 1.6 | 5.00 | ● | - | - | ● |
| Commscope 7538 | NBNC75BDD6X | NBNC75BDD6 | | | 1.07 | 1.6 | 4.53 | ● | - | - | - |

| | rearTWIST UHD | rearTWIST HD | rearTWIST HD Tiny | Cable Jack & Panel | Pin Crimp in mm | | Hex Crimp in mm | Stripping Tool | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | UHD | HD | | CS-BNC-RT | CS-BNC-LCS | CS-BNC-LCV | + CS-BNC-TCI |
| **Draka Multimedia Cable** | | | | | | | | | | | |
| 0.31 / 1.45 AF, 753-1304(2), 755-1302 | | | NBTC75BFI4 | NBTB75CFI4 | | 1.6 | 4.06 | ● | - | - | ● |
| 0.41 / 1.9 AF, 753-1104, 755-1103, 755-1101 | | | NBTC75BNN5 | NBTB75CNN5 | | 1.6 | 4.53 | ● | - | - | ● |
| 0.51 / 2.3 Dz, 757-1001, VADN 7243 | | | NBTC75BVX6 | | | 1.6 | 5.00 | ● | - | - | ● |
| 0.6 / 2.8 AF, 0.6 L / 2.8 AF | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| HD Pro 0.6/2.8 AF | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| 0.6 / 3.7, 0.6L / 3.7 | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| 0.6 / 3.7 Dz | | NBNC75BLS7 | | | | 1.6 | 7.01 | ● | - | - | - |
| 0.8 / 3.7 AF, 755-801(803, 804) | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Highflex 08L/3.7D, HD Pro 0.8/3.7 AF | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| 0.8 / 4.9 Dz | | NBNC75BXY9 | | | | 1.6 | 8.23 | ● | - | - | - |
| 1.0 / 4.8 AF, 755-901/5 | NBNC75BUU11X | NBNC75BUU11 | | NBNB75GUU11 | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| 1.2L / 4.8Dz, 1.2L / 4.95AF | | NBNC75BWU13 | | | | 1.6 | 7.36 | ● | - | - | - |
| 1.4 / 6.6 AF | | NBLC75BSX14 | | | | 1.75 | 9.73 | - | ● | - | - |
| 1.6 / 7.3AF | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| **Suhner** | | | | | | | | | | | |
| Suhner G02233 | | | NBTC75BFI4 | NBTB75CFI4 | | 1.6 | 4.06 | ● | - | - | ● |
| Suhner G04233D | | NBNC75BLS7 | | | | 1.6 | 7.01 | ● | - | - | - |
| Suhner S02223 | | | NBTC75BLI4 | | | 1.6 | 4.06 | ● | - | - | ● |
| Suhner S04233, S04263 | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Suhner S05133-07 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Suhner S05163-02 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| **Percon** | | | | | | | | | | | |
| Percon VK2 | | | NBTC75BNN5 | | | 1.6 | 4.53 | ● | - | - | ● |
| Percon VK5 | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Percon VK6 | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Percon VK7 | NBNC75BUU11X | NBNC75BUU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Percon VK77 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Percon VK770F | | NBNC75BWU13 | | | | 1.6 | 7.36 | ● | - | - | - |
| Percon VK8 | | NBLC75BSX14 | | | | 1.75 | 9.73 | - | ● | - | - |
| Percon VK9 | | NBLC75BVZ17 | | | | 1.8 | 10.0 | - | - | ● | - |
| Percon VK95 | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| **Van Damme** | | | | | | | | | | | |
| Van Damme 268-175-000 | NBNC75BUU11X | NBNC75BUU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Van Damme 268-275-000 | NBNC75BJP9X | NBNC75BJP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Van Damme 268-306-000 | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Van Damme 268-408-000 | | | NBTC75BFI14 | | | 1.6 | 6.47 | ● | - | - | ● |
| Van Damme 268-475-000 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Van Damme 268-675-000 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Van Damme 278-475-000 | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| Van Damme 278-175-000 | NBNC75BUU11X | NBNC75BUU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Van Damme 278-975-000 | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Van Damme 278-775-000 | | | NBTC75BSS5 | | | 1.6 | 4.53 | ● | - | - | ● |
| Van Damme 278-075-000 | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Van Damme 278-075-006 | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Van Damme 278-375-000 | NBNC75BUU11X | NBNC75BUU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |

| | rearTWIST UHD | rearTWIST HD | rearTWIST HD Tiny | Cable Jack & Panel | Pin Crimp in mm | | Hex Crimp in mm | Stripping Tool | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | UHD | HD | | CS-BNC-RT | CS-BNC-LCS | CS-BNC-LCV | + CS-BNC-TCI |
| **Argosy Image** | | | | | | | | | | | |
| Argosy Image 360 | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Argosy Image 720 | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Argosy Image 1000 | NBNC75BTU11X | NBNC75BUU11 | | NBNB75GUU11 | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| **CAE** | | | | | | | | | | | |
| CAE MC75 | | | NBTC75BLI5 | NBTB75CLI5 | | 1.6 | 4.06 | ● | - | - | ● |
| CAE MC75.39 | | | NBTC75BVX6 | | | 1.6 | 5.00 | ● | - | - | ● |
| CAE KX6A | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| CAE VCB75 | | NBNC75BNP9 | | | | 1.6 | 6.47 | ● | - | - | - |
| CAE VCB 100 | | NBNC75BXU13 | | | | 1.6 | 7.36 | ● | - | - | - |
| CAE HD1250FLEX | | NBNC75BXU13 | | | | 1.6 | 7.01 | ● | - | - | - |
| CAE HD10460LSZH | | NBNC75BTS11 | | | | 1.6 | 7.01 | ● | - | - | - |
| CAE HD0628LSZH | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| CAE HD08370LSZH | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| CAE HD16720LSZH | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| **Cordial** | | | | | | | | | | | |
| Cordial CVI 3-7 | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 4.53 | ● | - | - | - |
| Cordial CVI 06-28 | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Cordial CVI 06-28HD, CVI 06-28HD-FRNC | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Cordial CVI (CVM) 06-37 | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Cordial CVI 08-37 HD-FRNC | | NBNC75BNP9 | | | | 1.6 | 6.47 | ● | - | - | - |
| Cordial CVI 10-48 HD | NBNC75BUU11X | NBNC75BUU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Cordial CVI 10-48 HD-FRNC | | NBNC75BWS11 | | | | 1.6 | 7.01 | ● | - | - | - |
| Cordial CVM 08-32 HD-FLEX | | NBNC75BIJ9 | | | | 1.6 | 5.41 | ● | - | - | - |
| Cordial CVM 12-50 HD-FLEX | | NBNC75BWU13 | | | | 1.6 | 7.36 | ● | - | - | - |
| **Kabeltronik** | | | | | | | | | | | |
| Kabeltronik HFV 1.0/4.8 AF-FRNC | | NBNC75BRU11 | | | | 1.6 | 7.36 | ● | - | - | - |
| Kabeltronik HFV 0.6/2.8 AF-FRNC | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Kabeltronik MVP 5x 0.6/2.8 AF-FRNC | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| **KLOTZ** | | | | | | | | | | | |
| KLOTZ V06/28, V062SH, VMXx75Y | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| KLOTZ V06/37 | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| KLOTZ V08/37H, VD083SH | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| KLOTZ V10/48, V10/48H | NBNC75BTU11X | NBNC75BUU11 | | NBNB75GUU11 | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| KLOTZ V16/72 | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| **Nexans** | | | | | | | | | | | |
| Nexans HF 75 0.6/2.9 02YS(ST)CH | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Nexans HF 75 1.6/7.2 02Y(ST)C(ST)H | | NBNC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| Nexans HF 75 0.6/3.7 2YCY | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| **Proel** | | | | | | | | | | | |
| Proel HPC 805 | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Proel HPC 810 | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Proel HPC 820 | | NBNC75BFH6 | | | | 1.6 | 5.00 | ● | - | - | - |
| **RG** | | | | | | | | | | | |
| RG11 | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| RG59B/U | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| RG179B/U | | | NBTC75BLI4 | | | 1.6 | 4.06 | ● | - | - | ● |
| **SOMMER** | | | | | | | | | | | |
| SOMMER 600-0051 (M/L/S) | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| SOMMER 600-0054 (M/L/S) | NBNC75BLP7X | NBNC75BLP7 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| SOMMER 600-0101M | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| SOMMER 600-0104M | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| SOMMER 600-162(F), Vctor 0.8/3.7 | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| SOMMER 600-025* -03 (05) | | | NBTC75BLI5 | NBTB75CLI5 | | 1.6 | 4.06 | ● | - | - | ● |
| SOMMER 600-0701 | | | NBTC75BLI5 | NBTB75CLI5 | | 1.6 | 4.06 | ● | - | - | ● |
| SOMMER 600-020* -03 (05) | | | NBTC75BLI5 | NBTB75CLI5 | | 1.6 | 4.06 | ● | - | - | ● |
| SOMMER 600-0451 | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| SOMMER 600-0751 | | | NBTC75BVX6 | | | 1.6 | 5.00 | ● | - | - | ● |
| **Tesca** | | | | | | | | | | | |
| Tesca Bengal | | | NBTC75BNS4 | | | 1.6 | 4.53 | ● | - | - | ● |
| Tesca Supra | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Tesca Massimo | | NBLC75BSX14 | | | | 1.75 | 9.73 | - | ● | - | - |
| Tesca Sphere | | NBLC75BVZ17 | | | | 1.8 | 10.00 | - | - | ● | - |
| Tesca Presto | | NBNC75BJP9 | | | | 1.6 | 6.47 | ● | - | - | - |
| Tesca Prima | | NBNC75BTS11 | | | | 1.6 | 7.01 | ● | - | - | - |
| Tesca Linea | | NBNC75BNP9 | | | | 1.6 | 6.47 | ● | - | - | - |
| Tesca Vostok | | NBNC75BWS12 | | | | 1.6 | 7.01 | ● | - | - | - |
| Tesca Dublo | | NBNC75BWS12 | | | | 1.6 | 7.01 | ● | - | - | - |
| **Others** | | | | | | | | | | | |
| AT&T 735 | | | NBTC75BSS5 | | | 1.6 | 4.53 | ● | - | - | ● |
| COMM-TEC RGBHV | | | NBTC75BSS5 | | | 1.6 | 4.53 | ● | - | - | ● |
| BBC PSF 1/3* | | NBNC75BLS7 | | | | 1.6 | 7.01 | ● | - | - | - |
| Bryant BD SD50 | | NBNC75BRS9 | | | | 1.6 | 7.01 | ● | - | - | - |
| Bryant BD SD53F | NBNC75BJP9X | NBNC75BJP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| Bryant SD10F, SD11 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Bryant SD50F | NBNC75BLP9X | NBNC75BLP9 | | | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| COVID CVD 1300-1500 | | | NBTC75BLI5 | NBTB75CLI5 | | 1.6 | 4.06 | ● | - | - | ● |
| Eupen 705 CRT 5V-HS | | NBNC75BTS11 | | | | 1.6 | 7.36 | ● | - | - | - |
| Extron BNC-5HR | | | NBTC75BNN5 | NBTB75CNN5 | | 1.6 | 4.53 | ● | - | - | ● |
| Extron BNC-5RC | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| GEPCO VDM230 | NBNC75BDD6X | NBNC75BDD6 | | | 1.07 | 1.6 | 4.53 | ● | - | - | - |
| GEPCO VPM2000 | NBNC75BLP9X | NBNC75BLP9 | | NBNB75GLP9 | 1.07 | 1.6 | 6.47 | ● | - | - | - |
| GEPCO VSD2001 | NBNC75BTU11X | NBNC75BTU11 | | | 1.07 | 1.6 | 7.36 | ● | - | - | - |
| Helix 734 | | NBNC75BNP9 | | | | 1.6 | 6.47 | ● | - | - | - |
| Helix 735 | | | NBTC75BSS5 | | | 1.6 | 4.53 | ● | - | - | ● |
| Hirschmann KOKA 712Cu | | NBNC75BTS9 | | | | 1.6 | 6.47 | ● | - | - | - |
| Kansai 3C-5S | | NBNC75BFH6 | | | | 1.6 | 5.00 | ● | - | - | - |
| Kelsey SD-1 | NBNC75BFG7X | NBNC75BFG7 | | | 1.07 | 1.6 | 5.00 | ● | - | - | - |
| Kelsey SD-1-LL | | NBNC75BWS11 | | | | 1.6 | 7.01 | ● | - | - | - |
| KROSCHU (341 270, 341 280) | | | | NBTC75BLI4 | | 1.6 | 4.06 | ● | - | - | ● |
| Wisi MK 99A | | | NBNC75BWS12 | | | 1.6 | 6.47 | ● | - | - | - |
| ZNK CM14B | | | NBTC75BFI4 | NBTB75CFI4 | | 1.6 | 4.06 | ● | - | - | ● |

* Registered trademark of BBC

| | Inner Conductor | Insulator | Cable O.D. mm | Pin crimp mm (square) | Hex Crimp mm | Stripping Tool | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CS-BNC-RT | CS-BNC-LCS | CS-BNC-LCV | + CS-BNC-TCI |
| **rearTWIST HD & UHD** | | | | | | | | | |
| NBLC75BVZ17 | < 1.7 | < 8.0 | < 10.4 | 1.80 (Hex crimp) | 10.00 | - | - | ● | - |
| NBLC75BSX14 | < 1.4 | < 6.6 | < 9.5 | 1.75 (Hex crimp) | 9.73 | - | ● | - | - |
| NBNC75BDD6 | < 0.6 | < 2.8 | < 4.3 | 1.6 | 4.53 | ● | - | - | - |
| NBNC75BDD6X | < 0.6 | < 2.8 | < 4.3 | 1.07 | 4.53 | ● | - | - | - |
| NBNC75BFG7 | < 0.7 | < 3.1 | < 4.7 | 1.6 | 5.00 | ● | - | - | - |
| NBNC75BFG7X | < 0.7 | < 3.1 | < 4.7 | 1.07 | 5.00 | ● | - | - | - |
| NBNC75BFH6 | < 0.6 | < 3.1 | < 4.9 | 1.6 | 5.00 | ● | - | - | - |
| NBNC75BGG7 | < 0.7 | < 3.2 | < 4.7 | 1.6 | 5.00 | ● | - | - | - |
| NBNC75BHK7 | < 0.7 | < 3.3 | < 5.6 | 1.6 (or 1.75 Hex) | 5.41 | ● | - | - | - |
| NBNC75BIJ9 | < 0.9 | < 3.6 | < 5.3 | 1.6 | 5.41 | ● | - | - | - |
| NBNC75BJJ9 | < 0.9 | < 3.8 | < 5.3 | 1.6 | 5.41 | ● | - | - | - |
| NBNC75BJP9 | < 0.9 | < 3.8 | < 6.3 | 1.6 | 6.47 | ● | - | - | - |
| NBNC75BJP9X | < 0.9 | < 3.8 | < 6.3 | 1.07 | 6.47 | ● | - | - | - |
| NBNC75BLP7 | < 0.7 | < 3.8 | < 6.3 | 1.6 | 6.47 | ● | - | - | - |
| NBNC75BLP7X | < 0.7 | < 3.8 | < 6.3 | 1.07 | 6.47 | ● | - | - | - |
| NBNC75BLP9 | < 0.9 | < 3.8 | < 6.3 | 1.6 | 6.47 | ● | - | - | - |
| NBNC75BLP9X | < 0.9 | < 3.8 | < 6.3 | 1.07 | 6.47 | ● | - | - | - |
| NBNC75BLS7 | < 0.7 | < 3.8 | < 6.9 | 1.6 | 7.01 | ● | - | - | - |
| NBNC75BNP9 | < 0.9 | < 4.1 | < 6.3 | 1.6 | 6.47 | ● | - | - | - |
| NBNC75BQP11 | < 1.1 | < 4.5 | < 6.3 | 1.6 | 6.47 | ● | - | - | - |
| NBNC75BRS9 | < 0.9 | < 4.8 | < 6.9 | 1.6 | 7.01 | ● | - | - | - |
| NBNC75BTS9 | < 0.9 | < 4.7 | < 6.9 | 1.6 | 7.01 | ● | - | - | - |
| NBNC75BTS11 | < 1.1 | < 4.7 | < 6.9 | 1.6 | 7.01 | ● | - | - | - |
| NBNC75BTU11 | < 1.1 | < 4.7 | < 7.3 | 1.6 | 7.36 | ● | - | - | - |
| NBNC75BTU11X | < 1.1 | < 4.7 | < 7.3 | 1.07 | 7.36 | ● | - | - | - |
| NBNC75BTUP11X | < 1.1 | < 4.7 | < 7.3 | 1.07 | 7.06 | ● | - | - | - |
| NBNC75BTU13 | < 1.3 | < 4.7 | < 7.3 | 1.6 | 7.36 | ● | - | - | - |
| NBNC75BUU11 | < 1.1 | < 4.9 | < 7.3 | 1.6 | 7.36 | ● | - | - | - |
| NBNC75BUU11X | < 1.1 | < 4.9 | < 7.3 | 1.07 | 7.36 | ● | - | - | - |
| NBNC75BRU11 | < 1.1 | < 4.7 | < 7.3 | 1.6 | 7.36 | ● | - | - | - |
| NBNC75BWS11 | < 1.1 | < 5.1 | < 6.9 | 1.6 | 7.01 | ● | - | - | - |
| NBNC75BWS12 | < 1.2 | < 5.1 | < 6.9 | 1.6 | 7.01 | ● | - | - | - |
| NBNC75BWU13 | < 1.4 | < 5.1 | < 7.3 | 1.6 | 7.36 | ● | - | - | - |
| NBNC75BXU13 | < 1.4 | < 5.3 | < 7.3 | 1.6 | 7.36 | ● | - | - | - |
| NBNC75BXY9 | < 0.9 | < 5.3 | < 8.0 | 1.6 | 8.23 | ● | - | - | - |
| NBNC75BYY9 | < 0.9 | < 5.2 | < 8.0 | 1.6 | 8.23 | ● | - | - | - |
| NBNC75BYY11 | < 1.1 | < 5.2 | < 8.0 | 1.6 | 8.23 | ● | - | - | - |
| NBNC75BZV14 | < 1.4 | < 5.2 | < 8.0 | 1.6 (or 1.75 Hex) | 8.23 | ● | - | - | - |
| **rearTWIST TINY** | | | | | | | | | |
| NBTC75BFI4 | < 0.4 | < 1.6 | < 2.9 | 1.6 | 4.06 | ● | - | - | ● |
| NBTC75BLI4 | < 0.4 | < 1.8 | < 2.9 | 1.6 | 4.06 | ● | - | - | ● |
| NBTC75BLI5 | < 0.5 | < 1.8 | < 2.9 | 1.6 | 4.06 | ● | - | - | ● |
| NBTC75BNN5 | < 0.5 | < 2.0 | < 3.1 | 1.6 | 4.53 | ● | - | - | ● |
| NBTC75BNS4 | < 0.4 | < 2.0 | < 3.5 | 1.6 | 4.53 | ● | - | - | ● |
| NBTC75BSS5 | < 0.5 | < 2.3 | < 3.4 | 1.6 | 4.53 | ● | - | - | ● |
| NBTC75BVV5 | < 0.5 | < 2.5 | < 3.8 | 1.6 | 5.00 | ● | - | - | ● |
| NBTC75BVX6 | < 0.6 | < 2.5 | < 4.0 | 1.6 | 5.00 | ● | - | - | ● |
| NBTC75BXX5 | < 0.5 | < 2.6 | < 4.0 | 1.6 | 5.00 | ● | - | - | ● |
| NBTC75BXX6 | < 0.6 | < 2.6 | < 4.0 | 1.6 | 5.00 | ● | - | - | ● |
| **CABLE JACKS (TINY & PANEL VERSION)** | | | | | | | | | |
| NBTB75CFI4 | < 0.4 | < 1.6 | < 2.9 | 1.6 | 4.06 | ● | - | - | ● |
| NBTB75CNN5 | < 0.5 | < 2.0 | < 3.1 | 1.6 | 4.53 | ● | - | - | ● |
| NBTB75CLI5 | < 0.5 | < 1.8 | < 2.9 | 1.6 | 4.06 | ● | - | - | ● |
| NBNB75GLP9 | < 0.9 | < 3.8 | < 6.3 | 1.6 | 6.47 | ● | - | - | ● |
| NBNB75GUU11 | < 1.1 | < 4.9 | < 7.3 | 1.6 | 7.36 | ● | - | - | ● |
| NBNB75ILP9 | < 0.9 | < 3.8 | < 6.3 | 1.6 | 6.47 | ● | - | - | ● |
| NBNB75IUU11 | < 1.1 | < 4.9 | < 7.3 | 1.6 | 7.36 | ● | - | - | ● |

