



Data Connectors

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.

EtherCon chassis overview

	Class D Fastethernet 10/100 Base-T	CAT 5e Gigabit 1000 Base-T	CAT 6 10 Gigabit (IP54)
PCB mount	NE8FAV NE8FBV NE8FDV NE8FAH NE8FBH*	NE8FDH-C5E	NE8FAV-Y* NE8FDV-Y* NE8FDY-C6
IDC			
Feedthrough		NE8FDP NE8FF	



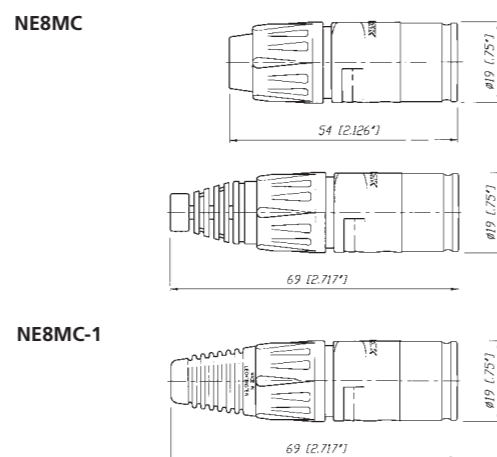
Rugged diecast shell Bushing

Cable Carriers



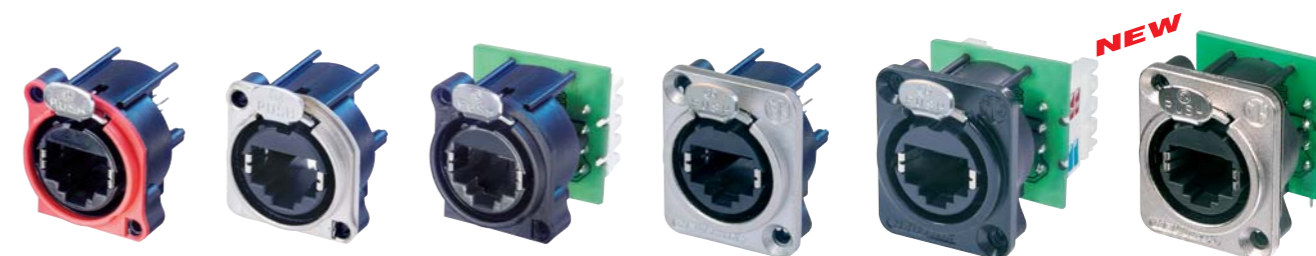
NE8MC NE8MC-1

- 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



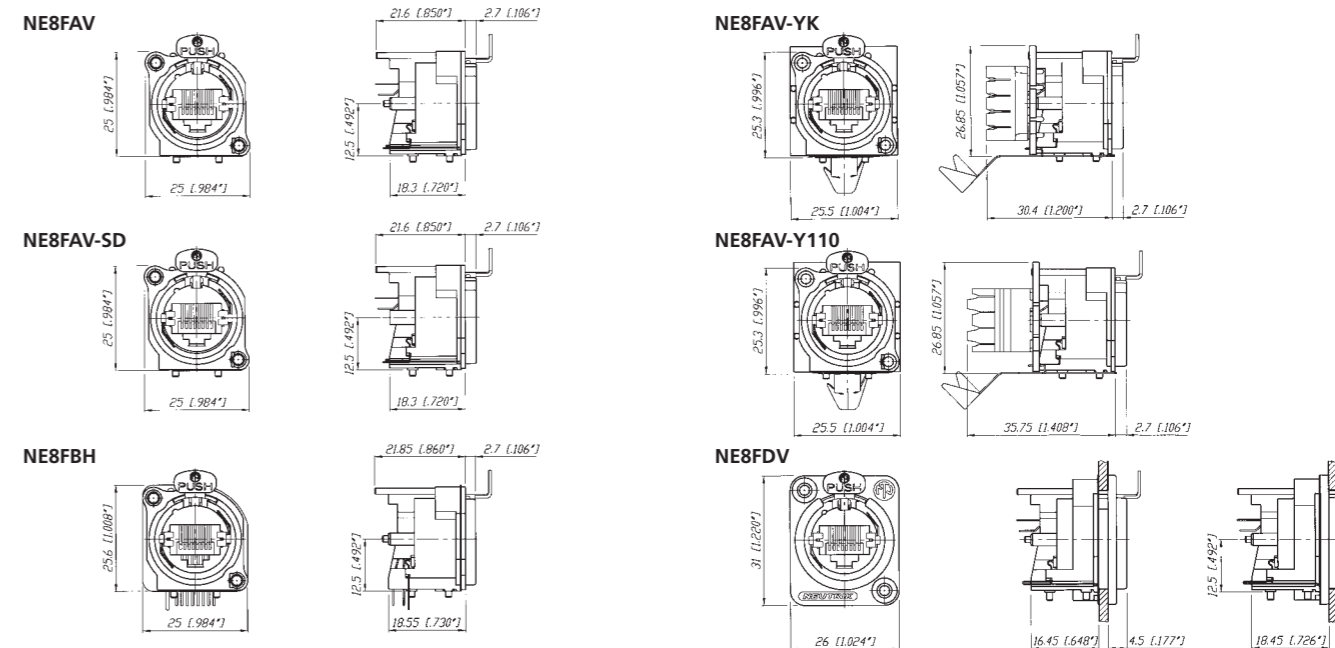
Horizontal PCB Vertical PCB IDC Terminals

