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THE
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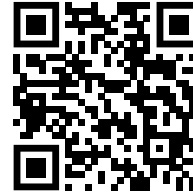
Data Connectors



NEUTRIK®

Content	Page
Network Interconnections:	
etherCON - CAT6A Cable Carrier	4
etherCON - CAT6A Receptacles	4
etherCON - CAT6A - Technical Data	5
etherCON - CAT6A - Ordering Information	5
etherCON - CAT5e A / B / D type Receptacle	6
etherCON - Receptacles	7
etherCON - Receptacle Shield & Lighted	8
etherCON - Feedthrough	9
etherCON - TOP Cable Carrier	10
etherCON - TOP Receptacles	10
etherCON - Cable Carrier	12
etherCON - Technical Data	13
etherCON - Ordering Information	14
etherCON - Accessories	15
etherCON - CAT6 Patch Cable	16
etherCON - CAT6 Receptacles	16
etherCON - CAT6 - Technical Data	17
etherCON - CAT6 - Ordering Information	17
Digital Interfaces (USB / IEEE / HDMI / D-SUB):	
USB Patch Cable	18
USB 2.0 Receptacle	19
USB 3.0 Receptacle	19
Technical Data USB Receptacle and Patch Cable	20
Ordering Information USB Receptacle and Patch Cable ...	20
Accessories	20
HDMI Patch Cable	21
HDMI Receptacle	21
Firewire Receptacle	22
D-SUB Receptacle	22
HDMI, Firewire, D-SUB - Technical Data	23
HDMI, Firewire, D-SUB - Ordering Information	23
Fiber Optic:	
opticalCON DUO, QUAD, MTP12°, MTP24°	24
opticalCON DRAGONFLY	26
USB Type-C series:	
mediaCON - USB-C Cable	28
mediaCON - USB-C Chassis	28
mediaCON - USB-C Chassis & IF	28
mediaCON - Technical Data	30
mediaCON - Ordering Information	30
General information:	
Definition, Abbreviation & Useful Information	31
Neutrik Part Number Guide	32
Neutrik Product Line	33

Data Connectors

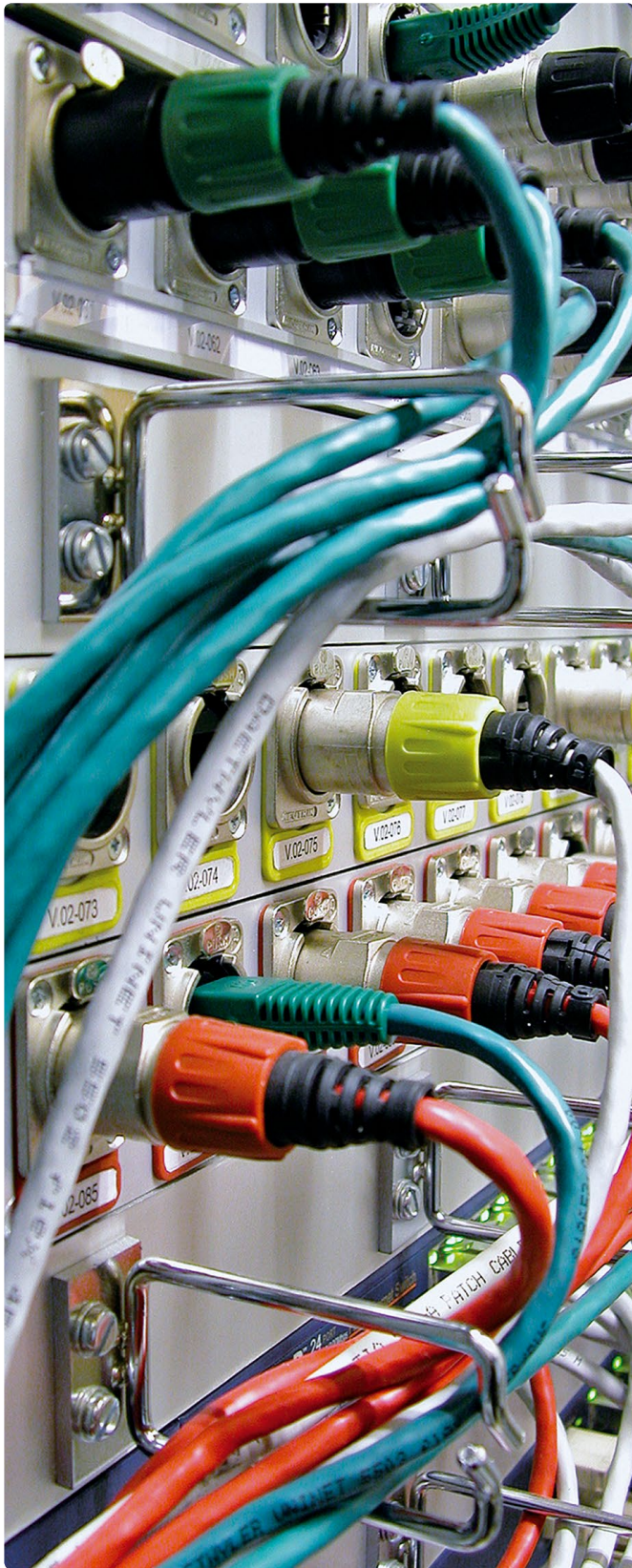


Introduction

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

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

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



Ruggedized RJ45 Data Connector

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

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

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



Rugged diecast shell



Feedthrough



IDC Version



IP 65 Protected

etherCON® CAT6A Series



NE8MX6



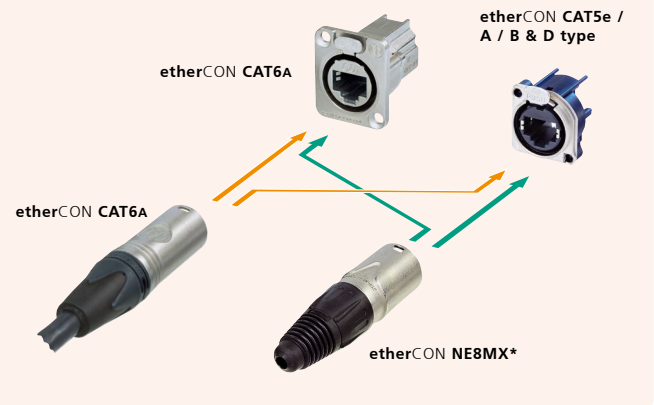
NE8FDX-P6



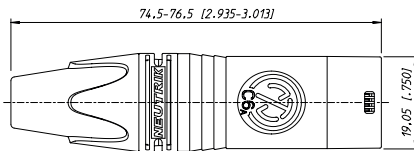
NE8FDX-Y6-W

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

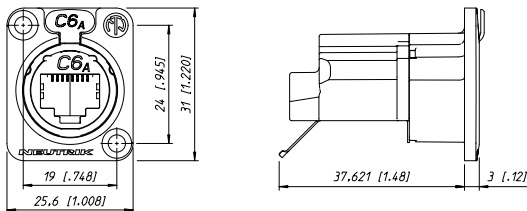
CAT6A / CAT5* compatibility:



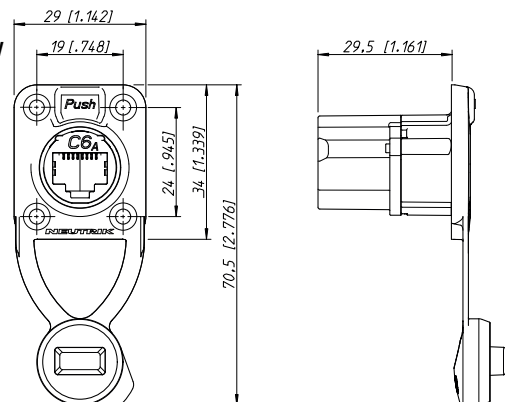
NE8MX6



NE8FDX-Y6



NE8FDX-P6-W



Technical Data

		Receptacle	Cable connector
Electrical			
Number of contacts	8	●	●
Rated current per contact	1.5 A	●	●
TIA / EIA rating	CAT6A	●	●
IEC / ISO / EN rating	CAT6A	●	●
Input to output resistance	< 200 mΩ	-	-
Insulation resistance	> 500 MΩ	●	●
Dielectric strength	1 kV dc	●	●
PoE + acc. IEEE 802.3at		●	●