D-shape metal housing

Gold plated center pin

## HD BNC Chassis & Cable Jacks Panel Version

Bulkhead Jacks - NBB75FG

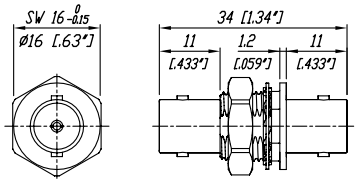
NBB75DFG

NBB75DFGB

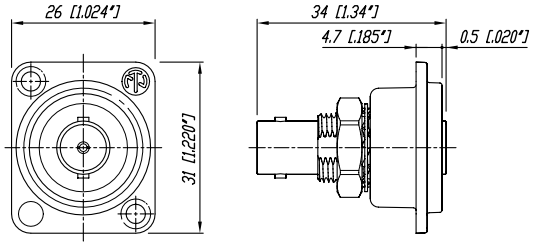
Cable jacks Panel Version – NBB75SI

- True 75 Ω design meets the stringent HDTV / DVD requirements
- Isolated or grounded versions
- "D" shaped housing (provides flush mounting and protection of the jacks from damage) or single feed through mountings
- Gold plated center contact

**NBB75FI**




**NBB75DFG**




## Ordering Information

| Nickel housing | Black housing | Antraloy housing | |
|---|---|---|---|
| NBB75DFG | NBB75DFGB | | Bulkhead jack, D-shape housing, feed through, grounded |
| | | NBB75DFGX | Bulkhead jack, D-shape housing, feed through, grounded, UHD-optimezed |
| NBB75DFI | NBB75DFIB | | Bulkhead jack, D-shape housing, feed through, isolated |
| | | NBB75DFIX | Bulkhead jack, D-shape housing, feed through, isolated, UHD-optimezed |
| NBB75DSG | NBB75DSGB | | Bulkhead jack, D-shape housing, solder version, grounded |
| NBB75DSI | NBB75DSIB | | Bulkhead jack, D-shape housing, solder version, isolated |
| NBB75FG | | | Bulkhead jack, feed through, grounded |
| NBB75FI | | | Bulkhead jack, feed through, isolated |
| NBB75SI | | | Bulkhead jack, solder version, including isolationwashers |
| NBB75FA | | | Coupler, feed through |

| Specifications | | rearTWIST UHD | rearTWIST HD & rearTWIST HD Large & Cable Jack Panel | rearTWIST HD Tiny & Cable Jack Tiny | Bulkheads & Coupler |
|---|---|---|---|---|---|
| **Electrical** | | | | | |
| Impedance | 75 Ω | ● | ● | ● | ● |
| Rated voltage | 500 V ac rms | ● | ● | 250 V ac rms | ● |
| Insulation resistance | > 5 GΩ | ● | ● | ● | ● |
| Dielectric withstanding voltage | 1'500 V ac rms | ● | ● | 750 V ac rms | ● |
| VSWR / Return Loss | ≤ 1.050 / > 32 dB up to 1 GHz | ≤ 1.06 / > 30 dB up to 6 GHz | ● | ≤ 1.10 / > 26 dB up to 1 GHz | ≤ 1.03 / > 37 dB up to 1 GHz |
| | ≤ 1.065 / > 30 dB up to 2 GHz | ≤ 1.13 / > 24 dB up to 12 GHz | ● | ≤ 1.14 / > 24 dB up to 2 GHz | ≤ 1.05 / > 32 dB up to 2 GHz |
| | ≤ 1.100 / > 26 dB up to 3 GHz | ≤ 1.22 / > 20 dB up to 18 GHz | ● | ≤ 1.22 / > 20 dB up to 3 GHz | ≤ 1.08 / > 28 dB up to 3 GHz |
| Inner contact resistance | ≤ 3 mΩ (initial) | ● | ● | ● | ● |
| Outer contact resistance | ≤ 2 mΩ (initial) | ● | ● | ● | ● |
| **Mechanical** | | | | | |
| Cable anchoring | Jacket crimping | ● | ● | ● | N / A |
| Cable O.D. range | mm | 4.3 - 7.3 | 4.0 - 7.7 | 2.5 - 3.8 | N / A |
| - Rear Twist Large | mm | - | 10.3 | - | - |
| Center contact retention | > 30 N | ● | ● | ● | - |
| Engagement force | < 25 N | ● | ● | ● | ● |
| Lifetime | 1`000 mating cycles | ● | ● | ● | ● |
| **Material** | | | | | |
| Shell | Brass (CuZn39Pb3) | ● | ● | ● | ● |
| | Optalloy coated | - | ● | ● | ● |
| | Antraloy coated | ● | - | - | - |
| | PA6 (Push Pull only) | - | N / A | N / A | N / A |
| D-Shape housing: | Zinc diecast (ZnAl4Cu1) gal Ni or black Cr platin | N / A | N / A | N / A | NBB75D* |
| | Antraloy coated | ● | - | - | - |
| Ground contact | Bronze (CuSn6) | ● | ● | ● | - |
| | 0.2 µm AuCo over 2 µm NiP15 | ● | ● | ● | - |
| | Brass (CuZn39Pb3) | - | - | - | ● |
| | OPTALLOY coated | - | - | - | ● |
| Center contact | Brass (CuZn35Pb2) | ● | ● | ● | - |
| | 0.2 µm AuCo or | ● | ● | ● | - |
| | Brass (CuZn39Pb3) | - | - | - | ● |
| | 0.2 µm AuCo | - | - | - | ● |
| Insulator | Teflon PTFE | - | ● | ● | ● |
| | Polypropylen PP | ● | - | - | - |
| Chuck | Polyacetal POM | N / A | N / A | N / A | N / A |
| Insulation Shell | Polyacetal POM | N / A | N / A | N / A | ● |
| **Environmental** | | | | | |
| Temperature range | -30 °C to +85 °C | ● | ● | ● | ● |
| Solderability complies with | IEC 68-2-20 | ● | ● | ● | N / A |
| Contact crimpability complies | IEC 60803 and IEC 60352-2 | ● | ● | ● | N / A |

## Colour Coded Accessories and Seals

BST-BNC-*

DSS-*

SCF

SCDX

SCCD-W

SCDP-*

| | |
|---|---|
| BST-BNC-* | Standard boot for the rearTWIST BNCs in black, 9 different colors available |
| DSS-* | Lettering plate for D Shape bulkheads. |
| SCF | Rubber sealing cover to protect the connector agains dust and moisture |
| SCDP-* | D-Size sealing gaskets, color coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |
| SCDX | Hinged cover seals D-size chassis connectors, IP 42 rated |
| SCCD-W | Spring-loaded cover to seals for D-size chassis connectors, IP 65 rated |
| NZP1RU-8 | Panel 1RU housing for 8 D-shape cutouts |
| NZP1RU-12 | Panel 1RU housing for 12 D-shape cutouts |
| | *: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White |

## Assembly Tools

CAS-BNC-T

CS-BNC-RT

HX-R-BNC

PT-BNC

DIE-R-BNC-*

| | | | |
|---|---|---|---|
| CAS-BNC-T | BNC tool case equipped with HX-R-BNC, PT-BNC: Plier tool, CS-BNC-RT: Stripping tool Note: Dies have to be ordered separately | CS-BNC-LCV | Coax cable stripper for cable O.D. > 8 mm (NBLC75BVZ17) |
| CS-BNC-RT | Coax cable stripper for cable O.D. 2.5 – 8 mm | DIE-R-BNC-* | Crimp tool die for pin and shield for HX-R-BNC |
| CS-BNC-LCS | Coax cable stripper for cable O.D. > 8 mm (BNLC75BSX14) | HT-BNC | Spanner tool for the pushPULL BNCs |
| | | HX-R-BNC | Crimp tool, frame |
| | | PT-BNC | BNC pliers tool |

## Crimp die assignment for HX-R-BNC

| Crimp die | Hex crimp mm A | B | C | Hex crimp inch A | B | C | Center pin mm (square crimp) |
|---|---|---|---|---|---|---|---|
| **rear**TWIST **HD BNC** | | | | | | | |
| DIE-R-BNC-PDC | 6.47 | 4.53 | 4.06 | 0.255 | 0.178 | 0.160 | 1.6 |
| DIE-R-BNC-PG | 6.47 | 5.00 | - | 0.255 | 0.197 | - | 1.6 |
| DIE-R-BNC-PJ | 6.47 | 5.41 | - | 0.255 | 0.213 | - | 1.6 |
| DIE-R-BNC-PS | 6.47 | 7.01 | - | 0.255 | 0.276 | - | 1.6 |
| DIE-R-BNC-PU | 6.47 | 7.36 | - | 0.255 | 0.290 | - | 1.6 |
| DIE-R-BNC-PY | 6.47 | 8.23 | - | 0.255 | 0.324 | - | 1.6 |

| Crimp die | Hex crimp mm A | B | C | Hex crimp inch A | B | C | Center pin mm (square crimp) |
|---|---|---|---|---|---|---|---|
| DIE-R-BNC-X | 9.73 | - | - | 0.383 | - | - | 1.75 (Hex Crimp) |
| DIE-R-BNC-UG | 7.36 | 5.00 | - | 0.290 | 0.197 | - | 1.6 |
| DIE-R-BNC-ZPLUS | 10.0 | - | - | 0.39 | - | - | 1.8 |
| **rear**TWIST **UHD BNC** | | | | | | | |
| DIE-R-BNCX-PDG | 6.47 | 5.00 | 4.53 | 0.255 | 0.197 | 0.178 | 1.07 |
| DIE-R-BNCX-PU | 6.47 | 7.36 | - | 0.255 | 0.290 | - | 1.07 |

# Circular Connectors

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**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA®, XIRIUM®, are registered trademarks of Neutrik AG.**

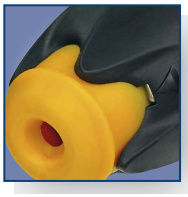
## Introduction

The Neutrik® circular connector program is a range of metal, multi-pole connectors specifically designed for industrial applications. These series provide a variety of male and female cable connectors and receptacles that can be terminated by soldering and crimping or to printed circuit boards. An easy to use and reliable quick-lock system ensures a perfect connection and cannot be released accidentally. The circular connectors offer the Neutrik® unique chuck type strain relief and a reinforced housing for robust dependability.

The Neutrik® industrial connector range also features a unique power connector for single phase applications up to 32 A.

The main areas of application are in the measurement, test and control, automotive and machine tool industry as well as medical technology.

Ergonomic quick lock



Bushing with securing key and sealing

Overmolded ready made cable

Screw terminals

1/4" flat tabs

UL recognized

ENEC certified

## powerCON TRUE1 – Lockable 16 A single phase connector

NAC3FX-W

NAC3MX-W

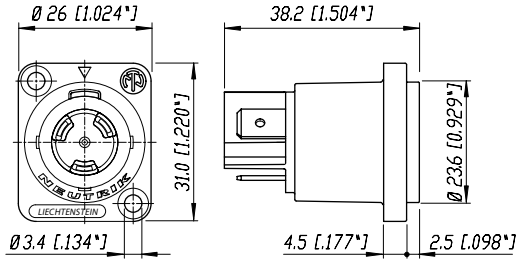
NAC3MPX

NAC3FPX

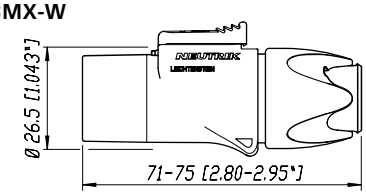
NAC3PX

- True mains connector with breaking capacity (CBC)
- Lockable 16 A (acc. ENEC, VDE) / 20 A (acc. single phase connector
- Complete system with inlet and outlet connectors
- Unique duplex chassis connector – combines inlet and outlet coupler
- IP 65 – water resistant ready-made cord sets
- ENEC certified according to IEC 60320
- Easy and reliable locking system
- UL recognized components

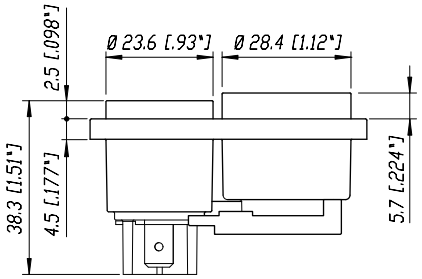
**NAC3MPX**



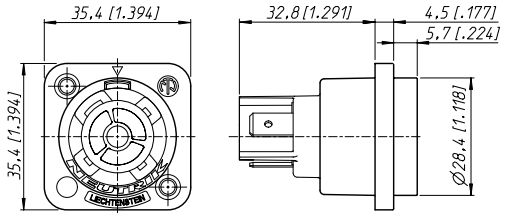

**NAC3MX-W**

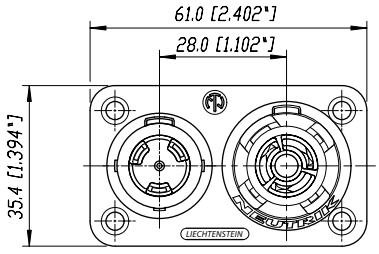



**NAC3PX**




**NAC3FPX**



## Ordering Information

| Cable Connector | |
|---|---|
| NAC3FX-W | Mains cable connector, female CBC, screw terminals, IP 65 |
| NAC3MX-W | Mains cable connector, male CBC, screw terminals, IP 65 |

| Chassis Connector | |
|---|---|
| NAC3FPX | Mains chassis connector female CBC, 1/4" flat tab terminals, power outlet |
| NAC3FPX-ST | Mains chassis connector female CBC, screw terminals, power outlet |
| NAC3MPX | Mains chassis connector male CBC, 1/4" flat tab terminals, power inlet |
| NAC3MPX-WOT | Mains chassis connector male CBC, 1/4" flat tab terminals, without insulation divider, power inlet |
| NAC3PX | Mains chassis duplex, 1/4" flat tab terminals |

## Accessories

HTAC

SCDP-*

SCNAC-PX

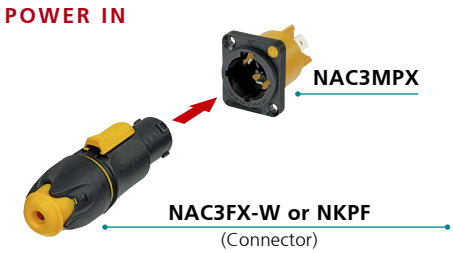
SCNAC-FPX

SCNAC-MPX

| | |
|---|---|
| HTAC | Hand tool to tighten the powerCON TRUE1 bushing |
| SCDP-* | D-Size sealing gaskets, colour coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |
| SCNAC-PX | Sealing cover NAC3PX, IP 65 |
| SCNAC-FPX | Sealing cover for NAC3FPX, IP 65 |
| SCNAC-MPX | Sealing cover for NAC3MPX, IP 65 |

## Connector Assignment

### APPLIANCE INLET




### APPLIANCE COMBINATION

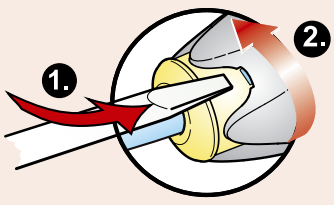
### CABLE EXTENTION

### APPLIANCE OUTLET

### FOR DISASSEMBLY - OPEN TWIST LOCK!

① Press with screw driver to unlock

② Turn bushing while still press the locking.



## Specification
READY-MADE POWER CORDS

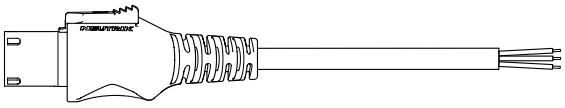
Ready-made overmolded power cord in protection class IP65. The cable utilizes standard duty cord with 3 conductors with cross section 1.5 mm² or AWG 12.

Cables are equipped with Neutrik powerCON TRUE1 NAC3FX-W and NAC3MX-W for extention cables, with an open end for termination of local connectors for "power in" supply cables or a right-angled Schuko plug. Other local connectors on request.

Cables are available in different lengths.

