Data Connectors

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Introduction

Neutrik's data connector range copes with the increasing 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 like USB, Firewire and now as well HDMI.

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Fiber Optic

Some years ago fiber optic has been used for speciality cabling like HD broadcast cameras only. Meanwhile digital signal and network applications in Pro Audio, Broadcast and Touring / Rental spring up like mushrooms which opens a wide range of fiber optic use. The application depth is multiple, some examples are:

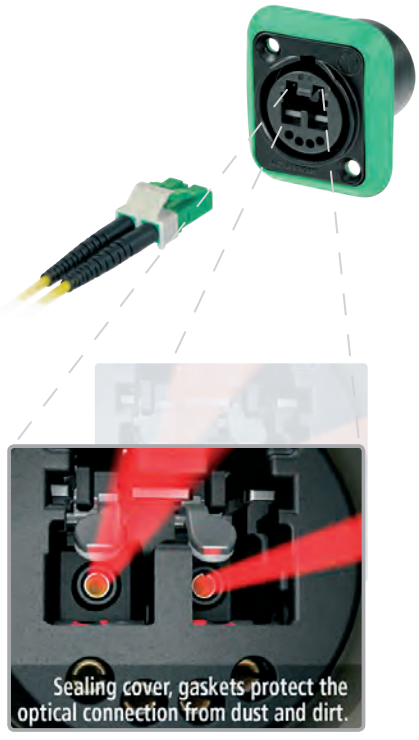
- Network (Audio, Data or DMX) transmissions with >70 m (mobile) or >100 m (installation) length, based on Pro Equipment (e.g. Mixers) offering fiber optic connections or using a fiber optic switch
- Digital HD video transmissions > 15 m (e.g. DVI, HDMI or KVM projection) using fiber optic media converters
- Future prove installations eliminating bandwidth limitations
- Noise and EMI protection on Audio or Video (LED walls) applications
- Increased bandwidth especially on broadcast applications
- Signal embedding to minimize cabling efforts especially on broadcast applications with help of Pro Equipment or media converters



The trend to use connectors out of the Datacom / Computer industry for Pro Audio and Broadcast applications (RJ45 connectors) did also not stop short of fiber optic connectivity. Conventional Datacom fiber optic connectors like ST, SC or LCs are optimized for one time permanent connection but can not meet the rough requirements of mobile applications and high mating cycles as required for the entertainment industry. By necessity used military connectors have been expensive and showed either high attenuation and return loss or no dust protection.

Design Criteria

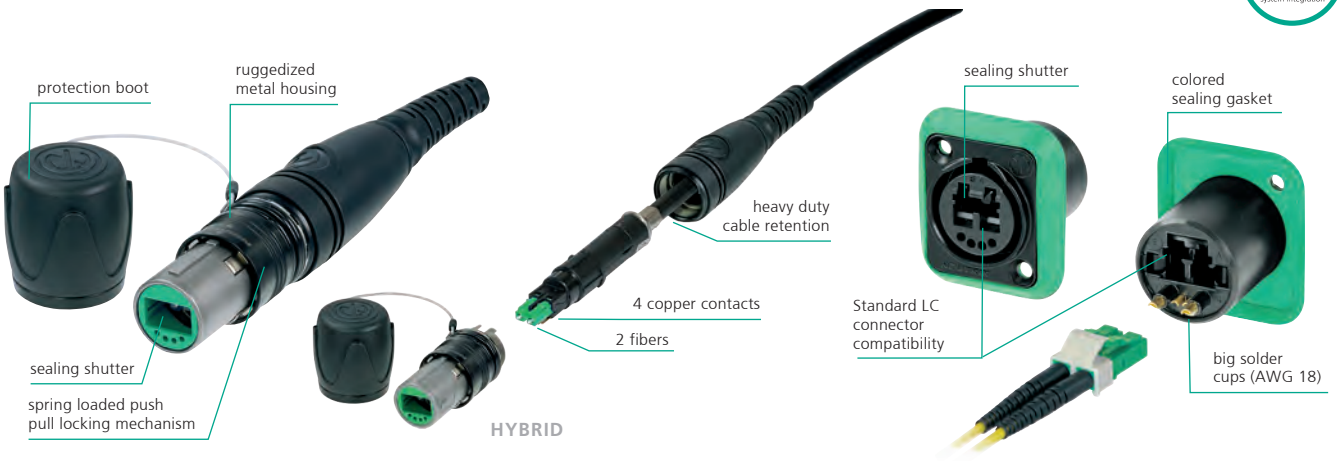
Neutrik as connectivity specialist for rough entertainment applications solved these problems when launching the opticalCON DUO fiber optic connection system in 2005. The reliable and simple concept has proven its ruggedness and low maintenance which led to a wide acceptance in the pro audio and broadcast industry. The opticalCON system is based on LC connectors but eliminates its weakness and guarantees a safe, dust protected and rugged connection. Being compatible to conventional LC connectors the opticalCON DUO offers the choice of using cost effective LC cables or the rugged opticalCON mobile cable assembly. This final user flexibility choosing a cost effective LC for system integration or a rugged cable for mobile applications is appreciated by OEMs.
opticalCON QUAD and opticalCON MTP® are based on the proven opticalCON DUO conzept but are, with 4 or respectively 12 fiber channels, focused to POINT-TO-POINT interconnections. These systems copes with the increasing need for fiber optic channels. opticalCON is more than a connector, the optimized connection system includes a variety of customized rugged cables, drums, breakout and pulling solutions. Well-known equipment manufacturers of pro equipment as well as key users in broadcast and rental / touring trust in the opticalCON. It is our goal to turn it to an industry standard comparable to the widely used etherCON series.



