



## Data Connectors

## Content

## Page

### Fiber Optic:

opticalCON ADVANCED .....	80
opticalCON DUO - Cable Connector Assembly .....	82
opticalCON DUO - Chassis Connector .....	82
opticalCON QUAD - Cable Connector Assembly .....	83
opticalCON QUAD - Chassis Connector .....	83
opticalCON Breakout Boxes .....	84
opticalCON D-shape Z-panels .....	84
opticalCON powerMONITOR .....	85
opticalCON opticamSWITCH .....	86
opticalCON Accessories .....	87

### Network Interconnections:

etherCON - Cable Carrier .....	89
etherCON - Receptacles .....	90
etherCON - Receptacle Shield & Lighted .....	91
etherCON - Feedthrough .....	91
etherCON - Technical Data .....	92
etherCON - Ordering Information .....	93
etherCON - Accessories.....	93
etherCON - CAT6 .....	94
etherCON - CAT6 - Technical Data .....	95
etherCON - CAT6 - Ordering Information .....	95

### Digital Interfaces (USB / IEEE / HDMI):

USB Receptacle .....	96
USB Patch Cable .....	96
Technical Data USB Receptacle and Patch Cable .....	97
Ordering Information USB Receptacle and Patch Cable ..	97
HDMI Receptacle .....	98
HDMI Patch Cable .....	98
Firewire Receptacle .....	99
Technical Data Firewire and HDMI .....	100
Ordering Information Firewire and HDMI .....	100

## 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.

## 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 > 15m (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. Well-known equipment manufacturers of pro equipment as well as key users in broadcast and rental / touring trust in the opticalCON DUO. It is our goal to turn it to an industry standard comparable to the widely used etherCON series.

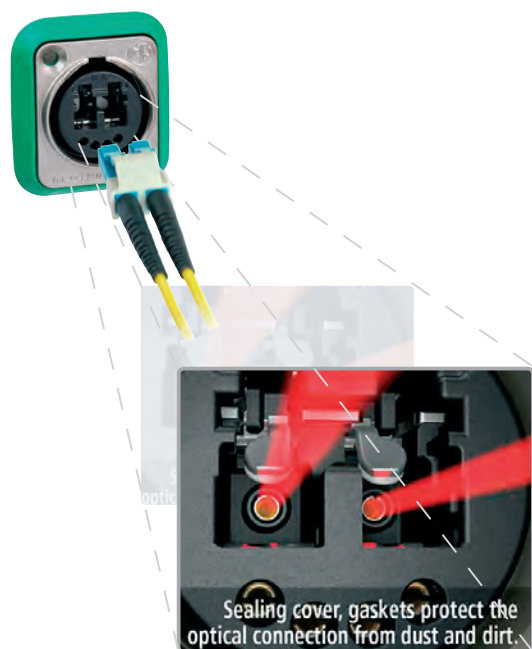
The opticalCON system is based on LC-Duplex connectors but eliminates its weakness and guarantees a safe, dust protected and rugged connection. Being compatible to conventional LC connectors the opticalCON DUO offers the choice of using cost effective LC cables or the rugged opticalCON mobile cable assembly. This final user flexibility choosing a cost effective LC for system integration or a rugged cable for mobile applications is appreciated by OEMs.

The new opticalCON QUAD is based on the proven opticalCON DUO connection system but with 4 fiber channels it is optimized for POINT-TO-POINT interconnections. The system copes with the increasing need for fiber optic channels, offers a armoured X-TREME cable for highest reliability and helps to minimize different connection standards with an innovative TRIPLE-SPLIT 12-channel solution.



opticalCON DUO

opticalCON QUAD



# opticalCON ADVANCED

## LAUNCH 2012



Lockable, O-ring sealed  
metal protection cap

Stainless steel front  
housing

Ratched lock bushing

Custom color coding

Protective rubber coating

Ergonomic anti-kink boot  
for various cable O.D.