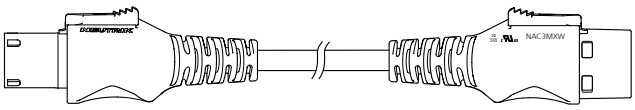
## International Cord

### International Power Cord 16 A / 250 VAC



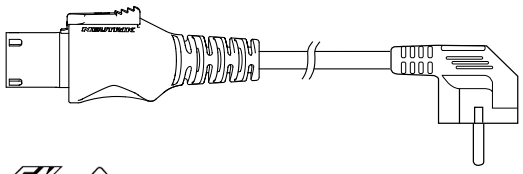
| | |
|---|---|
| Plug / end termination | Neutrik NAC3FX-W / stripped open end |
| Approvals | ENEC, VDE |
| Standard length | 1 m, 1.5 m, 2 m, 3 m, 5 m |
| Conductor size | 3 x 1.5 mm² |
| Cable type / color / Nom. O.D. | H07RN-F3G1.5 / black / 9.6 mm |
| Part Number e.g. | NKPF-NC-A-3 |
| Cable type / color / Nom. O.D. | H05VV-F3G1.5 / black / 8.3 mm |
| Part Number e.g. | NKPF-NC-B-1 |

### International Extension Cord 16 A / 250 VAC




| | |
|---|---|
| Plug / end termination | Neutrik NAC3FX-W / Neutrik NAC3MX-W |
| Approvals | ENEC, VDE |
| Standard length | 0.5 m, 1 m, 1.5 m |
| Conductor size | 3 x 1.5 mm² |
| Cable type / color / Nom. O.D. | H07RN-F3G1.5 / black / 9.6 mm |
| Part Number e.g. | NKPF-M-A-0.5 |
| Cable type / color / Nom. O.D. | H05VV-F3G1.5 / black / 8.3 mm |
| Part Number e.g. | NKPF-M-B-1 |

### International Power Cord 16 A / 250 VAC



| | |
|---|---|
| Plug / end termination | Neutrik NAC3FXW / SCHUKO RA Plug |
| Approvals | ENEC, VDE |
| Standard length | 1 m, 1.5 m, 2 m, 3 m, 5 m, 10 m |
| Conductor size | 3 x 1.5 mm² |
| Cable type / color / Nom. O.D. | H07RN-F3G1.5 / black / 9.6 mm |
| Part Number e.g. | NKPF-SR-A-1 |
| Cable type / color / Nom. O.D. | H05VV-F3G1.5 / black / 8.3 mm |
| Part Number e.g. | NKPF-SR-B-1 |

## Cable Part Number Breakdown

**N K P F - X - Y - 3**

**Neutrik Power Cord**

F ..... NAC3FX-W
M ..... NAC3MX-W

**TERMINATION 2. END**

M ..... NAC3MX-W
NC ..... Stripped open end
SR ..... Schuko right-angled

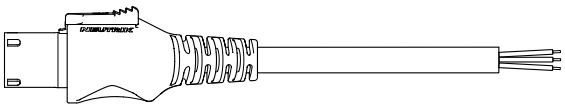
**LENGTH in m**

**CABLE TYPE**

A ..... H07RN-F3G1.5
B ..... H05VV-F3G1.5
C ..... SJTOW AWG 12
D ..... SJOOW AWG 12

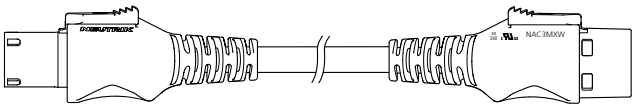
## US Cord

### US Power Cord 20 A / 250 VAC



| | |
|---|---|
| Plug / end termination | Neutrik NAC3FXW / stripped open end |
| Approvals | UL, cUL |
| Standard length | 1 m, 1.5 m, 2 m, 3 m, 5 m |
| Conductor size | 3 x 12 AWG |
| Cable type / color / Nom. O.D. | SJTOW / black / 11.3 mm |
| Part Number e.g. | NKPF-NC-C-5 |
| Cable type / color / Nom. O.D. | SJOOW / black / 11.3 mm |
| Part Number e.g. | NKPF-NC-D-3 |

### US Extension Cord 20 A / 250 VAC



| | |
|---|---|
| Plug / end termination | Neutrik NAC3FXW / Neutrik NAC3MXW |
| Approvals | UL, cUL |
| Standard length | 0.5 m, 1 m, 1.5 m |
| Conductor size | 3 x 12 AWG |
| Cable type / color / Nom. O.D. | SJTOW / black / 11.3 mm |
| Part Number e.g. | NKPF-M-C-1 |
| Cable type / color / Nom. O.D. | SJOOW / black / 11.3 mm |
| Part Number e.g. | NKPF-M-D-1 |

Quick lock

Neutrik bushing

3/16" flat tabs

Locking area on chassis connector

powerCON

## powerCON – Locking 3 Pole Power Connectors

NAC3FCA

NAC3MPA-1

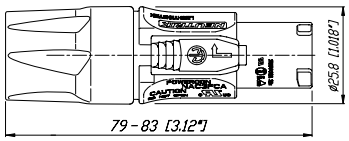
NAC3FCB

NAC3MPB-1

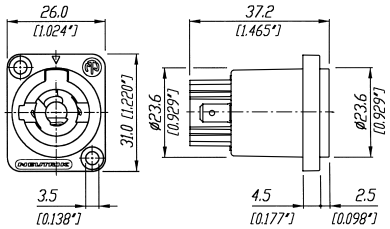
NAC3MM-1

- Lockable 3 pole single phase equipment (AC) connector
- High current capacity, rated at 20 A / 250 V ac
- Colour coded for easy identification, powerCON offers power-in (blue) and power-out (grey) versions with different keying to avoid the possibility of intermating
- Fast and easy locking system
- Extremely robust and reliable
- Excellent cable retention
- UL, cUL recognized components (file no. E 135070) VDE certified (Reg. No. 6360),
- New latch design for easier handling and secure locking
- Coupler for linking cables (couples NAC3FCA to NAC3FCB)

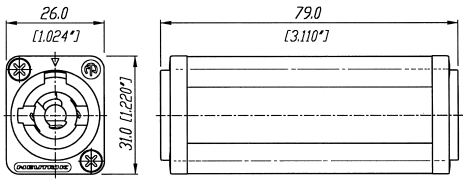
**NAC3FCA(B)**




**NAC3MPA(B)-1**



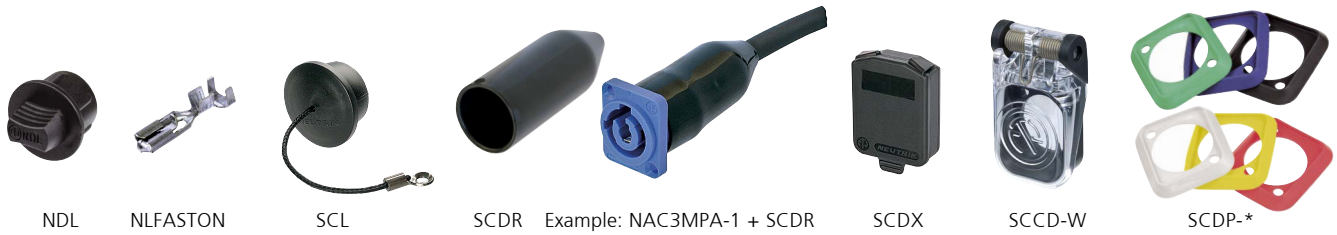

**NAC3MM-1**



## Ordering Information

| | |
|---|---|
| NAC3FCA | Cable connector, quick lock with securing lever, A-type for power inlet, screw terminals |
| NAC3MPA-1 | Air tight chassis connector, A-type for power inlet, flat tab terminals, blue |
| NAC3MPA-1-WOT | Chassis connector, power-out, 3/16'' flat tab terminals, blue, without insulation divider |
| NAC3FCB | Cable connector, quick lock with securing lever, B-type for power outlet, screw terminals |
| NAC3MPB-1 | Air tight chassis connector, B-type for power outlet, flat tab terminals, grey |
| NAC3MPB-1-WOT | Chassis connector, power-out, 3/16'' flat tab terminals, grey, without insulation divider |
| NAC3MM-1 | Coupler for linking cables (couples NAC3FCA to NAC3FCB) |

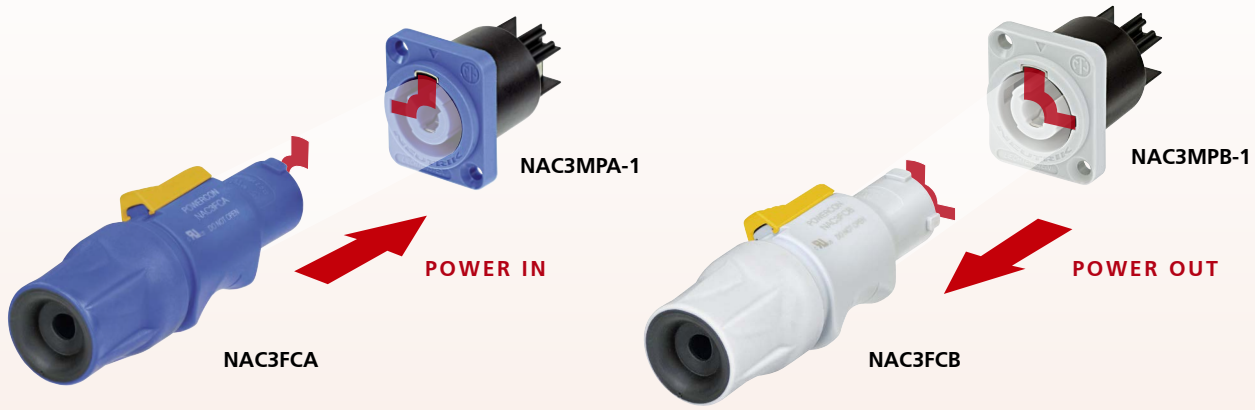
## Accessories



NDL NLFASTON SCL SCDR Example: NAC3MPA-1 + SCDR SCDX SCCD-W SCDP-*

| | |
|---|---|
| HTFAC | Hand tool to tighten the powerCON bushing |
| NDL | dummyPLUG for powerCON 20 A chassis connector |
| NLFASTON | FASTON® receptacle for tabs with "positive lock" for use with NL4MP, NL4MPR, NL8MPR, Pack of 100 pcs. |
| SCL | Plastic sealing cover to protect the connectors against dust and moisture |
| SCDR | Rear end protection cover for D-size chassis connector |
| SCDX | Hinged cover seals D-size chassis connectors, IP 42 rated |
| SCCD-W | Spring-loaded cover to seals D-size chassis connectors, IP65 rated |
| SCD-W | D-Size sealing cap, IP65 rated |
| SCDP-* | D-Size sealing gaskets, colour coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white) |

**KEYWAYS:**
With the two non-interchangeable types of connectors (A type and B type) it is impossible to produce a short circuit. Mating connectors (combination) are identified by mechanical keyways and by color.




**ATTENTION**

The technical data of the powerCON connectors refer to connectors without breaking capacity, meaning connecting devices not to be engaged and disengaged in normal use when live or under load.

Robust metal housing

Screw-type terminals

powerCON

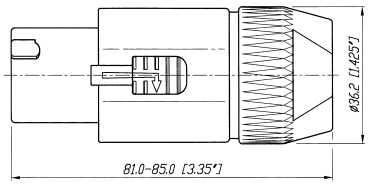
## powerCON 32 A Connectors

NAC3FC-HC

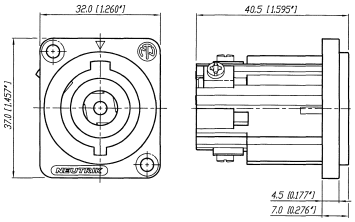
NAC3MP-HC

- Locking single phase AC appliance coupler
- High current capacity (32 A rated)
- Fast and easy locking system
- Excellent cable handling and protection
- Extremely robust and reliable
- 250 V ac, 32 A single-phase (for ambient temperatures up to 35 °C)
- Premating contact for protective earth
- Locking system to prevent unintentional disengagement
- Cable O.D. range: 8 – 20 mm
- Wiring with screw-type terminals for wires 2.5 to 6.0 mm² (AWG 14 – 10)

**NAC3FC-HC**




**NAC3MP-HC**




## Ordering Information

| | |
|---|---|
| NAC3FC-HC | Cable connector, quick lock with securing lever, screw terminals |
| NAC3MP-HC | Fast and easy locking system, screw-type terminals |

| Specification | | powerCON TRUE1 | powerCON Series | 32 A powerCON Series |
|---|---|---|---|---|
| **Electrical** | | | | |
| Number of contacts | 2 + PE | ● | ● | ● |
| Rated current per contact | | 20 A rms [1] | 20 A rms | 32 A rms |
| Rated voltage | 250 V ac | ● | ● | ● |
| Dielectric strength | 4 kV ac | ● | ● | ● |
| Contact resistance | ≤ 3 mΩ | ● | ● | ● |
| Insulation resistance after | > 0.1 GΩ | ● | ● | ● |
| damp heat test (IEC 68-2-30) | | | | |
| **Mechanical** | | | | |
| Retention method | Quick lock | ● | ● | ● |
| Cable O.D. range | | 6 – 12 mm | 6 – 15 mm [2] | 8 – 20 mm |
| Wiring | Cable: screw type terminals | ● | ● | ● |
| | | 1.0 - 2.5 mm² / AWG 12 | 2.5 mm² / AWG 14 | 2.5 – 6 mm² / AWG 14-10 |
| | or soldering | ● | ● | ● |
| | Chassis: | | | |
| | flat tabs for Faston (4.8 x 0.5 mm) | - | ● | - |
| | (6.35 mm x 0.8 mm) | ● | - | - |
| | or soldering | ● | ● | ● |
| | screw type terminals | - | ● | ● |
| **Material** | | | | |
| Housing cable connector | | PA 6 30% GR | PA 6 30% GR | PA 6 30% GR |
| Housing receptacle | | PA 6.6 30% GR | PA 6.6 30% GR | PA 6.6 25% GR |
| Insert | | PA 6.6 30% GR | PA 6 30% GR | PA 6.6 25% GR |
| Contacts | Female: | CuSn0.2 | CuZn39Pb3 | CuZn39Pb3 |
| | Male: | CuNi1Si0.2 | CuNi1Si0.2 | CuSn0.2 |
| Contact surface | | 2 µm Ag plated | 4 µm / 2 µm Ag plated | 4 µm Ag |
| Chuck POM | | ● | ● | ● |
| **Environmental** | | | | |
| Flammability | UL 94 HB | - | ● | ● plug housing |
| | UL 94 V-0 | ● | ●* | ●* |
| Temperature range: | -30 °C to +80 °C | ● | ● | 70 °C |
| Protection class (mated) | | IP 65 | IP 20 | IP 2X unmated |
| Safety Requirements | EN / IEC61984 | - | ● | ● |
| | IEC 60320 | ● | - | - |
| Solderability complies with | IEC 68-2-20 | ● | ● | - |

[1] : Appliance coupler acc. IEC 60320 limited to 16 A ac

[2] : Cable O.D. range limited to 6 - 14 mm / acc. VDE

* : Receptacle

FASTON® is a trademark of AMP Inc.

Connector locking

PCB receptacle

Panel mount receptacle

nanoCON

## nanoCON – 3 Pole Subminiature Connectors

NSC3F

NP3F-H

NP3M-V

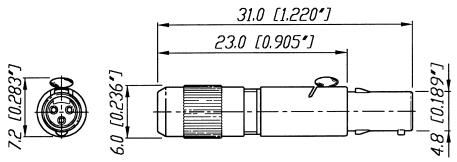
NR3M-S

NR3F-S

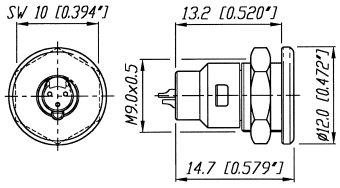
- World's smallest circular lockable multipole connector
- Robust metal housing with gold plated contacts
- Male and female receptacles for vertical or horizontal PCB mount or solder termination
- Cable connector and receptacle with interchangeable male and female inserts
- Reliable and versatile in applications like medical equipment, control systems, sensors or audio applications such as miniature and wireless microphones and portable mixers
- Pre-mating contact 1

**M 1:1**

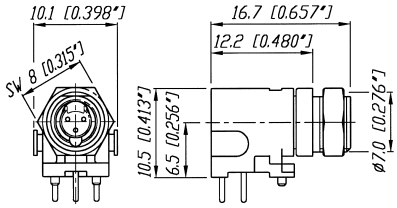
**NSC3F(M)**




**NR3F(M)-S**




**NP3F(M)-H**

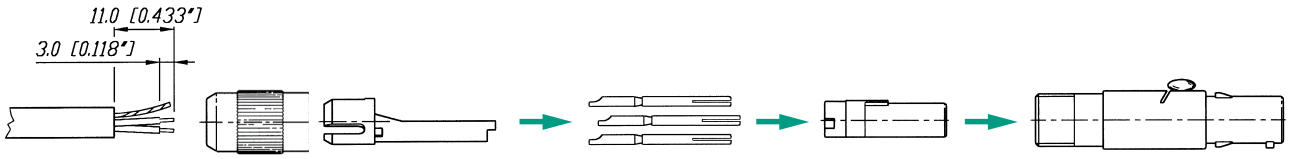


## Ordering Information

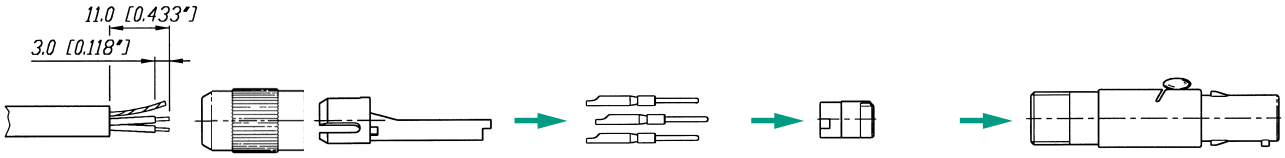
| Female | | Male | |
|---|---|---|---|
| NSC3F | Cable connector, chuck principle, solder contacts | NSC3M | Cable connector, chuck principle, solder contacts |
| NR3F-S | Chassis connector panel mount, solder contacts | NR3M-S | Chassis connector panel mount, solder contacts |
| NP3F-H | Chassis connector horizontal PCB mount | NP3M-H | Chassis connector horizontal PCB mount |
| NP3F-V | Chassis connector vertical PCB mount | NP3M-V | Chassis connector vertical PCB mount |