Materials

Housing	Zinc diecast	●	●
Adapter	Polyamide PA 6	-	-
Strain relief clamp	POM	-	●
Contacts	Bronze CuSn	-	-
	Spring steel	●	●
Contact surface	Gold	●	●
Bushing	PU / PA	-	●

Mechanical

Retention method	Latch Lock	●	●
Life time (mating cycles)	> 1'000	●	●
Cable O.D. range	7.0 - 9.5 mm	●	●
Wire size	solid	NE8FDX-Y6(-B)(-W):	AWG 26/1 - 22/1
	stranded wire		AWG 26/7 - 22/7
Insulation diameter		> 0.85 - 1.6 mm	NE8MX6(-B): > 1.10 - 1.60 mm NE8MX6(-B)-T: > 0.85 - 1.10 mm

Environmental

Operating temperature / Storage temperature	-40 °C to +70 °C	●	●
Flammability	UL94V-0	●	●
Protection class	IP 65 in combination with "-W" receptacle	●	●

Ordering Information

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

Accessories and Assembly Tools

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



IDC Terminals



Horizontal PCB



Vertical PCB with lightpipes



D shape metal shell



PCB Version

etherCON® CAT5e – A/B & D type Receptacle



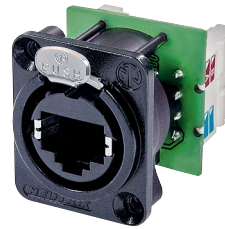
NE8FAH-C5



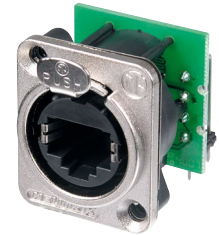
NE8FBH-C5-LED



NE8FBV-C5-LED-S



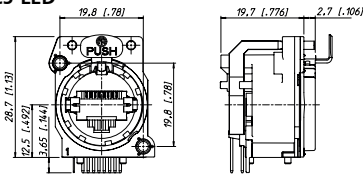
NE8FDV-Y110-B



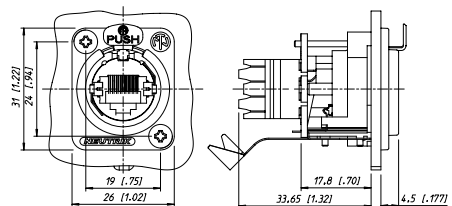
NE8FDH-C5E

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

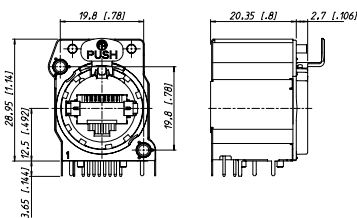
NE8FBH-C5-LED



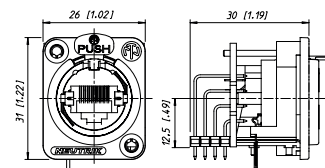
NE8FDV-Y110

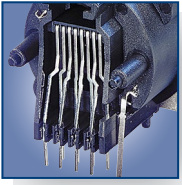


NE8FBV-C5-LED-S

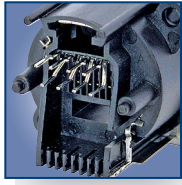


NE8FDH-C5E





Horizontal PCB



Vertical PCB



NE8FDV-SE – Vertical PCB receptacle combined with waterproof kit

etherCON® – Receptacles



NE8FAV + ACRF-2



NE8FBH



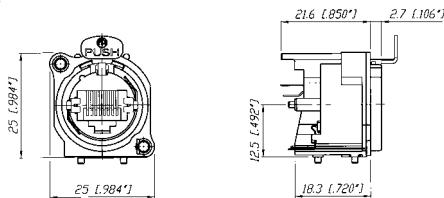
NE8FDV



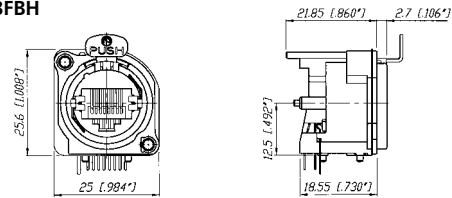
NE8FDV-SE

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

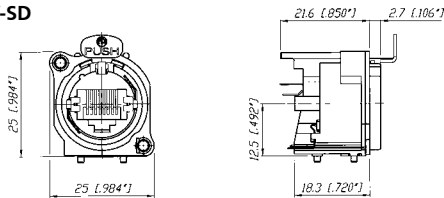
NE8FAV



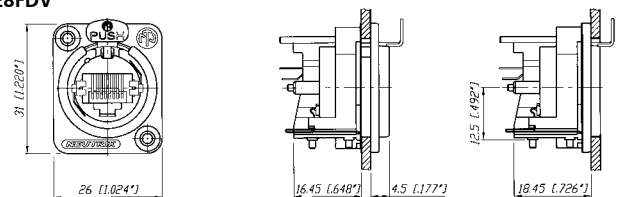
NE8FBH



NE8FAV-SD



NE8FDV





Completely closed housing



Light pipe

etherCON® – Shielded & Lighted



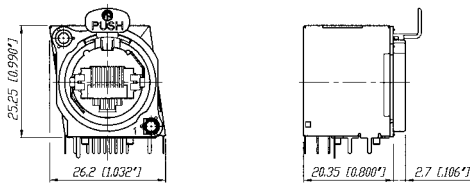
NE8FBH-S



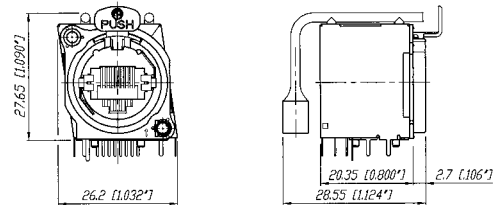
NE8FBH-LED

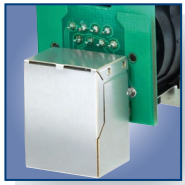
- Comprehensive shielding granted by completely closed metal housing
- Improves EMC performance of appliance even in unmated condition
- Light pipes illuminated by standard 3 mm LEDs – to be mounted on PCB by customer
- Receptacles comply with class D Link performance.

NE8FBH-S



NE8FBH-LED





NE8FDP-R rear side



Locking latch



Rugged aluminium extrusion housing



Rugged diecast shell



IP65 Protected in mated condition

etherCON® Feedthrough



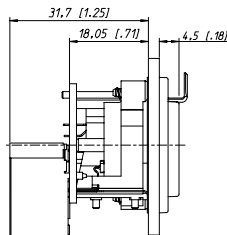
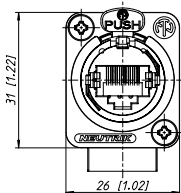
NE8FDP-R



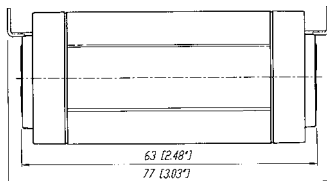
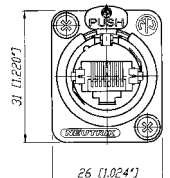
NE8FF

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

NE8FDP-R



NE8FF



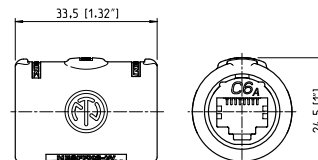
etherCON® CAT6A Adapter



NE8FFX6-W

- Ruggedized coupler with CAT6_A component compliance according to ISO/IEC 11801 and TIA/EIA 568-C.2
- IP65 protected when mated with NE8MX6*
- Accommodates standard RJ45 plug
- Revolutionary small form factor
- The adapter offers the million fold proven robust latch lock system
- The adapters are problem solvers for various intermating problems for professional and semi-professional applications

NE8FFX6-W





etherCON® TOP

Neutrik's new TRUE OUTDOOR PROTECTION products for demanding outdoor applications is setting standards. Approved for outdoor use according to UL50E. UV resistant and IP65 rated.

