

## Neutrik® Part Number Guide

### NC3FAH1-B-0-D

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

Definitions, Abbreviations & Useful Information see page 162.



## XLR Connectors

## Content Page

### Cable Connectors:

|                            |    |
|----------------------------|----|
| XX Series .....            | 12 |
| EMC-XLR Series .....       | 12 |
| RX Series .....            | 13 |
| XX-HE Series .....         | 13 |
| XX-14 Series .....         | 14 |
| XX Crimp Series .....      | 14 |
| crystalCON .....           | 15 |
| convertCON .....           | 15 |
| XX-HD Series .....         | 16 |
| X Series .....             | 16 |
| X-HD Series .....          | 17 |
| XCC Series .....           | 17 |
| FXS Series .....           | 18 |
| FX-SPEC Series .....       | 18 |
| Technical Data .....       | 19 |
| Ordering Information ..... | 21 |

### Receptacles:

|                                                     |    |
|-----------------------------------------------------|----|
| A Series .....                                      | 23 |
| AA Series .....                                     | 23 |
| B Series .....                                      | 24 |
| BA Series .....                                     | 24 |
| A/B Series 5-pole switch .....                      | 25 |
| D Series .....                                      | 25 |
| DL Series .....                                     | 26 |
| DLX Series .....                                    | 26 |
| DLX Crimp Series .....                              | 27 |
| EMC Series .....                                    | 27 |
| MPR-HD Series .....                                 | 28 |
| P Series .....                                      | 28 |
| Combo Series .....                                  | 29 |
| Combo A Series .....                                | 30 |
| Accessories .....                                   | 31 |
| Technical Data .....                                | 32 |
| Ordering Information A/AA Series .....              | 34 |
| Ordering Information B/BA Series .....              | 35 |
| Ordering Information D / DL / DLX / DLX Crimp ..... | 35 |
| Ordering Information EMC / P / MPR-HD .....         | 36 |
| Ordering Information Combo / Combo A Series .....   | 36 |
| Panel Cutouts, Assembly Tools .....                 | 36 |



## 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 more than 30 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.



Ergonomic latch design



Neutrik hologram



Inside view



Circumferential ground shield contact

## XX Series



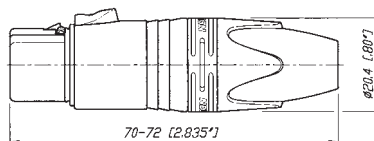
NC3FXX



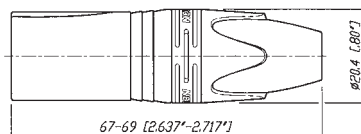
NC6MXX-B

- The next generation of the worldwide accepted standard
- Unique cage type female contact - increases conductivity
- Female contact with "solder stop" for ease 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

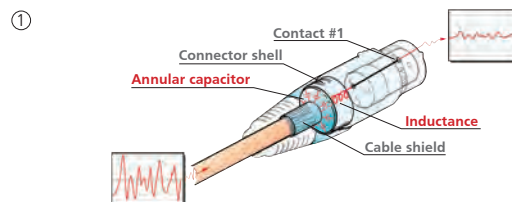


NC3FXX-EMC

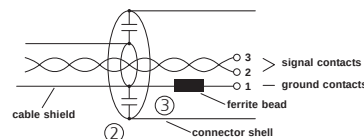


NC3MXX-EMC

- 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
- Patent



- 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

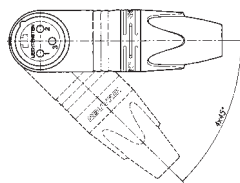


Velour chromium housing

## 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

## XX-HE Series



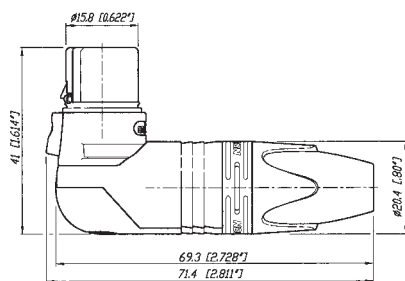
NC3FXX-HE



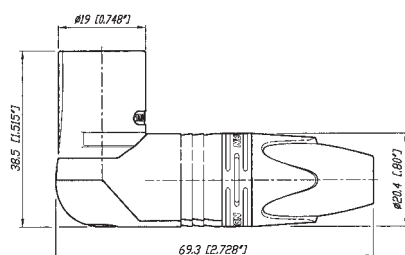
NC3MXX-HE

- 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), flammability UL94V-0
- Machined female contacts standard
- Insert is dark grey to distinguish it from standard XX-Series insulators
- Flammability UL 94V-0

### NC\*FRX

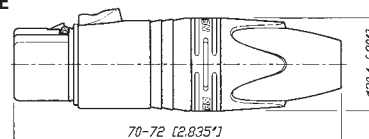


### NC\*MRX

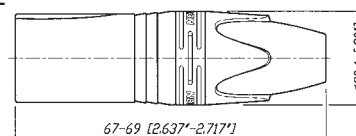


\*: 3 - 7 contacts

### 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



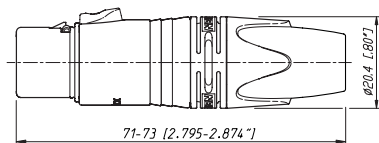
NC3FXX-HA-BAG



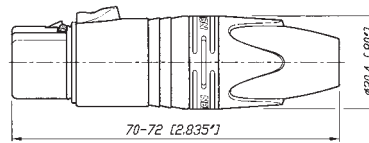
NC3MXX-HA

- 3 pin XX Series with crimp contacts
- Accommodates wire size AWG 24 - 22 or 0.22 – 0.34 mm<sup>2</sup>
- 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

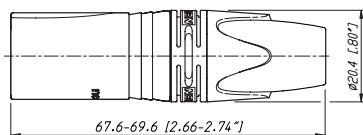
NC3FXX-14



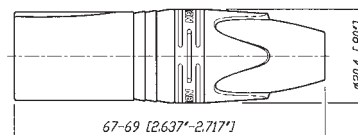
NC3FXX-HA



NC3MXX-14



NC3MXX-HA







Crystal stones



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



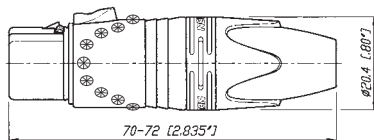
NC3FM-C

- 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
- Substitute adapters, ideal as an emergency kit
- Exclusively with gold plated contacts
- With all benefits of the XLR XX-Series

