FIBER OPTIC CONNECTION SYSTEM

opticalCON®



TRUST THE ORIGINAL

NEUTRIK®

A brand of the Neutrik Group

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FIBER OPTIC SYSTEMS





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THE APPLICATIONS FOR FIBER ARE EXTENSIVE

A few years ago, the use of fiber optic cabling in professional AV applications was limited to such special cases as HD broadcast cameras. Since then, the AV industry's adoption of fiber optics has increased immensely. Today, fiber optics are widely used for digital signal transmission in pro audio, professional broadcast, and the touring / rental industries.

As pro audio and broadcast equipment has evolved from analog to digital data transmission, the industry has attempted to adapt connectors originally designed for data communication (e.g. RJ45 connectors for electrical transmission). Today, that trend continues with fiber optic connectors. However, conventional data communication fiber optic connectors (ST, SC, LC, etc.) have a risk of failure when they are deployed in AV applications. These conventional data connectors are optimized for permanent, one-time connection.

They were never designed for mobile applications or to handle high mating cycles in harsh environments. Alternative connectors, originally developed for military applications, have not been cost effective and have been deficient either in regards to dust protection and maintenance and/or in their attenuation and return loss characteristics.

Neutrik understood these deficiencies and solved the various issues associated with mobile fiber optic connectivity when it launched its **optical**CON® fiber optic line in 2005. The **optical**CON® design is based on a unique concept which combines low maintenance, high mating cycles, and a safe connection in the field. As a result, **optical**CON® has gained wide acceptance in the pro audio and professional broadcast industries. Both well known equipment manufacturers and key industry users have put their trust in **optical**CON® for many years.



opticalCON®
DESIGN CRITERIA

opticalCON® **ADVANCED DUO** is an LC-based fiber optic connection system which is typically used for equipment connections. With built-in, automatic dust shutters and a rugged housing, the fibers are always dust protected, and high mating cycles in harsh environments are achieved. Compatibility with conventional LC connectors at both the front and the rear of the chassis connectors offers users the choice of using either cost-effective, standard LC patch cables or else ruggedized opticalCON® cables.

Following on the success of opticalCON® ADVANCED DUO, the **optical**CON® **ADVANCED QUAD** series, also an LC-based connector system, doubles the fiber count to offer a rugged point-to-point connection. opticalCON® QUAD has been successfully deployed in applications such as data routing for touring / live rental, including especially OB (outdoor broadcast) applications.

opticalCON® **ADVANCED MTP®** increases the number of fibers in one connector up to 48 and is the ideal solution for point-to-point multi-fiber signal transmission. As an alternative to opticalCON® MTP's single 12-fiber connector, Neutrik offers a wide variety of SPLIT cable configurations. opticalCON® SPLIT offers an alternative for users of opticalCON® DUO or QUAD chassis connectors, providing advantages regarding field assembly and potential repair cost.

Finally, Neutrik's **optical**CON® **LITE** connectors offer a cost effective and lightweight solution. The unique design of opticalCON® LITE's tactical patch cable allows extreme bending without fiber breakage and absorbs high lateral forces. As a result, the opticalCON® LITE is an ideal choice for such permanent and semi-permanent installations as server rooms, patch fields, and indoor cabling.



opticalCON®
CABLE CONNECTORS

opticalCON® LITE



opticalCON® ADVANCED



opticalCON®
CHASSIS CONNECTORS



opticalCON® DUO

2-channel fiber optic connection system



opticalCON® QUAD

4-channel fiber optic connection system



opticalCON® MTP® 12

12-channel fiber optic connection system



opticalCON® MTP® 16

16-channel fiber optic connection system



opticalCON® MTP® 24

24-channel fiber optic connection system



opticalCON® MTP® 48

48-channel fiber optic connection system

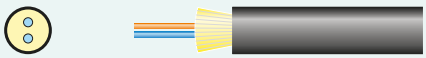


opticalCON®
MOBILE FIELD CABLE RANGE

ADVANCED CABLE

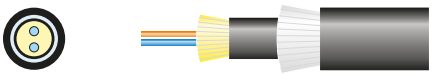
opticalCON® DUO
Rugged and lightweight 2-channel mobile field cable, excellent cable retention due to aramid yarn, black PUR outer jacket, available in multi- and single mode (PC or APC), military approved.

2M / 2S (A)



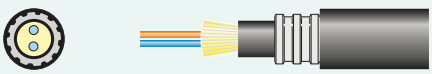
opticalCON® DUO X-TREME
2-channel X-TREME cable offering a cut-proof and rodent resistant double jacket glass yarn armoured cable construction, excellent cable retention due to aramid yarn, black PUR outer jacket.

X2M / X2S (A)



opticalCON® DUO ARMORED
Extra rugged and lightweight stainless steel, jacket absorbs lateral forces up to 200 kg/cm². Ultra flexible due to the special spring shape construction, available in multi- and single mode (PC or APC).

XX2M / XX2S (A)



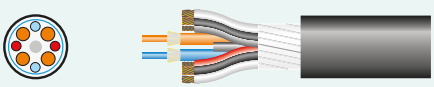
opticalCON® DUO HYBRID
Extra rugged hybrid cable with 2 multimode channels and 4 x 0.75 mm2 copper conductors, GFK strengh member and aramid yarn as cable retention.

H1



opticalCON® DUO SMPTE
SMPTE cable with 2 single mode channels (PC or APC), 2 x AWG 24 and 4 x AWG 20 stranded copper conductors, overall copperbraided shield and stainless steel strength member, 120 kg/km.

S1/S7 (A)



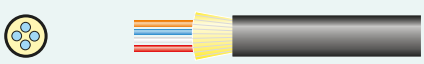
opticalCON® DUO LOW VOLTAGE HYBRID
Ultra flexible, cost effective and lightweight (65 kg/km) low voltage hybrid cable with 2 single mode channels and 2 x AWG 16 copper conductors, aramid yarn cable retention.

S5 (A)



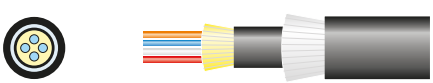
opticalCON® QUAD
Rugged and lightweight 4-channel mobile field cable, excellent cable retention due to aramid yarn, black PUR outer jacket, available in multi- and single mode (PC or APC).

4M / 4S (A)



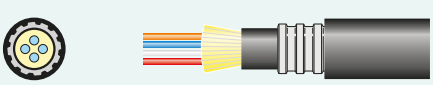
opticalCON® QUAD X-TREME
4-channel X-TREME cable offering a cut-proof and rodent resistant double jacket glass yarn armoured cable construction, excellent cable retention due to aramid yarn, black PUR outer jacket.

X4M / X4S (A)



opticalCON® QUAD ARMORED
Extra rugged and lightweight stainless steel jacket absorbs lateral forces of 200 kg/cm2. Ultra flexible due to the special spring shape construction, available in multi- and single mode (PC or APC).

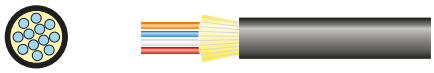
XX4M / XX4S (A)



opticalCON® **MTP® 12 & SPLIT**

Rugged and lightweight 12-channel mobile field cable, excellent cable retention due to aramid yarn, black PUR outer jacket, available in multimode PC and singlemode APC.

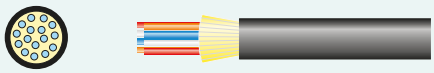
12M / 12SA



opticalCON® **MTP® 16**

Rugged and lightweight 16-channel mobile field cable, excellent cable retention due to aramid yarn, black PUR outer jacket, available in singlemode APC.