The highly innovative entertainment industry is permanently evolving accompanied by increasing demands on interconnection systems. Particular environmentally sealed connectors are highly requested for heavy-duty and harsh environment applications of entertainment equipment like PA systems, signs and LED screens or lightings.

Cable connector carrier consists of a velour chromium shell, chuck and boot. The boot is suitable for cable diameters from 5 - 8 mm. For non pre-assembled cables only. Cable connector carrier does not include a RJ45 plug. The etherCON cable connector carrier upgrades a conventional RJ45 connector to an extremely robust, outdoor protected lockable solution (IP65 & UL50E).

ATTENTION: Does not intermate with the CAT6 chassis connectors NE8FDY-C6 and NE8FDY-C6-B.

The etherCON chassis connector series is a ruggedized and lockable RJ45 connector system, optimized for pro audio, video and lighting network applications. The chassis connectors are shaped to fit into standardized panels out of the entertainment industry. The D-series offers the most rugged design of the etherCON series and is perfectly suitable for panel mount and the installer market.

ATTENTION: Does not intermate with CAT6 cable connector NE8MC6-MO and NKE6S* cables.



Rugged diecast shell



Metal shell



Outdoor assembly kit



**TRUE
OUTDOOR
PROTECTION**

etherCON® TOP – lockable RJ45 connector system



NE8MX-TOP



NE8FDV-TOP



- Heavy-duty sealed RJ45 system for harsh environment
- Rugged cable connector carrier accepting most common RJ45 plugs
- Uses high impact UV resistant materials per UL
- Outdoor protection acc. IP65 and UL50E

- D-sized receptacles for PCB mount and IDC termination
- Sealing when disconnected by attached cover
- Class D or CAT5e acc. ISO/IEC 11801 and TIA/EIA 568B

Ordering Information

Cable Connector

NE8MX-TOP Rugged RJ45 cable connector carrier

Chassis Connector

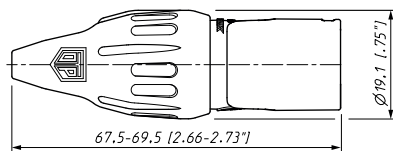
NE8FDV-TOP Rugged D-size chassis connector, mounting screws included

NE8FDP-TOP Rugged D-size feedthrough chassis connector, mounting screws included

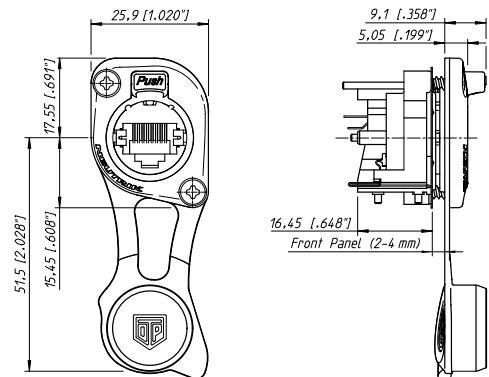
NE8FDH-C5E-TOP Rugged D-size PCB mount chassis connector, mounting screws included

SE8FD-TOP Outdoor assembly kit

NE8MX-TOP



NE8FDV-TOP





New designed rugged diecast shell



Neutrik bushing



etherCON® – Cable Carriers



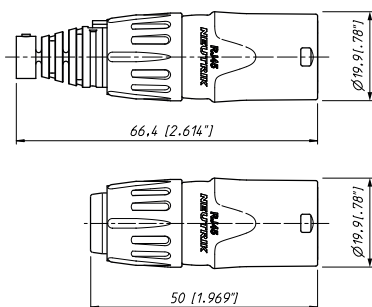
NE8MX



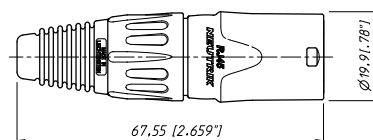
NE8MX-B-1

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

NE8MX



NE8MX-1



Specification		NE8MX-TOP Cable Con.	NE8MX* Cable Con.	NE8FA/B* (A + B Series)	NE8FD*-TOP (D Shape)	NE8FD* (D Series)
Electrical						
Number of contacts	8	- ¹⁾	- ¹⁾	●	●	●
Rated current per contact	< 1.5 A	- ¹⁾	- ¹⁾	●	●	●
Rated voltage	< 50 V ac	- ¹⁾	- ¹⁾	●	●	●
Contact resistance	< 10 mΩ	- ¹⁾	- ¹⁾	●	●	●
Insulation resistance	> 500 MΩ	- ¹⁾	- ¹⁾	●	●	●
Dielectric strength	> 1'000 V ac rms	- ¹⁾	- ¹⁾	●	●	●
Frequency bandwidth	1 - 100 MHz	- ¹⁾	- ¹⁾	●	●	●
Transmission class acc. TIA / EIA 568B or IEC 11801 - CAT 5e	Class D	- ¹⁾	- ¹⁾	NE8*-C5* / NE8FA*-Y*	●	NE8FD*-C5e / NE8FD*-Y*
PoE + acc. IEEE 802.3at		- ¹⁾	- ¹⁾	●	●	●
Mechanical						
Retention method	latch lock	●	●	●	●	●
Life time (mating cycles)	> 1'000 mating cycles	●	●	●	●	●
	> 200 mating cycles	-	-	-	-	SE8FD
Insertion / withdrawal force	≤ 20 N	●	●	●	●	●
Cable O.D. range	4.5 - 8 mm	5 - 8 mm	●	-	-	-
Wire size	AWG 26 – 20	- ¹⁾	- ¹⁾	NE8*-Y*	-	NE8*-Y*
Panel thickness	max. 3 mm / 0.12"	-	-	●	4 mm / 0.16"	4 mm / 0.16"
Material						
Housing	PBT D202G30	-	-	●	●	●
	Zinc diecast (ZnAlCu1)	●	●	-	-	-
	(gal Ni / bl Cr / Chromium)					
B / D-flange	Zinc diecast (ZnAlCu1)	-	-	●	●	●
	(gal Ni / bl Cr)					
Strain relief clamp	POM	●	●	-	-	-
	CuZn35Pb2, Tin plated	-	-	NE8*-Y*	-	NE8*-Y*
Contacts	Bronze (CuSn8)	- ¹⁾	- ¹⁾	●	●	●
	Spring steel	NE8*-TOP	NE8*C5*	●	●	●
Contact surface	Au (gal 0.2 μm over Ni plating)	- ¹⁾	- ¹⁾	●	●	●
Locking Element	Ck 67 steel, treated	-	-	●	●	●
Bushing	Polyamide (PA 6 15% GR)	●	●	-	-	-
Boot	Polyamide (PA 6)	●	●	-	-	-
Sealing gasket	EPDM	-	-	-	●	SE8FD
Environment						
Operating Temperature	-30 °C to +80 °C	●	●	●	●	●
	-20 °C to +60 °C	-	-	-	-	SE8FD
Protection class	IP 54	-	-	-	-	SE8FD
	IP 65, UL50E	●	-	-	●	-
	(mated or sealing cap closed)					
Flammability	UL94V-0	●	UL94 HB	●	●	●
Solderability complies with	IEC 68-2-20	-	-	PCB Version	●	PCB Version
Mating screw		-	-	A screw	included	E screw
Color coding		-	BSE-* / BSX-*	ACRF-*	-	DSS-*
¹⁾ : Specs depend on type of RJ45 plugs used						

Ordering Information

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

Feedthrough Coupler

NE8FF			•							feedthrough; black plating
NE8FX6-W										Revolutionary small form factor, Accommodates standard RJ45 plug, CAT6 _A feedthrough, rubber sealing, protection, IP65