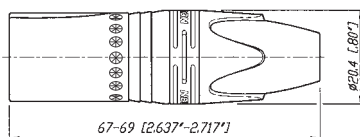


Convert male - female and vice versa

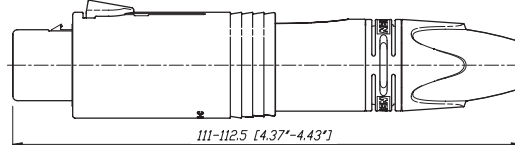
NC3FXX-B-CRYSTAL



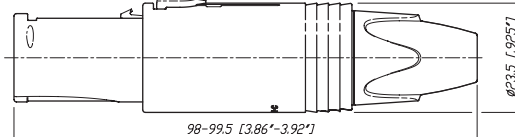
NC3MXX-B-CRYSTAL



NC3FM-C: Position Female



NC3FM-C: Position Male



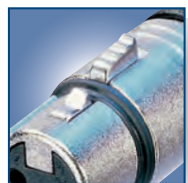




Rubber sealing protection



Neutrik original design



Female locking



Male metal locking window



## XX-HD Series



NC3FXX-HD-D



NC3MXX-HD-B-D

## X Series



NC3FX

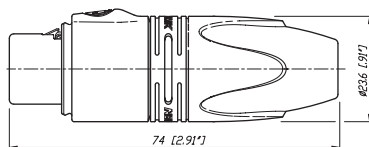


NC3MX + BSX-5

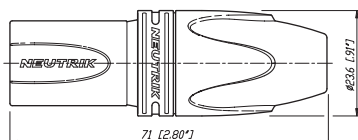
- "Heavy duty" cable connector for outdoor use
- Rubber sealing jacket protects against water ingress and mechanical shock
- Dust and water resistant according IP 67 in mated condition
- NC3FXX-HD mates with NC3MPR-HD chassis connector and NC3MXX-HD cable connector
- Gold contacts
- Chuck type strain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

- 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 has rubber ring for secure mating to male XLR or microphone
- Sleek profile and compact design
- Rugged diecast shell
- UL Recognized components

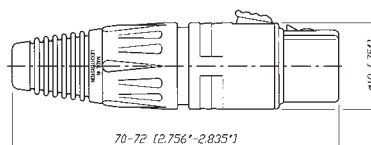
NC3FXX-HD-D



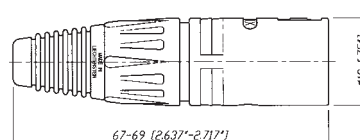
NC3MXX-HD-D



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

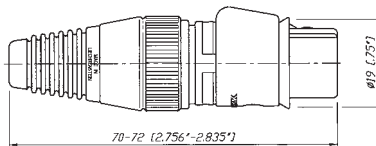
## XCC Series



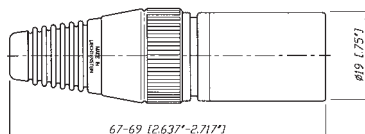
NC3FXCC

- Coaxial ground spring and hex crimp ferrule at cable entrance allows continuous (360°) ground connection to the 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

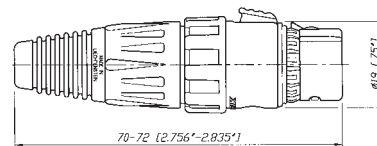
NC\*FX-HD



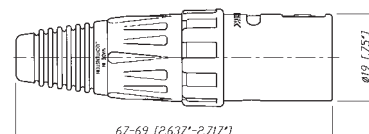
NC\*MX-HD



NC3FXCC



NC3MXCC



\*: 3 - 5 contacts



Switch activating ring



Locking ring

## FXS Series

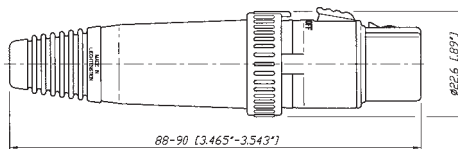


NC3FXS

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



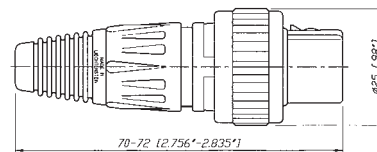
## FX-SPEC Series



NC3FX-SPEC

- Available in a 3 pin female standard configuration with Gold plated contacts
- Features a locking ring which is secured with a M2.5 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



| Specification                    |                                               | XX &<br>XX-14 &<br>CRYSTAL | EMC<br>Series | XX-HD<br>Series | XX-HE<br>Series | RX<br>Series | XX Crimp<br>Series | convert-<br>CON<br>Series |
|----------------------------------|-----------------------------------------------|----------------------------|---------------|-----------------|-----------------|--------------|--------------------|---------------------------|
| <b>Electrical</b>                |                                               |                            |               |                 |                 |              |                    |                           |
| Number of contacts               |                                               | 3 - 7 <sup>1)</sup>        | 3             | 3               | 3               | 3 - 7        | 3                  | 3                         |
| Contact resistance               | ≤ 3 mΩ                                        | ●                          | ●             | ●               | ●               | ●            | ●                  | ●                         |
| Insulation resistance - initial: | > 2 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                                       | ●                          | ●             | ●               | ●               | ●            | ●                  | ●                         |
| <b>Mechanical</b>                |                                               |                            |               |                 |                 |              |                    |                           |
| Lifetime >                       | 1'000 cycles                                  | ●                          | ●             | ●               | ●               | ●            | ●                  | ●                         |
| Insertion / withdrawal force ≤   | 20 N                                          | ●                          | ●             | ●               | ●               | ●            | ●                  | ●                         |
| Cable O.D. range                 | 3.5 - 8.0 mm                                  | ● <sup>2)</sup>            | ●             | 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                 | -                          | -             | -               | -               | -            | ●                  | -                         |
| <b>Material</b>                  |                                               |                            |               |                 |                 |              |                    |                           |
| 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                            | ●                          | -             | -               | -               | ●            | ●                  | -                         |
|                                  | 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)                             | -                          | -             | -               | -               | -            | -                  | -                         |
| <b>Environmental</b>             |                                               |                            |               |                 |                 |              |                    |                           |
| 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                                   | ●                          | ●             | ●               | ●               | ●            | ●                  | ●                         |

