

## 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 or IDC. Colour coding is available for both the cable carriers and the receptacles for ease of identification.

Neutrik® Ethercon® receptacles comply with CAT5e (IDC versions) or Class D (PCB versions), shielded or unshielded according to TIA / EIA 586B and ISO / EC 11801 standard.



## Cable Carriers

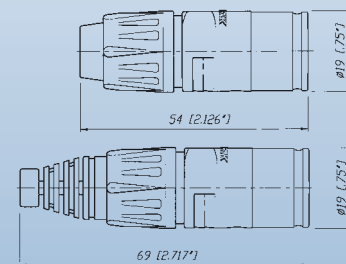


NE8MC

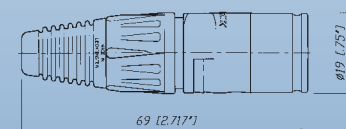
NE8MC-1

- The RJ45 system for harsh and demanding environment
- Cable connector carrier accepts the most common RJ45 plugs
- Cable 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 carrier does not include RJ45 plug

NE8MC



NE8MC-1





## Receptacles



NE8FAV



NE8FBH



NE8FAV-YK



NE8FDV

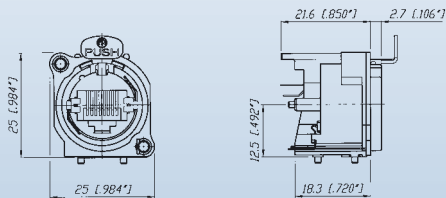


NE8FDV-Y110-B

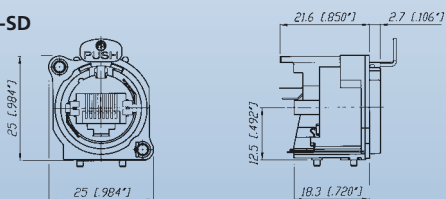
- "A / B" and "D" sized receptacles available in vertical and horizontal PCB or IDC terminations
- Accommodates NE8MC carriers or any standard RJ45 Plug
- D-versions with unified metal flange equal to "D" series-XLR, Speakon®, PowerCon® and BNC Bulkhead

- Receptacles comply with Class D (PCB versions) or CAT 5e (IDC versions) 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)

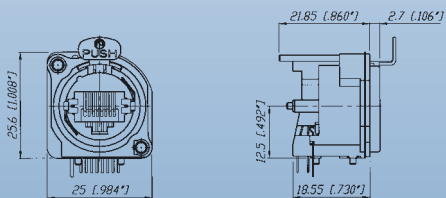
NE8FAV



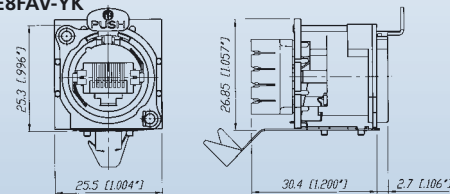
NE8FAV-SD



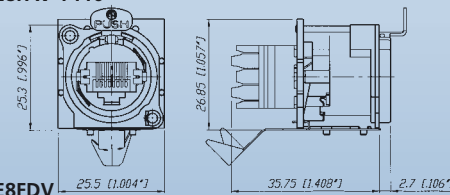
NE8FBH



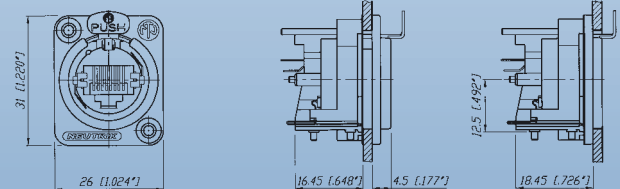
NE8FAV-YK



NE8FAV-Y110



NE8FDV



t o i d e n t i f y t h e o r i g i n a l



## Shielded & Lighted

## Feedthrough



NE8FBH-S



NE8FBH-LED



NE8FDP

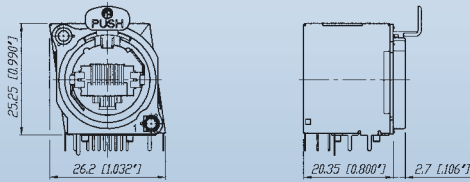


NE8FF

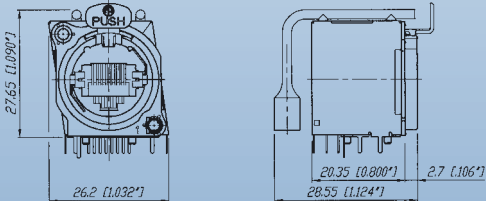
- Comprehensive shielding granted by completely closed metal housing
- Improves EMC performance of appliance even in unmated condition
- Lighted version offers in addition various illuminating indication possibilities by means of two separate light pipes
- Light pipes illuminated by standard 3 mm LEDs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