TOP Series

Cable Connector

NE8MX-TOP										IP65, UL50E (mated)
-----------	--	--	--	--	--	--	--	--	--	---------------------

Chassis Connector

NE8FDV-TOP [Ⓞ]			D-size		•					CLASS D
NE8FDP-TOP [Ⓞ]			D-size							CAT5e feedthrough
NE8FDH-C5E-TOP [Ⓞ]			D-size	•						CAT5e
SE8FD-TOP			D-size							Outdoor assembly kit

CLASS D Receptacle

NE8FAH	•			•						
NE8FAV	•				•					
NE8FAV-SD [Ⓞ]	•				•					Screw dome
NE8FBH		•		•						
NE8FBV		•			•					
NE8FDV			•		•					
NE8FDV-SE			•		•					with sealing kit SE8FD

Cable Carriers

NE8MX	Cable housing with chuck and bushing (two antikink boots, one up to 5 mm and one up to 8 mm cable O.D.) (standard boot in black, 9 different coding colours on request ... BSE-*)	
NE8MX-B	Black chromium housing with chuck and bushing (two antikink boots, one for 5 mm and one for 8 mm cable O.D.) (standard boot in black, 9 different coding colours on request ... BSE-*)	
NE8MX-1	Cable housing with chuck and X-series bushing, Collinox plating and O-ring gasket (perfect for waterproof applications, standard bushing in black, 9 different coding colours on request ... BSX-*)	
NE8MX-B-1	Black chromium housing with chuck and X-series bushing (standard bushing in black, 9 different coding colours on request ... BSX-*)	
IMPORTANT:	Cable connectors do not include RJ45 plug. RJ45 cable assembly must be provided by end-user!	
INFORMATION:	A	A-shape receptacle (all plastic)
	B	B-shape receptacle (Nickel ring)
	D	D-shape receptacle
	H	Horizontal PCB mount
	V	Vertical PCB mount
	IDC	IDC terminals
	IDC 110 ..	IDC 110 punch down terminals
	LED	Light pipe
	S	shielded metal housing
	Ⓞ	Including 2 mounting screws

Accessories



A screw



E screw



E screw Nickel



ACRF-*



DSS-*



BSE-*



BSX-*



SCDP-*



SCDX



SCCD-W



Waterproof assembly kit - SE8FD



Outdoor assembly kit - SE8FD-TOP

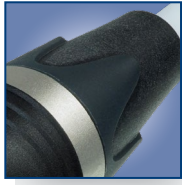
A-Screw	Mounting screw for A / B -shape (black self-tapping PLASTITE® screw 2.9 x 8, panhead)
E-Screw	Mounting screw for D-shape (black self-tapping PLASTITE® screw 2.9 x 12, countersunk)
E-Screw-Ni	Mounting screw for D-shape (Nickel self-tapping PLASTITE® screw 2.9 x 12, countersunk)
ACRF-*	Colored coding rings for A-shape receptacles (Box of 100 pcs.)
BSE-*	Colored boot for cable connector carrier (Box of 100 pcs.)
BSX-*	Colored bushing for NE8MC-1 and NE8MC-B-1 cable connectors
DSS-*	Lettering plate for D series, colored plastic
NZP1RU	Panel1RU D-shape housing
SCDP-*	D-Size sealing gaskets, color coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white)
SCDX	Hinged cover seals D-size chassis connectors, IP 42 rated
SCCD-W	Spring-loaded cover to seals for D-size chassis connectors, IP 65 rated
SE8FD	Waterproof kit, IP 54, consists of push, gasket, frontplate Suitable for all NE8FD*, perfect in combination with NE8MC-1 (with Chromium plating and sealing gasket)
SE8FD-TOP	Outdoor assembly kit to cover D-series etherCON connectors into TOP versions, according to IP65 & UL50E

*: 0 - Black, 1 - Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White





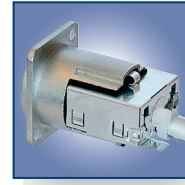
Push Pull locking



IP65 in mated condition



D-shape metal shell



Closed shielding

etherCON® CAT6 – Patch Cable & Receptacles



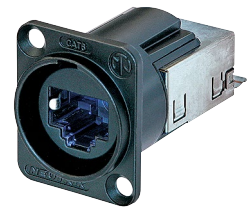
NKE6S-*



NE8MC6-MO



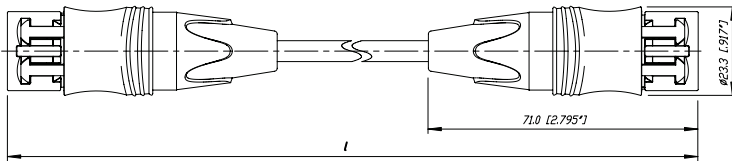
NE8FDY-C6



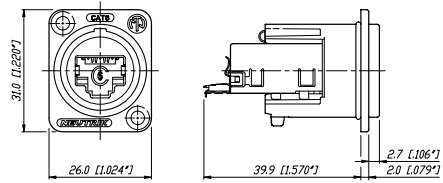
NE8FDY-C6-B

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

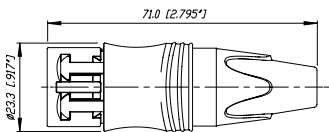
NKE6S-*



NE8FDY-C6



NE8MC6-MO



Technical Data

		Receptacle	Patch Cable
Electrical			
Number of contacts	8	•	•
Rated current per contact	1.5 A	•	•
TIA / EIA rating	CAT6	•	•
IEC / ISO / EN rating	CAT6 ^λ	-	-
Input to output resistance	< 200 mΩ	•	•
Insulation resistance	> 500 MΩ	•	•
Dielectric strength	1 kV dc	•	•
PoE + acc. IEEE 802.3at		-	-

Materials

Housing	Zinc diecast	•	•
Adapter	Polyamide PA 6	•	•
Strain relief clamp	POM	-	•
Contacts	Bronze CuSn	•	•
	Spring steel	-	-
Contact surface	Gold	•	•
Bushing	PU / PA	-	•

Mechanical

Retention method	Push-Pull	•	-
Life time (mating cycles)	> 1'000	•	•
Cable O.D. range	5.5 - 6.5 mm	•	•
Wire size (solid)	0.205 - 0.324 mm ² (AWG 24 - AWG 22)	•	•
Stranded wire	0.141 - 0.355 mm ² (AWG 26 / 7 - 22 / 7)	•	•

Environmental

Operating temperature	-10 °C to +60 °C	•	•
Storage temperature	-40 °C to +70 °C	•	•
Flammability	UL94HB	•	•
Protection class	IP 65	•	•

Ordering Information CAT6

Cable Connector

NE8MC6-MO RJ45 cable plug with carrier offering a robust metal shell with Push-Pull locking system

Patch Cable

NKE6S-* Standard lengths: 0.5, 1, 2, 3, 5, 10, 30 m

NKE6S-*-WOC Equipped on one side with metal shell, standard lengths: 1, 2, 3, 5, 10, 30 m
Custom length in meter steps on request

Receptacle

NE8FDY-C6 CAT6 with Nickel D-shell

NE8FDY-C6-B CAT6 with Black Chrome D-shell

Accessories

see page 111 / 116 / 120



Push Pull locking



USB type B

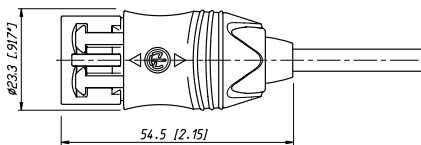
U S B P a t c h C a b l e

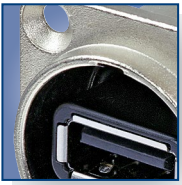


NKUSB-*

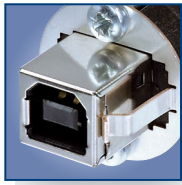
- USB 2.0 compliant – data rate up to 480 MBit/s
- Dust and water resistant sealing in combination with NAUSB-W*
- Push Pull mating design provides secure locking system if mated with NAUSB-W*
- Shielded connection – high noise immunity and EMI protection
- Ready made patch cables (1 m, 3 m and 5 m)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