## Ordering Information

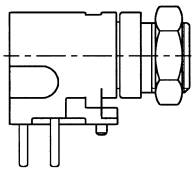
**NSC3F**



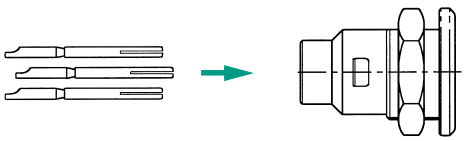

**NSC3M**



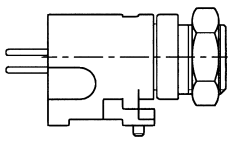

**NP3F-H**
**NP3M-H**



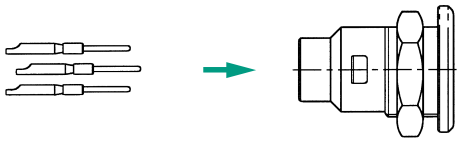
**NR3F-S**



**NP3F-V**
**NP3M-V**



**NR3M-S**



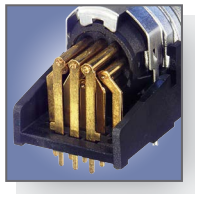
**Contact Arrangement**

**Male**

**Female**

Push Pull locking

Gold solder contacts



Horizontal PCB mount



## miniCON – 12 Pole Miniature Connectors

MSCM12

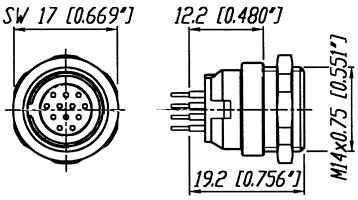
MMC* (modulares System)

MRF12

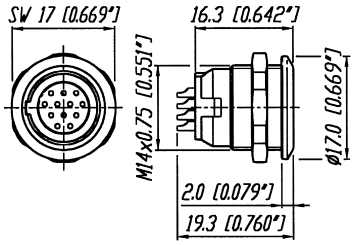
MPF12-H

- Up to 12 pole miniature connector
- Complete set or modular system
- Push-pull self-locking system
- Precisely machined, rugged all metal design
- Fully loaded male and female receptacles for horizontal or vertical PCB mount
- Gold plated contacts, crimp or solder, velour chromium housing
- Special crimp type strain relief establishes an ideal coaxial connection of the cable shield to the connector shell for best EMC shielding
- Easy assembly: contact soldering in disassembled condition avoids awkward wiring of high density contacts
- Interchangeable insert (male-female)

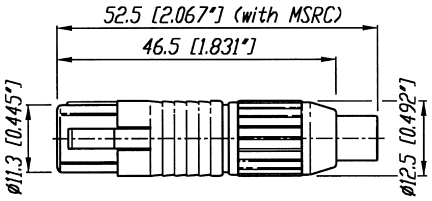
**MPF(M)12-V**



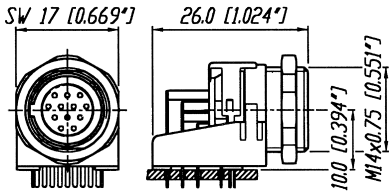

**MRF(M)12**




**MSCF(M)12 (+MSRC)**




**MPF(M)12-H**

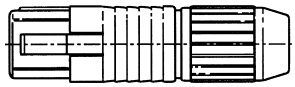


## Ordering Information for complete miniCON set

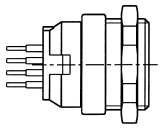
**Complete set (consisting of housing, insert, 12 contacts and chuck for cable connector)**

| Female | | Male | |
|---|---|---|---|
| MSCF12 | Cable connector, chuck principle, solder contacts | MSCM12 | Cable connector, chuck principle, solder contacts |
| MRF12 | Receptacle panel mount, solder contacts | MRM12 | Receptacle panel mount, solder contacts |
| MPF12-H | Receptacle horizontal PCB mount | MPM12-H | Receptacle horizontal PCB mount |
| MPF12-V | Receptacle vertical PCB mount | MPM12-V | Receptacle vertical PCB mount |

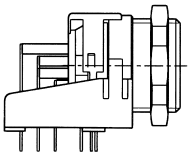
**MSCF(M)12**



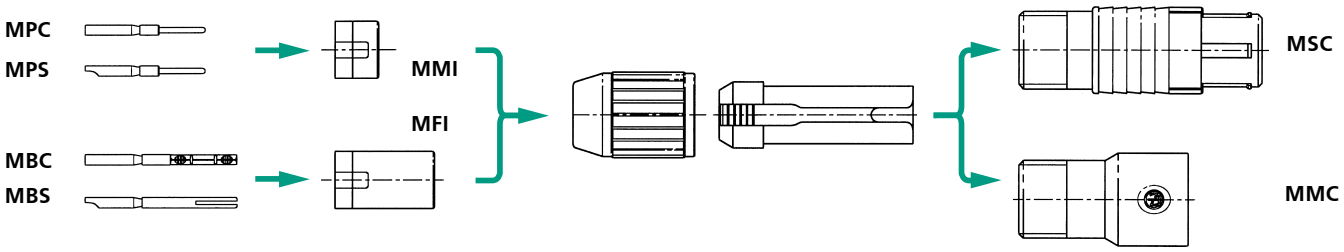
**MPF(M)12-V**



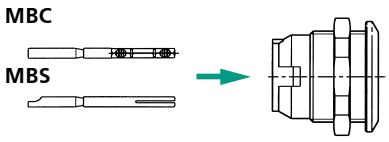
**MPF(M)12-H**



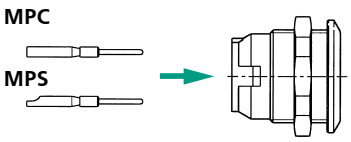
## Ordering Information for modular miniCON system



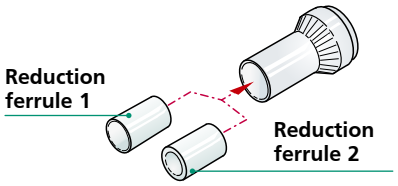

**MRF**




**MRM**




**MSRC**




Housing and insert pre-assembled, contacts must be ordered separately.

**Modular system**

| Female | | Male | |
|---|---|---|---|
| MFI | Insert for cable connector | MMI | Insert for cable connector |
| MBC | Crimp contacts for cable connector and receptacle | MPC | Crimp contacts for cable connector and receptacle |
| MBS | Solder contacts for cable connector and receptacle | MPS | Solder contacts for cable connector and receptacle |
| MRF | Receptacle housing and insert pre-assembled | MRM | Receptacle housing and insert pre-assembled |
| MMC | Cable connector extension, incl. chuck (for male and female) | | |
| MSC | Cable connector housing, incl. chuck (for male and female) | | |
| MSRC | Set of strain relief crimp version (consisting of crimp ferrule & reduction ferrule 1 + 2, tools see page 130) | | |

Push Pull locking

All metal housing

Colored bushing available

neutriCON

## neutriCON – Versatile Circular Connectors

OSC8F

OSC8M-Ni

ORP8F-Ni

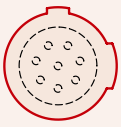
ORP8M

- Complete set or modular system for any desirable configuration
- Contact configuration can be selected from 1 to 8 contacts
- Special crimp type strain relief establishes an ideal coaxial connection of the cable shield to the connector shell for best EMC shielding
- Precise and robust all metal housing absorbs vibration forces and protects contact inserts
- Easy, fast and screwless assembly
- Push-pull self-locking system

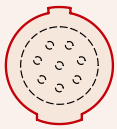
### Polarization

**Housing:** Two variants of metal polarizing guides (90° and 180°).

**Coding 90°**

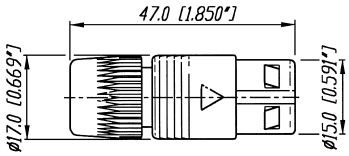


**Coding 180°**

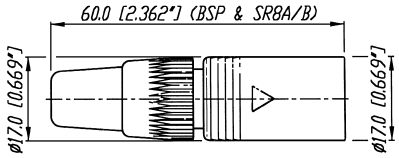


**Insert:** The male and female insert can be assembled in all three housings.

**OSC8F / OSC8M**

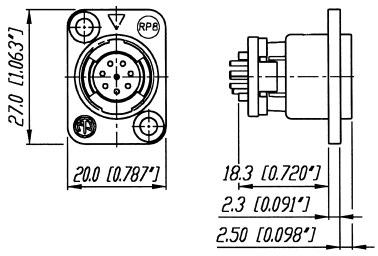



**MODULAR SYSTEM**




MC8 + SR8A/B + insert

**ORP8F / ORP8M**

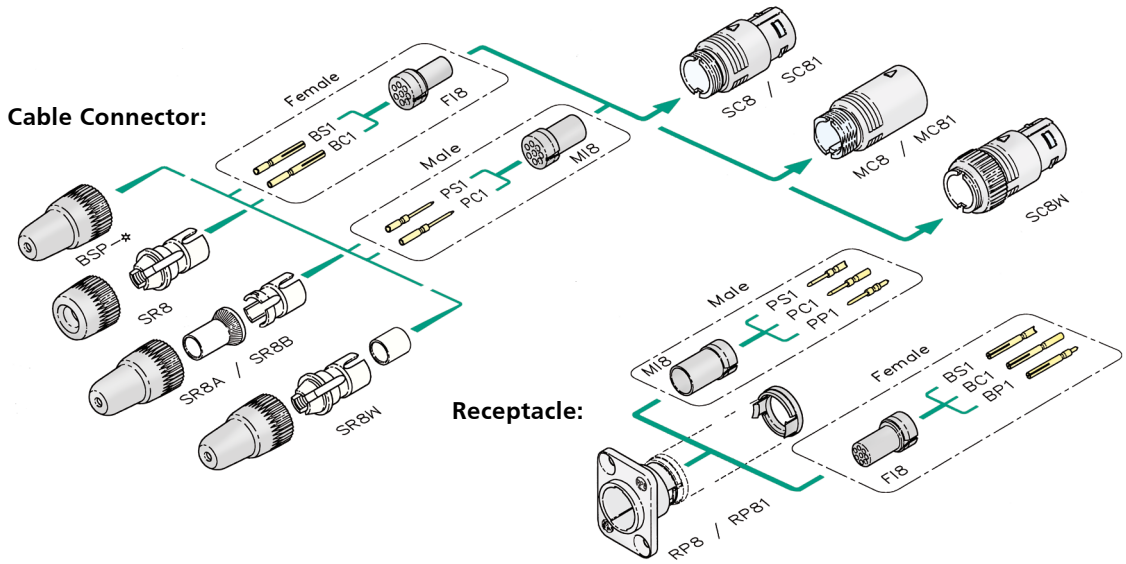


## Ordering Information for complete neutriCON set

**Complete set (consisting of housing, insert, 8 contacts and chuck for cable connector)**

| | |
|---|---|
| OSC8F | Female cable connector, chuck principle, black housing, solder contacts |
| OSC8F-Ni | Female cable connector, chuck principle, nickel housing, solder contacts |
| OSC8M | Male cable connector, chuck principle, black housing, solder contacts |
| OSC8M-Ni | Male cable connector, chuck principle, nickel housing, solder contacts |
| ORP8F | Female panel mount receptacle, black housing, solder contacts |
| ORP8F-Ni | Female panel mount receptacle, nickel housing, solder contacts |
| ORP8M | Male panel mount receptacle, black housing, solder contacts |
| ORP8M-Ni | Male panel mount receptacle, nickel housing, solder contacts |

## Ordering Information for modular neutriCON system




## Modular system

| Female | | Male | |
|---|---|---|---|
| FI8 | Insert for cable connector and receptacle | MI8 | Insert for cable connector and receptacle |
| BS1 | Solder contact | PS1 | Solder contact |
| BC1 | Crimp contact | PC1 | Crimp contact |
| BP1 | PCB contact | PP1 | PCB contact |
| SC8 | Cable housing, black coated, 180° coding | MC8 | Mating cable housing, black coated, 180° coding |
| SC8-Ni | Cable housing, nickel coated, 180° coding | MC8-Ni | Mating cable housing, nickel coated, 180° coding |
| SC81 | Cable housing, black coated, 90° coding | MC81 | Mating cable housing, black coated, 90° coding |
| SC81-Ni | Cable housing, nickel coated, 90° coding | MC81-Ni | Mating cable housing, nickel coated, 90° coding |
| SC8W | Cable housing, black coated, 180° coding, waterproof multipin connector according IP54 | | |
| RP8 | Receptacle, black coated, 180° coding | | |
| RP8-Ni | Receptacle, nickel coated, 180° coding | | |
| RP81 | Receptacle, black coated, 90° coding | | |
| RP81-Ni | Receptacle, nickel coated, 90° coding | | |
| SR8 | Bushing and chuck type strain relief (standard) | | |
| SR8A | Crimp type strain relief for cable O.D. 3 – 3.8 mm (Hex crimp 5.41 mm acc. IEC 803, see also page 132) | | |
| SR8B | Crimp type strain relief for cable O.D. 6 – 7 mm (Hex crimp 7.01 mm acc. IEC 803, see also page 132) | | |
| SR8W | Bushing and chuck type strain relief for waterproof solution IP 54 | | |
| BSP-* | Coloured boot, available in 10 resistor colours | | |
| | * color coding: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White | | |

## Crimptool

**Crimping tool HX-CONTACT** DMC crimptool AFM8 acc. M22520/2-01

+

**MPOS-*** Modified DMC positioner (K155) Contact positioner helds contact in position while crimping.

## Contact and connector assembly

**Crimptool HX-R-BNC** Neutrik® HEX crimptool

+

**DIE-R-BNC-*** Neutrik® dies for various HEX sizes.

## neutriCON - Ordering Information Assembly Tools

| | | Cable O.D. / Wire | Crimptool | Die/Positioner | HEX-Size/Standard |
|---|---|---|---|---|---|
| SR8A | Strain relief | 3 – 3.8 mm | HX-R-BNC | DIE-R-BNC-PJ | 5.41 mm / IEC 803 |
| SR8B | Strain relief | 6 – 7 mm | HX-R-BNC | DIE-R-BNC-PS | 7.01 mm / IEC 803 |
| BC1 | Female crimp contact | AWG 22 – 26 | HX-CONTACT | MPOS-BC1 | No. 5 / M22520/2-01 |
| PC1 | Male crimp contact | AWG 22 – 26 | HX-CONTACT | MPOS-PC1 | No. 5 / M22520/2-01 |

## miniCON - Ordering Information Assembly Tools

| | | Cable O.D. / Wire | Crimptool | Die/Positioner | HEX-Size/Standard |
|---|---|---|---|---|---|
| MSRC | Crimp ferrule only | 4.5 – 6 mm | HX-R-BNC | DIE-R-BNC-PDC* | 6.47 mm / IEC 803 |
| MSRC | Crimp ferrule & reduction ferrule 1 | 3.3 – 4.4 mm | HX-R-BNC | DIE-R-BNC-PDC* | 6.47 mm / IEC 803 |
| MSRC | Crimp ferrule & reduction ferrule 2 | 2.5 – 3.2 mm | HX-R-BNC | DIE-R-BNC-PDC* | 6.47 mm / IEC 803 |
| MBC | Female crimp contact | AWG 24 / 0.22 $mm^2$ | HX-CONTACT | MPOS-MBC | No. 5 / M22520/2-01 |
| MPC | Male crimp contact | AWG 24 / 0.22 $mm^2$ | HX-CONTACT | MPOS-MPC | No. 5 / M22520/2-01 |

*: DIE-R-BNC-PJ or PS also possible

| Specification | | nanoCON Series | miniCON Series | neutriCON Series |
|---|---|---|---|---|
| **Electrical** | | | | |
| Number of contacts | | 3 | 12 (1-12 modular system) | 8 (1-8 modular system) |
| Rated current per contact | | 2 A | 3 A | 7.5 A (solder), 5 A (crimp) |
| Rated voltage | | 50 V ac | 50 V ac | 50 V ac |
| Dielectric strength | | 1000 V dc | 1000 V dc | 1500 Vdc |
| Contact resistance | | ≤ 12 mΩ | ≤ 8 mΩ | ≤ 5 mΩ |
| Insulation resistance after damp heat test (IEC 68-2-30) | | > 1 GΩ | > 500 MΩ | > 500 MΩ |
| **Mechanical** | | | | |
| Retention method | | latch | Push-pull | Push-pull |
| Cable O.D. range | | max. 3.4 mm | 3 – 5 mm (grey chuck) | 3 – 7 mm |
| | | | 5 – 7 mm (white chuck) | 3 – 3.8 mm (SR8A) |
| | | | 2.5 – 6 mm | 6 – 7 mm (SR8B) |
| | | | (crimp version MSRC) | |
| Wiring | | 0.2 mm² / 24 AWG | 0.5 mm² / 20 AWG | 1.0 mm² / 18 AWG |
| | | for solid wire | for solder | for solder |
| | | 0.14 mm² | 0.22 mm² | 0.14 - 0.34 mm² |
| | | 26 AWG | 24 AWG | 22 - 26 AWG |
| | | for stranded wire | for crimp | for crimp |
| Solderability complies with IEC 68-2-20 | | ● | ● | ● |
| **Material** | | | | |
| Housing cable connector | | CuSn4Pb4Zn4 | ZnAl4Cu1 / CuZn39Pb3 | ZnAl4Cu1 |
| | | | | gal Ni or black chrome |
| Housing receptacle | | CuZn39Pb2 | ZnAl4Cu1 | ZnAl4Cu1, |
| | | | | gal Ni or black chrome |
| Insert | | PETP | PA 6.6 | PBTP 15% GR |
| Contacts | | CuZn35Pb2 | CuZn35Pb2 (solder) | CuZn35Pb2 (solder) |
| | | | CuZn39Pb3 (crimp) | CuZn39Pb3 (crimp) |
| | | | CuSn6 | |
| Contact surface | | 0.5 µm Au | 0.2 µm AuCo | 0.3 µm Au hard |
| | | | | alloy over 2 µm Ni |
| Chuck POM | | ● | ● | ● |
| **Environmental** | | | | |
| Flammability | UL 94 HB | - | - | ● |
| Flammability | UL 94 V-0 | ● | ● | - |
| Temperature range | -30 °C to +80 °C | ● | ● | ● |
| Protection class (mated) | | IP 40* | IP 5X | IP 5X |
| Safety Requirements EN/IC61984 | | - | - | - |

*: Receptacle

FASTON® is a trademark of AMP Inc.