- MOBILE USE
- RUGGED
- LOW MAINTENANCE
- SIMPLE INTEGRATION
- COST EFFECTIVE



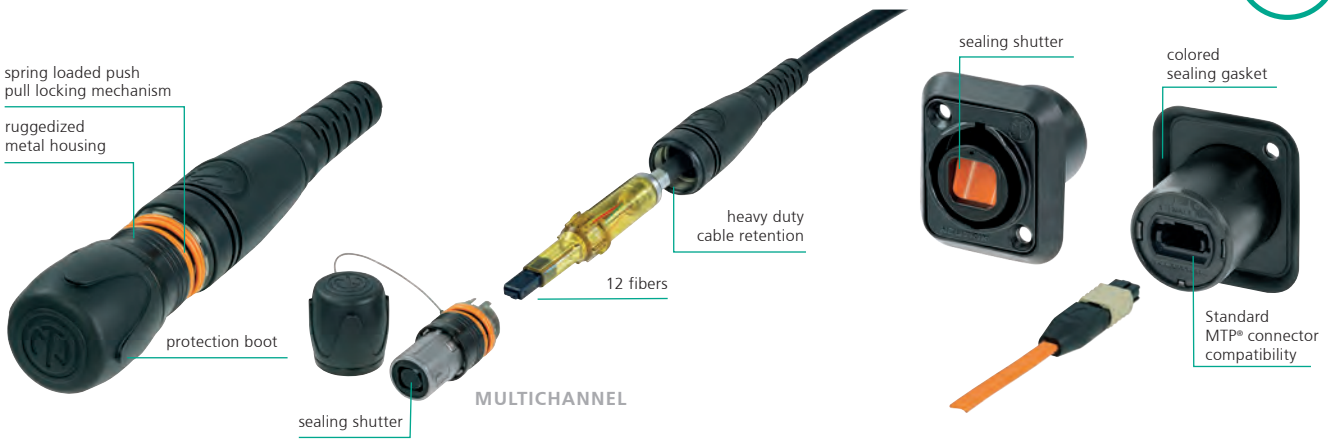
opticalCON DUO



opticalCON QUAD



opticalCON MTP®





Rugged metal housing



Cable drum



Rubber coated protection cover



Rear LC connection



Sealing shutters



Chassis with transceiver adapter

Cable Connector Assembly



NKO2S-A*

NKOY* SPLIT Cable

- Ruggedized and dirt-protected 2-channel fiber optic connection system
- Waterproof acc. to IP 65 in mated condition
- Color-coded cable connector comes pre-assembled with a choice of mobile field cables
- Accommodates standard optical LC-Duplex connectors
- Cable connector features rugged all metal housing and heavy duty cable retention
- Excellent dust and dirt protection due to automatic sealing shutter with silicone gasket
- Reliable Push-Pull locking mechanism
- Easy to clean, no tools required
- Cable packed in case, on drum or air spool
- Field repairable
- Hybrid assembly available
- Custom split cable assembly

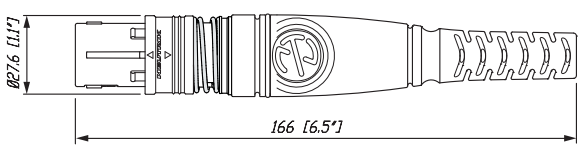
Chassis Connector



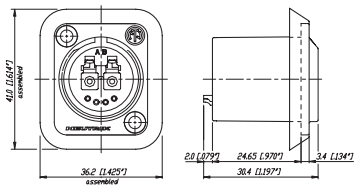
NO2-4FDW-A with SCDP-0

- Suggested OEM equipment connectors due to LC front compatibility
- Accommodates standard LC connectors on the rear for simple installation
- Designed as feedthrough with automatic sealing shutter
- Shutter with silcone gasket protects optical connection from dust and dirt
- Waterproof acc. to IP 65 ingress protection in mated condition
- Rubber sealing gasket (black, blue, green to identify fiber mode)
- Connection on the front side either by rugged opticalCON or standard LC connector