NKUSB

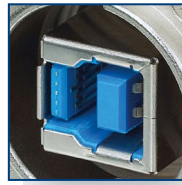




D-shape metal housing



USB type B



USB 3.0 Type B



Rugged housing

USB 2.0 Receptacle



NAUSB-W



NAUSB-W-B

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

USB 3.0 Receptacle



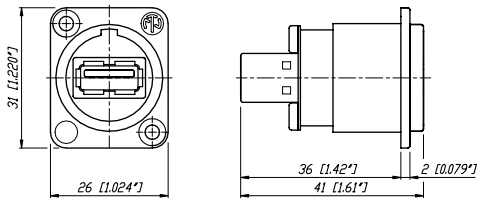
NAUSB3



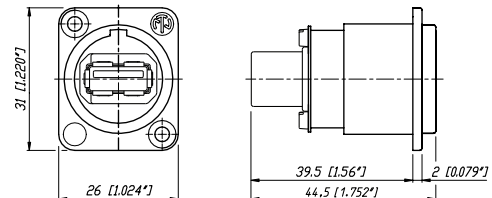
NAUSB3-B

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

NAUSB-W



NAUSB3



Technical Data

Mechanical and Electrical

Conform with USB 2.0 Standard

Receptacle

Patch Cable

•

•

Material

Shell Zinc diecast (ZnAl4Cu1)

•

•

Shell plating Nickel or black Chrome

•

Nickel

Insert

PBTP 15% GR

PVC

Contacts Brass (CuZn39Pb3)

•

•

Contact finish Gold

•

•

Environmental

Operating temperature -25 °C to +85 °C

•

•

Flammability UL94 V-0

•

•

Protection class IP 65

•

•

Ordering Information

Chassis

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

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

NAUSB3 USB 3.0: USB A – USB B Adapter (reversible), sealing ring, optional grounding, nickel housing

NAUSB3-B USB 3.0: USB A – USB B Adapter (reversible), sealing ring, optional grounding, black housing

Patch Cable

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

Accessories



DSS-*



SCDX



SCCD-W



SCD-W



SCDP-*

DSS-** Lettering plate for D series, colored plastic

SCDP-* D-Size sealing gaskets, color coding

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

SCDX Hinged cover seals D-size chassis connectors, IP 42 rated

SCCD-W Spring-loaded cover seals for D-size chassis connectors, IP 65 rated

SCD-W D-Size sealing cap, IP 65 rated

NZP1RU-8 Panel1RU housing with 8 D-shape cutouts

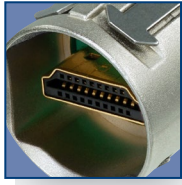
NZP1RU-12 Panel1RU housing with 12 D-shape cutouts

**: 0 - Black, 1 - Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White





Push Pull locking



HDMI 2.0



D-shape metal housing



HDMI 2.0 receptacle

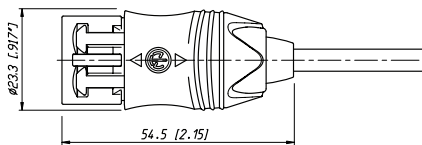
HDMI Patch Cable



NKHDMI-*

- HDMI 2.0 – data rate up to 10.2 GBit/s
- Push Pull mating design provides secure locking system if mated with NAHDMI-W*
- Shielded connection – high noise immunity and EMI protection
- Ready made patch cables (0.6 m, 1 m, 3 m, 5 m and 10 m) with removeable rugged diecast cable carrier
- Mates with conventional HDMI receptacles if cable carrier is removed
- Dust and water resistant sealing in combination with NAHDMI-W*

NKHDMI-*



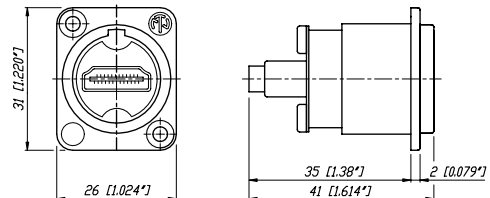
HDMI Receptacles



NAHDMI-W

- Audio / Video interface to transmit any digital TV and PC Video format including high-definition video (HDTV).
- HDMI 2.0 feedthrough adapter with 19 pole HDMI receptacle at both ends
- Optional screen to chassis grounding
- Universally accepted standard D-shape housing

NAHDMI-W



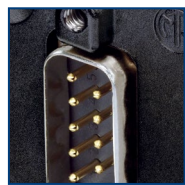
Firewire Adapter



D-shape metal housing



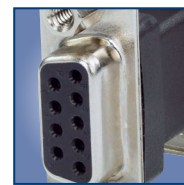
IEE 1394 receptacle



D-SUB data connector



D-shape metal housing



9 pole or 15 pole available

Firewire Receptacle



NA1394-6-W-B



NA1394-6-W



NADB9MF-B

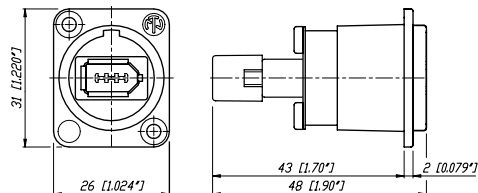


NADB15FF

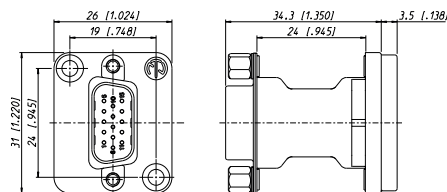
- Ideal for audio networking and integration of digital equipment into audio systems
- Firewire feedthrough adapter with 6 pole IEEE 1394 receptacle at both ends
- Optional screen to chassis grounding
- Universally accepted standard D-shape housing

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

NA1394-6-W



NADB9MF



Technical Data

Mechanical and Electrical

	HDMI Receptacle	HDMI Patch Cable	Firewire	D-SUB
Conform with Standards	HDMI 2.0	HDMI 2.0	IEEE	-

Material

Shell	Zinc diecast (ZnAl4Cu1)	●	●	●	●
Shellplating	Nickel or black Chrome	●	●	●	●
Insert		ABS	Nickel	PBTP 15% GR	Steel, tin plated
		-	PVC	-	PBT
Contacts	Brass (CuZn39Pb3)	●	●	●	●
Contact finish	Gold	●	●	●	●

Environmental

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

Ordering Information

HDMI

Chassis

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

Firewire

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

Patch Cable

NKHDMI-*	HDMI 2.0 cable with overmolded flex relief and metal cable carrier, standard lengths: 0.6, 1, 3, 5, 10 m (combination with Neutrik chassis up to 5 m cable length HDMI 2.0, cable length of 10 m complies with HDMI 1.4 specification)
----------	---

D-SUB

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

opticalCON® FIBER OPTIC SYSTEMS

RUGGED & RELIABLE

SUPERIOR QUALITY

DUST AND WATER RESISTANT - IP65

opticalCON® Chassis

opticalCON® DUO

opticalCON® QUAD

opticalCON® MTP® 12

opticalCON® MTP® 24



NO2-4FDW-A



Standard LC connector



NO4FDW-A



Standard LC connector



NO12FDW-A



MTP® ELITE MALE connector



NO24FDW-A



MTP® ELITE MALE connector

opticalCON® ADVANCED

opticalCON® DUO



NKO2S-A*



- 4 copper contacts
- 2 fibers

opticalCON® QUAD



NKO4S-A*



- 4 fibers

opticalCON® MTP® 12



NKO12SA*



- 12 fibers

opticalCON® MTP® 24



NKO24SA*



- 24 fibers

opticalCON® LITE

opticalCON® DUO LITE



NKO2M-L*



- 2 x 1.25 mm LC-ferrules

opticalCON® QUAD LITE



NKO4M-L*



- 4 x 1.25 mm LC-ferrules

opticalCON® MTP® 12 LITE



NKO12M-L*



- 12 fiber - MTP® ferrule

opticalCON® MTP® 24 LITE



NKO24M-L*



- 24 fiber - MTP® ferrule

DRAGONFLY

opticalCON®

**LOW MAINTENANCE
AND EASY TO CLEAN**

**DUST AND WATERPROOF TO
IP68 IN MATED CONDITION**



**RELIABLE PUSH/PULL
LOCKING MECHANISM**

**HIGH PERFORMANCE –
LOW LOSS**

**FUSION SPLICE TECHNOLOGY –
FIELD REPAIRABLE**

**LONG LIFE – 10'000
MATING CYCLES**

**HYBRID CONNECTION –
POWER AND DATA**

**PROVEN ANTI-KINK
BOOT DESIGN**

opticalCON® DRAGONFLY

DRAGONFLY is a ruggedized and low maintenance hybrid cable connector for indoor and outdoor use.