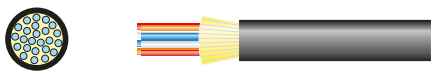
16SA



opticalCON® **MTP® 24**

24-channel mobile field cable with excellent cable PUR outer jacket, available in multimode PC and singlemode APC.

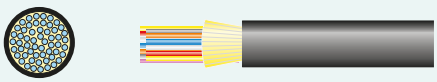
24M / 24SA



opticalCON® **MTP® 48**

Rugged and lightweight 48-channel mobile field cable, excellent cable retention due to aramid yarn, black PUR outer jacket, available in multimode PC.

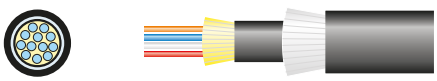
48M



opticalCON® **MTP® 12 X-TREME & SPLIT**

12-channel X-TREME cable offering a cut-proof and rodent resistant double jacket glass yarn armoured cable construction, excellent cable retention due to aramid yarn, black PUR outer jacket.

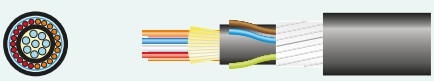
X12M / X12SA



opticalCON® **POWER-SPLIT 1.5**

Extra rugged hybrid cable up to 8 single mode channels and 2 x 1.5 mm² copper conductors, 1.5 mm2 shield, 2 opticalCON cable connectors and 1 powerCON cable connector.

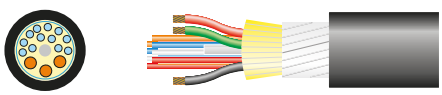
P8M / P8S (A)



opticalCON® **POWER-SPLIT 2.5**

Extra rugged hybrid cable up to 12 single mode or multimode channels and 3 x 2.5 mm² copper conductors, 1 opticalCON cable connector and 1 powerCON TRUE1 TOP cable connector.

P12M / P12S (A)

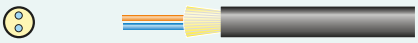


LITE CABLE

opticalCON® **DUO LITE**

Rugged and lightweight 2-channel patch cable, excellent cable retention due to aramid yarn, black PVC outer jacket, available in multi- and singlemode (PC or APC), suitable for permanent and temporary instalation.

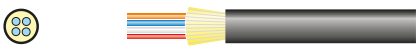
2M-L / 2S (A)-L



opticalCON® **QUAD LITE**

Lightweight tactical patch cable, 4 x 900/125 micron fibers, rugged cable retention due to aramid yarn, black PVC outer jacket, available in multi- and singlemode (PC or APC), designed for permanent or semi-permanent installations.

4M-L / 4S (A)-L



opticalCON® **MTP® 12 LITE**

Rugged tactical patch cable, 12x 250/125 micron fibers, aramid yarn for appropriate cable retention, black PVC outer jacket, available in multimode PC and singlemode (APC), suitable for permanent or semi-permanent installations.

12M-L / 12SA-L



opticalCON® **MTP® 24 LITE**

Rugged tactical patch cable, 24 x 250/125 micron fibers, aramid yarn for appropriate cable retention, black PVC outer jacket, available in multimode PC and singlemode (APC), suitable for permanent or semi-permanent installations.

24M-L / 24SA-L



opticalCON® OPTIONS

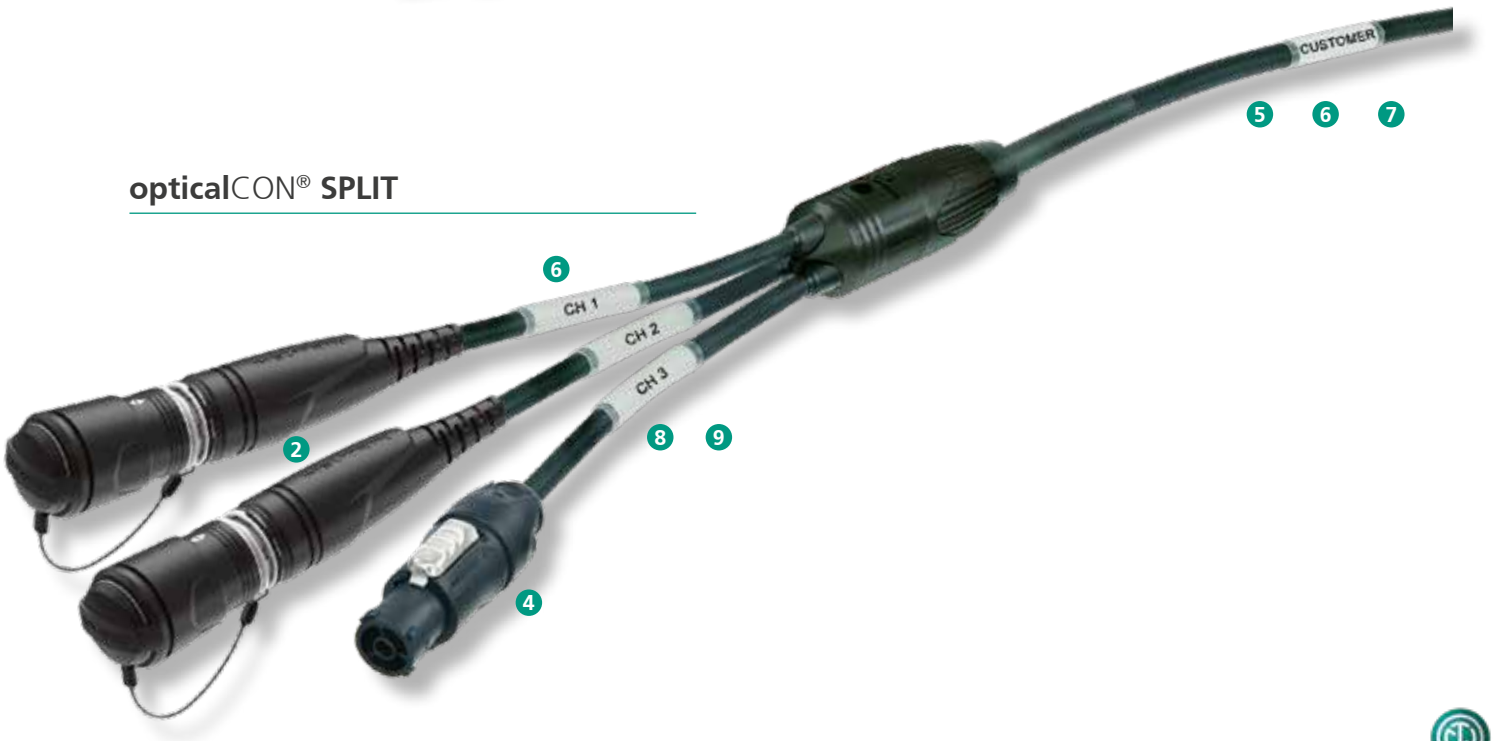
opticalCON® ADVANCED



opticalCON® LITE



opticalCON® SPLIT



1 Rubber protection cover

Noise cancelling rubber protection cover for opticalCON® ADVANCED cable connectors, including front housing.

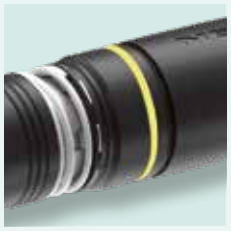


SCNO*X-A-NC

2 Custom color coding

Color coding ring for opticalCON® cable connectors.