<sup>1)</sup> : XX-14, CRYSTAL: 3 pole

<sup>2)</sup> : XX-14: Cable O.D. 8.0 - 10.0 mm

| Specification                    |                                               | X Series | XCC Series   | X-HD Series | FXS Series   | FX-SPEC Series |
|----------------------------------|-----------------------------------------------|----------|--------------|-------------|--------------|----------------|
| <b>Electrical</b>                |                                               |          |              |             |              |                |
| Number of contacts               |                                               | 3 - 7    | 3            | 3 - 5       | 3            | 3              |
| Contact resistance               | ≤ 3 mΩ                                        | ●        | ●            | ●           | ●            | ●              |
| Insulation resistance - initial: | > 2 GΩ                                        | ●        | ●            | ●           | ●            | ●              |
| - after damp heat test:          | > 1 GΩ                                        | ●        | ●            | ●           | ●            | ●              |
| Dielectric strength              | 1500 V 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                                          | ●        | ●            | ●           | ●            | ●              |
| 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                                       | ●        | ●            | ●           | ●            | ●              |
| <b>Mechanical</b>                |                                               |          |              |             |              |                |
| 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 | ●              |
| 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                 | -        | -            | -           | -            | -              |
| <b>Material</b>                  |                                               |          |              |             |              |                |
| Shell                            | Zinc diecast (ZnAl4Cu1)                       | ●        | ●            | female      | ●            | ●              |
|                                  | Stainless steel                               | -        | -            | male        | -            | -              |
| Shell plating                    | gal Ni or black Cr                            | -        | ●            | female      | ●            | ●              |
| 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)                             | -        | -            | -           | -            | ●              |
| <b>Environmental</b>             |                                               |          |              |             |              |                |
| 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 |
|-----------------------------------------------------------------------|--------------------------|-------------------|-------------------|--------|--------|--------|--------|--------|
| <b>XX Series</b>                                                      |                          |                   |                   |        |        |        |        |        |
| 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-**-D <sup>1</sup>                                              | NC3MXX-**-D <sup>1</sup> | Nickel / Black Cr | Silver / Gold     | ●      | -      | -      | -      | -      |
| NC6FSXX <sup>2</sup>                                                  | NC6MSXX <sup>2</sup>     | Nickel            | Silver            | -      | -      | -      | ●      | -      |
| NC6FSXX-B <sup>2</sup>                                                | NC6MSXX-B <sup>2</sup>   | Black Cr          | Gold              | -      | -      | -      | ●      | -      |
| NC6FSXX-BAG <sup>2</sup>                                              | NC6MSXX-BAG <sup>2</sup> | Black Cr          | Silver            | -      | -      | -      | ●      | -      |
| <b>XX-EMC Series</b>                                                  |                          |                   |                   |        |        |        |        |        |
| NC3FXX-EMC                                                            | NC3MXX-EMC               | Nickel            | Gold              | ●      | -      | -      | -      | -      |
| NC3FXX-EMC-B                                                          | -                        | Black Cr          | Gold              | ●      | -      | -      | -      | -      |
| <b>RX Series</b>                                                      |                          |                   |                   |        |        |        |        |        |
| NC*FRX                                                                | NC*MRX                   | Nickel            | Silver            | ●      | ●      | ●      | ●      | ●      |
| NC*FRX-B                                                              | NC*MRX-B                 | Black Cr          | Gold              | ●      | ●      | ●      | ●      | ●      |
| NC*FRX-BAG                                                            | NC*MRX-BAG               | Black Cr          | Silver            | ●      | ●      | ●      | ●      | ●      |
| <b>XX-HE Series</b>                                                   |                          |                   |                   |        |        |        |        |        |
| NC3FXX-HE                                                             | NC3MXX-HE                | Velour Chromium   | Gold              | ●      | -      | -      | -      | -      |
| <b>XX-14 Series</b>                                                   |                          |                   |                   |        |        |        |        |        |
| 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            | ●      | -      | -      | -      | -      |
| <b>XX Crimp Series</b>                                                |                          |                   |                   |        |        |        |        |        |
| NC3FXX-HA                                                             | NC3MXX-HA                | Nickel            | Silver            | ●      | -      | -      | -      | -      |
| NC3FXX-HA-BAG                                                         | NC3MXX-HA-BAG            | Black Cr          | Silver            | ●      | -      | -      | -      | -      |
| <b>convertCON Series</b>                                              |                          |                   |                   |        |        |        |        |        |
|                                                                       | NC3FM-C                  | Nickel            | Gold              | ●      | -      | -      | -      | -      |
|                                                                       | NC3FM-C-B                | Black Cr          | Gold              | ●      | -      | -      | -      | -      |
| <b>Crystal XLR</b>                                                    |                          |                   |                   |        |        |        |        |        |
| NC3FXX-B-CRYSTAL                                                      | NC3MXX-B-CRYSTAL         | Black Cr          | Gold              | ●      | -      | -      | -      | -      |
| <b>XX-HD Series</b>                                                   |                          |                   |                   |        |        |        |        |        |
| NC3FXX-HD-D                                                           | NC3MXX-HD-D              | Nickel            | Gold              | ●      | -      | -      | -      | -      |
| NC3FXX-HD-B-D                                                         | NC3MXX-HD-B-D            | Metal Black       | Gold              | ●      | -      | -      | -      | -      |
| <b>Accessories and Assembly Tools</b>                                 |                          |                   |                   |        |        |        |        |        |
| Detailed information on page 31 and 36.                               |                          |                   |                   |        |        |        |        |        |
| * : Number of Contacts                                                |                          |                   |                   |        |        |        |        |        |
| ** : Nickel or Black                                                  |                          |                   |                   |        |        |        |        |        |
| -D <sup>1</sup> : Bulk packed, to be ordered in multiples of 100 pcs. |                          |                   |                   |        |        |        |        |        |
| <sup>2</sup> : Switchcraft equivalent                                 |                          |                   |                   |        |        |        |        |        |

## Ordering Information for Cable Connectors

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

## Accessories and Assembly Tools

Detailed information on page 31 and 36.

\* : Number of Contacts

\*\* : Nickel or Black

-D<sup>1</sup>: Bulk packed, to be ordered in multiples of 100 pcs.