NKO2M-4S75*



NO2-4FDW





Colour Coding



Sealed and rugged housing



Sealing shutter



Sealed housing



Rear LC connection

Cable Connector Assembly



NKO4S-A*

NKOP8*
SPLIT Cable

- Ruggedized and dirt protected 4 channel fiber optic connection system
- For POINT-TO-POINT multichannel routing
- Innovative shutter guarantees low maintenance
- Dust and water resistant according to IP 65 in mated condition
- Color-coded cable connector comes pre-assembled with a choice of mobile field cables
- Up to 12-channel custom SPLIT cables
- opticalCON X-TREME cable for demanding applications like touring / rental or outdoor broadcast offering a cut-proof and rodent resistant double jacket glass yarn armoured cable construction
- POWER SPLIT 4 or 8 channel cable combines multi-fiber and power in one cable
- Field repairable

Chassis Connector

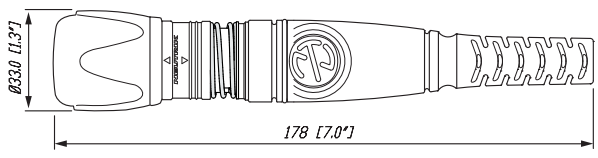




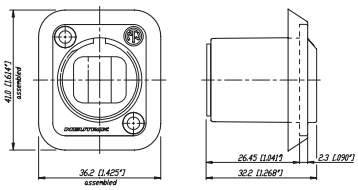
NO4FDW-A with SCDP-0

- Rugged 4 channel POINT-TO-POINT multi-channel routing solution
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- Waterproof acc. IP 65 in mated condition
- Accommodates standard LC connectors on the rear for cost effective and simple installations
- Rubber sealing gasket (black, blue, green to identify fiber mode)