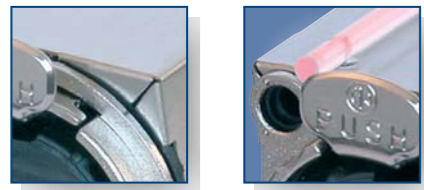
Receptacles



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)





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

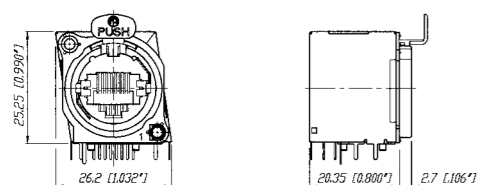
Feedthrough



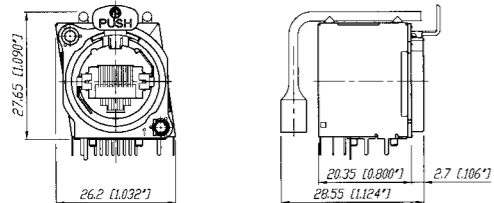
NE8FDP
NE8FF

- 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

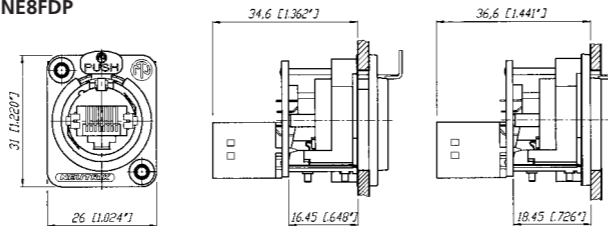
NE8FBH-S



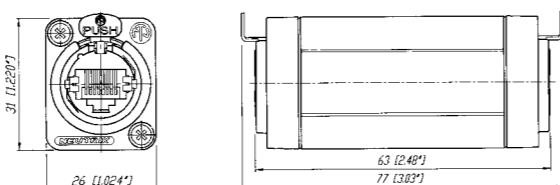
NE8FBH-LED



NE8FDP



NE8FF



Specification	NE8MC* Cable Con.	NE8FA/B* (A + B Series)	NE8FD* (D Series)
Electrical			
Number of contacts	- ¹⁾	8	8
Rated current per contact	> 1.5 A	•	•
Rated voltage	< 50 V ac	•	•
Contact resistance	< 10 mΩ	•	•
Insulation resistance	> 500 MΩ	•	•
Dielectric strength	> 1'000 V ac rms	•	•
Frequency bandwidth	1 - 100 MHz	•	•
Transmission class acc. TIA / EIA 568B or IEC 11801	CAT 5e	•	• 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*
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*
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	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-*

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, Colinox 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	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



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



Closed shielding



Push Pull locking



IP65 in mated condition

CAT6 Receptacles

NEW



NE8FDY-C6



NE8FDY-C6-B

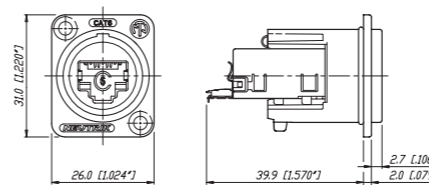
NEW



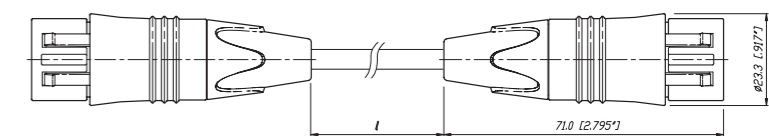
NKE6S-*

- CAT6 compliant - data rate up to 10 GBit/s
- IP 65 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

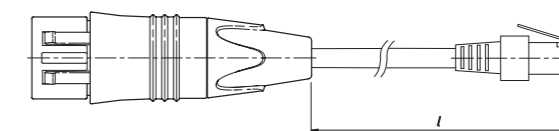
NE8FDY-C6



NKE6S-*



NKE6S-*-WOC



Design Criteria

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, 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



D-shape metal housing



USB type B



D-shape metal housing



IEE 1394 receptacle

USB



NAUSB

- Ideal for audio networking and integration of computer-based equipment into audio systems
- USB gender changer type A-B (B-A)
- Reversible insert offering type A or B on front or rear end
- Universally accepted standard D-shape housing

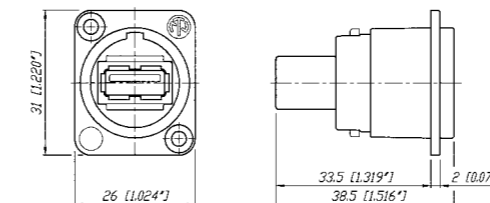
Firewire



NA1394-6-B

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

NAUSB



NA1394-6