# TRUST THE ORIGINAL

## powerCON®

The new lockable 3 pole single phase equipment connector provides high current capacity, rated at 20 A / 250 V ac. It is UL, cUL and VDE certified and extremely robust and reliable. **www.neutrik.com**

NEUTRIK®

# Accessories

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**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA®, XIRIUM®, are registered trademarks of Neutrik AG.**

## Introduction

Various connector standards in the professional and semi-professional audio and video world lead to many interconnection challenges.

Neutrik has made it a rule to serve our customers' needs in all its connector offerings and has therefore produced a variety of problem solvers.

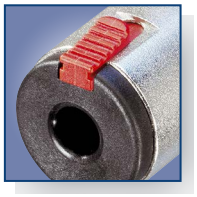
With our adapter series we have a solution for the most known interconnection difficulties and in addition we offer modules for the most common connector types to fulfill more specific needs.

Miniature impedance balancing adapters are the answer to the most common noise and grounding problems and for customized designs we recommend our proven audio transformers in combination with our modules.

Neutrik offers a wide range of audio adapters, transformers, AES / EBU adapters and gooseneck products. From problem solvers to connection quick fixes, Neutrik has the most popular audio connectivity solutions. All Neutrik adapters and connectors are soldered with lead free RoHS compliant solder.

XLR connector

RCA phono socket



Jack with locking latch

BNC socket

## Circular Adapters

NA2FP

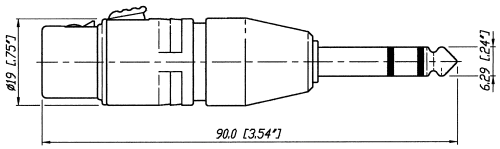
NA2MPMM

NA3MJ

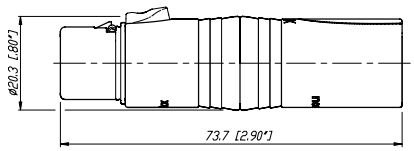
NA4FX-F

- Variety of adapters offered to interface with most connector combinations
- Professional look and compact space saving design
- Rugged diecast shell for best reliability
- Compact design and durability with Neutrik quality

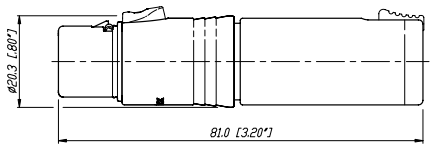
**NA3FP**



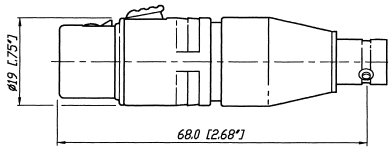

**NA3FM**




**NA3FJ**




**NA2FBNC**




Example drawing. Find more info on www.neutrik.com

Phono socket

speakON NL4MP

3 pole XLR male

Jack with locking latch

## D Shape Adapters

NA2BBNC-D9B

NA2M-D2B-TX

NA4MP-J

NA4MP-MX

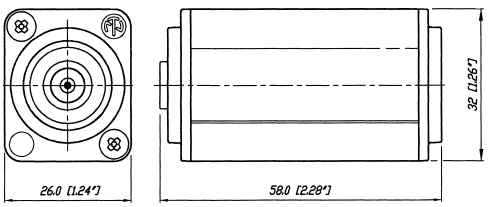
- Problem solvers for various intermating problems for professional and semi-professional applications
- Rugged aluminium extrusion housings for best reliability
- Colour coding on all RCA types

### Miniature transformer balancing adapters NA2*-TX

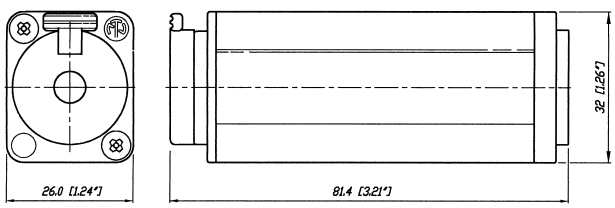
- Audio Transformer 1:1 impedance ratio 200:200
- Low cost solution for unbalanced / balanced line conversion and passive DI applications, where no earth or gain switching is required.
- Source / Load impedance 600 / 10 K
  Max. input level @ 50 Hz at 1% THD: -3 dBu

NA2F-D0B-TX

**NA2BBNC-D9B**




**NA4MP-J**




Example drawing. Find more info on www.neutrik.com

## Circular Adapters

| Part No. | Port 1 | Port 2 | Comments |
|---|---|---|---|
| NA2FBNC | 3 pole XLR female | BNC socket | [1] |
| NA2FP | 3 pole XLR female | TS [2], 1/4" plug | [1] |
| NA2FPMF | 3 pole XLR female | RCA / phono socket | [1] |
| NA2FPMM | 3 pole XLR female | RCA / phono plug | [1] |
| NA2MBNC | 3 pole XLR male | BNC socket | [1] |
| NA2MP | 3 pole XLR male | TS [2], 1/4" plug | [1] |
| NA2MPMF | 3 pole XLR male | RCA / phono socket | [1] |
| NA2MPMM | 3 pole XLR male | RCA / phono plug | [1] |
| NA3FF | 3 pole XLR female | 3 pole XLR female | gender conversion adapter |
| NA3FF-B | 3 pole XLR female | 3 pole XLR female | gender conversion, black plating |
| NA3FJ | 3 pole XLR female | TRS [2], 1/4" jack | locking jack |
| NA3FM | 3 pole XLR female | 3 pole XLR male | extention adapter |
| NA3FMX | 3 pole XLR female | 3 pole XLR male | contacts 2 - 3 inverted |
| NA3FP | 3 pole XLR female | TRS [2], 1/4" plug | |
| NA3JJ | stereo 1/4" jack | TRS [2], 1/4" jack | extension adapter, locking jack |
| NA3MJ | 3 pole XLR male | TRS [2], 1/4" jack | locking jack |
| NA3MM | 3 pole XLR male | 3 pole XLR male | gender conversion adapter |
| NA3MM-B | 3 pole XLR male | 3 pole XLR male | gender conversion, black plating |
| NA3MP | 3 pole XLR male | TRS [2], 1/4" plug | |
| NA5FF-B | 5 pole XLR female | 5 pole XLR female | gender conversion adapter, black plating |
| NA5MM-B | 5 pole XLR male | 5 pole XLR male | gender conversion adapter, black plating |

## D Shape Adapters

| | | | |
|---|---|---|---|
| NA2BBNC-D4B | BNC socket | RCA / phono socket | colour coded yellow |
| NA2BBNC-D9B | BNC socket | RCA / phono socket | colour coded white |
| NA2F-D0B-TX | 3 pole XLR female | RCA / phono socket | colour coded black [4] |
| NA2F-D2B-TX | 3 pole XLR female | RCA / phono socket | colour coded red [4] |
| NA2F-J-TX | 3 pole XLR female | 1/4" jack | ground lifted [4] |
| NA2M-D0B-TX | 3 pole XLR male | RCA / phono socket | colour coded black [4] |
| NA2M-D2B-TX | 3 pole XLR male | RCA / phono socket | colour coded red [4] |
| NA2M-J-TX | 3 pole XLR male | 1/4" jack | ground lifted [4] |
| NE8FF | etherCON | etherCON | RJ45 coupler |
| NL4MMX | 4 pole speakON | 4 pole speakON | lockable coupler |
| NL8MM | 8 pole speakON | 8 pole speakON | lockable coupler |
| NAC3MM-1 | 3 pole powerCON | 3 pole powerCON | lockable coupler |
| NA4FX-F | speakON NL4FX | 3 pole XLR female | speaker adapter [3] |
| NA4FX-M | speakON NL4FX | 3 pole XLR male | speaker adapter [3] |
| NA4LJX | speakON NL4FX | TS [2], 1/4" jack | speaker adapter [3] |
| NA4MP-F | speakON NL4MP | 3 pole XLR female | speaker adapter [3] |
| NA4MP-J | speakON NL4MP | TS [2], 1/4" jack | speaker adapter [3] |
| NA4MP-M | speakON NL4MP | 3 pole XLR male | speaker adapter [3] |
| NA4MP-M-X | speakON NL4MP | speakON NL4MP | speaker adapter 1+ / 1- inverted [3] |

[1]: Wired according to IEC 268-12: pin 2 = signal, pin 1 and 3: connected to ground
[2]: TRS-Tip, Ring, Sleeve contact (stereo); TS-Tip, Sleeve contact (mono)
[3]: Detailed wiring info on www.neutrik.com
[4]: Unbalanced / balanced line conversion, 1:1 transformer 200 Ω : 200 Ω

3 pole XLR female receptacle

3 pole cable connector

BNC chassis

## AES / EBU Digital Impedance Transformer Adapters

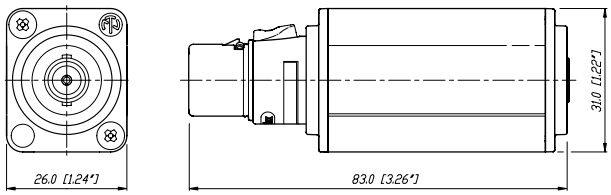
NADITBNC-F

NADITBNC-FX

NADITBNC-MX

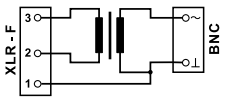
- Cost effective exceptional impedance matching adapters
- Allow long cable runs for digital audio signals via low attenuation coax lines
- Match balanced (110 Ω) to coaxial lines (75 Ω)
- Pre-wired in black anodized aluminum extrusions for increased durability
- AES/EBU adapters available with either 3 pin male or female XLR cable ends or receptacles
- Simple use, passive units

**NADITBNC-FX**

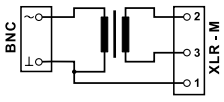



## Technical Data

| | |
|---|---|
| Maximum voltage / Max. power: | 5 Vp-p / 250 mW |
| Frequency band: | 0.1 MHz to 6 MHz |
| Insertion loss: | < 0.3 dB @ 0.1 MHz to 10 MHz |
| VSWR / Return loss: | < 1.1 / > 26.4 dB |




NADITBNC-F




NADITBNC-M

## Ordering Information

| Part No. | Port 1 | Port 2 | Comments |
|---|---|---|---|
| | Input | Output | |
| NADITBNC-F | 3 pole XLR female chassis | female BNC chassis | 110 Ω XLR input and 75 Ω BNC output |
| NADITBNC-M | 3 pole XLR male chassis | female BNC chassis | 75 Ω BNC input and 110 Ω XLR output |
| NADITBNC-FX | 3 pole XLR female cable con. | female BNC chassis | 110 Ω XLR input and 75 Ω BNC output |
| NADITBNC-MX | 3 pole XLR male cable con. | female BNC chassis | 75 Ω BNC input and 110 Ω XLR output |

5 pole male connector

5 pole female connector

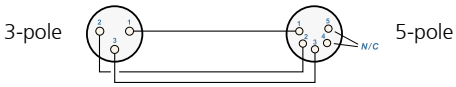
All metal housing

## DMX Adapters

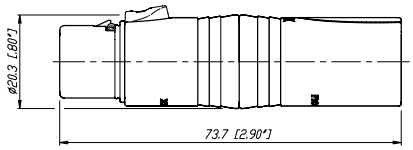
NA3F5M

NA3F5M

- Compact XLR 3 to 5 pole adapters for lighting (DMX) applications
- Solve interconnection problems of the old (3-pole) and new (5 pole) DMX standard
- Enable usage of standard 3 pole microphone cable for DMX applications
- Based on the worldwide accepted standard XLR connectors
- Reliable and rugged diecast shell




**NA3F5M**



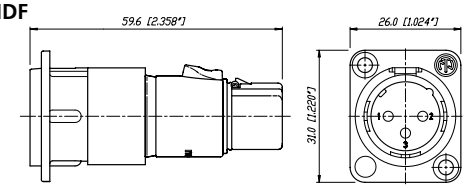

## Feedthrough

NA3FDM

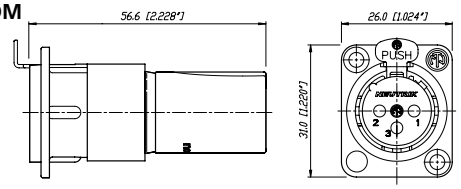
NA3MDF

- 3 pole XLR feedthrough adapter
- D-flange chassis mount
- Male to female and vice versa
- Utilizes XX-components

**NA3MDF**




**NA3FDM**




## Ordering Information DMX Adapter

| Part No. | Port 1 | Port 2 | Comments |
|---|---|---|---|
| NA3F5M | 3 pole XLR female | 5 pole XLR male | for DMX lighting applications |
| NA3M5F | 3 pole XLR male | 5 pole XLR female | for DMX lighting applications |

## Ordering Information Feedthrough

| | | | |
|---|---|---|---|
| NA3FDM | 3 pole XLR female | 3 pole XLR male | |
| NA3MDF | 3 pole XLR male | 3 pole XLR female | |

3 pole plug

SM2/2 switch

VM housing

## Modules & Audio Transformers

NM3FXI

NM3P

KMX

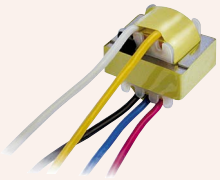
SM2/2

NM3FD-B

- Multifunctional modules allow to design customized adapters to suit specific needs
- Based on the X and D Series connector system
- NTE transformers and switch can be built in
- Professional look, rugged diecast shell

**Audio Transformer**

- Professional audio transformers for multiple applications, as e.g. microphone or line inputs
- Very low distortion, excellent frequency response
- Cost effective cable version for free wiring
- Fully permalloy-shielded studio versions



NTE10-3

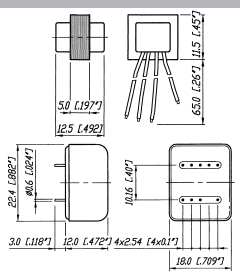
NTL1

## Audio Transformer selection Guide

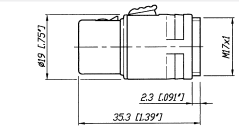
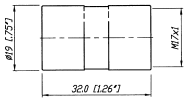
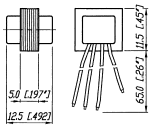
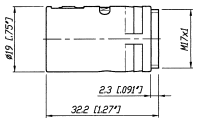
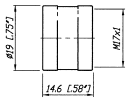
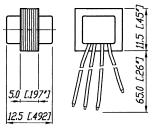
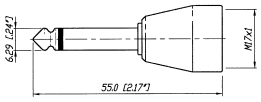
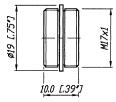
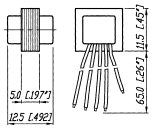
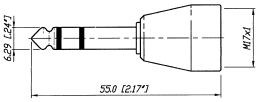
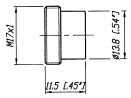
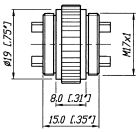
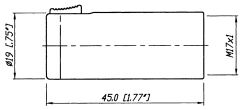
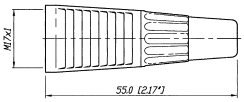
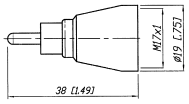
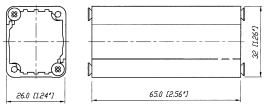
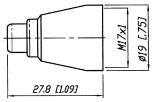
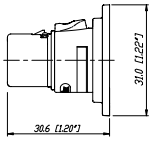
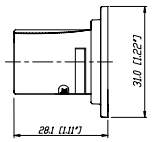
| Part No. | Turns Ratio (prim : sec) | Impedance ratio | Source / load impedance in Ω | Max. Input level* @ 50 Hz, 1% THD [dBu] | Applications |
|---|---|---|---|---|---|
| NTE1 | 1 : 1 | 200 : 200 | 200 / 2k, (600 / 10k) | -3 | General purpose, splitting, XLR inline |
| NTE4 | 1 : 4 | 200 : 3.2k | 200 / 10 K | -7 | Mic input step-up |
| NTE10/3 | 1 : 3 | 200 : 1.8k | 200 / 10 K | -7 | General purpose mic input step-up |
| | 1 : 10 | 200 : 20k | 200 / 50 K | -6 | |
| NTL1 | 1 : 1 | 10k : 10k | 600 / 10k | +19 | Line input |
| NTM1 | 1 : 1 | 200 : 200 | 200 / 2k | +7 | Mic input, splitting |
| NTM4 | 1 : 4 | 200 : 3.2k | 200 / 10k | +9 | Mic input step-up |

* : measured with typical source / load impedances

Wiring: NTE*: free wires, NTL / NTM*... PCB mount, shielded; Find detailed specifications on www.neutrik.com

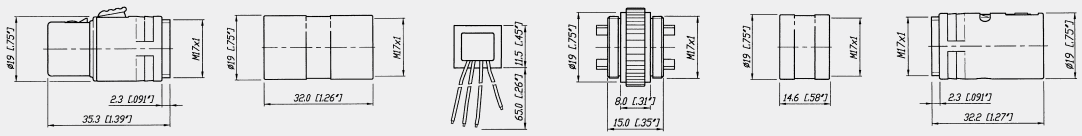


## Module Selection Guide

| Connector module | | Coupler / housing | | Transformer / switch | |
|---|---|---|---|---|---|
| NM3FXI<br>XLR female<br>M17x1 outside |  | KM<br>M 17x1 inside |  | NTE1<br>1:1 |  |
| NM3MXI<br>XLR male<br>M17x1 outside |  | KMX<br>M 17x1 inside |  | NTE4<br>1:4 |  |
| NM2P<br>mono 1/4" plug<br>M17x1 inside |  | VM<br>M 17x1 outside |  | NTE10/3<br>1:3:10 |  |
| NM3P<br>stereo 1/4" plug<br>M17x1 inside |  | VMX<br>M 17x1 outside |  | SM2/2<br>2x2 switch<br>M17x1 outside |  |
| NM3J<br>stereo 1/4" jack<br>M17x1 inside |  | CM<br>cable outlet<br>M 17x1 inside |  | | |
| NMPMM<br>RCA male<br>M17x1 inside |  | NA-Housing[1]<br>black plated<br>screws included |  | | |
| NMPMF<br>RCA female<br>M17x1 inside |  | | | | |
| NM3FD-B<br>black plated<br>D-Shape |  | | | | |
| NM3MD-B<br>black plated<br>D-Shape |  | | | | |

[1] ... Combinations possible with all D Shape connectors like e.g. NC3FD-L-1, NF2D, NBB75DSI, etc.