<sup>2</sup>: Switchcraft Equivalent





Colored coding ring



Lateral right PCB mount



Locking release tab



Ground contact

## A Series



NC3FAH



NC3MAV

- Smallest XLR receptacles, highest packing density
- Plastic housing, steel retention lug
- 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

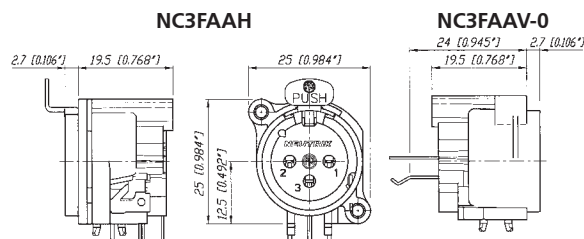
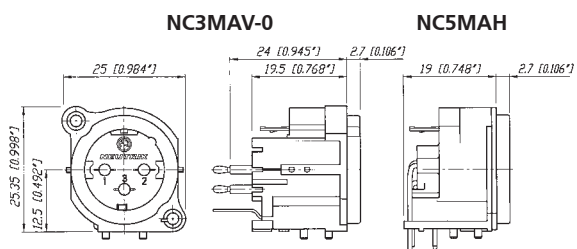
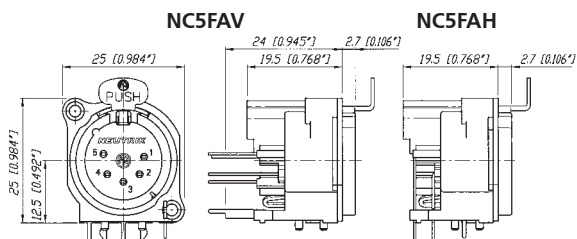


NC3FAAV2



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



### Grounding Options (A / AA / B / BA 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:

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



Circumferential metal ring



Front panel grounding



Tear drop contact design

## B Series



NC3FBV1



NC3MBV

- The B Series XLR receptacle 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) features complete EMC and RF protection
- Female versions available latchless
- Rear mount only
- "Tulip" type female contact
- Fastening with Nickel B-Screw-1-8

## BA Series



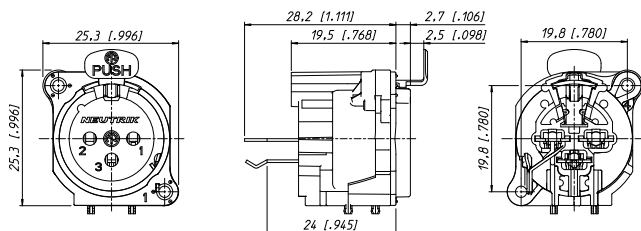
NC3FBAV2



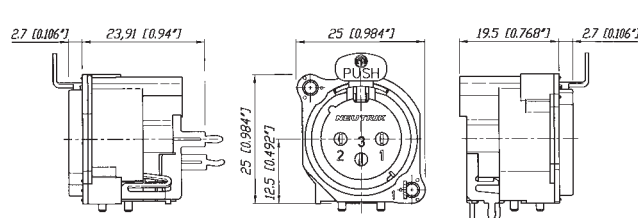
NC3MBAH

- Economical version of B-Series product with modified metal flange
- Available in 3, 4 and 5 pole version with nickel metal ring
- Rear mount only
- "Fork" type female contact
- Fastening with A-Screw-1-8

NC3FBV1

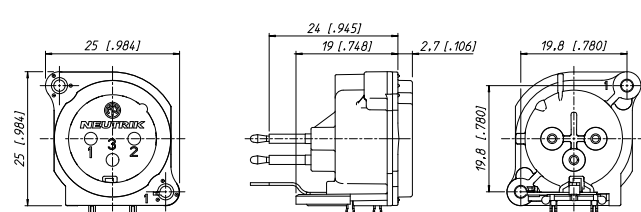


NC3FBAV

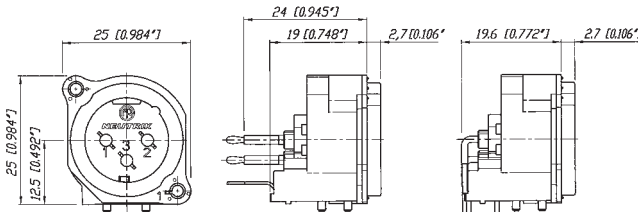


NC3FBAH

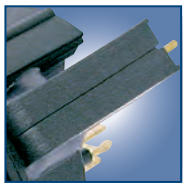
NC3MBV



NC3MBAV



NC3MBAH



Incorporated switch



Insert removable



## A/B Series 5-pole switch



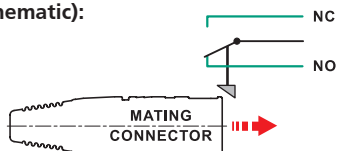
NC5FBV-SW



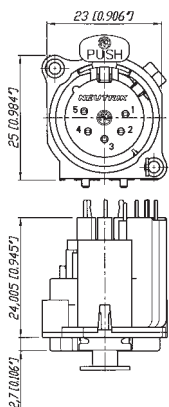
NC5MAV-SW

- A and B Series 5 pole connector with additional switch
- Normally open, normally closed (NO - NC) contact
- Switch activated by mating XLR cable connector
- Available in 5 pole, 3 or 4 pole on request

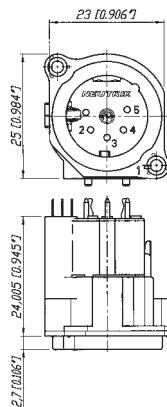
### Inserting (Schematic):



NC5FAV-SW



NC5MBV-SW



## D Series



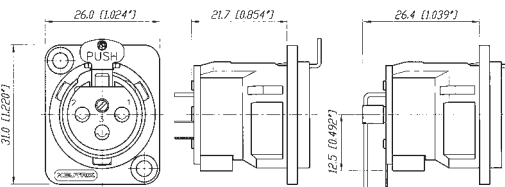
NC3FDM3-H-B



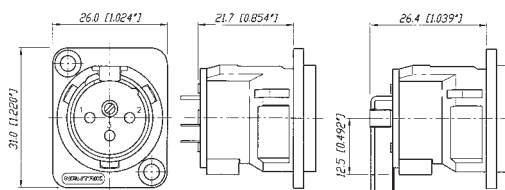
NC3MD-V

- "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

NC3FD-V / NC3FD-H



NC3MD-V / NC3MD-H





Locking release tab



Horizontal PCB  
mount



Ground shielding

## 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

## DLX Series



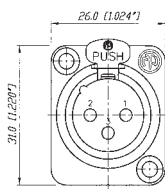
NC3FD-LX-HE



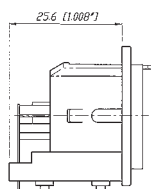
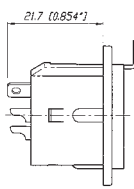
NC5MD-LX