NOR-*

* 0-black / 1-brown / 2-red / 3-orange / 4-yellow / 5-green / 6-blue / 7-violet / 8-grey / 9-white

3 Crossed fiber wiring (A-A), (B-B)



Neutrik standard: wiring acc. IEC 11801



4 Power IN / OUT

With the Neutrik powerCON TRUE1 TOP mains connector NAC3MX-W-TOP (IN) / NAC3FX-W-TOP (OUT).

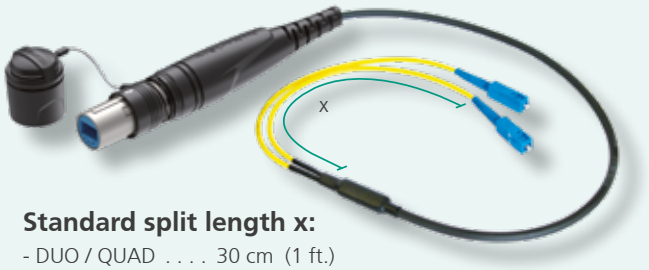


NAC3MX-W-TOP



NAC3FX-W-TOP

5 Breakout assembly



Standard split length x:

- DUO / QUAD . . . . 30 cm (1 ft.)
- MTP® 12. . . . . 60 cm (2 ft.)
- MTP® 16. . . . . 1 m (3 ft.)
- MTP® 24. . . . . 1 m (3 ft.)
- MTP® 48. . . . . 1 m (3 ft.)

6 Custom cable & Split text labeling

- Custom labeling
- 1 or 2 lines
- Split text to color



7 Female assembly on cable drums

Cable extention solution eliminating the need for couplers.

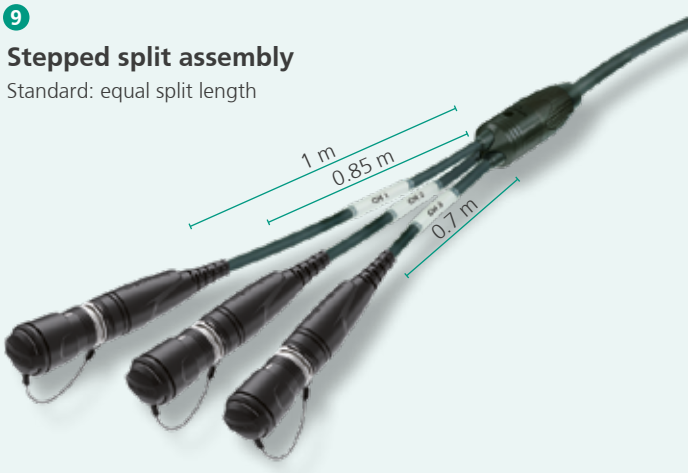


8 Custom split length

Standard: length 1 m

9 Stepped split assembly

Standard: equal split length



opticalCON® ADVANCED CABLE CONNECTORS



FEATURES AND BENEFITS

oC Customized solutions with **optical**CON® Configurator



MOBILE USE

RUGGED

LOW MAINTENANCE

HIGH PERFORMANCE

opticalCON® DUO



NKO2S-A*

- 2 fibers
- 4 copper contacts

opticalCON® QUAD



NKO4S-A*

- 4 fibers

opticalCON® MTP® 12



NKO12*

- 12 fibers

opticalCON® MTP® 16



NKO16SA*

- 16 fibers

opticalCON® MTP® 24



NKO24*

- 24 fibers

opticalCON® MTP® 48



NKO48MA*

- 48 fibers

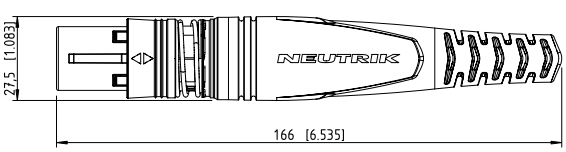
opticalCON® DUO ADVANCED CABLE CONNECTOR ASSEMBLY

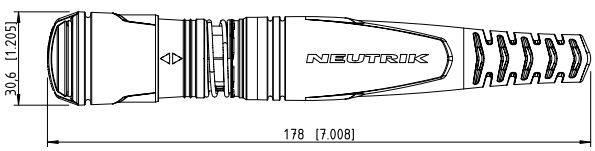


NKO2S-A*

- Ruggedized and dirt-protected 2-channel fiber optic connection system
- Cable connector features rugged metal housing and heavy-duty cable retention
- Automatic sealing shutter with silicone gasket to protect the LC's
- Dust and water resistant according to IP65 in mated condition
- Accommodates standard optical LC-Duplex connectors
- Field repairable
- Easy to clean, no special tools required
- Reliable Push-Pull locking mechanism
- Cable connector comes pre-assembled with a choice of mobile field cables
- Range of 3 hybrid cables for powered applications:
  - SMPTE cable for indoor UHD camera routing applications[1]
  - Hybrid multimode cable
  - Light weight low voltage camera / SM hybrid cable for ENG / SNG applications
- Available in multimode, single mode PC, and single mode APC

1 ... Not compatible to SMPTE 304M standard. Suitable for indoor (studio) camera links considering specific conditions acc. to IEC 60664-1 like pollution degree 1, overvoltage category 1 and rated voltage. For detailed information ask for the White Paper "opticalCON® @ SMPTE Indoor Applications".





TECHNICAL DATA

OPTICAL CABLE CONNECTOR

Optical connector			LC-Duplex
Fiber	Multimode, Singlemode PC / APC		•
Insertion loss	< 0.45 dB / connection		•
min. Return loss	MM PC > 25 dB		•
	SM PC > 50 dB		•
	ESM APC > 60 dB		•
MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 5'000	•
Cable retention force	Fiber only	> 500 N	•
	Hybrid	> 500 N	•
	SMPTE	> 500 N	•
ELECTRICAL			
Number of electrical contacts			4
Rated current	contact 1+ 4	6 A	NKO2M-H1
	contact 1+ 4	6 A	NKO2S(A)-S1/S7
Contact resistance		< 7 mΩ	•
Insulation resistance	- initial:	> 10 GΩ	•
	- after damp heat test:	> 1 GΩ	•
Dielectric strength		1500 V dc	•
Rated voltage	Mains	65 V ac/dc	•[1]
	Sense	50 V ac/dc	•[1]
MATERIAL			
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating		•
Insert / Insulation	Polyamid PA 6, PBT 30% GR, PBT 50% GR		•
Insert color	MM: black, SM PC: blue, SM APC: green		•
Contacts	- male: Brass (CuZn39Pb3)		•
Contact surface	Gold (gal 0.2 µm Au over 2 µm Ni)		•
Strain relief	Brass, Ni plated		•
Bushing	ZnAl4Cu1		•
Boot	EPDM, rubber boot		•
ENVIRONMENTAL			
Operating temp.	-40°C to +75°C		•
Flammability	UL94 HB		•
Solderability	complies with IEC 68-2-20		•
Protection class	in mated condition IP65		•

1 ... Not compatible to SMPTE 304M standard. Suitable for indoor (studio) camera links considering specific conditions acc. to IEC 60664-1 like pollution degree 1, overvoltage category 1 and rated voltage. For detailed information ask for the White Paper "opticalCON® @ SMPTE Indoor Applications".