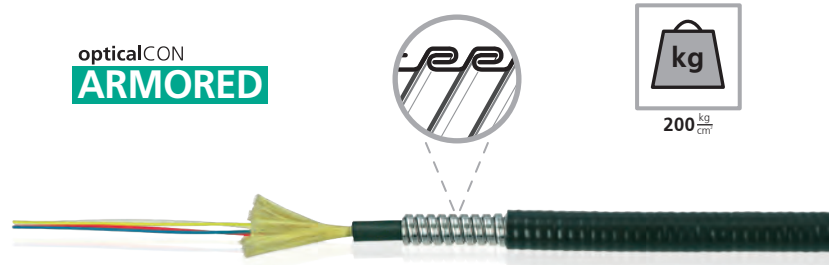
## Advanced Cable Drum Management

- Optimized cable management
- Maintenance cover on female assembly



## Advanced Cable Protection

- Stainless steel armored cable
- High flexibility, perfect handling
- Extremely robust



## Advanced Pulling Solutions

- Pulling sock simplifies installation
- Pulling force > 100 kg
- Protects connectors in mated / unmated condition



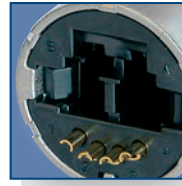
Find more details in the opticalCON Guide and on [www.neutrik.com](http://www.neutrik.com).



Rugged metal housing



Cable drum



Rear LC connection



Sealing shutters



Chassis with transceiver adapter and SFP transceiver

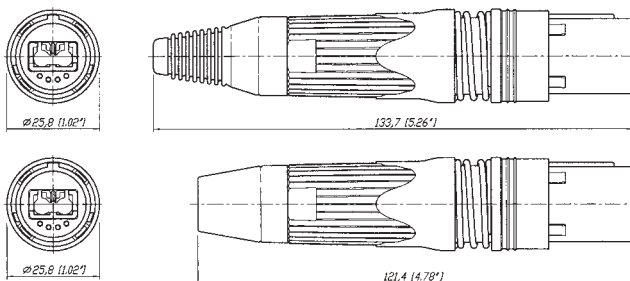
## Cable Connector Assembly



NKO2S-S5-R-O-\*

- Ruggedized and dirt-protected 2-channel fiber optic connection system
- Waterproof acc. to IP65 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

### NKO2M-4S75\*



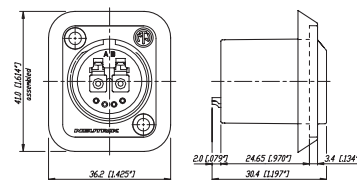
## Chassis Connector



NO2-4FDW

- 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 silicone gasket protects optical connection from dust and dirt
- Waterproof acc. to IP65 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

### NO2-4FDW







Colour Coding



Sealed and rugged housing



Sealing shutter



Sealed housing



Rear LC connection

## Cable Connector Assembly

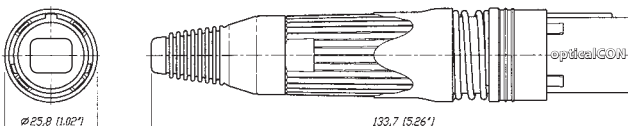


NK04M

NKOP8\*  
POWER SPLIT Cable

- Ruggedized and dirt protected 4 channel fiber optic connection system
- For POINT-TO-POINT multichannel routing
- Innovative spherical shutter guarantees low maintenance
- Dust and water resistant according to IP65 in mated condition
- Color-coded cable connector comes pre-assembled with a choice of mobile field cables
- TRIPLE-SPLIT 12 channel cable featuring 3 opticalCON QUAD connectors on both ends, allowing standardized 4-channel connectivity for multichannel POINT-TO-POINT cabling (color coded red, yellow, white)
- 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

NK04



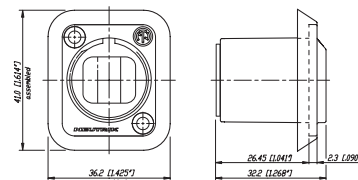
## Chassis Connector



NO4FDW-R

- Rugged 4 channel POINT-TO-POINT multi-channel routing solution
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- Waterproof acc. IP65 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)

NO4FDW-R



Find more details in the opticalCON Guide and on [www.neutrik.com](http://www.neutrik.com).