- 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 four to seven pin versions
- D-style housing provides installation compatibility with industry standard D mounting dimensions

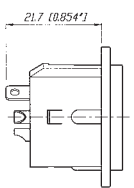
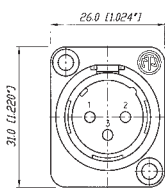
NC3FD-L-1



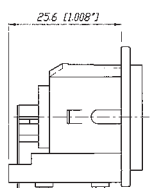
NC\*FDM3-H



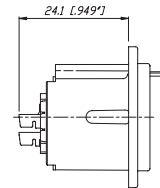
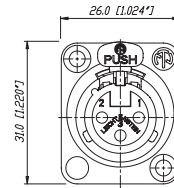
NC3MD-L-1



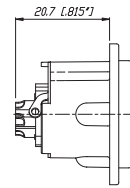
NC\*MDM3-H



NC3FD-LX



NC\*MD-LX



\*: 3 - 5 contacts

\*: 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 mm<sup>2</sup>
- 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

## EMC Series

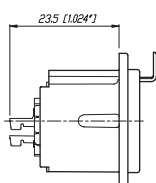
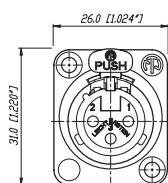


NC3FDX-EMC-SPEC

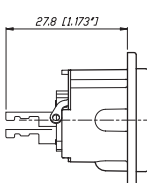
- 3 pole female XLR chassis connector with integrated capacitive shield to shell connection to avoid RF-interference and LF-noise
- 360° shield contact ensures best possible shielding and chassis contact
- D flange chassis for panel mount applications
- Includes the locking nut of the NC3FX-SPEC for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

Detailed information of RF-shielding see page 12 - EMC cable connector.

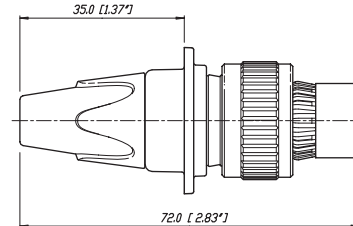
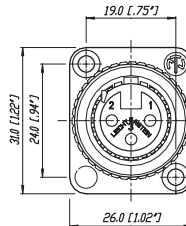
NC3FD-LX-HA



NC3MD-LX-HA



NC3FDX-EMC-SPEC

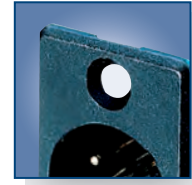




Sealing Gasket



Through hole fastening



## MPR-HD Series



NC3MPR-HD



NC5MPR-HD

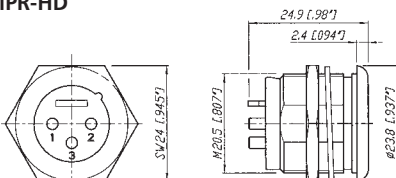
- IP 65 - in combination with NC\*FX-HD cable connectors
- Perfect for outdoor applications
- Sealing gasket for water tight panel mount
- Gold plated contacts



NC5MPR-HD

NC5FX-HD

NC3MPR-HD



\*: 3 - 5 contacts

## P Series



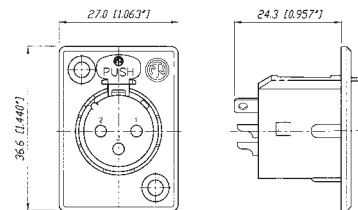
NC3FP-1



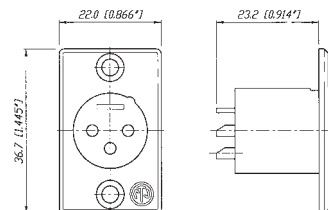
NC6MP-B

- Male and female available in 3-6 pin configurations; 7 pin versions 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, DxP; 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

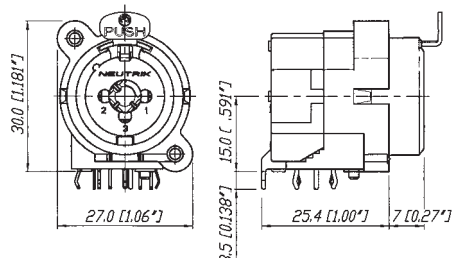
- Combined XLR receptacle and 1/4" phone jack
- Attractive "front end" design
- Saves rack space by combining 2 connectors in one housing
- Horizontal or vertical PCB mounting or hard wire soldering
- Fully normalised
- Stereo or mono version

- 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)

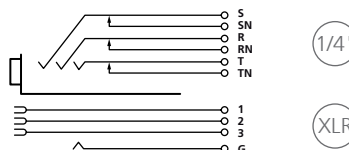


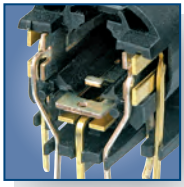
XLR receptacle or  
1/4" phone jack

NCJ10FI-H



Wiring: Example of NCJ9FI-H





Horizontal PCB  
mount



Vertical PCB mount



Hologram

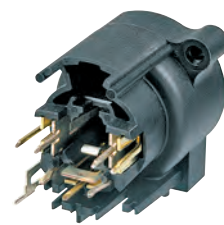
## Combo A Series



NCJ6FA-V



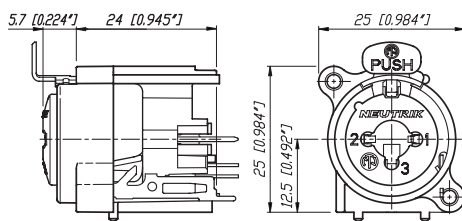
NCJ6FA-H-0



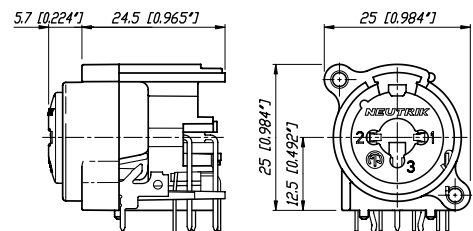
NCJ6FA-V-0

- 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                                                                             | Brown                                                                             | Red                                                                               | Orange                                                                             | Yellow                                                                              | Green                                                                               | Blue                                                                                | Violet                                                                              | Grey                                                                                | White                                                                               |
|------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                        |                                                                  | 0                                                                                 | 1                                                                                 | 2                                                                                 | 3                                                                                  | 4                                                                                   | 5                                                                                   | 6                                                                                   | 7                                                                                   | 8                                                                                   | 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 + 5 pole A Series and 3 pole BA Series |  |  |  |  |  |  |  |  |  |  |
| ACRM-*                 | Colored ring for male 4 + 5 pole A Series and 3 pole BA Series   |  |  |  |  |  |  |  |  |  |  |
| DSS-*                  | Lettering plate for D Series                                     |  |  |  |  |  |  |  |  |  |  |