TECHNICAL DATA

CABLES

		2M	2S (A)	2M-H1	2S(A) - S1/S7	2S (A) - S5	X2M	X2S (A)	XX2M	XX2S (A)
Max. number of fibers		2	2	2	2	2	2	2	2	2
Mode	- Multimode PC	•	-	•	-	-	•	-	•	-
	- Single mode PC / APC	-	•	-	•	•	-	•	-	•
Fiber	- 50 / 125-OM3	•	-	•	-	-	•	-	•	-
	- 9 / 125-G657A2	-	•	-	•	•	-	•	-	•
Bend optimized fiber		•	•	-	•	•	•	•	•	•
Laser optimized fiber		•	N/A	-	N/A	N/A	•	N/A	•	N/A
Copper wires										
	- AWG 16	-	-	-	-	2x	-	-	-	-
	- AWG 18 (0.75 mm²)	-	-	4x	-	-	-	-	-	-
	- AWG 20	-	-	-	4x	-	-	-	-	-
	- AWG 24	-	-	-	2x	-	-	-	-	-
Outer shield										
	- Copper braid	-	-	-	•	-	-	-	-	-
	- Coated glass yarn	-	-	-	-	-	•	•	-	-
	- Stainless steel Jacket	-	-	-	-	-	-	-	•	•
Strength member										
	- GFK	-	-	•	-	-	-	-	-	-
	- Stainless Steel	-	-	-	•	-	-	-	-	-
Cable retention										-
Aramid yarn		•	•	•	-	•	•	•	•	•
	- Crimp type	-	-	-	•	-	-	-	-	-
Overall diameter	(mm)	5.0	5.0	8.9	9.2	7.3	9.2	9.2	10.5	10.5
Jacket	- PUR black matte	•	•	•	•	•	•	•	•	•
Optical connector										
	- LC-Duplex	•	•	•	•	•	•	•	•	•
	- LC based	-	-	-	-	-	-	-	-	-
Min. bending radius	(cm)	5.0	5.0	8.9	10.0	7.5	9.2	9.2	10.5	10.5
Weight	(kg / km)	21	23	78	120	65	79	79	131	133
Attenuation	(dB / km)	@ 850 nm - 3.5 @ 1310 nm - 1.5	@ 1310 nm - 0.5 @ 1550 nm - 0.5	@ 850 nm - 2.5 @ 1300 nm - 0.7	@ 1310 nm - 0.45 @ 1550 nm - 0.5	@ 1310 nm - 0.5 @ 1550 nm - 0.5	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.35 @ 1550 nm - 0.21	@ 850 nm - 3.5 @ 1300 nm - 1.5	@ 1310 nm - 0.5 @ 1550 nm - 0.5
Bandwidth	(MHz-km)	@ 850 nm > 1500 @ 1310 nm > 500		@ 850 nm > 500 @ 1300 nm > 500			@ 850 nm ≥ 1500 @ 1300 nm ≥ 500		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	
Refraction index		@ 850 nm - 1.483 @ 1310 nm - 1.479	@ 1310 nm - 1.458 @ 1550 nm - 1.458	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.468 @ 1550 nm - 1.468	@ 1310 nm - 1.458 @ 1550 nm - 1.458	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467	@ 850 nm - 1.483 @ 1310 nm - 1.479	@ 1310 nm - 1.458 @ 1550 nm - 1.458
Power solution	240V ac / 16A	-	-	-	-	-	-	-	-	-

ORDERING & PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



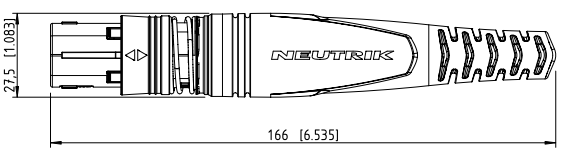
-0... Airspool
-1... opticalCON Case
-2... Drum Schill GT310
-3... Drum Schill GT380
-4... Drum Schill HT582
-5... Drum Schill GT450
-6... Drum Schill SK4812

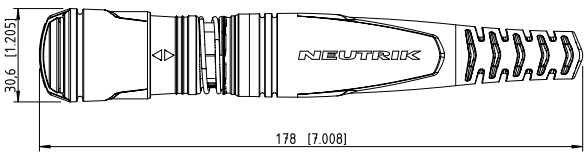
opticalCON® QUAD ADVANCED CABLE CONNECTOR ASSEMBLY



NKO4S-A*

- Ruggedized and dirt-protected 4-channel fiber optic connection system
- For point-to-point multichannel routing
- Cable connector features rugged all-metal housing and heavy-duty cable retention
- Innovative special shutter guarantees low maintenance
- Dust and water resistant according to IP65 in mated condition
- Easy to clean, no special tools required
- Reliable Push-Pull locking mechanism
- Cable connector comes pre-assembled with a choice of mobile field cables
- Field repairable





TECHNICAL DATA

OPTICAL CABLE CONNECTOR

Optical connector		PC
Fiber	Multimode, Singlemode PC / APC	•
Insertion loss	< 0.45 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM PC > 50 dB	•
	SM APC > 60 dB	•

MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 5'000	•
Cable retention force	Fiber only	> 500 N	•

MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1),	•
	black chrome plating	
Insert / Insulation	Polyamid PA 6, PBT 30% GR,	•
	PBT 50% GR	
Insert color	MM: black, SM PC: blue,	•
	SM APC: green	
Strain relief	Brass, Ni plated	•
Bushing	ZnAl4Cu1	•
Boot	EPDM, rubber boot	•

ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA

CABLES

		4M	4S (A)	X4M	X4S (A)	XX4M	XX4S (A)
Max. number of fibers		4	4	4	4	4	4
Mode	- Multimode PC	•	-	•	-	•	-
	- Single mode PC / APC	-	•	-	•	-	•
Fiber	- 50 / 125-OM3	•	-	•	-	•	-
	- 9 / 125-G657A2	-	•	-	•	-	•
Bend optimized fiber		•	•	•	•	•	•
Laser optimized fiber		•	N/A	•	N/A	•	N/A
Outer shield							
	- Copper braid	-	-	-	-	-	-
	- Coated glass yarn	-	-	•	•	-	-
	- Stainless steel Jacket	-	-	-	-	•	•
Strength member							
	- GFK	-	-	-	-	-	-
	- Stainless Steel	-	-	-	-	-	-
Cable retention							
	- Aramid yarn	•	•	•	•	•	•
	- Crimp type	-	-	-	-	-	-
Overall diameter	(mm)	5.8	5.8	9.2	9.2	10.5	10.5
Jacket	- PUR black matte	•	•	•	•	•	•
Optical connector							
	- LC-Duplex	-	-	-	-	-	-
	- LC based	•	•	•	•	•	•
Min. bending radius	(cm)	5.8	5.8	9.2	9.2	10.5	10.5
Weight	(kg / km)	31	31	88	88	141	141
Attenuation	(dB / km)	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.35 @ 1550 nm - 0.21	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.35 @ 1550 nm - 0.21	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.35 @ 1550 nm - 0.21
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	
Refraction index		@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467

ORDERING & PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0...	Airspool
-1...	opticalCON Case
-2...	Drum Schill GT310
-3...	Drum Schill GT380
-4...	Drum Schill HT582
-5...	Drum Schill GT450
-6...	Drum Schill SK4812

opticalCON® MTP® 12 ADVANCED CABLE CONNECTOR ASSEMBLY

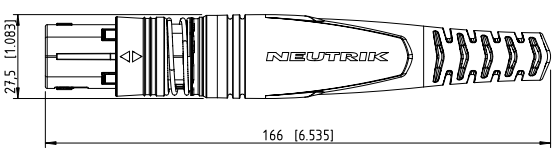


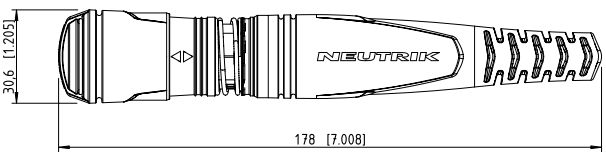
NKO12SA-A*

- Ruggedized and dirt-protected 12-channel fiber optic connection system
- For point-to-point multichannel routing based on MTP® technology
- Cable connector features rugged metal housing and heavy-duty cable retention
- Spherical shutter guarantees low maintenance
- Dust and water resistant according to IP65 in mated condition
- Easy to clean, no special tools required
- Reliable Push-Pull locking mechanism
- Cable connector comes pre-assembled with a choice of mobile field cables
- Wiring Type A
- Available in multimode and single mode APC

The MTP® is a multichannel fiber optic connector based on MPO ("Multifiber Push On") technology (IEC-61754-7). Breakout / Master cables to standard connectors as LC, SC, ST are available in various length.