Colour coding



Frame with opticalCON



Individual frame application

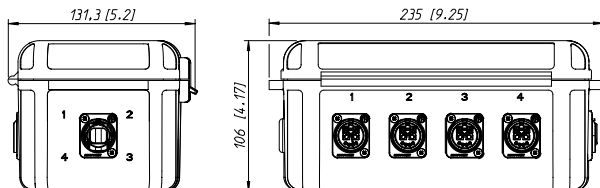
## Breakout Boxes



NO4SABB1-4

- The breakout boxes are used to split a 4-channel point-to-point opticalCON QUAD connection to either 2 dual channels or 4 single channels based on the opticalCON DUO
- Dust and waterproof according to IP65 in mated condition

NO4SABB1-4



## 19" Z-Panel & Plates



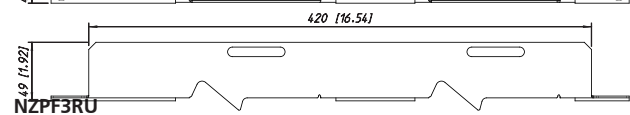
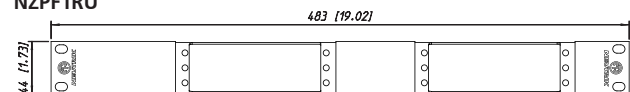
NZPF1RU



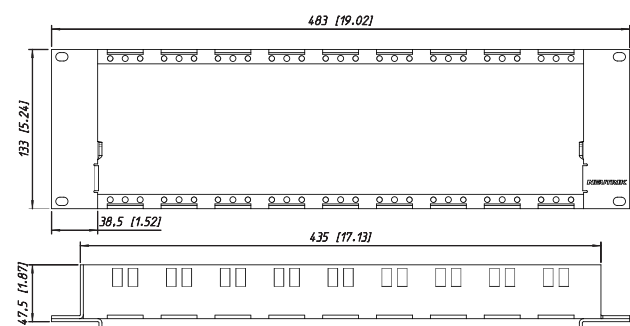
NZPF3RU equipped with frame plates

- 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







Breakout Box with powerMONITOR

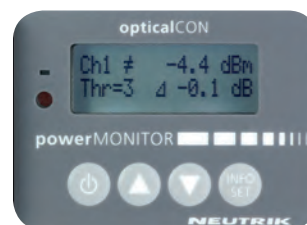


3RU frame with up to 9 powerMONITORS

## powerMONITOR



NO4S-4F-2R-PM

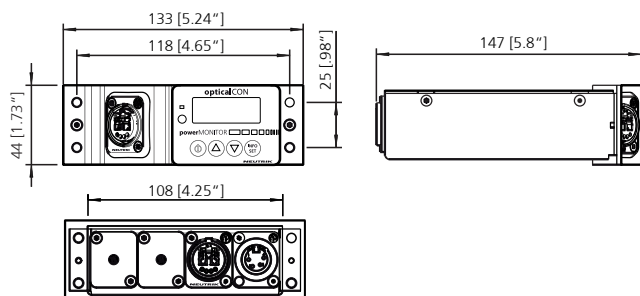


The opticalCON powerMONITOR is a cost-saving, purpose-built measurement (monitoring) device for professional fiber optic broadcast, audio and video applications.

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/-0.1dB 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 (0.5dB maximum split loss)
- Wavelength selectable: multimode 850 nm or 1300 nm, single mode 1310 nm, 1550 nm or WDM (wave division multiplexing)

### NO4S-4F-2R-PM



Find more details in the opticalCON Guide and on [www.neutrik.com](http://www.neutrik.com).



19" x 1RU Rack unit



Ergonomic panel



Robust rear connection

## o p t i c a m S W I T C H



opticaSwitch front

Rear side with opticalCON chassis or Wieland connectors.

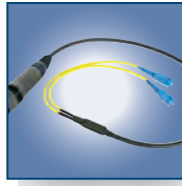
The opticaSwitch is the ultimate solution for fiber optic camera routing within broadcast studios. The device allows switching of unlimited camera positions between several studios and control rooms, eliminating the need for high-maintenance, risky matrix patch fields using SMPTE patch cables. The device 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