NKO4



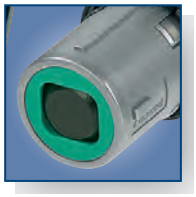
NO4FDW-R



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



Rugged metal housing



Spherical shutter



Rubber sealing gasket



Rear MTP® connection

Cable Connector Assembly



NKO12S*

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

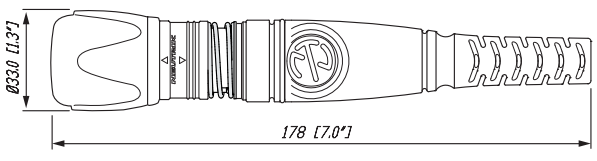
Chassis Connector



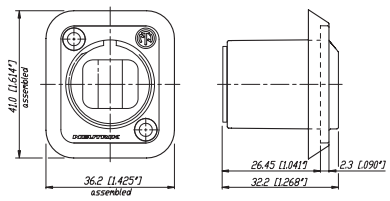
NO12FDW-A with SCDP-0

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

NKO12S*



NO12FDW-A





Colour coding



DUO, QUAD & MTP® Couplers



Frame with opticalCON



Individual frame application

Breakout Boxes & Coupler



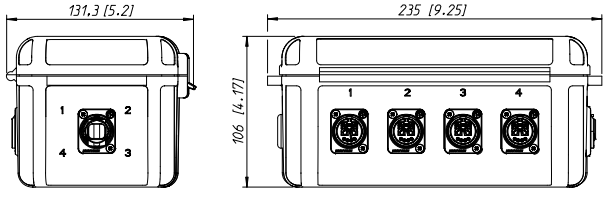
NO4SABB1-4



NAO2S-H1W-A

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

NO4SABB1-4



19" Z-Panel & Plates

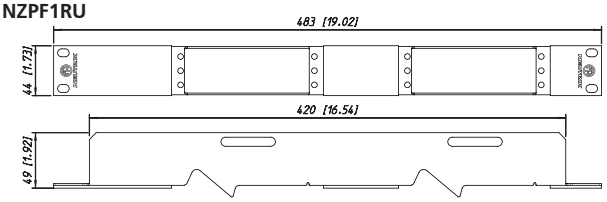


NZPF1RU

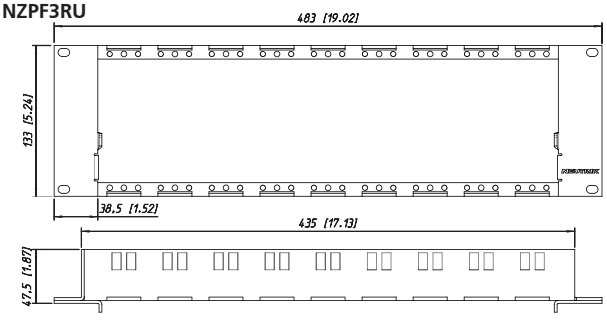
NZPF3RU equipped with frame plates

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

NZPF1RU



NZPF3RU



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



Breakout Box with powerMONITOR



3RU frame with up to 9 powerMONITORs

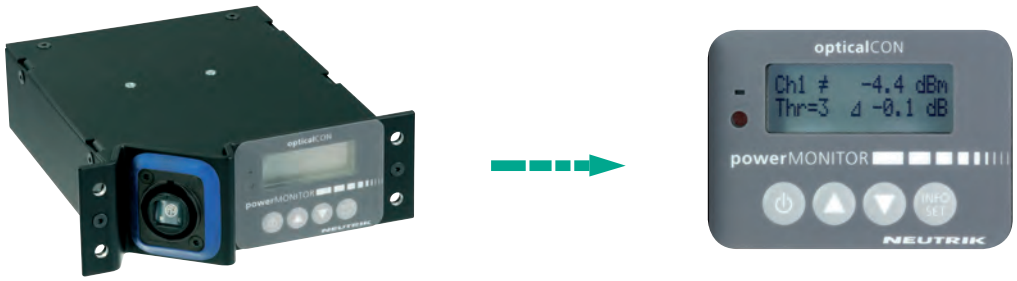


1RU rack mount



Robust rear connection

powerMONITOR



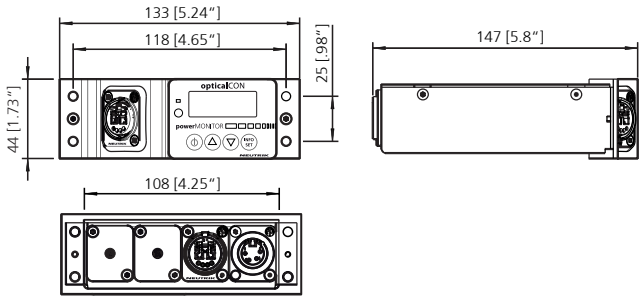
NO4S-4F-2R-PM

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

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

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

NO4S-4F-2R-PM





Coupler NAO4MW-A



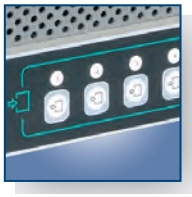
Breakout Cable



opticalCON Field assembly



19" x 1 1/2 RU Rack unit



Ergonomic panel



Wielan rear connection

Accessories & opticalSWITCH



CAS-FOCD-ADV



CAS-FOMD



NAOBO



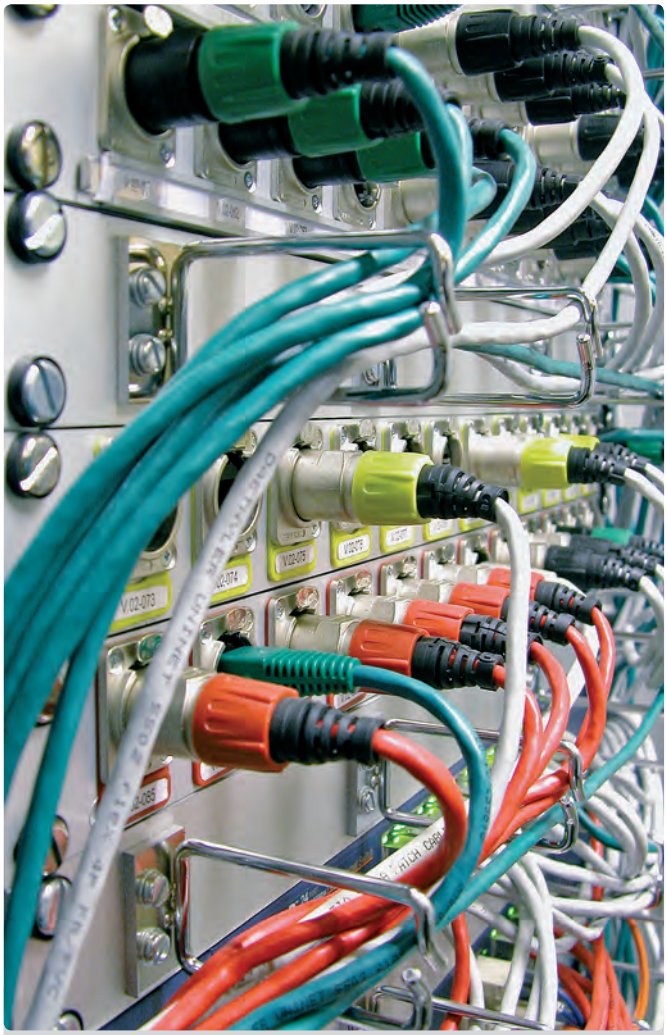
opticamSWITCH

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

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

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

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



Example of etherCON RJ45 Data Connector.