* ... MTP® is a trademark of US Conec (www.usconec.com)





TECHNICAL DATA

OPTICAL CABLE CONNECTOR

Optical connector		MTP® female
Fiber	Multimode, Singlemode APC	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM APC > 60 dB	•
Wiring	Type A	•

MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 2'500	•
Cable retention force	Fiber only	> 500 N	•

MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1),	•
	black chrome plating	
Insert / Insulation	PA 6	•
	POM, PC, PEI	
Insert color	MM: black,	•
	SM APC: green	
Strain relief	Brass, Ni plated	•
Bushing	ZnAl4Cu1	•
Boot	EPDM, rubber boot	•

ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA

CABLES

		12M	12SA	X12M	X12SA
Max. number of fibers		12	12	12	12
Mode	- Multimode PC	•	-	•	-
	- Single mode APC	-	•	-	•
Fiber	- 50 / 125-OM3	•	-	•	-
	- 9 / 125-G657A2	-	•	-	•
Bend optimized fiber		•	•	•	•
Laser optimized fiber		•	N/A	•	N/A
Outer shield					
	- Copper braid	-	-	-	-
	- Coated glass yarn	-	-	•	•
	- Stainless steel Jacket	-	-	-	-
Strength member					
	- GFK	-	-	-	-
	- Stainless Steel	-	-	-	-
Cable retention					
	- Aramid yarn	•	•	•	•
	- Crimp type	-	-	-	-
Overall diameter	(mm)	8.2	8.2	10.9	10.9
Jacket	- PUR black matte	•	•	•	•
Optical connector					
	- LC-Duplex	-	-	•	•
	- LC based	•	•	•	•
Min. bending radius	(cm)	8.2	8.2	10.9	10.9
Weight	(kg / km)	60	60	103	103
Attenuation	(dB / km)	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.5 @ 1550 nm - 0.3	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.5 @ 1550 nm - 0.3
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	
Refraction index		@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467

ORDERING & PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0...	Airspool
-1...	opticalCON Case
-2...	Drum Schill GT310
-3...	Drum Schill GT380
-4...	Drum Schill HT582
-5...	Drum Schill GT450
-6...	Drum Schill SK4812

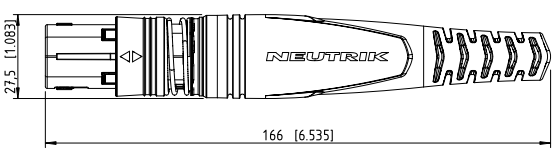
opticalCON® MTP® 16 ADVANCED CABLE CONNECTOR ASSEMBLY

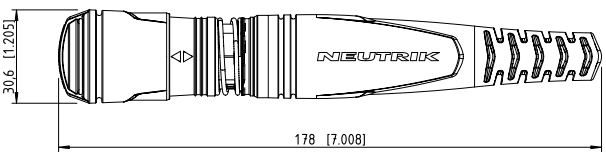


NKO16SA-A*

- Ruggedized and dirt-protected 16-channel fiber optic connection system
- For point-to-point multichannel routing based on MTP® technology
- Cable connector features rugged metal housing and heavy-duty cable retention
- Spherical shutter guarantees low maintenance
- Dust and water resistant according to IP65 in mated condition
- Easy to clean, no special tools required
- Reliable Push-Pull locking mechanism
- Cable connector comes pre-assembled with a choice of mobile field cables
- Wiring Type A
- Available in single mode APC only

* ... MTP® is a trademark of US Conec (www.usconec.com)





TECHNICAL DATA

OPTICAL CABLE CONNECTOR

Optical connector		MTP® female
Fiber	Singlemode APC	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	SM APC > 60 dB	•
Wiring	Type A	•

MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 2'500	•
Cable retention force	Fiber only	> 500 N	•

MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating	•
Insert / Insulation	PA 6 POM, PC, PEI	•
Insert color	SM APC: green	•
Strain relief	Brass, Ni plated	•
Bushing	ZnAl4Cu1	•
Boot	EPDM, rubber boot	•

ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA

CABLES

		16SA
Max. number of fibers		16
Mode	- Multimode PC	-
	- Single mode APC	•
Fiber	- 50 / 125-OM3	-
	- 9 / 125-G657A2	•
Bend optimized fiber		•
Laser optimized fiber		N/A
Outer shield		
	- Copper braid	-
	- Coated glass yarn	-
	- Stainless steel Jacket	-
Strength member		
	- GFK	-
	- Stainless Steel	-
Cable retention		
	- Aramid yarn	•
	- Crimp type	-
Overall diameter	(mm)	7.0
Jacket	- PUR black matte	•
Optical connector		
	- LC-Duplex	-
	- LC based	•
Min. bending radius	(cm)	8.2
Weight	(kg / km)	43
Attenuation	(dB / km)	@ 1310 nm - 0.5 @ 1550 nm - 0.3
Bandwidth	(MHz-km)	
Refraction index		@ 1310 nm - 1.467 @ 1550 nm - 1.467

ORDERING & PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0...	Airspool
-1...	opticalCON Case
-2...	Drum Schill GT310
-3...	Drum Schill GT380
-4...	Drum Schill HT582
-5...	Drum Schill GT450
-6...	Drum Schill SK4812

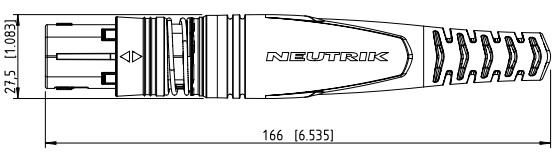
opticalCON® MTP® 24 ADVANCED CABLE CONNECTOR ASSEMBLY

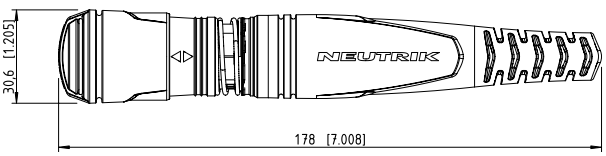


NKO24M-A*

- Ruggedized and dirt-protected 24-channel fiber optic connection system
- For point-to-point multichannel routing based on MTP® technology
- Cable connector features rugged metal housing and heavy-duty cable retention
- Spherical shutter guarantees low maintenance
- Dust and water resistant according to IP65 in mated condition
- Easy to clean, no special tools required
- Reliable Push-Pull locking mechanism
- Cable connector comes pre-assembled with a choice of mobile field cables
- Wiring Type A
- Available in multimode and single mode APC

* ... MTP® is a trademark of US Conec (www.usconec.com)