**Example:**



NM3FXI KM NTE1 SM2/2 KMX NM3MXI

3 pole XLR with securing ring

Flexible spiral

Integrated cable outlet

## Goosenecks

GNS18

GN36

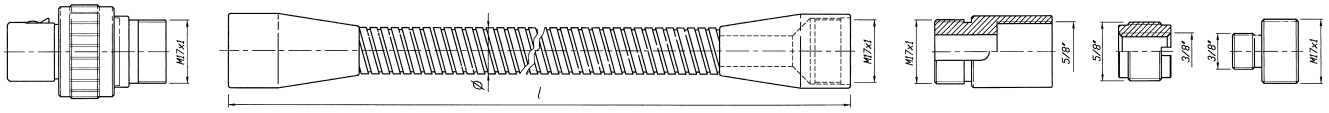
GNS50

- For flexible and secure mounting of microphones, lamps etc.
- Versatile, modular system allows various combinations
- Durable stainless steel spiral, no rust, no noise, non-reflective black finish
- Theft proof microphone connection on GNS version (securing ring and fixing screw)
- Strong, flexible and noiseless goosenecks available in three lengths

## Ordering Information

| Part No. | Description | |
|---|---|---|
| GN18 | M17 x 1 inside thread at both ends | (∅ 12 mm, 230 mm length) |
| GN36 | M17 x 1 inside thread at both ends | (∅ 13 mm, 360 mm length) |
| GN50 | M17 x 1 inside thread at both ends | (∅ 15 mm, 500 mm length) |
| Gosseneck sets: | | |
| GNS18 | Gooseneck set GN18, NC3FX-Spec., cable outlet, NAM5 adapter, M17 x 1 bolt thread | |
| GNS36 | Gooseneck set GN16, NC3FX-Spec., cable outlet, NAM5 adapter, M17 x 1 bolt thread | |
| GNS50 | Gooseneck set GN50, NC3FX-Spec., cable outlet, NAM5 adapter, M17 x 1 bolt thread | |
| **Accessories:** | | |
| NAM4 | M17 x 1 outside thread, 5/8" 27 UNS inside thread [1)] | |
| NAM5 | 3/8" inside thread, 5/8" 27 UNS outside thread [1)] | |
| GF1 | Mounting kit: Flange ∅ 63.5 mm including mounting bolt M17x1, 13 mm length [1)] | |
| MSG | Mounting bolt M17 x 1, 30 mm length [1)] | |
| | [1)] : Find detailed specifications on www.neutrik.com | |

**GNS Set consisting of:**




NC3FX-Spec | GN | Cable outlet | NAM5 | M17x1 bolt

# ELIMINATE CABLES KEEP PURE SOUND

## XIRIUM PRO

DIGITAL WIRELESS AUDIO SOLUTION

Designed as a cable replacement system, providing audio signals to and from devices without long or complicated cable runs, XIRIUM PRO delivers studio quality audio with extremely low latency. XIRIUM PRO offers audio professionals tremendous versatility, ease of operation, FCC license-free audio that is ideally suited to a myriad of live sound applications. For more information visit **www.xirium.net**

NEUTRIK

# Patch Panels

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**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DIWA®, XIRIUM®, are registered trademarks of Neutrik AG.**

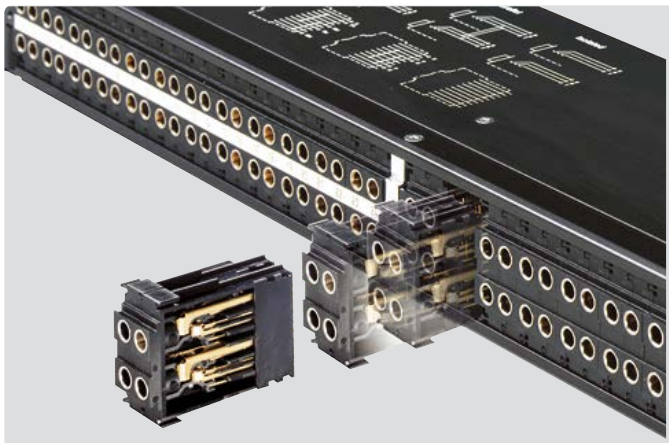
# Introduction

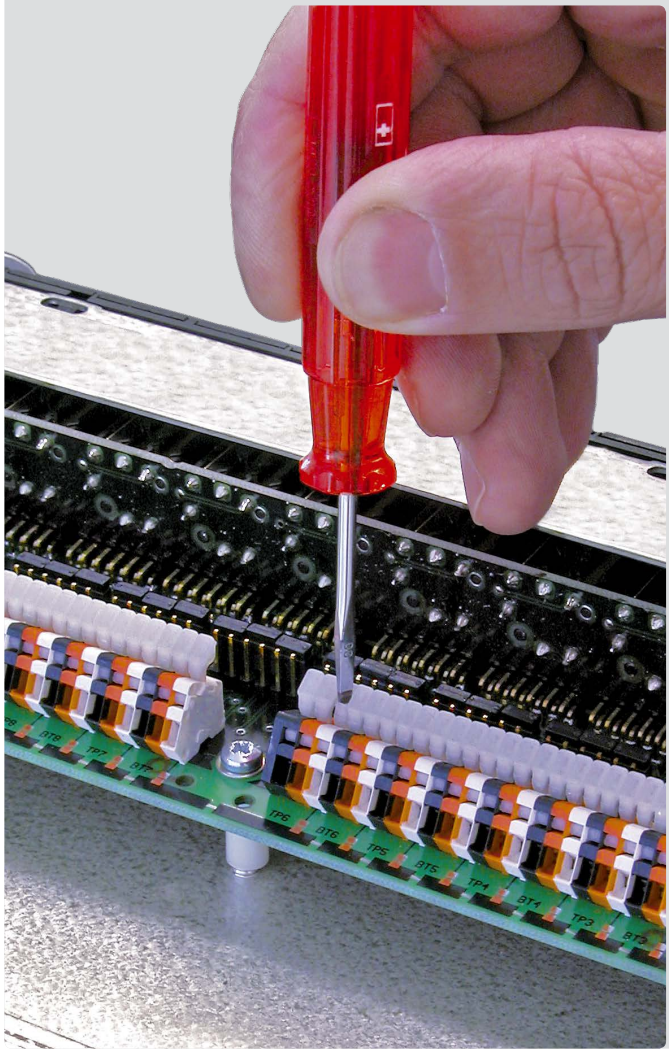
Patch Panels are central switching gears between audio equipments. They are used to switch and route analog and digital audio signals from and to equipments in recording or broadcast studios, OB vans, churches, theatres, stadiums, arenas, etc.

Neutrik® Patch Panels are available in a varety of jack types, wiring and grounding possibilities.
Common versions accommodating Bantam TT, 1/4" A-gauge and longframe B-gauge jacks on the front rows are available.

The mechanical size is designed to fit into 1U 19" standard racks. All Neutrik patch panels offer various normalling possibilities between top and bottom row.

All Neutrik® Patch Panels are able to handle digital audio signals acc. AES3, 48kHz sampling rate.



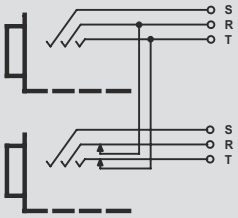


## Audio Normalling

Audio Normalling is usually used with audio patch panels and is a wiring pattern in which a circuit path is established from one piece of audio equipment to another without the use of a patch cord. This pattern is then considered to be the „normal" circuit path that is desired most of the time. If a patch cord is inserted, the normal circuit path is interrupted and rerouted to a different circuit path.

Normalled patch panels are most commonly found in vertical jack pairs: the top jack is designated as the source and the bottom jack is the destination.

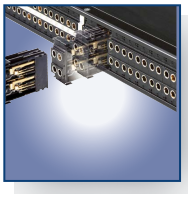
Normalling example: HALF NORMALLED BOTTOM ROW




This is the most common configuration, very often called HALF NORMALLED. In this configuration internal normalling contacts connect the top jack contact with the corresponding bottom jack contact. Inserting a plug in the bottom jack will interrupt this internal normalling connection, while inserting a patch cord into the top jack doesn't interrupt the circuit. (Can be used to monitor the normalling circuit)

Other versions of normalling are Half Normalled Top Row, Full Normalled, Parallel and Isolated.

Robust front design



Easy assembly

Jack-pair

IDC terminals

Push terminals

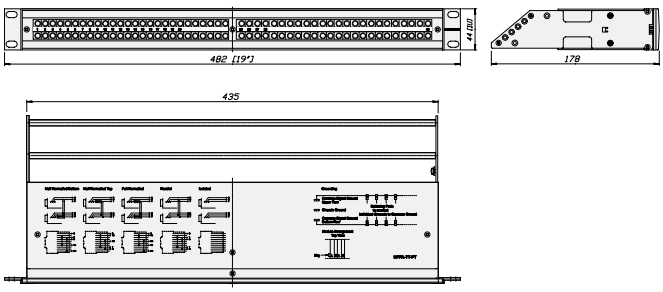
ELCO connectors

## NPPA-Series – 96 Bantam (TT) Jacks

NPPA-TT-PT

- Innovative and compact patching system (just 1U high) for 19" rack mounting
- Robustly housed in a black coated steel shell
- Features 2 x 48 long life gold plated TT size (bantam) Neutrik NJ3TTA double contact point TRS jacks
- Available in all common normalling configurations (default Half Normalled Bottom)
- Qualified for analog and digital signals according to AES3, 48 kHz sampling frequency
- Remove the front panel for quick changes of the NJ3TTA-** modules for reconfiguration or repair even when "on air"
- Includes two built in cable bars and two wide channel ID strips
- PatchLink Software for printing onto labeling strips is on Neutrik website (available for PC only)

### Dimensional Drawing



## Design Criteria

All NPPA patch panels are fitted with high quality, long life NJ3TTA gold plated double contact jacks (2x48), featuring best contact integrity. The unit, robustly housed in a black coated steel shell, is finished off with a built in cable bar and two large channel identification strips for perfect management of the system. The NPPA patch panels are an innovative and compact patching system (just 1U high) for 19" rack mounting.

## Configuration

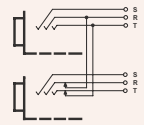
The standard version of the NPPA Panel is delivered bottom row half normalled for each jack pair by default. Further patch versions are available with fully loaded jack-pairs as:

- Full Normalled
- Half Normalled
- Isolated
- Parallel

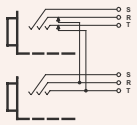
For individual normalling single pre-configured jack-pairs are offered.
NPPA-TT-IDC is equipped with jumper blocks for individual switching configurations of each jack channel.

Note: Take care when handling digital signals. Do not use parallel configuration and avoid other parallel paths when using half normalled configurations. Parallel paths may lead to mismatching.

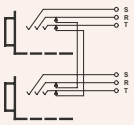
Half Normalled Bottom



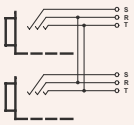
Half Normalled Top



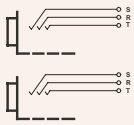
Full Normalled



Parallel



Isolated



## Grounding

The flexible grounding system provides the following versions:

- Individual: Each channel is individually grounded by its corresponding cable shield (default configuration).
- Group: Selected channel grounds are connected via the ground bus on the PCB using solder bridges and track cuts to form a group that is connected to one common cable shield.
- Central: All channel grounds (individual top and bottom row) are connected via the ground bus on the PCB using solder bridges and wired with only one cable shield.
- Chassis-Common: The same as central grounding but with the addition of the common ground bus (top and / or bottom rows) connected to the patch panel chassis by means of jumpers

## Wiring Terminations

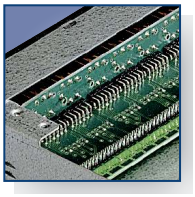
TT patch panels offer different choices of wiring:

- Spring loaded push terminals
- 56 pin Elco/Edac male connectors
- 90 pin Elco/Edac connectors
- 50 pin D-SUB connectors
- 25 pin D-SUB connectors
- IDC-Krone terminals
- Solder lugs

The spring loaded terminal blocks enable fast and easy wiring. No soldering and screwing necessary. Simply insert the stripped wire after pressing down the white key. Terminals accommodate stranded wires up to AWG 20 (0.5 $mm^2$) and solid wires up to AWG 18 (0.75 $mm^2$). Push terminals are gas tight connections.

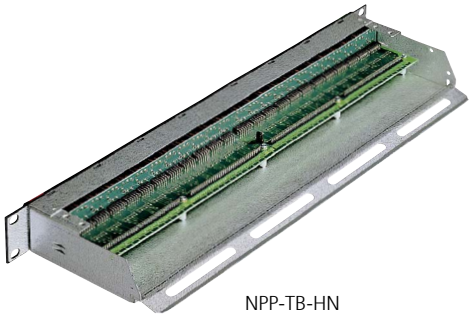
For Pin assignment of ELCO / EDAC and D-SUB connectors please see drawings on www.neutrik.com

Individual colour coding

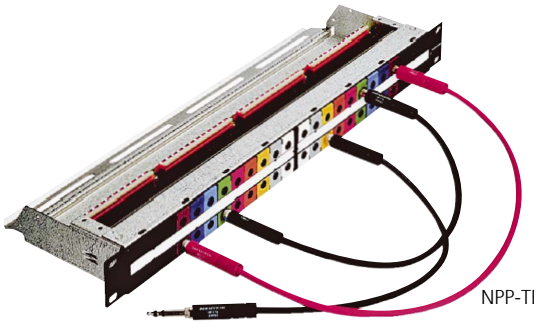


Galvanized metal housing

## NPP-TB-Series – 48 B-Gauge Jacks



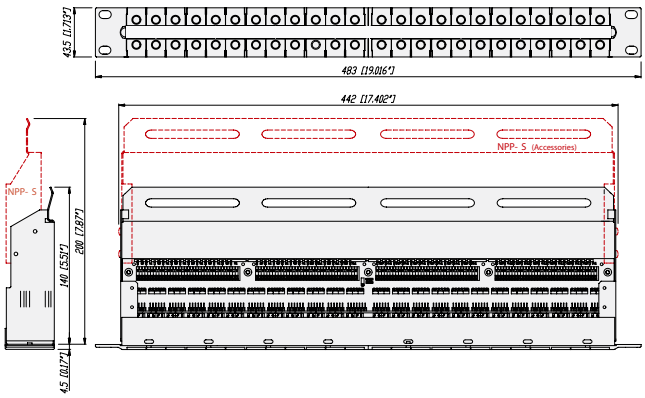
NPP-TB-HN



NPP-TB + NPP-LB*

- Features 2 x 24 Neutrik® NJ6TB-V long frame 1/4" TRS jacks according to BPO316/MIL-P-642/2
- Very robust and compact galvanized metal housing
- Compact, cost effective system qualified for both analog and digital signals acc. AES3, 48 kHz sampling frequency
- High quality long life gold plated Neutrik jacks
- Easily programmable for any of 6 configurations with 4 grounding choices
- Rear terminations include solderless terminal blocks or solder lugs (solder for non-programmable half-normalled versions only).
- Center marking strip is removable; See Neutrik website to download PatchLink labeling software for PCs
- Color coded tabs, dust cover and rear extension strain relief bars are optional accessories

### Dimensional Drawing



## Design Criteria

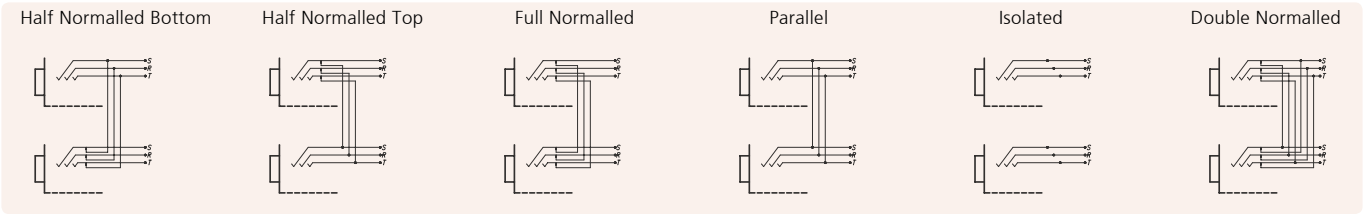
The NPP-TB patch panels are equipped with gold plated, high quality long life NJ6TB-V Jacks for BPO/MIL style plugs. The panels are easily programmable for six switching configurations and offer a flexible grounding system. The NPP-TB patch panels are very robust and compactly designed for 19" rack mount (19" x 1U) with galvanized metal housing and a built-in cable bar on the rear for securing wires. There is a rear extension bar (NPP-S) available as an option. On the front side there is an attractive additional lettering area for each channel pair with a marking strip and individual snap-on colour coding plates.

## Configuration

Due to the jumper blocks capability provided, the switching configurations available per jack channel are:

- Half Normalled Bottom Row
- Full Normalled
- Parallel
- Isolated

The TB Panel is delivered in a full normalled configuration for each jack channel. A non-configurable half normalled ("-HN") bottom row version with solder lugs is also available.
NOTE: Take care when handling digital signals. Do not use Parallel configuration and avoid other parallel paths with Half / Double Normalled configurations. Parallel paths may lead to mismatching.




## Grounding

The flexible grounding system allows four possibilities to fit your needs:

- Individual: Each channel ground is separately connected with the corresponding cable shield (default configuration).
- Group: Some channel grounds are PCB connected by making soldering joints on the PCB and by cutting tracks respectively to form a group that is connected to one common cable shield.
- Central: All channel grounds are PCB connected by making soldering joints and wired with only one cable shield.
- Chassis-Common: Same as central grounding with additional connection of the common ground to the Patch Panel chassis by means of a jumper.

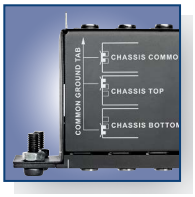
## Wiring Terminations

TB patch panels are available with:

- Spring loaded push terminals (NPP-TB)
- Solder lugs (NPP-TB-HN)

The spring loaded terminal blocks are fast and easy to connect and disconnect the wires.
No soldering and screwing necessary. Simply insert the stripped wire after pressing down the white key.
Accommodates stranded wires up to AWG 20 (0.5 $mm^2$) and solid wires up to AWG 18 (0.75 $mm^2$).