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 male cable carriers, assembled female receptacles, feedthrough jacks, cable coupler and shielded versions with or without illumination possibilities by LEDs. The male cable end offers a rugged diecast metal shell as a carrier for pre-assembled RJ45 plugs, which does not require the re-termination of the cable assembly. Female chassis receptacles are based on the current Neutrik "A & B" series as well the "D" series of XLR receptacles with secure latching system – a feature not found on other RJ45 receptacles. Terminations include horizontal and vertical PCB mount or IDC. Colour coding is available for both the cable carriers and the receptacles for ease of identification.

Ingress protection of IP 54 is achived on the CAT 5 version by assembling the waterproof kit SE8FD while CAT 6 versions are IP 65 rated as standard.

Neutrik etherCON receptacles comply with CAT 6, CAT 5e (IDC versions) or Class D (PCB versions), shielded or unshielded according to TIA / EIA 568B and ISO / EC 11801 standard.

etherCON chassis overview

	Class D Fastethernet 10/100 Base-T	**CAT 5e** Gigabit 1000 Base-T	**CAT 6** 10 Gigabit (IP65)
PCB mount	NE8FAV NE8FBV NE8FDV NE8FAH NE8FBH*	NE8FDH-C5E	
IDC		NE8FAV-Y* NE8FDV-Y*	NE8FDY-C6
Feedthrough		NE8FDP NE8FF	



Rugged diecast shell



Colored coding
Bushing

Cable Carriers



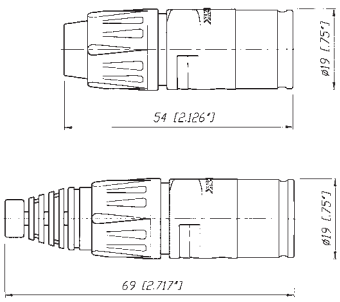
NE8MC



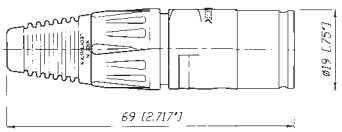
NE8MC-1 + BSE2

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

NE8MC



NE8MC-1





Horizontal PCB



Vertical PCB



IDC Terminals

Receptacles



NE8FAV + ACRF-2



NE8FBH



NE8FAV-YK



NE8FDV



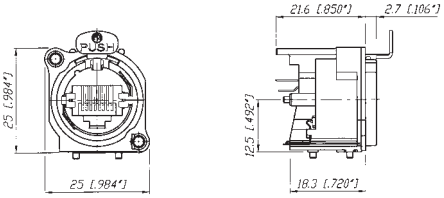
NE8FDV-Y110-B



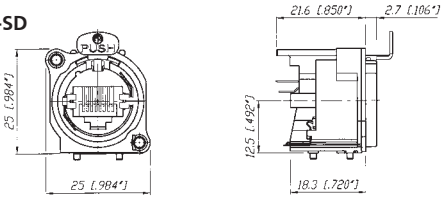
NE8FDH-C5E

- "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
- D-version mountable from the front or rear of the panel
- Version with screw domes to fix connector onto PCB securely (NE8FAV-SD)