TECHNICAL DATA

OPTICAL CABLE CONNECTOR

Optical connector			MTP® female
Fiber	Multimode, Singlemode APC		•
Insertion loss	< 0.9 dB / connection		•
min. Return loss	MM PC > 25 dB		•
	SM APC > 60 dB		•
Wiring	Type A		•
MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 2'500	•
Cable retention force	Fiber only	> 500 N	•
MATERIAL			
Shell	Zinc diecast (ZnAl4Cu1),		•
	black chrome plating		
Insert / Insulation	PA 6		•
	POM, PC, PEI		
Insert color	MM: black,		•
	SM APC: green		
Strain relief	Brass, Ni plated		•
Bushing	ZnAl4Cu1		•
Boot	EPDM, rubber boot		•
ENVIRONMENTAL			
Operating temp.	-40°C to +75°C		•
Flammability	UL94 HB		•
Protection class	in mated condition IP65		•

TECHNICAL DATA

CABLES

		24M	24SA
Max. number of fibers		24	24
Mode	- Multimode PC	•	-
	- Single mode APC	-	•
Fiber	- 50 / 125-OM3	•	-
	- 9 / 125-G657A2	-	•
Bend optimized fiber		•	•
Laser optimized fiber		•	N/A
Outer shield			
	- Copper braid	-	-
	- Coated glass yarn	-	-
	- Stainless steel Jacket	-	-
Strength member			
	- GFK	-	-
	- Stainless Steel	-	-
Cable retention			
	- Aramid yarn	•	•
	- Crimp type	-	-
Overall diameter	(mm)	7.0	7.0
Jacket	- PUR black matte	•	•
Optical connector			
	- LC-Duplex	-	-
	- LC based	•	•
Min. bending radius	(cm)	8.2	8.2
Weight	(kg / km)	43	43
Attenuation	(dB / km)	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.5 @ 1550 nm - 0.3
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	
Refraction index		@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467

ORDERING & PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0...	Airspool
-1...	opticalCON Case
-2...	Drum Schill GT310
-3...	Drum Schill GT380
-4...	Drum Schill HT582
-5...	Drum Schill GT450
-6...	Drum Schill SK4812

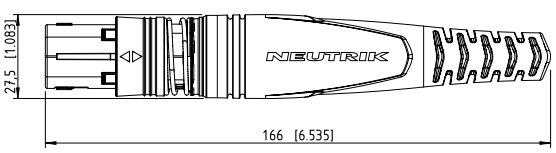
opticalCON® MTP® 48 ADVANCED CABLE CONNECTOR ASSEMBLY

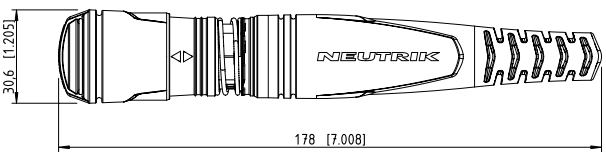


NKO48M-A*

- Ruggedized and dirt-protected 48-channel fiber optic connection system
- For point-to-point multichannel routing based on MTP® technology
- Cable connector features rugged metal housing and heavy-duty cable retention
- Spherical shutter guarantees low maintenance
- Dust and water resistant according to IP65 in mated condition
- Easy to clean, no special tools required
- Reliable Push-Pull locking mechanism
- Cable connector comes pre-assembled with a choice of mobile field cables
- Wiring Type A
- Available in multimode only

* ... MTP® is a trademark of US Conec (www.usconec.com)





TECHNICAL DATA

OPTICAL CABLE CONNECTOR

Optical connector			MTP® female
Fiber	Multimode		•
Insertion loss	< 0.9 dB / connection		•
min. Return loss	MM PC > 25 dB		•
Wiring	Type A		•
MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 2'500	•
Cable retention force	Fiber only	> 500 N	•
MATERIAL			
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating		•
Insert / Insulation	PA 6 POM, PC, PEI		•
Insert color	MM: black		•
Strain relief	Brass, Ni plated		•
Bushing	ZnAl4Cu1		•
Boot	EPDM, rubber boot		•
ENVIRONMENTAL			
Operating temp.	-40°C to +75°C		•
Flammability	UL94 HB		•
Protection class	in mated condition IP65		•

TECHNICAL DATA

CABLES

		48M
Max. number of fibers		48
Mode	- Multimode PC	•
	- Single mode APC	-
Fiber	- 50 / 125-OM3	•
	- 9 / 125-G657A2	-
Bend optimized fiber		•
Laser optimized fiber		•
Outer shield		
	- Copper braid	-
	- Coated glass yarn	-
	- Stainless steel Jacket	-
Strength member		
	- GFK	-
	- Stainless Steel	-
Cable retention		
	- Aramid yarn	•
	- Crimp type	-
Overall diameter (mm)		8.1
Jacket	- PUR black matte	•
Optical connector		
	- LC-Duplex	-
	- LC based	•
Min. bending radius (cm)		12.1
Weight (kg / km)		48
Attenuation (dB / km)		@ 850 nm - 2.5 @ 1300 nm - 0.5
Bandwidth (MHz-km)		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500
Refraction index		@ 850 nm - 1.482 @ 1300 nm - 1.477

ORDERING & PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0... Airspool
-1... opticalCON Case
-2... Drum Schill GT310
-3... Drum Schill GT380
-4... Drum Schill HT582
-5... Drum Schill GT450
-6... Drum Schill SK4812

opticalCON® SPLIT & POWER-SPLIT CABLES

opticalCON® SPLIT



NKOY*

- opticalCON® multichannel solution based on opticalCON® DUO, QUAD or MTP® connectors
- Maximum flexibility, combining up to 12-channel
- Custom configurations available
- 1m SPLIT fanout
- Color coding for channel identification
- Field assembly possible
- XTREME version available

opticalCON® POWER-SPLIT



NKOYP*

powerSPLIT 1.5mm²

- 2-, 4-, 6- and 8-channel assembly available
- Custom made cable, optimized for ENG / SNG applications
- 3 electrical conductors 1.5mm² (cross section)
- Hybrid fiber / copper solution
- Custom Configurations
- Up to 240 V AC (16 A) power possible
- powerCON TRUE1 TOP power connectors

powerSPLIT 2.5mm²

- 2-, 4-, 12- channel assembly available
- Custom made cable, optimized for ENG / SNG applications
- 3 electrical conductors 2.5mm² (cross section)
- Hybrid fiber / copper solution
- Custom configurations
- Up to 240V AC (16 A) power possible
- powerCON TRUE1 TOP power connectors

TECHNICAL DATA

OPTICAL CABLE CONNECTOR

Optical connector		PC
Fiber	Multimode, Singlemode PC / APC	•
Insertion loss	< 0.45 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM PC > 50 dB	•
	SM APC > 60 dB	•

MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 5'000	•
Cable retention force	Fiber only	> 500 N	•

MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1),	•
	black chrome plating	
Insert / Insulation	Polyamid PA 6, PBT 30% GR,	•
	PBT 50% GR	
Insert color	MM: black, SM PC: blue,	•
	SM APC: green	
Strain relief	Brass, Ni plated	•
Bushing	ZnAl4Cu1	•
Boot	EPDM, rubber boot	•

ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA

CABLES

		12M	12S (A)	X12M	X12S (A)	P8M	P8S (A)	P12M	P12S
Max. number of fibers		12	12	12	12	8	8	12	12
Mode	- Multimode PC	•	-	•	-	•	-	•	-
	- Single mode PC / APC	-	•	-	•	-	•	-	•
Fiber	- 50 / 125-OM3	•	-	•	-	•	-	•	-
	- 9 / 125-G657A2	-	•	-	•	-	-	-	•
Bend optimized fiber		•	•	•	•	•	•	•	•
Laser optimized fiber		•	N/A	•	N/A	•	N/A	•	N/A
Copper wires									
	- 3 x 1.5 mm²	-	-	-	-	•	•	-	-
	- 3 x 2.5 mm²	-	-	-	-	-	-	•	•
Outer shield									
	- Copper braid	-	-	-	-	•	•	•	•
	- Coated glass yarn	-	-	•	•	-	-	-	-
	- Stainless steel Jacket	-	-	-	-	-	-	-	-
Strength member									
	- GFK	-	-	-	-	-	-	-	-
	- Stainless Steel	-	-	-	-	-	-	-	-
Cable retention									
	- Aramid yarn	•	•	•	•	•	•	•	•
	- Crimp type	-	-	-	-	-	-	-	-
Overall diameter	(mm)	8.2	8.2	10.9	10.9	11.7	11.7	13.2	13.2
Jacket	- PUR black matte	•	•	•	•	•	•	•	•
Optical connector									
	- LC-Duplex	-	-	•	•	•	•	•	•
	- LC based	•	•	•	•	•	•	•	•
Min. bending radius	(cm)	8.2	8.2	10.9	10.9	12.1	12.1	19.8	19.8
Weight	(kg / km)	60	60	103	103	138	138	220	220
Attenuation	(dB / km)	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.5 @ 1550 nm - 0.3	@ 850 nm - 2.5 @ 1300 nm - 0.5	@ 1310 nm - 0.5 @ 1550 nm - 0.3	@ 850 nm ≤ 2.3 @ 1300 nm ≤ 0.6	@ 1310 nm ≤ 0.33 @ 1550 nm ≤ 0.19	@ 850 nm ≤ 2.3 @ 1300 nm ≤ 0.6	@ 1310 nm ≤ 0.33 @ 1550 nm ≤ 0.19
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500		@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	
Refraction index		@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467	@ 850 nm - 1.482 @ 1300 nm - 1.477	@ 1310 nm - 1.467 @ 1550 nm - 1.467
Power solution	240V ac / 16A	-	-	-	-	•*	•*	•*	•*

* Cable must be unreeled completely before use!

ORDERING & PACKAGING OPTIONS

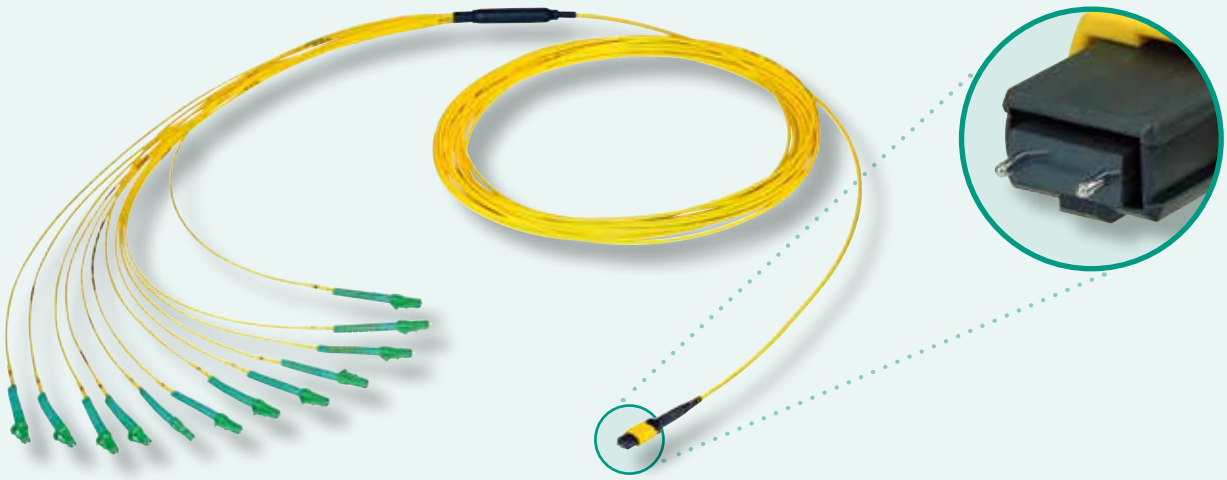
with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0...	Airspool
-1...	opticalCON Case
-2...	Drum Schill GT310
-3...	Drum Schill GT380
-4...	Drum Schill HT582
-5...	Drum Schill GT450
-6...	Drum Schill SK4812

ORDERING INFORMATION BREAKOUT ADAPTER

MTP® BREAKOUT / MASTER CABLE



Custom MTP® patch / master cable (LC / ST / SC)

- Low loss breakout cable
- Grade A premium ferrules
- LC (APC) / SC, ST breakout connector available
- Standard split length: 61 cm
- High performance USCONEC Elite® Male MTP® ferrule
- Interferometer measurement to guarantee high ferrule performance

High performance MTP® breakout cable for permanent and temporary installations. Standard premium grade A LCs (single-mode PC; multimode PC) guarantee low insertion loss values. 61 cm long fan-out for easy fiber breakout to any opticalCON® DUO or QUAD chassis.

NKOB12SA-A-0-**	MTP® 12 / LC – patch cable, Singlemode PC
NKOB12M-A-0-**	MTP® 12 / LC – patch cable, Multimode PC
NKOB24SA-A-0-**	MTP® 24 / LC – patch cable, Singlemode PC
NKOB24M-A-0-**	MTP® 24 / LC – patch cable, Multimode PC

ATTRIBUTE	
BO [ ]	... breakout connectors (ST, SC), APC on request
*	... Fiber optic transmission parameters exceeding standard quality, suitable for measurement applications.
Notice:	Standard for out configuration comes with LC (PC) connectors.

ACCESSORIES

FOR CABLE CONNECTOR



SCNO*X-A



SCNO*X-A-NC



NAO4*L-A



NOR-*

SCNO*X-A	Rubber coated protection cover for opticalCON® cable connectors, including black chrome front housing
SCNO*X-A-NC	Light weight noise cancelling rubber protection cover for opticalCON® cable connectors, including front housing
NAO4ML-A	opticalCON® QUAD LOOP connector, multimode
NAO4SL-A	opticalCON® QUAD LOOP connector, singlemode
NOR-*	Color coding ring for cable connector chassis

1) : find part numbers on www.neutrik.com



NOR-*
* 0-black / 1-brown / 2-red / 3-orange / 4-yellow / 5-green / 6-blue / 7-violet / 8-grey / 9-white

opticalCON®

PULLING SOLUTIONS



Single pulling sock FOPS-SINGLE

Split pulling sock FOPS-SPLIT



Application example: FOPS-SPLIT

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

FOPS-SPLIT	Split cable pulling sock
FOPS-SINGLE	Single cable pulling sock for DUO / QUAD or MTP® cables.