Ruggedized metal housing




Imprinted grounding instruction

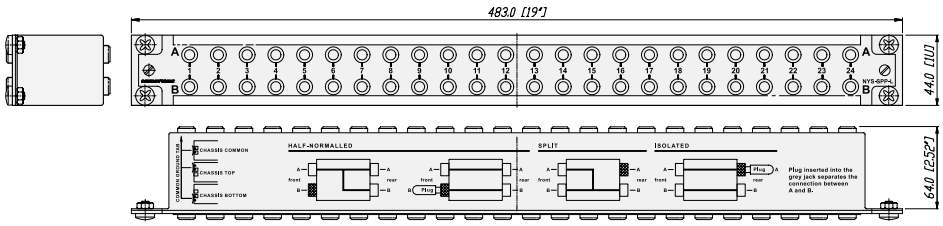
Module NYS-SPCR1

## 1/4" Patch Panel

NYS-SPP-L1

- Individual grounding available for each channel separately
- Ruggedized metal housing
- Improved contact design minimises wear on mated plugs
- Economic and versatile designed 1/4" modular patch panel with 2 rows of jack sockets
- 48 balanced channels with fully PCB wired jack (24 vertical PC boards), 24 front pairs and corresponding 24 rear pairs
- Jack PC card contains 4 balanced 1/4" jacks with non-tarnishing contacts, is held securely in place without the use of nuts - no little pieces to drop, break or lose
- Easy to change configuration by just flipping individual PC board
- Normalling jack is coloured grey for easy identification
- 4 designation strips included for front and rear panel

### Dimensional Drawing



## Design Criteria

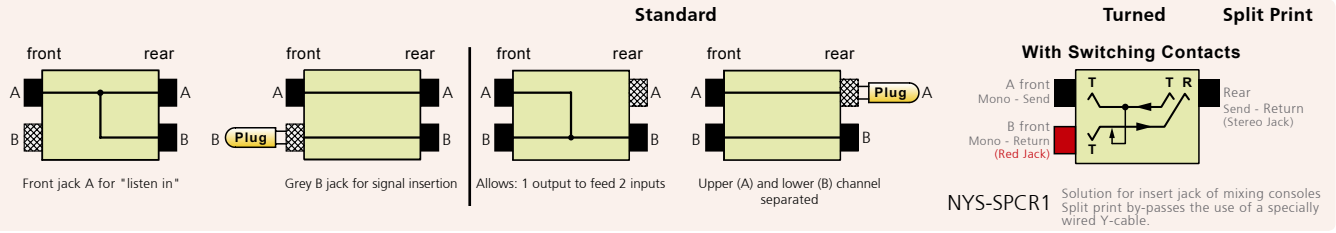
The NYS-SPP-L1 is a economical and remarkable sleek designed 1/4" modular patch panel for 19" rack mount (19" x 1U) with a reinforced metal housing. Each of it's 48 PCB wired balanced channels (24 front pairs and corresponding 24 rear pairs) can either be grounded separately or in groups of inividually chooseable channel numbers (detailed information see below).

The PCBs are held securely in place by being clamped between the front and the rear panel, this grants an easy reconfiguration of the patch panel without the danger of loosing any small parts (e.g. nuts). The grey jack serves as an easy and distinguishable normalling identification.

## Configuration

Standard configuration, when delivered, is Half Normalled bottom row. The configuration can easily be changed by just flipping the individual PCB. Inserting a plug into the grey jack will always isolate the top against the bottom row. Alternative solution for send / return applications by use of NYS-SPCR1 module (see accessories below).

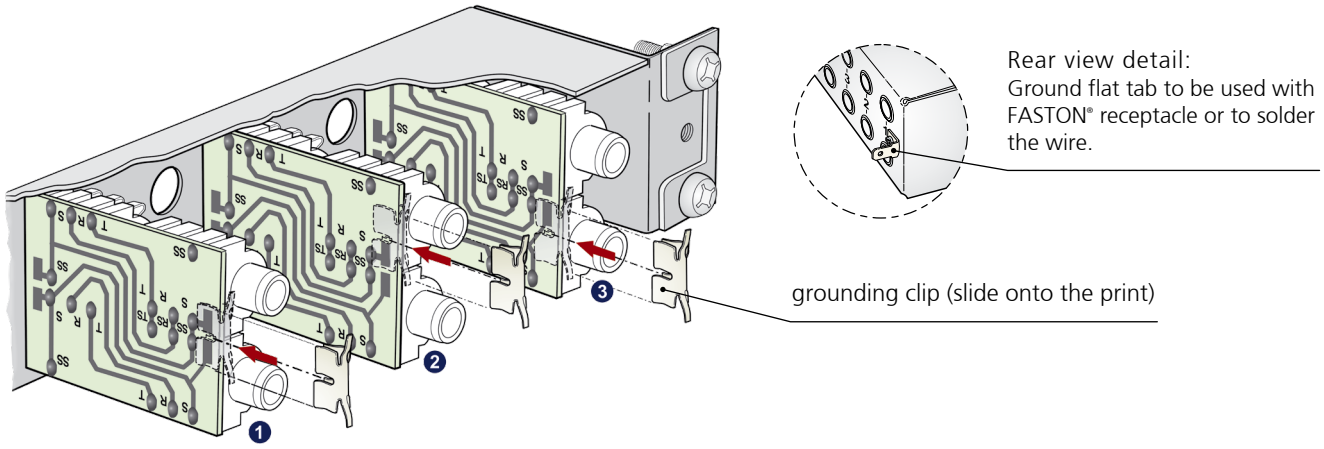
The following configurations are available:




## Grounding

The flexible grounding system, applicable for each channel separately by simply attaching the loose supplied grounding clips to the grounding pad of the corresponding channel, offers the following alternatives:

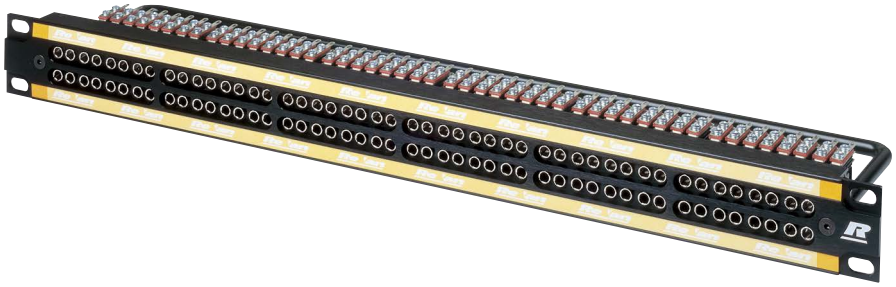
- Individual (without grounding clip): Each channel ground (sleeve contact) is connected to the dedicated ground contact of the incoming 1/4" plug only. This is the standard configuration for delivery.
- Chassis common ①: The relevant channel grounds (sleeve contacts; top and bottom row) is connected to the ground flat tab via grounding clip and chassis.
- Chassis top ②: The dedicated top channel ground (sleeve contact) is connected to the ground flat tab via grounding clip and chassis.
- Chassis bottom ③: The dedicated bottom channel ground (sleeve contact) is connected to the ground flat tab via grounding clip and chassis.



Standard 4.4mm bantam jack

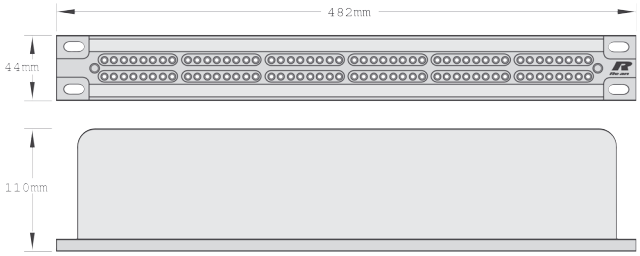
Long frame jack socket

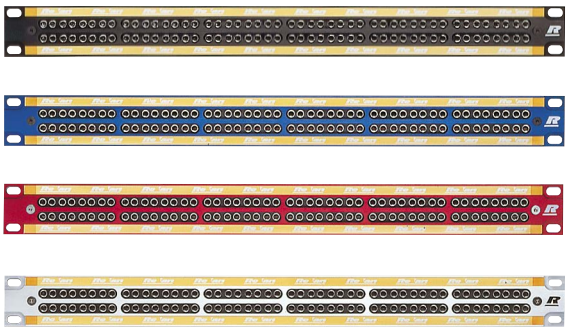
## MA 96 and XPM 96 Bantam Patchbays



- Robust designed patchbay to accept standard 4.4 mm Bantam jack connectors (acc. MIL-D-642/13)
- Fitted with 96 Rean die-cast jack sockets
- Constructed from rigid aluminium extrusion which includes 2 integral slots for designation strips
- 96 channels grouped in two row 12 x 8 stereo jacks
- XPM96 features traditional 2 row, 4 x 24 stereo jacks
- Available in 4 colours: black, silver, red or blue
- Suitable for audio, broadcast, data and industrial applications XPM96

### Dimensional Drawing

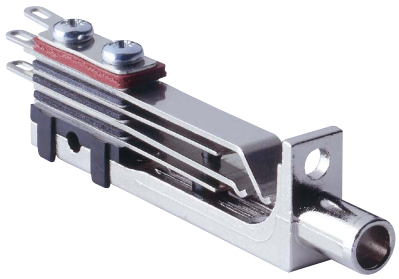


Die-cast frame

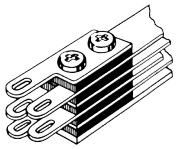
Tinned tags

## MAJ 501 Bantam Jack Socket

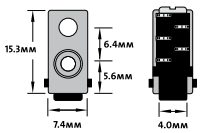


- 5-point Bantam jack socket (Tip, Ring, Sleeve, Tip Normal, Ring Normal)
- Rigid nickel plated die-cast frame, featuring considerable frame strength eliminating physical distortion when plug is inserted
- Nickel-silver spring contacts, palladium plated switch contacts
- Tinned tags for easy soldering

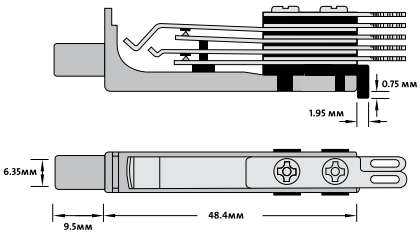
**Termination**



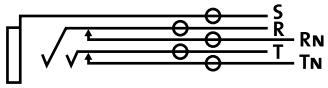
**End Elevations**




**Plan Elevations**




**Circuit Detail**



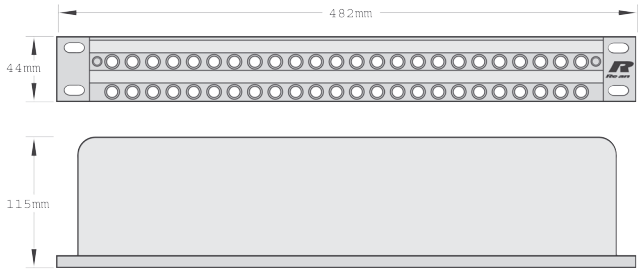
B-Gauge patchbay

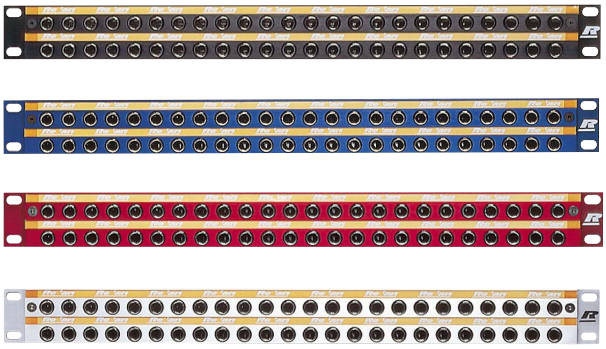
48 way longframe

## LF 48 B-Gauge Patchbays

- 48 way Longframe B-Gauge patchbay
- Accepts both European BPO 316 and US MIL-P-642/2 style phono plugs
- 2 rows of 24 LF501 jack connectors
- Jack designed from rigid nickel-plated die-cast aluminium with nickel-silver spring contacts
- Available in 4 colours: black, silver, red or blue
- Reliable support for connecting looms by steel lacing bar

### Dimensional Drawing



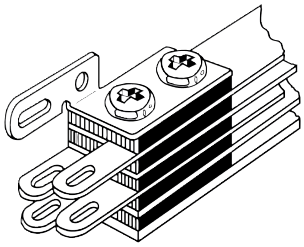



Solder lugs

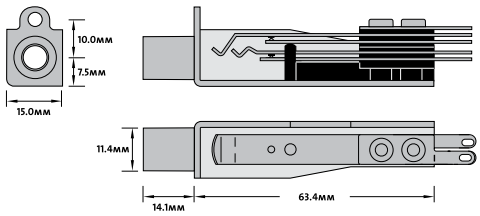
## LFJ 501 B-Gauge Jack Socket

- 5-point B-Gauge jack socket
- Nickel-silver spring contacts
- Palladium plated switch contacts
- Durable die-cast body with bright nickel plated nose
- Termination solder lugs

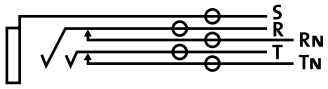
**LFJ 501**



**Plan Elevations**




**Circuit Detail**



| Specifications | | NPPA Series | NPP-TB Series | NYS Series | MA 96 and XPM 96 | LF 48 Series |
|---|---|---|---|---|---|---|
| **Electrical** | | | | | | |
| Contact resistance: | | < 20 mΩ | < 10 mΩ | < 10 mΩ | < 24 mΩ | < 20 mΩ |
| Switch contact resistance: | | < 25 mΩ | < 15 mΩ | < 10 mΩ | < 26 mΩ | < 15 mΩ |
| Insulation resistance: | > 1 GΩ @ 500 V dc | ● | ● | ● | ● | ● |
| Dielectric strength: | > 500 V ac | ● | ● | ● | ● | ● |
| | > 1`000 V dc | ● | ● | ● | - | - |
| Frequency range: | DC to > 50 MHz | ● | ● | ● | ● | ● |
| Channel separation: | > 100 dB @ 10 kHz 600 Ω terminated | ● | ● | ● | ● | ● |
| | > 40 dB @ 6 MHz 110 Ω terminated | ● | ● | ● | ● | ● |
| AES / EBU Signals (digital) suitable: | | ● | ● | ● | ● | ● |
| Handles Phantom Power: | | ● | ● | ● | ● | ● |
| **Mechanical** | | | | | | |
| Life time: | > 20`000 cycles | - | - | - | ● | ● |
| | > 10`000 cycles | - | - | ● | - | - |
| | > 5`000 cycles | ● | ● | - | - | - |
| Insertion force: | < 25 N | - | - | - | ● | ● |
| | < 20 N | - | - | ● | - | - |
| | < 10 N | ● | ● | - | - | - |
| Withdrawal force: | > 10 N | ● | ● | ● | ● | ● |
| | > 8 N | ● | ● | - | - | - |
| Dimensions: | 482 x 44 mm (19" x 1U) | ● | ● | ● | ● | ● |
| Depth: | | 178 mm (7") | 140 mm (5.5") | 64 mm (2.52") | 110 mm (4.33") | 115 mm (4.53") |
| Dimension Patch Box: | 168 x 77 x 77 mm (6.0 x 3 x 3") | | | | | |
| Temperature range: | - 30 °C to + 80 °C | ● | ● | ● | ● | ● |
| Mating plug: | | 4.4 mm (0.173") Bantam plug | B-Gauge 1/4" plug | A-Gauge 1/4" plug acc. EIA RS-453 | 4.4 mm (0.173") Bantam plug | Longframe B-Gauge plug |
| | according | MIL-P-642/13 | BPO316/MIL-P-642/2 | TEC60603-11 | MIL-P-642/13 | BPO316/MIL-P-642/2 |
| Grounding wiring | flat tab for 3/16" FASTON® (4.8 x 0.8 mm) | - | - | ● | - | - |
| **Material** | | | | | | |
| Housing: | | Steel | Steel | Steel | anodised Al | anodised Al |
| Front panel: | | anodised Al | Pocan B 3225 | Steel | anodised Al | anodised Al |
| Lacing bar: | | Brass | Steel | N / A | coated steel | coated steel |
| Jack housing: | | PA 66 blend | PA 6.6 30% GR | ABS | diecast alloy | diecast Al |
| Jack contacts: | | CuSn6 Tribor® plated | CuSn6 Au plated | CuSn6 tin plated | Ni-Silver (CuNi18Zn20) | Ni-Silver (CuNi18Zn20) |
| Switch contacts: | | Au plated | Au plated | Bronze, tin plated | Palladium plated | Palladium plated |
| Grounding clip: | | - | - | CuSn6, SnCu plated | - | - |

## Operating Accessories

### Labeling software

Patchlabel is a program to Label Patch Panel designation strips.
Free Download of Patch Label Program (ZIP – 347 KB) on the Web "www.neutrik.com" section "Patch Panels".