Coupler NAO2S-4S75W



Breakout Cable NKO\*-BO\*



opticalCON Field assembly

## Accessories



CAS-FOCD



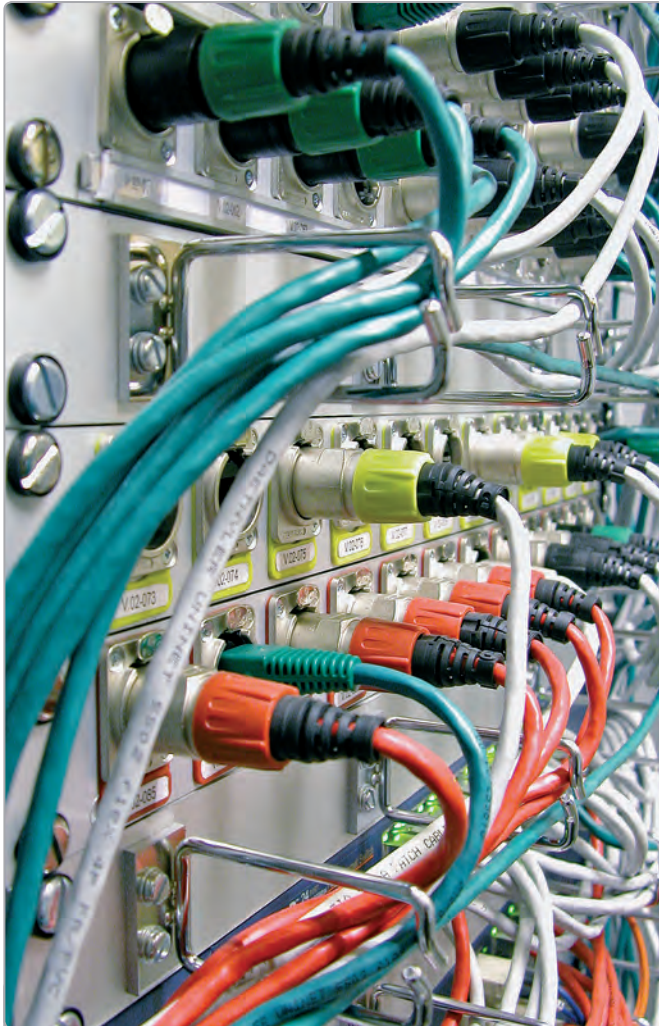
CAS-FOMD



NAOBO

- 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)
- Transceiver adapter connects opticalCON chassis and multi / singlemode transceivers
- Color coding
- Sealing covers

Find more details in the opticalCON Guide and on [www.neutrik.com](http://www.neutrik.com).



Example of etherCON RJ45 Data Connector.

### etherCON chassis overview

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

## 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 IP54 is achieved on the CAT 5 version by assembling the waterproof kit SE8FD while CAT 6 versions are IP65 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.



Rugged diecast shell



Colored coding  
Bushing

## Cable Carriers



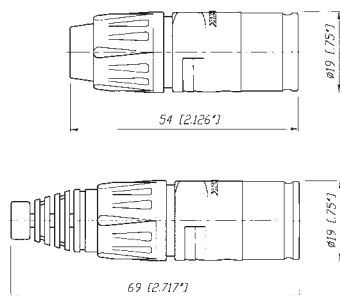
NE8MC



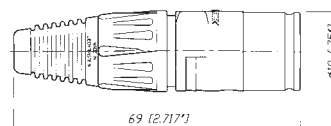
NE8MC-1 + BSE2

- 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



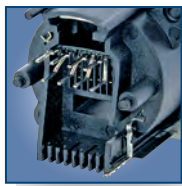
NE8MC-1







Horizontal PCB



Vertical PCB



IDC Terminals

## Receptacles



NE8FAV + ACRF-2



NE8FBH



NE8FAV-YK



NE8FDV



NE8FDV-Y110-B

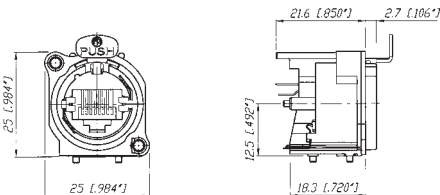


NE8FDH-C5E

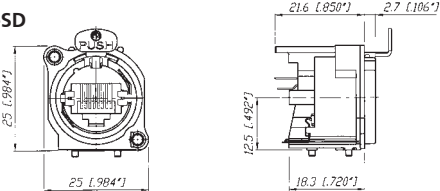
- "A / B" and "D" sized receptacles available in vertical and horizontal PCB or IDC terminations
- Accommodates NE8MC carriers or any standard RJ45 Plug
- D-versions with unified metal flange equal to "D" series- XLR, speakON, powerCON and BNC Bulkhead

- 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)