CAMERA CONNECTOR SYSTEM

Neutrik's new fiber optic connector series offers advanced lens technology for the Broadcast and AV Market. DRAGONFLY is more robust, reliable and easier to maintain than common hybrid camera signal transmission systems.

With technology based on fiber lenses and fusion splicing, Neutrik's DRAGONFLY achieves an extremely robust signal with minimal loss. opticalCON DRAGONFLY combines all the advantages of lens technology and makes it competitive with physical contact connectivity.

The DRAGONFLY connector offers long life with very low maintenance. It can also withstand harsh and demanding environments and is dust and moisture insensitive. Additionally, DRAGONFLY is robust against vibration and therefore has low potential for damage. And if there ever is a problem, DRAGONFLY is field repairable. With this new technology, DRAGONFLY provides a complete solution for the Broadcast and AV Market.

INNOVATIVE AND FUTURE PROOF

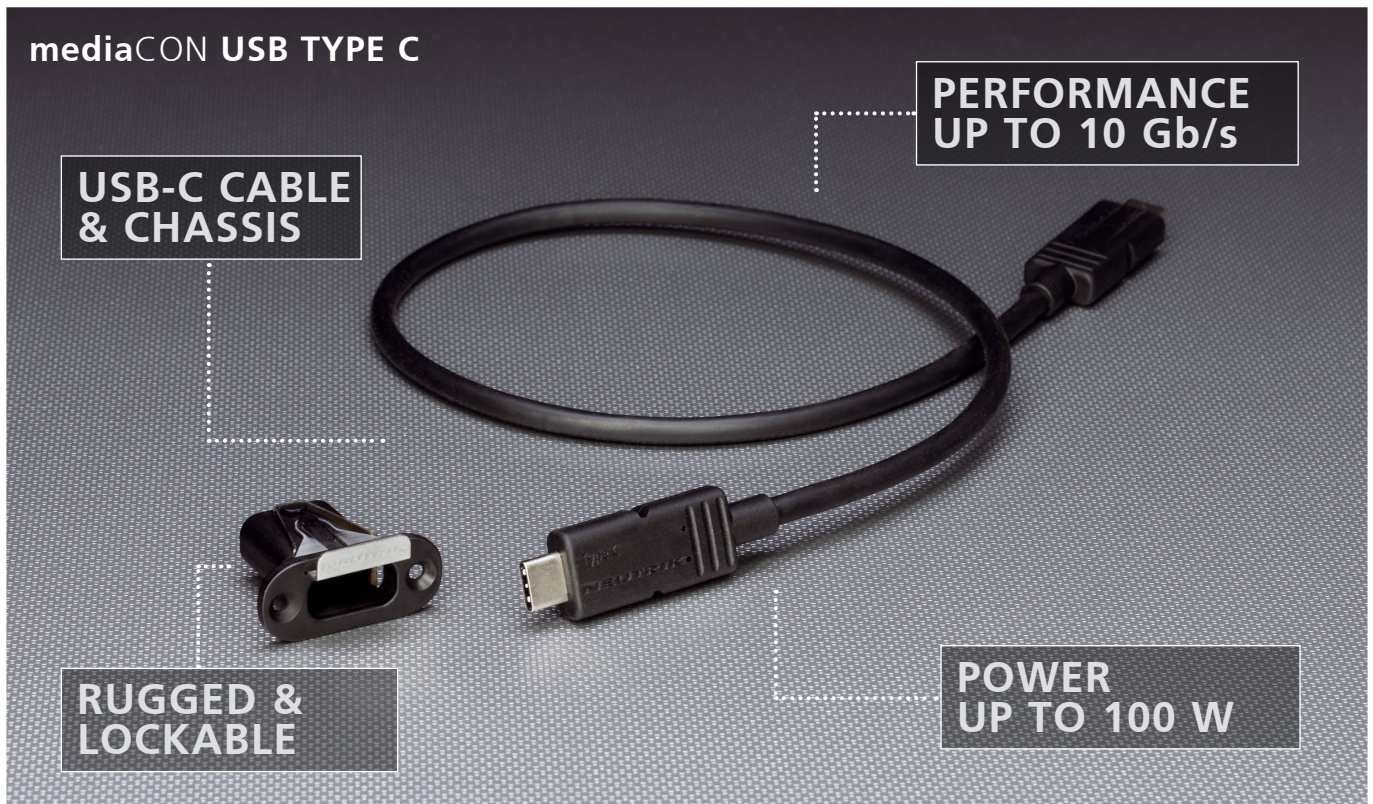
- fusion splice technology – field repairable
- High performance – low loss
- Consistent quality
- 100% reliable even at extreme temperature fluctuations
- Permanent connection

SIMPLE AND EFFICIENT

- hybrid connection – power and data over one connection
- Low maintenance interval
- Easy switching to DRAGONFLY – fits into standardized cutouts
- Easy cleaning with compressed air and water
- Competitive price

ROBUST AND RELIABLE

- Extremely robust system
- Reliable push/pull locking mechanism
- Dust and waterproof according to IP68
- Proven anti-kink boot design
- Long life – 10.000 mating cycles



mediaCON the new USB-C multimedia solution

The innovative USB-C multimedia system for demanding broadcast and professional A/V applications.

Due to the increasing digitalization in the broadcast and A/V market, Neutrik has decided to launch the brand-new mediaCON USB Type-C series. Neutrik built a push/pull lockable and space-saving mediaCON chassis which can be mounted from the rear and front side as well. The mediaCON cable guarantees the performance of 10 Gb/s and up to 100 W of power. The overmolded housing of the cable is designed for a ruggedized strain relief and protects the housing from mechanical stress.



USB Type-C cable with over molded flex relief and rugged cable

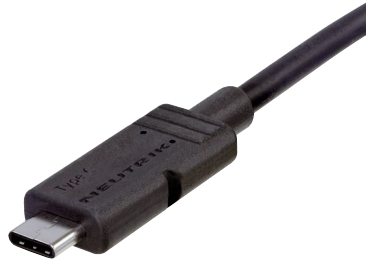


Lockable USB Type-C chassis



Lockable USB Type-C chassis with integral USB IF approved receptacle

Cable



NMK-20U-*

USB Type-C Chassis



NMC-C

USB Type-C Chassis & IF



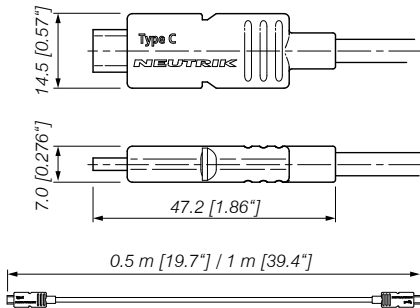
NMC-C-HR

- Guaranteed performance up to 10 Gb/s (USB 3.1 Gen.II compatibility)**
- Push Pull mating design provides secure locking system if mated with NMC-*
- Reversible USB-C housing Provide power up to 100 W (@5A/20V)
- Shielded connection – high noise immunity and EMI protection
- Mates with conventional USB-C receptacles