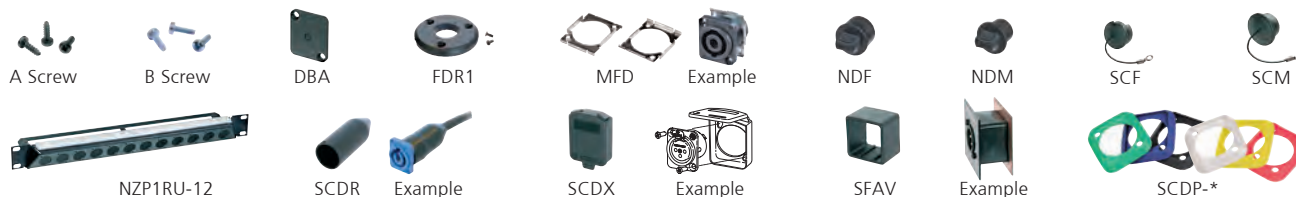
## Accessories

### 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) |

### 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                                           |
| SFAV        | Rubber frame for A / B Series to mount between front plate and rear vertical print                 |

| Specification                                                           |                                                      | A Series | AA Series | B Series | BA Series | D Series | DL / DLX Series | DLX Crimp | DLX-HE Series |
|-------------------------------------------------------------------------|------------------------------------------------------|----------|-----------|----------|-----------|----------|-----------------|-----------|---------------|
| <b>Electrical</b>                                                       |                                                      |          |           |          |           |          |                 |           |               |
| Number of contacts                                                      |                                                      | 3 - 5    | 3         | 3        | 3-5       | 3        | 3-7             | 3         | 3             |
| Contact resistance                                                      | ≤ 6 mΩ                                               | ●        | ●         | ●        | ●         | ●        | ●               | ●         | ●             |
| Insulation resistance - initial:                                        | > 2 GΩ                                               | ●        | ●         | ●        | ●         | ●        | ●               | ●         | ●             |
| - after damp heat test:                                                 | > 1 GΩ                                               | ●        | ●         | ●        | ●         | ●        | ●               | ●         | ●             |
| Dielectric strength                                                     | 1500 V 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                                               | -        | -         | -        | -         | -        | ●               | -         | -             |
| <b>Mechanical</b>                                                       |                                                      |          |           |          |           |          |                 |           |               |
| 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 mm <sup>2</sup> / AWG 24 - 22            | -        | -         | -        | -         | -        | -               | ●         | -             |
| <b>Material</b>                                                         |                                                      |          |           |          |           |          |                 |           |               |
| 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 teal, treated                                  | ●        | ●         | ●        | ●         | ●        | ●               | ●         | ●             |
| <b>Environmental</b>                                                    |                                                      |          |           |          |           |          |                 |           |               |
| Operating temperature                                                   | -30°C to +80°C                                       | ●        | ●         | ●        | ●         | ●        | ●               | ●         | ●             |
| Protection class                                                        | IP 40                                                | ●        | ●         | ●        | ●         | ●        | ●               | ●         | ●             |
| Flammability                                                            | UL 94 HB                                             | ●        | ●         | -        | ●         | ●        | ●               | ●         | -             |
|                                                                         | UL 94 V-0                                            | 3 pole   | -         | ●        | 3 pole    | -        | -               | -         | ●             |
| Solderability complies with IEC 68-2-20                                 |                                                      | ●        | ●         | ●        | ●         | ●        | ●               | ●         | ●             |
| Mounting screw                                                          | A                                                    | A        | 1)        | A        | -         | -        | -               | -         | -             |
| Color coding                                                            | ACR* 2)                                              | -        | -         | ACR* 2)  | DSS       | DSS      | DSS             | DSS       | DSS           |
| (4 + 5 pole only)                                                       |                                                      |          |           |          |           |          |                 |           |               |
| 1): B Series 3 pole connectors > B-screw, 4 & 5 pole versions > A-screw |                                                      |          |           |          |           |          |                 |           |               |
| 2): 4 + 5 pole A series, 3 pole BA 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               | ≤ 6 mΩ    | ●      | ●          | ≤ 10 mΩ  | ≤ 10 mΩ |
| Insulation resistance - initial: | > 2 GΩ    | ●      | ●          | ●        | ●       |
| - after damp heat test:          | > 1 GΩ    | ●      | ●          | > 500 MΩ | ●       |
| Dielectric strength              | 1500 V 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          | Female           | Male      | Shell         | Contact | 3 pole |
|-----------------|-----------|---------------|---------|--------|-----------------|-----------------|------------------|-----------|---------------|---------|--------|
| <b>A Series</b> |           |               |         |        |                 |                 | <b>AA Series</b> |           |               |         |        |
| NC*FAH-D        |           | Black Plastic | Gold    | -      | ● <sup>1)</sup> | ● <sup>1)</sup> | NC3FAAH          | NC3MAAH   | Black Plastic | Gold    | ●      |
|                 | NC*MAH    | Black Plastic | Gold    | ●      | ●               | ●               | NC3FAAH-0        |           | Black Plastic | Gold    | ●      |
| NC*FAH-0        |           | Black Plastic | Gold    | ●      | ● <sup>1)</sup> | ● <sup>1)</sup> | NC3FAAH1         | NC3MAAH-1 | Black Plastic | Gold    | ●      |
|                 | NC3MAH-0  | Black Plastic | Gold    | ●      | -               | -               | NC3FAAH1-0       |           | Black Plastic | Gold    | ●      |
| NC3FAHL-0       |           | Black Plastic | Gold    | ●      | -               | -               |                  | NC3MAAH-0 | Black Plastic | Gold    | ●      |
| NC3FAHR-0       |           | Black Plastic | Gold    | ●      | -               | -               | NC3FAAH2         |           | Black Plastic | Gold    | ●      |
| NC3FAH1-D       | NC3MAH-1  | Black Plastic | Gold    | ●      | -               | -               | NC3AAH2-0        |           | Black Plastic | Gold    | ●      |
| NC3FAH1-0       |           | Black Plastic | Gold    | ●      | -               | -               | NC3FAAV          | NC3MAAV   | Black Plastic | Gold    | ●      |
| NC3FAHL1-D      |           | Black Plastic | Gold    | ●      | -               | -               | NC3FAAV-0        |           | Black Plastic | Gold    | ●      |
|                 | NC3MAHL   | Black Plastic | Gold    | ●      | -               | -               | NC3FAAV1         | NC3MAAV-1 | Black Plastic | Gold    | ●      |
| NC3FAHL1-0      |           | Black Plastic | Gold    | ●      | -               | -               | NC3FAAV1-0       |           | Black Plastic | Gold    | ●      |
| NC3FAHR1-D      |           | Black Plastic | Gold    | ●      | -               | -               |                  | NC3MAAV-0 | Black Plastic | Gold    | ●      |
|                 | NC3MAHR   | Black Plastic | Gold    | ●      | -               | -               | NC3FAAV2         |           | Black Plastic | Gold    | ●      |
| NC3FAHR1-0      |           | Black Plastic | Gold    | ●      | -               | -               | NC3FAAV2-0       |           | 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    | -      | ● <sup>1)</sup> | ● <sup>1)</sup> |                  |           |               |         |        |
|                 | NC*MAV    | Black Plastic | Gold    | ●      | ●               | ●               |                  |           |               |         |        |
| NC*FAV-0        |           | Black Plastic | Gold    | ●      | ● <sup>1)</sup> | ● <sup>1)</sup> |                  |           |               |         |        |
|                 | NC3MAV-0  | Black Plastic | Gold    | ●      | -               | -               |                  |           |               |         |        |
| NC3FAV1-D       | NC3MAV-1  | Black Plastic | Gold    | ●      | -               | -               |                  |           |               |         |        |
| NC3FAV1-0       |           | Black Plastic | Gold    | ●      | -               | -               |                  |           |               |         |        |
| NC3FAV2-D       |           | Black Plastic | Gold    | ●      | -               | -               |                  |           |               |         |        |
| NC3FAV2-0       |           | Black Plastic | Gold    | ●      | -               | -               |                  |           |               |         |        |
| NC3FAY-D        | NC3MAY    | Black Plastic | Gold    | ●      | -               | -               |                  |           |               |         |        |
| NC3FAY-0        |           | Black Plastic | Gold    | ●      | -               | -               |                  |           |               |         |        |
| NC5FAV-SW-D     | NC5MAV-SW | 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