- Feedthrough 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

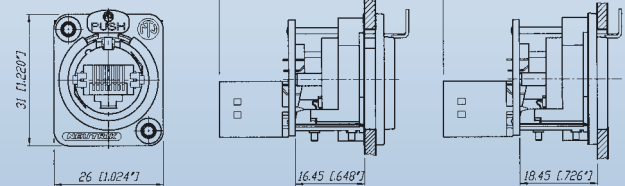
NE8FBH-S



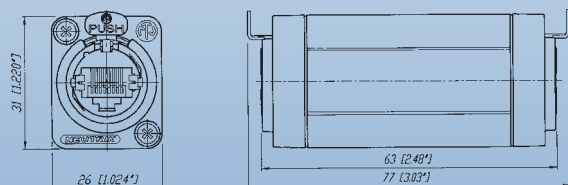
NE8FBH-LED



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>	●	●
	Class D	- <sup>1)</sup>	PCB Versions	PCB Versions
<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	UL94 HB	●	●	●
Solderability complies with IEC 68-2-20		-	PCB Version	PCB Version
Mating screw		-	A screw	E screw
Colour 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 with metal housing and light pipe		NE8FBH-LED	

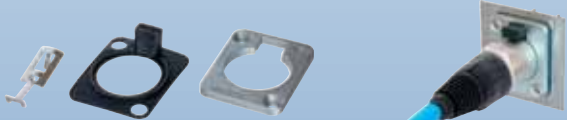
### Feedthrough

NE8FDP	Receptacle (includes 2 mounting screws)
NE8FF	Coupler

### Accessories

							
A screw	E screw	E screw Nickel	ACRF-*	DSS-*	BSE-*	BSX-*	SCDX
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-*	Coloured coding rings for A-shape receptacles (Box of 100 pcs.)						
BSE-*	Coloured boot for cable connector carrier (Box of 100 pcs.)						
BSX-*	Coloured bushing for NE8MC-1 and NE8MC-B-1 cable connectors						
DSS-*	Lettering plate for D series, coloured plastic						
SCDX	Hinged cover seals D-size chassis connectors, IP54 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)



## Receptacles

## Patch Cable

**NEW**



NE8FDY-C6



NE8FDY-C6-B

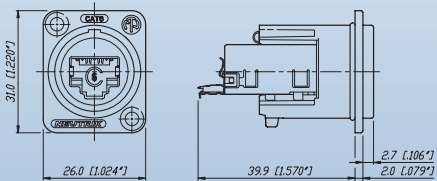
**NEW**



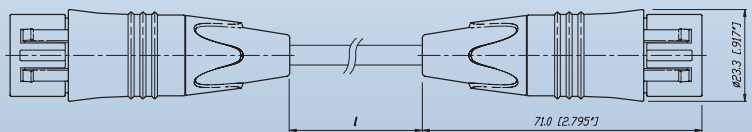
NKE6S-\*

- CAT6 compliant - data rate up to 10 GBit/s
- IP 54 rated - with dust and waterproof resistant sealing
- 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

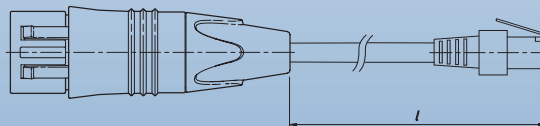
NE8FDY-C6



NKE6S-\*



NKE6S-\*-WOC



## Design Criteria

Neutrik's latest innovation, the new 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 water-proof to IP 54 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 54

## Technical Data

Electrical	Receptacle		Patch cable		Materials	Receptacle		Patch cable	
	Number of contacts:	8	8	8		8	Housing:	Zinc diecast	Zinc diecast
Rated current per contact:	1.5 A	1.5 A	1.5 A	1.5 A	Adapter:	Polyamide PA 6	Polyamide PA 6	Polyamide PA 6	Polyamide PA 6
TIA / EIA rating:	CAT6	CAT6	CAT6	CAT6	Strain relief clamp:	-	-	POM	POM
Input to output resistance:	< 200 mΩ	< 200 mΩ	< 200 mΩ	< 200 mΩ	Contacts:	Bronze CuSn	Bronze CuSn	Bronze CuSn	Bronze CuSn
Insulation resistance:	> 500 MΩ	> 500 MΩ	> 500 MΩ	> 500 MΩ	Contact surface:	Gold	Gold	Gold	Gold
Dielectric strength:	1 kV dc	1 kV dc	1 kV dc	1 kV dc	Bushing:	-	-	PU /PA	PU /PA
NEXT (250 MHz):	48.7 dB	48.7 dB	48.7 dB	48.7 dB					
Attenuation (250 MHz):	0.1 dB	0.1 dB	0.1 dB	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 54			

## Ordering Information

### Patch Cable

NKE6S-*	Standard lengths: 0.5, 1, 3, 5, 10 m
NKE6S-*-WOC	Equipped on one side with metal shell, standard lengths: 0.5, 1, 3, 5, 10 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