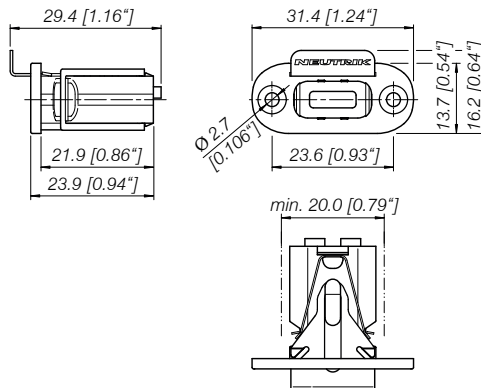
- Push Pull mating design provides secure locking system if mated with NMK-20U*
- Reversible USB-C housing
- Front and rear side mountable
- Guiding housing for better protection of receptacles

- Push Pull mating design provides secure locking system if mated with NMK-20U*
- Reversible USB-C housing
- Front and rear side mountable
- Guiding housing for better protection of receptacles
- With integrated USB IF approved receptacle

NMK-20U-*



NMC-C



** ... Performance will vary depending on your additional hardware and software components and configurations.

Specification		NMK-20U- Cable	NMC-C Chassis	NMC-C-HR Chassis with IF
---------------	--	-------------------	------------------	-----------------------------

Electrical

Rated current per contact	5 A	●	-	●
Rated voltage	20 V	●	-	●
Insulation resistance	10 MΩ	●	-	-
Conductor resistance	3 Ω	●	-	-
Transmission Performance	100 W	●	-	-

Materials

Shell	TPE - Thermoplastic Elastomer	●	-	-
	Polyamide PA 6	-	●	●
Cable Jacket Type	PVC - Polyvinyl Chloride	●	-	-
Contacts	Brass CuZn37	●	-	-
Contact plating	Au	●	-	-
Latch lock & spring	Ck 67 steel, treated	-	●	●

Mechanical

Life time (mating cycles)	> 10'000	●	●	●
Locking force	50 N	-	●	●
Locking device	latch lock	-	●	●
Orientation	Right Angle	-	●	●
PCB Mounting	HYBRID SMT+DIP	-	●	●
PCB surface center	1.58 mm	-	●	●

Environmental

Operating temperature	-25 °C to +85 °C	●	●	●
Standard compliance	USB 3.1 Gen II; USB 3.2	●	●	●
Flammability	UL94HB	●	●	●
Environmentally Compliant	RoHS and Halogen Free	●	●	●