<sup>1)</sup>: Grounding Option "2"

0: Retention Spring

## Grounding Options

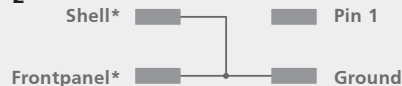
### A / AA Series and B / BA Series

#### Female

"1"

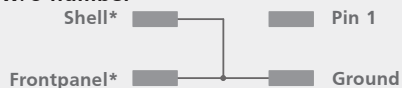


"2"



#### Male

w/o number



"0"



"1"



Shell\* : Contact to shell of mating connector

Frontpanel\* : Connection to frontpanel by fastening screw

## Ordering Information for Receptacles

| Female          | Male         | Flange      | Contact | 3<br>pole |
|-----------------|--------------|-------------|---------|-----------|
| <b>B Series</b> |              |             |         |           |
|                 | NC*MBH       | Metal       | Gold    | ●         |
|                 | NC*MBH-B     | Black Metal | Gold    | ●         |
|                 | NC*MBH-M25   | Black Metal | Gold    | ●         |
|                 | NC*MBH-B-M25 | Black Metal | Gold    | ●         |
| NC3FBH1-D       |              | Metal       | Gold    | ●         |
| NC3FBH1-B-D     |              | Black Metal | Gold    | ●         |
| NC3FBH1-M25     |              | Metal       | Gold    | ●         |
| NC3FBHL1-D      |              | Metal       | Gold    | ●         |
|                 | NC3MBHL      | Metal       | Gold    | ●         |
| NC3FBHR1-D      |              | Metal       | Gold    | ●         |
| NC3FBH2-D       |              | Metal       | Gold    | ●         |
| NC3FBH2-B-D     |              | Black Metal | Gold    | ●         |
| NC3FBHR2-D      |              | Metal       | Gold    | ●         |
|                 | NC3MBHR      | Metal       | Gold    | ●         |
|                 | NC*MBV       | Metal       | Gold    | ●         |
|                 | NC*MBV-B     | Black Metal | Gold    | ●         |
|                 | NC*MBV-M25   | Metal       | Gold    | ●         |
|                 | NC*MBV-B-M25 | Metal       | Gold    | ●         |
| NC3FBV1-D       |              | Metal       | Gold    | ●         |
| NC3FBV1-B-D     |              | Black Metal | Gold    | ●         |
| NC3FBV1-M25     |              | Metal       | Gold    | ●         |
| NC3FBV2-D       |              | Metal       | Gold    | ●         |
| NC3FBV2-B-D     |              | Black Metal | Gold    | ●         |
| NC3FBH1-E-D     | NC3MBV-E     | Metal       | Gold    | ●         |
| NC3FBH2-E-D     |              | Metal       | Gold    | ●         |
|                 | NC3MBH-E     | Metal       | Gold    | ●         |