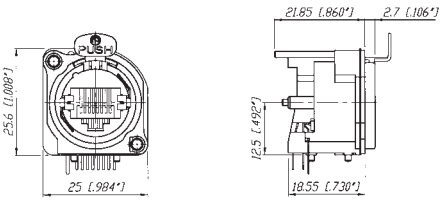
NE8FAV



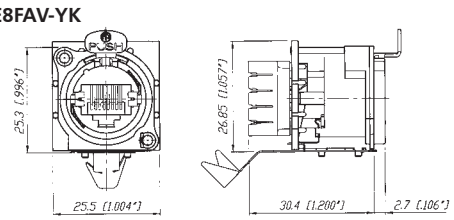
NE8FAV-SD



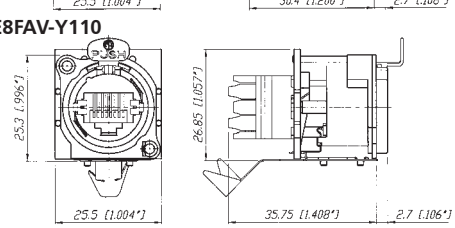
NE8FBH



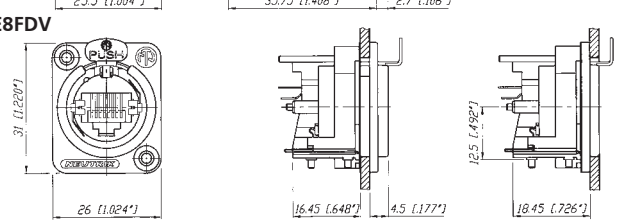
NE8FAV-YK



NE8FAV-Y110



NE8FDV





Completely closed housing



Light pipe



NE8FDP rear side



Locking latch

Shielded & Lighted



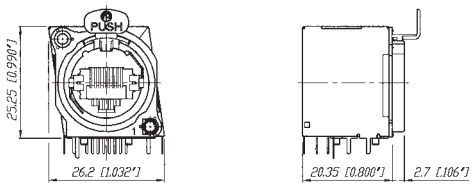
NE8FBH-S



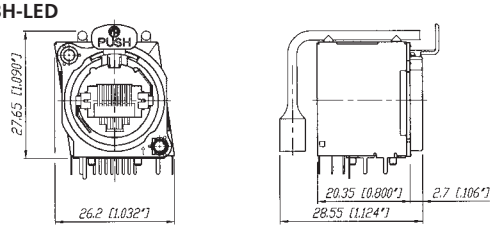
NE8FBH-LED

- Comprehensive shielding granted by completely closed metal housing
- Improves EMC performance of appliance even in unmated condition
- Lighted version offers in addition various illuminating indication possibilities by means of two separate light pipes
- Light pipes illuminated by standard 3 mm LEDs – to be mounted on PCB by customer

NE8FBH-S



NE8FBH-LED



Feedthrough



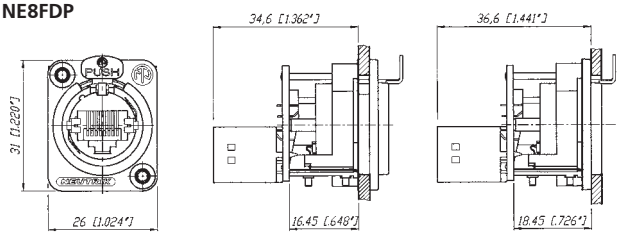
NE8FDP



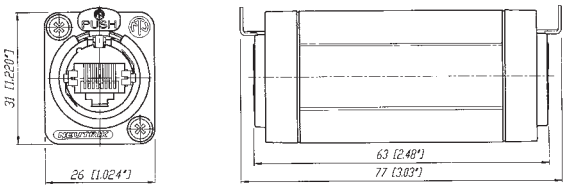
NE8FF

- 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
- NE8FF coupler (adapter) for cable to cable mating – use with NE8MC carriers or any standard RJ45 plugs

NE8FDP



NE8FF



Specification			NE8MC* Cable Con.	NE8FA/B* (A + B Series)	NE8FD* (D Series)
Electrical					
Number of contacts			- [1]	8	8
Rated current per contact	< 1.5 A		- [1]	●	●
Rated voltage	< 50 V ac		- [1]	●	●
Contact resistance	< 10 mΩ		- [1]	●	●
Insulation resistance	> 500 MΩ		- [1]	●	●
Dielectric strength	> 1`000 V ac rms		- [1]	●	●
Frequency bandwidth	1 - 100 MHz		- [1]	●	●
Transmission class acc. TIA / EIA 568B or IEC 11801		CAT 5e	- [1]	●	● NE8FDH-C5E
	Class D	- [1]	PCB Versions	PCB Versions	NE8FDV
Mechanical					
Retention method	latch lock		●	●	●
Life time (mating cycles)	> 1`000 mating cycles		●	●	●
	> 200 mating cycles		-	-	SE8FD
Insertion / withdrawal force	≤ 20 N		●	●	●
Cable O.D. range	3.5 - 8 mm		●	-	-
Wire size	AWG 26 – 20		- [1]	NE8*-Y*	NE8*-Y*
Panel thickness	max. 3 mm / 0.12"		-	●	4 mm / 0.16"
Material					
Housing	PBT D202G30		-	●	●
	Zinc diecast (ZnAlCu1, gal Ni / bl Cr / Collinox)		●	-	-
B / D-flange	Zinc diecast (ZnAlCu1, gal Ni / bl Cr)		-	●	●
Strain relief clamp	POM		●	-	-
	CuZn35Pb2, Tin plated		-	NE8*-Y*	NE8*-Y*
Contacts	Bronze (CuSn6)		- [1]	●	●
Contact surface	Au (gal 0.2 µm over Ni plating)		- [1]	●	●
Locking Element	Ck 67 steel, treated		-	●	●
Bushing	Polyamide (PA 6 15% GR)		●	-	-
Boot	Polyamide (PA 6)		●	-	-
Sealing gasket	EPDM		-	-	SE8FD
Environment					
Operating Temperature	-30 °C to +80 °C		●	●	●
	-20 °C to +60 °C		-	-	SE8FD
Protection class	IP 54		-	-	SE8FD
Flammability	UL94V-0		UL94 HB	●	●
Solderability complies with IEC 68-2-20			-	PCB Version	PCB Version
Mating screw			-	A screw	E screw
Color coding			BSE-* / BSX-*	ACRF-*	DSS-*