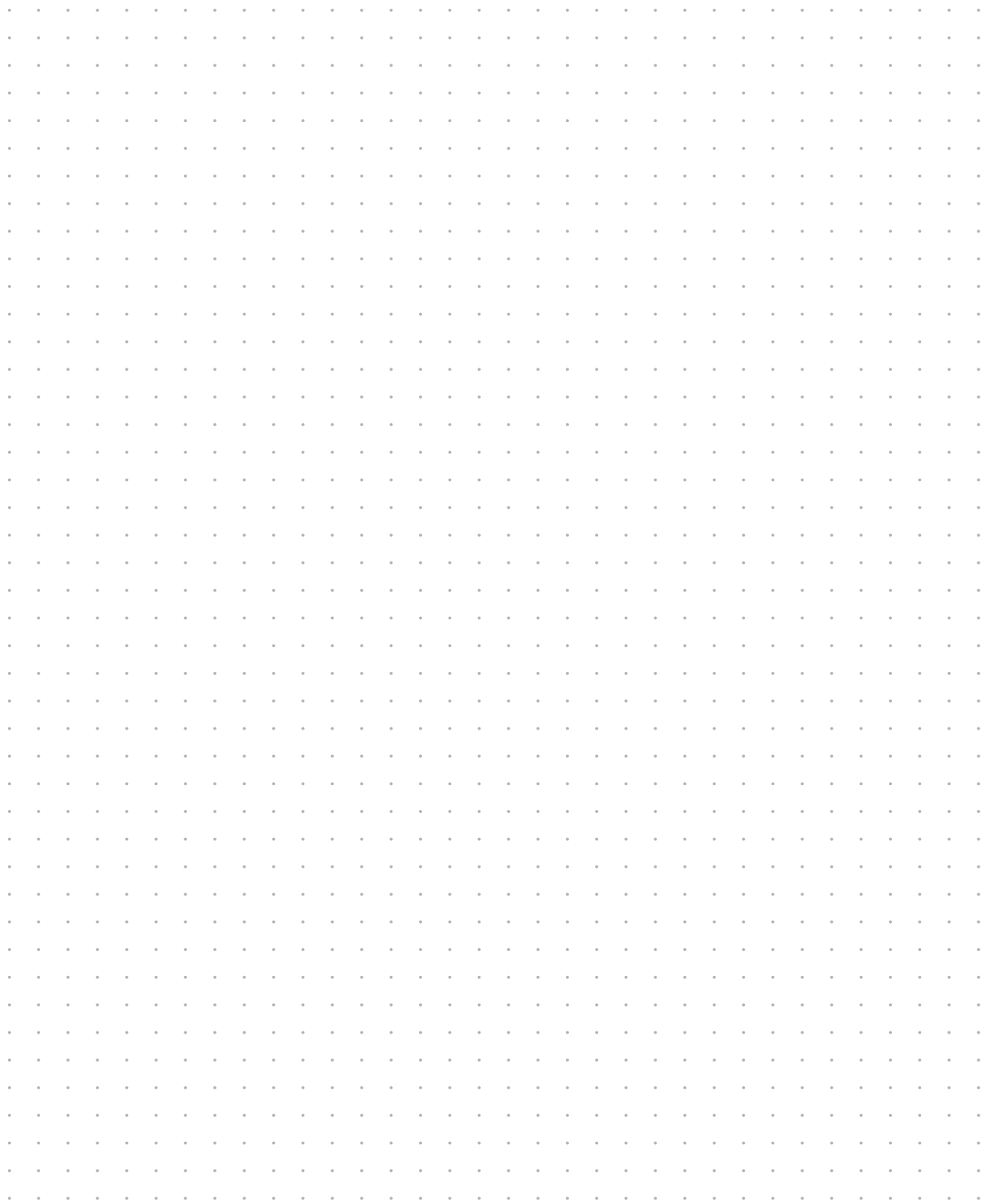
Ordering Information

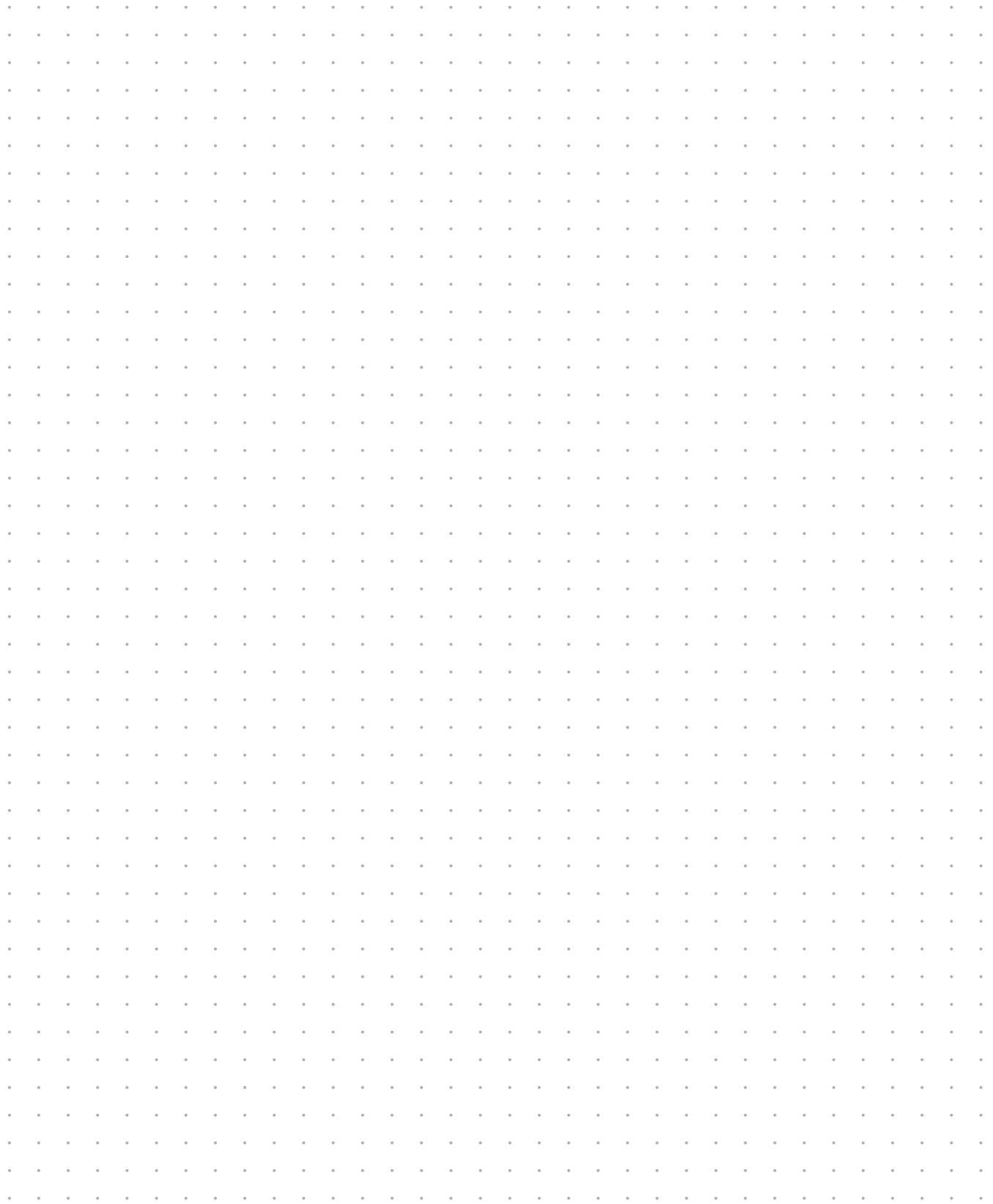
Cable

NMK-20U-*	Lockable USB Type C cable with over molded flex relief and rugged strain relief *...length 0.5 m or 1.0 m
-----------	--

Chassis

NMC-C	Locking USB C Type chassis
NMC-C-HR	Lockable USB Type C chassis with integrated USB IF approved receptacle





Definitions, Abbreviations & Useful Information

ELEMENTS

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

ALLOYS, PLASTICS, POLYMERS

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

MEASUREMENT LEGEND

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

ENGLISH TO METRIC CONVERSIONS



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

METRIC TO ENGLISH CONVERSIONS

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

OTHER ABBREVIATIONS

UL®	Underwriters Laboratories
IP Rating	Ingress Protection rating for objects and water ACC IEC529/EN60529
IEC	International Electrotechnical Commission is the international standards and conformity assessment body for all fields of electrotechnology
UL	UL Recognized Component Mark

	ENEC – European norms electrical certification, demonstrates compliance with European safety standards.
	VDE Association for Electrical, Electronic and Information Technologies e.V.
AWG	American Wire Gauge

NEUTRIK, crystalCON®, etherCON®, maxCON®, miniCON®, nanoCON®, neutriCON®, opticalCON®, powerCON®, Profi®, rearTWIST®, silentPLUG®, speakON®, TOP®, DiWA®, XIRIUM®, are registered trademarks of Neutrik AG.

Neutrik® Part Number Guide

NC3FAH1-B-0-D

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

Definitions, abbreviations & useful information see page 33.

Neutrik® Product Line



<p>XLR Connectors</p> <p>X Series XX Series TOP Series RX Series X5 Series A Series AA Series B Series TOP Series D Series DL Series DLX Series P Series MPR Series Combo I Series Combo A Series</p>	<p>Plugs & Jacks</p> <p>PX Series silentPLUG® timbrePLUG® ultimatePLUG® MIL/B-Gauge Type Plugs 0.173" Bantam 3.5 mm Plug</p>	<p>SpeakON® Connectors</p> <p>SpeakON® SPX Series SpeakON® FC Series SpeakON® Adapter SpeakON® Chassis Connectors SpeakON® Combo</p>	<p>Data Connectors</p> <p>HDMI Cable & Chassis Connectors opticalCON® Cable & Chassis Connectors etherCON® Cable & Chassis Connectors etherCON® TOP mediaCON Cable & Chassis Connectors USB Cable & Chassis Connectors</p>	<p>75 Ohm BNC Connectors</p> <p>rearTWIST® Female Cable Jack Chassis Bulkhead Jacks Tiny Cable Jack</p>	<p>Circular Connectors</p> <p>nanosCON® Cable & Chassis Connectors minisCON® Cable & Chassis Connectors neutricON® Cable & Chassis Connectors</p>	<p>powerCON® Connectors</p> <p>powerCON® TRUE1 TOP Cable & Chassis Connectors powerCON® Cable & Chassis Connectors 32 A powerCON® Cable & Chassis Connectors</p>	<p>Patch Panels</p> <p>1/4" Patch Panel NPPA Series - 96 Bantam (TT) Jacks LF 48 B-Gauge Patchbays</p>	<p>Digital Audio Network</p> <p>MicLine, AES/EBU I/O to Dante® Interface XIRIUM® PRO</p>	<p>Accessories</p> <p>D Shape Adapters Circular Adapters DMX Adapters XLR Feedthrough AES / EBU Digital Impedance Transformer Adapters Goose Necks Modules & Audio Transformers etherCON® CAT6A Adapter</p>
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NEUTRIK®

The premium brand of the Neutrik Group

LIECHTENSTEIN (HEADQUARTERS)

Neutrik AG, Im alten Riet 143, 9494 Schaan
T +423 237 24 24, F +423 232 53 93, neutrik@neutrik.com

GERMANY / NETHERLANDS / DENMARK / AUSTRIA

Neutrik Vertriebs GmbH, Felix-Wankel-Strasse 1, 85221 Dachau, Germany
T +49 8131 28 08 90, neutrik@neutrik.de

GREAT BRITAIN

Neutrik (UK) Ltd., Westridge Business Park, Cothey Way
Ryde, Isle of Wight PO33 1 QT
T +44 1983 811 441, sales@neutrik.co.uk

FRANCE

Neutrik France SARL, 52 rue d'aguesseau, 1er etage, 92100 Boulogne-Billancourt
T +33 1 41 31 67 50, info@neutrik.fr

USA

Neutrik USA Inc., 4115 Taggart Creek Road, Charlotte, North Carolina, 28208
T +1 704 972 30 50, info@neutrikusa.com

JAPAN

Neutrik Limited, Yusen-Higashinohonbashi-Ekimae Bldg., 3-7-19
Higashinohonbashi, Chuo-ku, Tokyo 103
T +81 3 3663 47 33, mail@neutrik.co.jp

HONG KONG

Neutrik Hong Kong LTD., Suite 18, 7th Floor Shatin Galleria
Fotan, Shatin
T +852 2687 6055, sales@neutrik.com.hk

CHINA

Ningbo Neutrik Trading Co., Ltd., Shiqi Street, Yinxian Road West
Fengjia Villiage, Hai Shu District, Ningbo, Zhejiang, 315153
T +86 574 88250833, sales@neutrik.com.cn

INDIA

Neutrik India Pvt. Ltd., Level 3, Neo Vikram, New Link Road,
Above Audi Show Room, Andheri West, Mumbai, 400053
T +91 982 05 43 424, anklesaria@neutrik.com

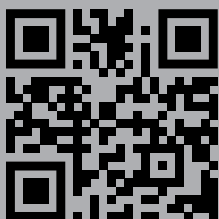
ASSOCIATED COMPANIES

Contrik AG

Steinackerstrasse 35, 8902 Urdorf, Switzerland
T +41 44 736 50 10, contrik@contrik.ch

H. Adam GmbH

Felix-Wankel-Straße 1, 85221 Dachau, Germany
T +49 08131 28 08-0, anfrage@adam-gmbh.de



www.neutrik.com