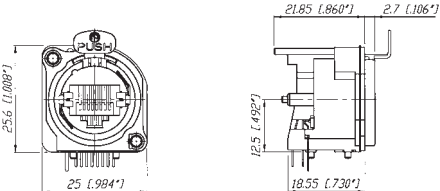
NE8FAV



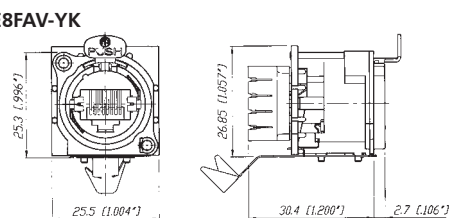
NE8FAV-SD



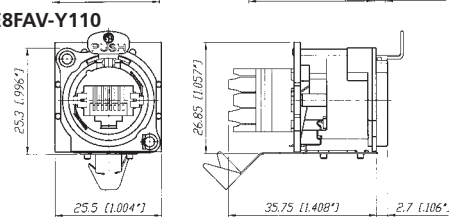
NE8FBH



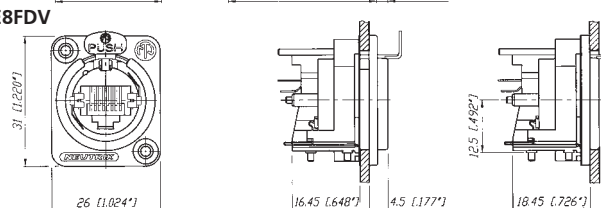
NE8FAV-YK



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

## Feedthrough



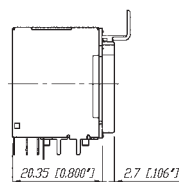
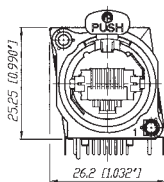
NE8FDP



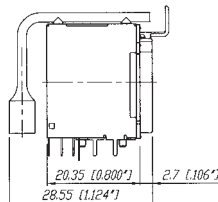
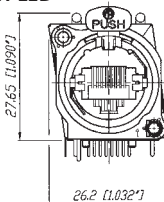
NE8FF

- 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

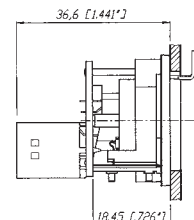
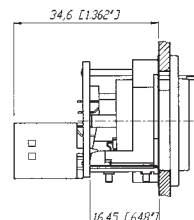
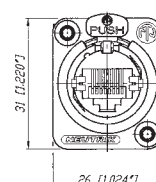
### NE8FBH-S



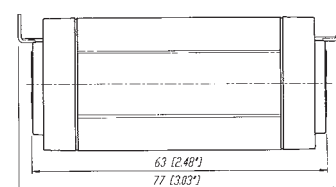
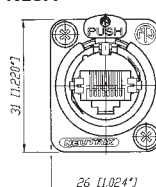
### NE8FBH-LED



### NE8FDP



### NE8FF



Specification		NE8MC* Cable Con.	NE8FA/B* (A + B Series)	NE8FD* (D Series)
<b>Electrical</b>				
Number of contacts		- <sup>1)</sup>	8	8
Rated current per contact	< 1.5 A	- <sup>1)</sup>	●	●
Rated voltage	< 50 V ac	- <sup>1)</sup>	●	●
Contact resistance	< 10 mΩ	- <sup>1)</sup>	●	●
Insulation resistance	> 500 MΩ	- <sup>1)</sup>	●	●
Dielectric strength	> 1'000 V ac rms	- <sup>1)</sup>	●	●
Frequency bandwidth	1 - 100 MHz	- <sup>1)</sup>	●	●
Transmission class acc. TIA / EIA 568B or IEC 11801	CAT 5e	- <sup>1)</sup>	●	● NE8FDH-C5E
	Class D	- <sup>1)</sup>	PCB Versions	PCB Versions
				NE8FDV
<b>Mechanical</b>				
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	- <sup>1)</sup>	NE8*-Y*	NE8*-Y*
Panel thickness	max. 3 mm / 0.12"	-	●	4 mm / 0.16"
<b>Material</b>				
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)	- <sup>1)</sup>	●	●
Contact surface	Au (gal 0.2 μm over Ni plating)	- <sup>1)</sup>	●	●
Locking Element	Ck 67 steel, treated	-	●	●
Bushing	Polyamide (PA 6 15% GR)	●	-	-
Boot	Polyamide (PA 6)	●	-	-
Sealing gasket	EPDM	-	-	SE8FD
<b>Environment</b>				
Operating Temperature	-30°C to +80°C	●	●	●
	-20°C to +60°C	-	-	SE8FD
Protection class	IP54	-	-	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-*