| Part Number | Description | | | |
|---|---|---|---|---|
| **NPPA Series** | | Configuration* | Wiring | Grounding |
| NPPA-TT-PT** | 2 x 48 jacks | half normalled bottom | 288 push terminals | individual |
| NPPA-TT-PT-FN** | 2 x 48 jacks | full normalled | 288 push terminals | individual |
| NPPA-TT-PT-HNT** | 2 x 48 jacks | half normalled top row | 288 push terminals | individual |
| NPPA-TT-PT-I** | 2 x 48 jacks | isolated | 288 push terminals | individual |
| NPPA-TT-PT-P** | 2 x 48 jacks | parallel | 288 push terminals | individual |
| NPPA-TT-S** | 2 x 48 jacks | half normalled bottom | 288 solder terminals | individual |
| NPPA-TT-S-FN** | 2 x 48 jacks | full normalled | 288 solder terminals | individual |
| NPPA-TT-S-HNT** | 2 x 48 jacks | half normalled top row | 288 solder terminals | individual |
| NPPA-TT-S-I** | 2 x 48 jacks | isolated | 288 solder terminals | individual |
| NPPA-TT-S-P** | 2 x 48 jacks | parallel | 288 solder terminals | individual |
| NPPA-TT-PT-PH | 2 x 48 jacks | half normalled bottom | 288 Phoenix push terminals | individual |
| NPPA-TT-SD50 | 2 x 48 jacks | half normalled bottom | 4 x 50 pole D-SUB | groups of 12 channels |
| NPPA-TT-SD25 | 2 x 48 jacks | half normalled bottom | 12 x 25 pole D-SUB | groups of 12 channels |
| NPPA-TT-E56 | 2 x 48 jacks | half normalled bottom | 6 x 56 pole ELCO male connectors | individual |
| NPPA-TT48-E56 | 2 x 24 jacks | half normalled bottom | 3 x 56 pole ELCO male connectors | individual |
| NPPA-TT-E90 | 2 x 48 jacks | half normalled bottom | 4 x 90 pole ELCO male connectors | individual |
| NPPA-TT-IDC | 2 x 48 jacks | programmable by jumpers | 288 IDC terminals (KRONE-Type) | individual |
| * : fully loaded jack pairs only, to built patch panels with mixed configuration use pre-config jackpairs | | | | |
| **: in case of need added normalling bars can be used to reconfigure up to 4 jackpairs | | | | |
| **Pre-configured Jack-Pairs** | | | | |
| NJ3TTA-4-HNB | blocks of 2 channels | half normalled bottom row | | cover ident color: clear |
| NJ3TTA-4-HNT | blocks of 2 channels | half normalled top row | | cover ident color: yellow |
| NJ3TTA-4-FN | blocks of 2 channels | full normalled | | cover ident color: green |
| NJ3TTA-4-P | blocks of 2 channels | parallel | | cover ident color: red |
| NJ3TTA-4-I | blocks of 2 channels | isolated | | cover ident color: orange |
| **Accessories** | | | | |
| NPPA-S | Strain Relief bar | | | |
| NKTT* | Patch cords with NP3TT-1 plugs. Available in black, blue, green, red and yellow. Lenght: 30, 40, 60, 90, 120 cm | | | |
| **NPP-TB Series** | | Configuration | Wiring | |
| NPP-TB | 2 x 24 TB (BP0316/MIL-P-642/2) jacks | programmable for all commonly used configurations | push terminals | |
| NPP-TB-HN | 2 x 24 TB (BP0316/MIL-P-642/2) jacks | half Normalled Bottom Row | solder tags | |
| **Accessories** | | | | |
| NPP-LB-** | Channel identification and status plates, pack of 100 per color, 9 different colors | | | |
| NPP-C | Metal dust cover | | | |
| NPP-S | A second rear extention bar for fix the very large cables. | | | |
| NKTB* | Patch cord with NP3TB plugs. Available in black and red. Length: 30, 40, 60, 90 cm | | | |
| | **: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White; Must be ordered in multiples of 100. | | | |
| **NYS SPPL** | | | | |
| NYS-SPP-L1 | 1/4" Patch Panel, 2 x 24 channels, configuration half normalled, isolated, split | | | |
| NYS-SPCR1 | Send / Return module (Split Print) | | | |

| Part Number | Description |
|---|---|
| **MA96 and XPM-96** | |
| MA96-1A | 96 way, Red front panel – grouped 12 x 8 |
| MA96-1D | 96 way, Blue front panel – grouped 12 x 8 |
| MA96-1O | 96 way, Black front panel – grouped 12 x 8 |
| MA96-1S | 96 way, Silver front panel – grouped 12 x 8 |
| XPM-96SS | 96 way, Silver front panel – grouped 4 x 24 |
| XPM-96SO | 96 way, Black front panel – grouped 4 x 24 |
| **Bantam Jack Socket** | |
| MAJ-501 | Standard Solder Tag |
| **LF48 Longframe B-Gauge Patchbays** | |
| LF48-1A | 48 way, Red front panel |
| LF48-1D | 48 way, Blue front panel |
| LF48-1O | 48 way, Black front panel |
| LF48-1S | 48 way, Silver front panel |
| LFJ-501 | Longframe B-Gauge jack socket, standard solder tag |

# Digital Wireless Audio Solution

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**NEUTRIK®, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi®, rear**TWIST®, **silent**PLUG®, **speak**ON®, **DiWA®** , **XIRIUM®, are registered trademarks of Neutrik AG.**

# XIRIUM PRO

## DIGITAL WIRELESS AUDIO SOLUTION

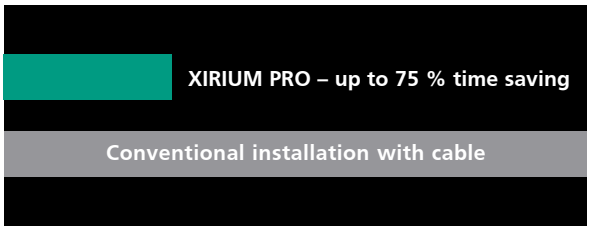
Regardless of the event, live sound, or house of worship: XIRIUM PRO provides the perfect audio solution. As a true replacement for cable bound systems it eliminates the often difficult and time consuming task of running cables.

### NEUTRIK – the vision

The vision of a wireless transmission system between two connectors and to transmit audio signals in studio quality has led to the development of the innovative DiWA technology. DiWA (Digital Wireless Audio) provides FCC license-free, compression-free, studio quality, full bandwidth audio with extremely low latency.

### XIRUM PRO – time and money saver

With XIRIUM PRO Neutrik introduces a new, innovative product, allowing for easy adoption of DiWA technology. With just two devices, namely the transmitter (TX) and the receiver (RX), audio transmission can be established quickly, and more cost effectively then using traditional audio cables or other wireless systems. Engineers, artists, and project designers can now think beyond the physical limitations of the traditional audio cable. Equipment such as loudspeakers, amplifiers, and mixing consoles can now be positioned for optimal audio performance and what makes the most acoustic sense allowing artistry and sonic performance to take priority over venue logistics.



## Innovative technology – studio sound quality

With XIRIUM PRO, a digital wireless audio system based on DiWA technology, Neutrik sets a new standard in professional wireless audio transmission.

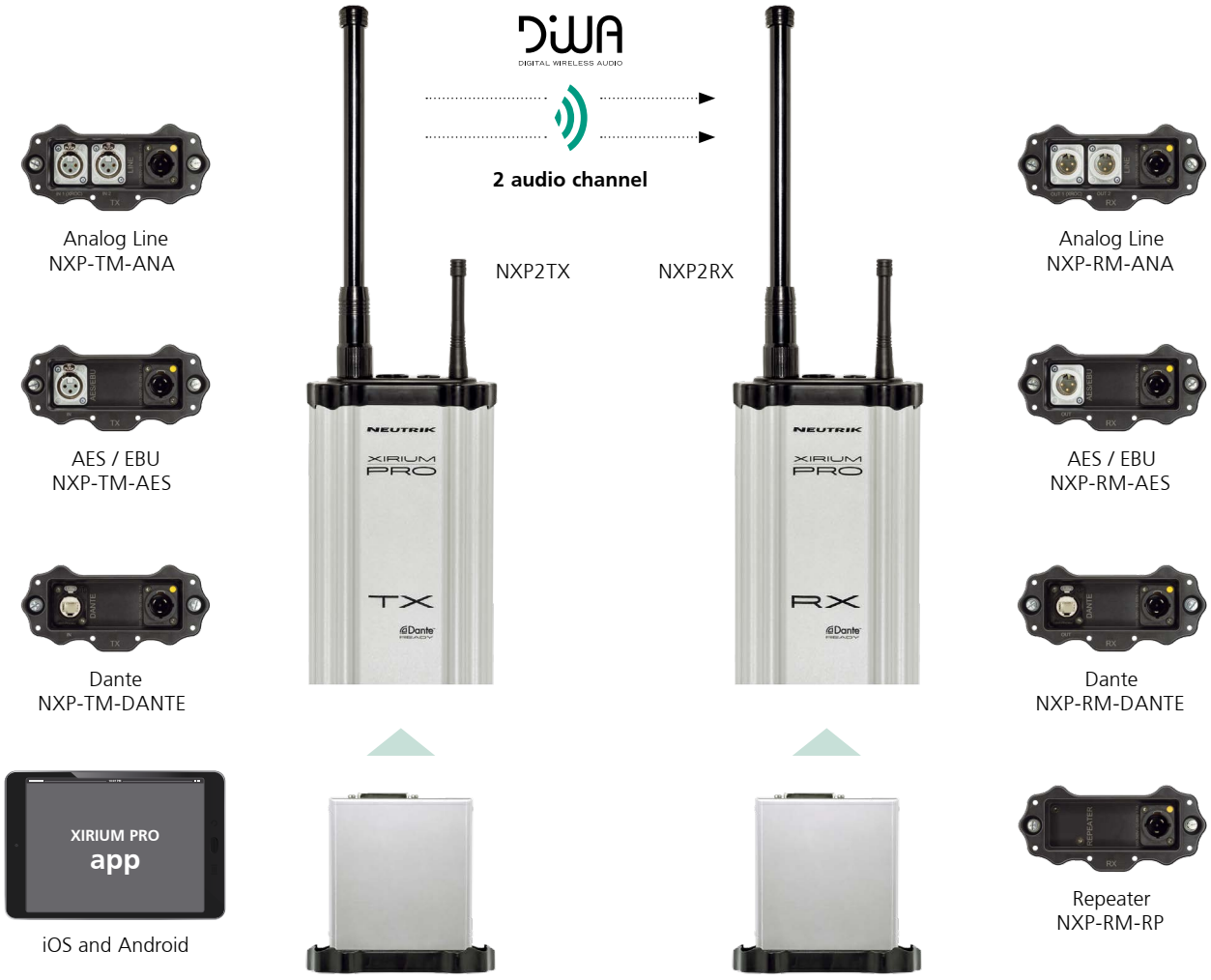
### XIRIUM PRO – the product

XIRIUM PRO combines digital transmission facilitating the highest possible sound quality, reliability, and outstanding performance in one unique solution. Neutrik, known as the global leader in manufacturing connector technology for the professional entertainment industry, completes the innovation circle in audio connectivity, by providing solutions with copper connectors, fiber optic systems and now wireless solutions.

DiWA
DIGITAL WIRELESS AUDIO

## XIRIUM PRO – the system components …

… with 2 base stations, 7 modules and the XIRIUM PRO software app




A XIRIUM PRO unit consists of a TX or RX base station and an input or output module. XIRIUM PRO offers the greatest flexibility available in a wireless audio system today. In order to make this flexibility possible, XIRIUM PRO offers a combination of 7 different input and output audio modules and 2 base stations. There are modules for analog (line-level), digital (AES/EBU), Dante, as well as a repeater module (RX only). All the modules contain a rechargeable lithium- Ion battery and can be operated either on battery power or on direct mains power. These modules can be mixed and matched within each base station allowing for a signal conversion from one type of signal to another. No matter which audio signal type, XIRIUM PRO can handle it.

# Interference-free transmission

Using the 5 GHz band for transmission, XIRIUM PRO offers an alternative to the reduced availability of VHF/UHF channels and congestion found in the 2.4 GHz band.

## Exceeding boundaries

The repeater is the perfect extension of the system: When used, the system range can be doubled, and walls, corners, or other obstacles may be overcome.

## Extended true diversity for even more reliable reception

Since the repeater duplicates and forwards the signals received from the transmitter it becomes a second, redundant audio source for every receiver. Each receiver automatically selects the best signal and switches between them without interruption.

## Channel occupation

The constant DiWA data flow prevents interference from other devices occupying the 5 GHz frequency band.

## Reliable operation/Forward error correction

Specially developed and patented data protocols transmit redundant data packets assuring trouble-free transmission.

Using advanced error correction ensures uninterrupted signal reception, eliminating delays or loss of the audio transmission. In fact, as many as 17 data packets may be lost without harming the signal.

## XROC (Extreme Ruggedized One Channel)

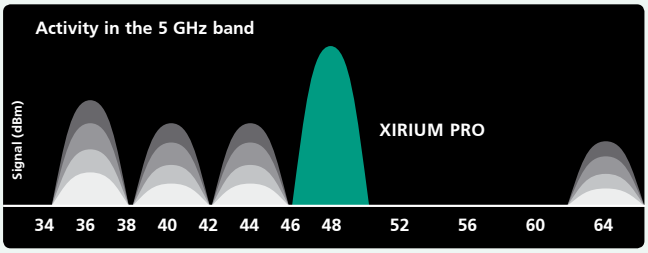
When RF congestion at a venue or event is at its worst, activate the exclusive Xirium Pro XROC feature and eliminate any opportunity for offending RF traffic to affect your wireless audio signal.

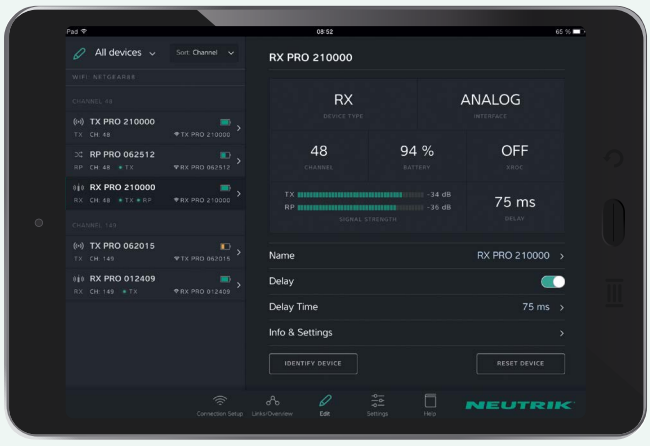
## XIRIUM PRO software app

Available for iPad and Android tablets, the user friendly XIRIUM PRO app provides enhanced setup functions and allows monitoring and control of XIRIUM PRO devices.

DiWA
DIGITAL WIRELESS AUDIO

www.xirium.net



# Definitions, Abbreviations & Useful Information

## ELEMENTS

| | |
|---|---|
| Ag | Silver |
| Al | Aluminium |
| Au | Gold |
| Co | Cobalt |
| Cr | Chromium |
| Cu | Copper |
| Ni | Nickel |
| P | Phosphorus |
| Pb | Lead |
| Pd | Palladium |
| Sn | Tin |
| Zn | Zinc |

## ALLOYS, PLASTICS, POLYMERS

| | |
|---|---|
| Brass (Alloy) | CuZn39Pb3 |
| Bronze (Alloy) | CuSn6 |
| Ck 67 | Carbon Steel |
| EPDM | Ethylene Propylene |
| GR | Glass Reinforced |
| PA | Polyamide |
| PBTP | Polybutylene Terephthalate |
| POM | Polyacetal |
| PTFE | PolyTetraFluoroEthylene (TEFLON) |
| PUR | Polyurethane |

## MEASUREMENT LEGEND

| | |
|---|---|
| N | Newton |
| Ω | Ohm |
| µ | Micro |
| OD | Outside Diameter |
| m | Meter(s) |
| k | Kilo |

## ENGLISH TO METRIC CONVERSIONS

| | | |
|---|---|---|
| 1/8 inch | 3.175 | millimeters (mm) |
| 1/4 inch | 6.35 | millimeters (mm) |
| 1 inch | 25.4 | millimeters (mm) |
| | 2.54 cm | 1 inch |
| 1 foot | 30.48 | centimeters (cm) |
| | 0.305 | meter (m) |
| 6 foot | 1.828 | meters (m) |
| 50 foot | 15.24 | meters (m) |
| 100 foot | 30.48 | meters (m) |
| 1000 foot | 304.8 | meters (m) |

## METRIC TO ENGLISH CONVERSIONS

| | | |
|---|---|---|
| 1 centimeter | 0.3937 | inches |
| 1 meter | 39.37 | inches |
| 3.281 meter | 10 | feet |
| 10 meters | 32.808 | feet |
| 50 meters | 164.041 | feet |
| 100 meters | 328.084 | feet |

## OTHER ABBREVIATIONS

| | |
|---|---|
| UL® | Underwriters Laboratories |
| IP Rating | Ingress Protection rating for objects and water ACC IEC529/EN60529 |
| IEC | International Electrotechnical Commission is the international standards and conformity assessment body for all fields of electrotechnology |
| | UL Recognized Component Mark |
| | ENEC – European norms electrical certification, demonstrates compliance with European safety standards. |
| | VDE Association for Electrical, Electronic and Information Technologies e.V. |
| AWG | American Wire Gauge |

**NEUTRIK, crystal**CON®, **ether**CON®, **max**CON®, **mini**CON®, **nano**CON®, **neutri**CON®, **optical**CON®, **power**CON®, **Profi**®, **rear**TWIST®, **silent**PLUG®, **speak**ON®, **DiWA**®, **XIRIUM**®, **are registered trademarks of Neutrik AG.**

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# Neutrik Product Line

## XLR Connectors

X Series | XX Series | RX Series | convertCON | XX-HD Series | FXS Series | A Series | AA Series | B Series | D Series | DL Series | DLX Series | P Series | MPR Series | Combo Series | Combo A Series

## Plugs & Jacks

PX Series | silentPLUG | timbrePLUG | ultimatePLUG | MIL/B-Gauge Type Plugs | 0.173" Bantam | 3.5 mm Plug | Cable Jack | Chassis Jacks | Vertical Jacks | Slim-Line | M-Line | Stacking Jacks | Phono - Profi | Phono - Socket

## Loudspeaker Connectors

speakON SPX Series | speakON FC Series | speakON Adapter | speakON Chassis Connectors | speakON Combo | speakON STX Series | speakON STX Chassis

## Data Connectors

opticalCON Cable & Chassis Connectors | opticalCON Breakout Box | powerMONITOR | etherCON Cable & Chassis Connectors | etherCON CAT6 Cable & Chassis Connectors | USB Cable & Chassis Connectors | HDMI Cable & Chassis Connectors | Firewire Chassis Connector | D-SUB Feedtrough

## 75 Ohm BNC Connectors

rearTWIST | Tiny Cable Jack | Chassis | Bulkhead Jacks | Female Cable Jack

## Circular Connectors

nanoCON Cable & Chassis Connectors | miniCON Cable & Chassis Connectors | neutriCON Cable & Chassis Connectors

## powerCON Connectors

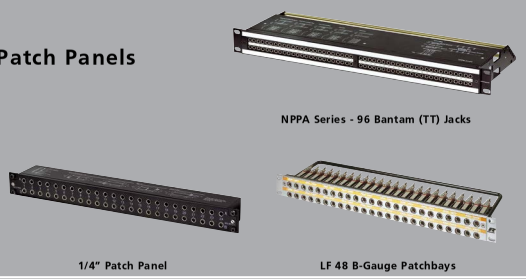
powerCON TRUE1 Cable & Chassis Connectors | powerCON Cable & Chassis Connectors | 32 A powerCON Cable & Chassis Connectors

## Accessories

Circular Adapters | D Shape Adapters | AES / EBU Digital Impedance Trasformer Adapters

DMX Adapters | XLR Feedthrough | Modules & Audio Transformers | Goosenecks

## Patch Panels



NPPA Series - 96 Bantam (TT) Jacks | 1/4" Patch Panel | LF 48 B-Gauge Patchbays

## Digital Wireless Audio Solution

XIRIUM PRO

Product Guide

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