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

Ordering Information

Cable Connector

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

Receptacle	A-shape (all plastic)	B-shape (Nickel ring)	D-shape
Horizontal PCB	NE8FAH	NE8FBH	
Vertical PCB	NE8FAV	NE8FBV	NE8FDV
Vertical PCB with additional screw domes	NE8FAV-SD**		
IDC terminals	NE8FAV-YK **		NE8FDV-YK **
IDC 110 punch down terminals	NE8FAV-Y110 **		NE8FDV-Y110 **
Horizontal PCB with metal housing (shielded)		NE8FBH-S	
Horizontal PCB in CAT5e			NE8FDH-C5e
Horizontal PCB with metal housing and light pipe		NE8FBH-LED	
** ... includes 2 mounting screws			

Feedthrough

NE8FDP	Receptacle (includes 2 mounting screws)
NE8FF	Coupler

Accessories


A screw


E screw


E screw Nickel


ACRF-*


DSS-*


BSE-*


BSX-*


SCDX


SCDP-*

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

Waterproof kit for etherCON D-Series


Waterproof assembly kit - SE8FD



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



Push Pull locking



IP65 in mated condition



D-shape metal shell



Closed shielding

CAT6 Patch Cable



NKE6S-*

CAT6 Receptacles



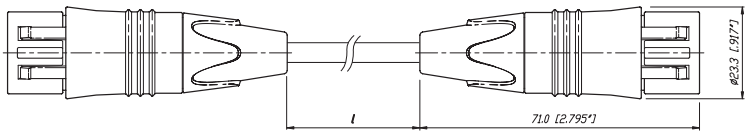
NE8FDY-C6



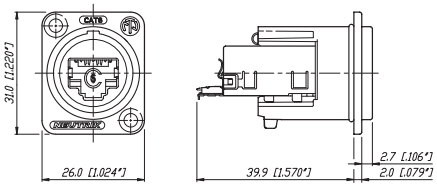
NE8FDY-C6-B

- CAT6 compliant – data rate up to 10 GBit/s
- 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 offer gas-tight termination
- Ready made patch cables with rugged diecast cable carrier and unique chuck-type strain relief

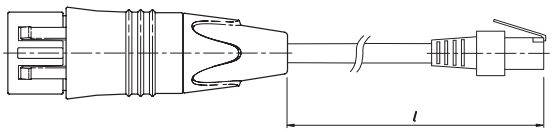
NKE6S-*



NE8FDY-C6



NKE6S-*-WOC



Design Criteria

The ruggedized RJ45 CAT6 connection system, provides solutions for high bandwidth data transfer in harsh and demanding environments. This series offers additional headroom for high performance Fast Ethernet 100BaseT and Gigabit Ethernet 1000BaseT connectivity in audio, lighting, live stage and industrial environments and even guarantees to be prepared for future 10 Gbit applications (true CAT6). The etherCON CAT6 series offers a D-shape panel connector with metal housing and secure latching system. Tool-free IDC termination makes cable assembly easy and fast. The preassembled CAT6 patch cables use a shielded S/FTP cable with cable plug carrier offering a robust metal shell and Push-Pull locking system. Integrated sealing rings make the system dust and waterproof to IP 65 rating.

Features & Benefits:

- CAT6 performance – fast data transmission and high bandwidth applications
- CAT6 specifications according TIA / EIA 568B, ISO / IEC 11801, EN 50173
- Shielded system – high noise immunity and EMI protection
- Push Pull mating – secure and proven locking system
- D-shape metal panel connector
- Ground lead jumper on panel connector with selectable grounding option
- IDC termination without tool
- Ready made patch cables with rugged cable carrier and unique chuck-type strain relief
- Dust and waterproof according IP 65

Technical Data

Electrical	Receptacle	Patch cable	Materials	Receptacle	Patch cable
Number of contacts	8	8	Housing	Zinc diecast	Zinc diecast
Rated current per contact	1.5 A	1.5 A	Adapter	Polyamide PA 6	Polyamide PA 6
TIA / EIA rating	CAT6	CAT6	Strain relief clamp	-	POM
Input to output resistance	< 200 mΩ	< 200 mΩ	Contacts	Bronze CuSn	Bronze CuSn
Insulation resistance	> 500 MΩ	> 500 MΩ	Contact surface	Gold	Gold
Dielectric strength	1 kV dc	1 kV dc	Bushing	-	PU / PA
NEXT (250 MHz)	48.7 dB	48.7 dB			
Attenuation (250 MHz)	0.1 dB				