<sup>1)</sup>: 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 RJ 45 plug. RJ 45 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, IP42 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)



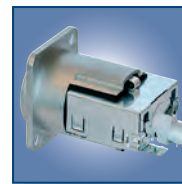
Push Pull locking



IP65 in mated condition



D-shape metal shell



Closed shielding

## CAT6 Patch Cable



NKE6S-\*

## CAT6 Receptacles



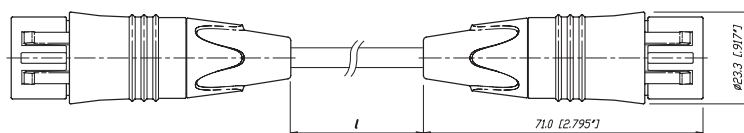
NE8FDY-C6



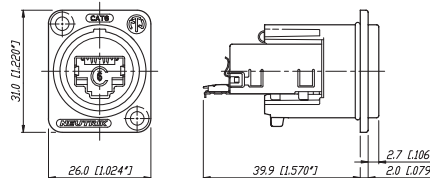
NE8FDY-C6-B

- CAT6 compliant - data rate up to 10 GBit/s
- Dust and water resistant according IP65 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

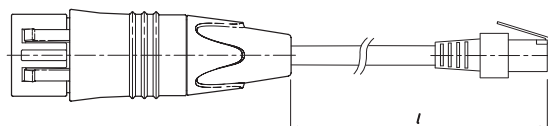
NKE6S-\*



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
Life time (mating cycles)	> 1'000
Wire size	0.5 - 0.65 mm (AWG 24 - AWG 22)
Stranded wire	AWG 26/7 - 22/7
	Operating temperature
	-10°C to +60°C
	Storage temperature
	-40°C to +70°C
	Flammability
	UL94HB
	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 89 / 93
------------------------------

# USB Adapter



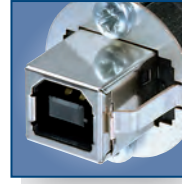
Push Pull locking



USB type B



D-shape metal housing



USB type B



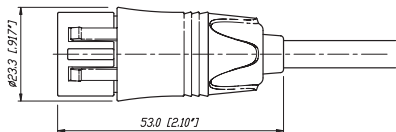
## USB Patch Cable



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



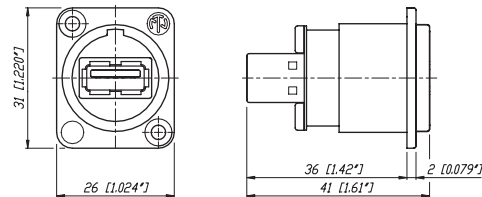
## USB Receptacle



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	•	•

## 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



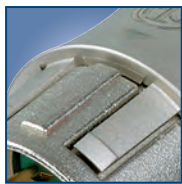
SCDP-\*

DSS-*	Lettering plate for D series, colored plastic (*: 0 - Black, 1 - Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White)
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, IP42 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



# HDMI Adapter



Push Pull locking



HDMI 1.3a



D-shape metal housing



HDMI 1.3a receptacle



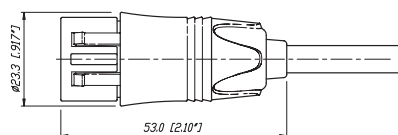
## HDMI Patch Cable



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-\*



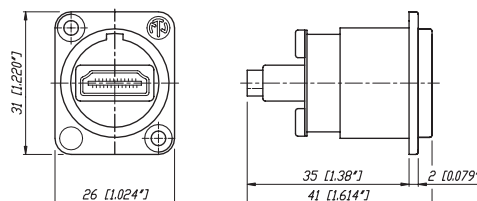
## HDMI Receptacles



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

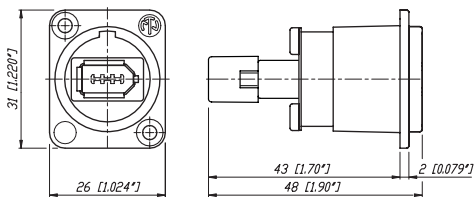
## Firewire Receptacle



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	•	•	•

## 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, IP42 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