| Female           | Male      | Flange      | Contact | 3<br>pole | 4<br>pole | 5<br>pole |
|------------------|-----------|-------------|---------|-----------|-----------|-----------|
| <b>BA Series</b> |           |             |         |           |           |           |
| NC3FBAH1-D       |           | Metal       | Gold    | ●         | -         | -         |
|                  | NC3MBAH   | Metal       | Gold    | ●         | -         | -         |
| NC3FBAH1-0       |           | Metal       | Gold    | ●         | -         | -         |
|                  | NC3MBAH-0 | Metal       | Gold    | ●         | -         | -         |
| NC3FBAH2-D       |           | Metal       | Gold    | ●         | -         | -         |
|                  | NC3MBAH-1 | Metal       | Gold    | ●         | -         | -         |
| NC3FBAH2-0       |           | Metal       | Gold    | ●         | -         | -         |
| NC3FBAV1-D       |           | Metal       | Gold    | ●         | -         | -         |
|                  | NC3MBAV   | Metal       | Gold    | ●         | -         | -         |
|                  | NC3MBAV-0 | Metal       | Gold    | ●         | -         | -         |
| NC3FBAV2-D       |           | Metal       | Gold    | ●         | -         | -         |
|                  | NC3MBAV-1 | Metal       | Gold    | ●         | -         | -         |
| NC3FBAV2-0       |           | Metal       | Gold    | ●         | -         | -         |
|                  | NC*FBH-D  | Metal       | Gold    | -         | ●         | ●         |
|                  | NC*MBH    | Metal       | Gold    | -         | ●         | ●         |
| NC*FBH-B-D       |           | Black Metal | Gold    | -         | ●         | ●         |
|                  | NC*MBH-B  | Black Metal | Gold    | -         | -         | ●         |
| NC*FBV-D         |           | Metal       | Gold    | -         | ●         | ●         |
|                  | NC*MBV    | Metal       | Gold    | -         | ●         | ●         |
| NC*FBV-B-D       |           | Black Metal | Gold    | -         | ●         | ●         |
|                  | NC*MBV-B  | Black Metal | Gold    | -         | -         | ●         |
| NC5FBV-SW-D      | NC5MBV-SW | Metal       | Gold    | -         | -         | ●         |

B / BA Series - D version come with disassembled Push latch, version with assembled latch omit -D.

B / BA Series rear mount only, all PCB mount except Y version = IDC

| Female          | Male          | Shell    | Contact | 3<br>pole | 4<br>pole | 5<br>pole | 6<br>pole | 7<br>pole |
|-----------------|---------------|----------|---------|-----------|-----------|-----------|-----------|-----------|
| <b>D Series</b> |               |          |         |           |           |           |           |           |
| 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-D     | NC3MDM3-H     | Nickel   | Silver  | ●         | -         | -         | -         | -         |
| NC3FDM3-H-B-D   | NC3MDM3-H-B   | Black Cr | Gold    | ●         | -         | -         | -         | -         |
| NC3FDM3-H-BAG-D | NC3MDM3-H-BAG | Black Cr | Gold    | ●         | -         | -         | -         | -         |

|                   |              |           |        |   |   |   |   |   |
|-------------------|--------------|-----------|--------|---|---|---|---|---|
| <b>DLX Series</b> |              |           |        |   |   |   |   |   |
| 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   | ● | - | - | - | - |

| Female           | Male          | Shell     | Contact | 3<br>pole | 4<br>pole | 5<br>pole | 6<br>pole | 7<br>pole |
|------------------|---------------|-----------|---------|-----------|-----------|-----------|-----------|-----------|
| <b>DL Series</b> |               |           |         |           |           |           |           |           |
| 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-D    | NC*MDM3-L-1   | Nickel    | Silver  | ●         | ●         | ●         | -         | -         |
| NC3FDM3LBAG-1-D  | NC3MDM3LBAG-1 | Black Cr  | Silver  | ●         | -         | -         | -         | -         |
| NC3FD-L-1-HE     | NC3MD-L-1-HE  | Velour Cr | Gold    | ●         | -         | -         | -         | -         |
| NC*FDM3-H-D      | NC*MDM3-H     | Nickel    | Silver  | ●         | ●         | ●         | -         | -         |
| NC*FDM3-H-B-D    | NC*MDM3-H-B   | Nickel    | Silver  | ●         | ●         | ●         | -         | -         |
| NC*FDM3-H-BAG-D  | NC*MDM3-H-BAG | Black Cr  | Silver  | ●         | ●         | ●         | -         | -         |
| NC3FD-S-1-B      | NC3MD-S-1-B   | Black Cr  | Silver  | ●         | -         | -         | -         | -         |

|                         |                 |          |        |   |   |   |   |   |
|-------------------------|-----------------|----------|--------|---|---|---|---|---|
| <b>DLX Crimp Series</b> |                 |          |        |   |   |   |   |   |
| NC3FD-LX-HA             | NC3MD-LX-HA     | Nickel   | Silver | ● | - | - | - | - |
| NC3FD-LX-HA-BAG         | NC3MD-LX-HA-BAG | Black Cr | Gold   | ● | - | - | - | - |

## Ordering Information for Receptacles

Female Male Shell Contact 3 4 5 6 7  
pole pole pole pole 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 6 9 10  
pole pole pole 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 • • • • •

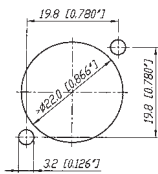
NCJ\*FI-V-0 Black plastic Gold • • • • •

### Contact #

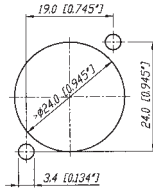
|           | 1 | 2 | 3 | T | R | S | TN | RN | SN | G | GN |
|-----------|---|---|---|---|---|---|----|----|----|---|----|
| NCJ5FI-*  | x | x | x | x |   | x |    |    |    | x |    |
| NCJ6FI-*  | x | x | x | x | x | x |    |    |    | x |    |
| NCJ9FI-*  | x | x | x | x | x | x | x  | x  | x  |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

## Panel Cutouts

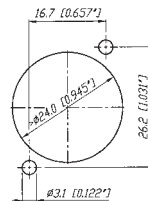
A/AA/B/BA Series



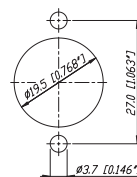
D/DL/DLX Series



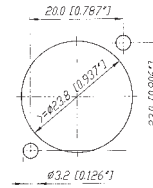
P Series Female



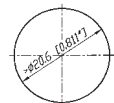
P Series Male



Combo



MPR Series



## Assembly Tools



HTXP



BTXX



HX-R-BNC



DIE-R-BNC-PT

|              |                                               |
|--------------|-----------------------------------------------|
| HTXP         | Hand tool to tighten the XX and PX-bushing    |
| BTXX         | Assembly fixture to tightening the XX-bushing |
| 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                    |