Mechanical		Environmental	
Retention method	Push-Pull	Operating temperature	-10 °C to +60 °C
Life time (mating cycles)	> 1`000	Storage temperature	-40 °C to +70 °C
Wire size	0.5 – 0.65 mm (AWG 24 - AWG 22)	Flammability	UL94HB
Stranded wire	AWG 26 / 7 – 22 / 7	Protection class	IP 65

Ordering Information

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

Accessories

Accessories	see page 97 / 101 / 104



Push Pull locking



USB type B



D-shape metal housing



USB type B

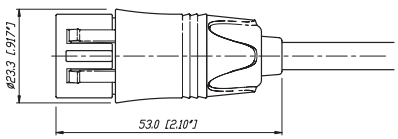
USB Patch Cable



NKUSB-*

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

NKUSB



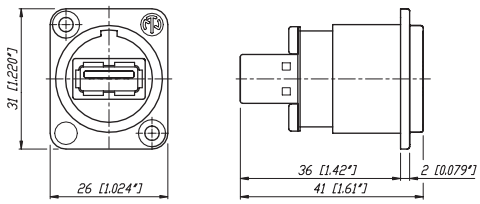
USB Receptacle



NAUSB-W

- 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

NAUSB-W



Technical Data

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

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

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

Ordering Information

Chassis

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

Patch Cable

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

Accessories



DSS-*



SCM



SCDX



SCDP-*

DSS-**	Lettering plate for D series, colored plastic
SCM	Plastic sealing cover to protect the Firewire connectors against dust and moisture.
SCDP-*	D-Size sealing gaskets, color coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white)
SCDX	Hinged cover seals D-size chassis connectors, IP 42 rated
NZP1RU-8	Panel1RU housing with 8 D-shape cutouts
NZP1RU-12	Panel1RU housing with 12 D-shape cutouts

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



Push Pull locking



HDMI 1.3a



D-shape metal housing



HDMI 1.3a receptacle

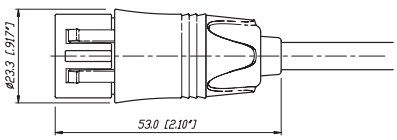
HDMI Patch Cable



NKHDMI-*

- HDMI 1.3a – data rate up to 3.5 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 (1 m, 3 m and 5 m) with removeable rugged diecast cable carrier
- Mates with conventional HDMI receptacles if cable carrier is removed
- Dust and water resistant sealing in combination with NAHDMI-W*

NKHDMI-*



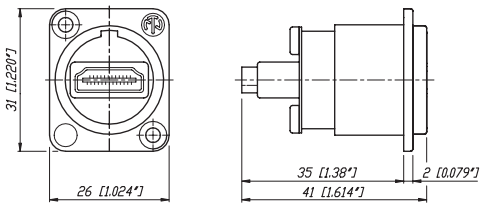
HDMI Receptacles



NAHDMI-W

- Audio / Video interface to transmit any digital TV and PC Video format including high-definition video (HDTV).
- HDMI 1.3a feedthrough adapter with 19 pole HDMI receptacle at both ends
- Optional screen to chassis grounding
- Universally accepted standard D-shape housing

NAHDMI-W





D-shape metal housing



IEE 1394 receptacle

Firewire Receptacle

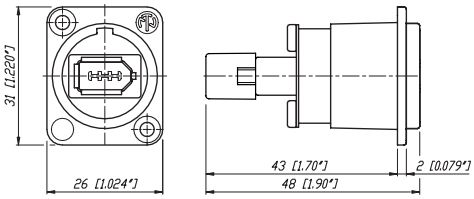




NA1394-6-W

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

NA1394-6-W



Technical Data

Mechanical and Electrical		HDMI Receptacle	HDMI Patch Cable	Firewire
Conform with Standards		HDMI 1.3a	HDMI 1.3a	IEEE
Material				
Shell	Zinc diecast (ZnAl4Cu1)	●	●	●
Shellplating	Nickel or black Chrome	●	●	●
Insert		ABS	Nickel	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 Firewire

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

Ordering Information HDMI

Chassis

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

Patch Cable

NKHDMI-*	HDMI 1.3a cable with overmolded flex relief and metal cable carrier, standard lengths: 1, 3, 5 m

Accessories



DSS-*



SCM



SCDX



SCDP-*

DSS-**	Lettering plate for D series, colored plastic
SCM	Plastic sealing cover to protect the Firewire connectors against dust and moisture.
SCDP-*	D-Size sealing gaskets, color coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white)
SCDX	Hinged cover seals D-size chassis connectors, IP 42 rated
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

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