opticalCON® LITE CABLE CONNECTORS



FEATURES AND BENEFITS

oC Customized solutions with **optical**CON® Configurator



SMALL FORM FACTOR

TACTICAL PATCH CABLE

SAFE CONNECTION

COST EFFECTIVE

opticalCON® **DUO LITE**	**optical**CON® **QUAD LITE**	**optical**CON® **MTP® 12 LITE**	**optical**CON® **MTP® 24 LITE**
 NKO2M-L*	 NKO4M-L*	 NKO12M-L*	 NKO24M-L*
• 2 x 1.25 mm LC-ferrules	• 4 x 1.25 mm LC-ferrules	• 12 fiber - MTP® ferrule	• 24 fiber - MTP® ferrule

opticalCON® DUO LITE CABLE CONNECTOR ASSEMBLY



NKO2S-L*

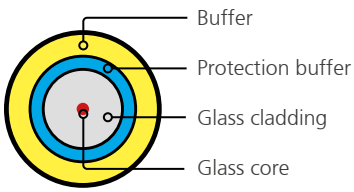


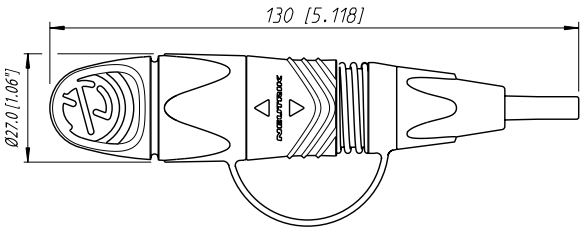
Example: closed rubber protection cap

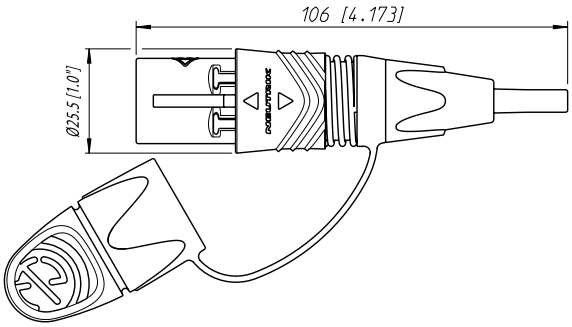
- 2-channel fiber optic connection system
- Cost optimized fiber connection for semi and permanent installations
- Waterproof acc. to IP65 safety standard in mated condition
- Small form factor
- Push-Pull locking mechanism for safe connection
- Easy to clean, no special tools required
- Compatible with standard opticalCON® DUO chassis NO2-4FDW-A*

RUGGED PATCH CABLE

Conventional patch cables are sensitive to excessively tight bending and lateral pressure. Neutrik's rugged opticalCON® LITE patch cables solve these problems via a unique design featuring a protection buffer which allows for tight bending along with increased maximum lateral pressure. These cables are ideal for permanent or semi-permanent applications.







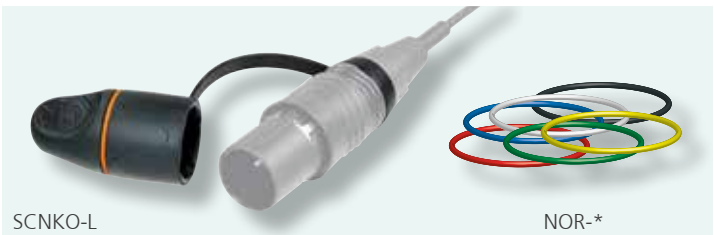
TECHNICAL DATA
OPTICAL CABLE CONNECTOR

Optical connector		LC-Duplex
Fiber	Multimode, Singlemode PC / APC	•
Insertion loss	< 0.45 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM PC > 50 dB	•
	SM APC > 60 dB	•
MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 2'500	•
Cable retention force	> 250 N	•
MATERIAL		
Shell	PBT	•
Insert / Insulation	PBT	•
Strain relief	Brass, Ni plated	•
Bushing	PA6	•
Boot	EPDM, rubber boot	•
Split sleeve	Ceramics	•
ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA
CABLES

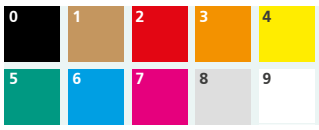
		2M	2S(A)
Max. number of fibers		2	2
Mode	- Multimode PC	•	-
	- Single mode PC / APC	-	•
Fiber	- 50 / 125-OM3	•	-
	- 9 / 125-G657A2	-	•
Bend optimized fiber		•	•
Laser optimized fiber		•	-
Cable retention			
	- Aramid yarn	•	•
	- Crimp type	-	-
Overall diameter	(mm)	3.0	3.0
Jacket	- PUR black matte	•	•
Optical connector			
	- LC-Duplex	-	-
	- LC based	•	•
Min. bending radius	(cm)	3.0	3.0
Weight	(kg / km)	9	9
Attenuation	(dB / km)	@ 850 nm ≤ 3.0 @ 1300 nm ≤ 1.0	@ 1310 nm ≤ 0.35 @ 1550 nm ≤ 0.21
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500
Refraction index		@ 850 nm - 1.481 @ 1300 nm - 1.476	@ 1310 nm - 1.467 @ 1550 nm - 1.468

ACCESSORIES
FOR CABLE CONNECTOR



SCNKO-L NOR-*

SCNKO-L	Rubber dirt protection for opticalCON® LITE cable connector (spare part)
NOR-*	Color coding ring for cable connector chassis



NOR-*
* 0-black / 1-brown / 2-red / 3-orange / 4-yellow / 5-green / 6-blue / 7-violet / 8-grey / 9-white

PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



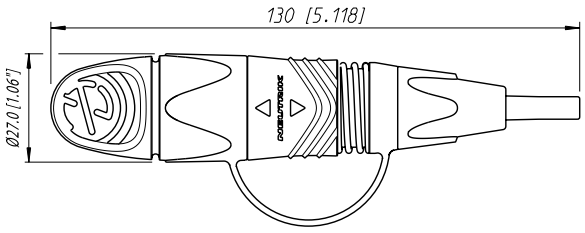
-0... Only airspool packaging available

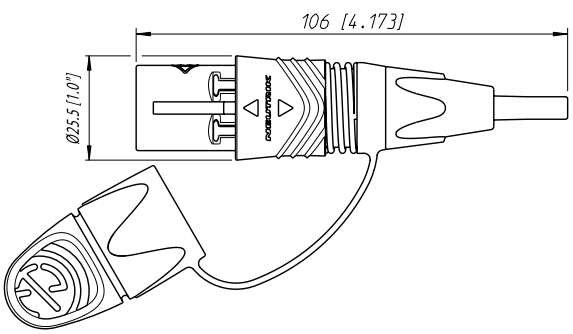
opticalCON® QUAD LITE CABLE CONNECTOR ASSEMBLY



NKO4S-L*

- 4-channel fiber optic connection system
- Waterproof acc. to IP65 safety standard in mated condition
- Push-pull locking mechanism
- Recommended for point-to-point connection
- Easy to clean, no special tools required
- Rugged patch cable
- Compatible with standard opticalCON® ADVANCED NO4FDW-A chassis





TECHNICAL DATA
OPTICAL CABLE CONNECTOR

Optical connector		PC
Fiber	Multimode, Singlemode PC / APC	•
Insertion loss	< 0.45 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM PC > 50 dB	•
	SM APC > 60 dB	•

MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 2'500	•
Cable retention force	> 250 N	•

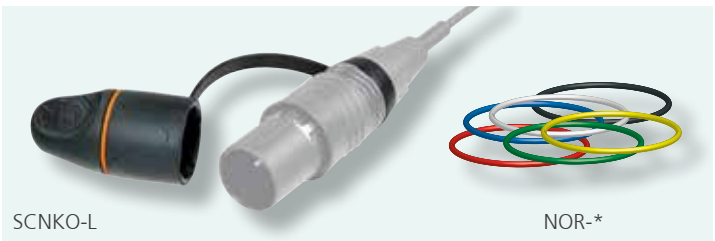
MATERIAL		
Shell	PBT	•
Insert / Insulation	PBT	•
Strain relief	Brass, Ni plated	•
Bushing	PA6	•
Boot	EPDM, rubber boot	•
Split sleeve	Ceramics	•

ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA
CABLES

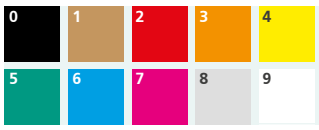
		4M	4S(A)
Max. number of fibers		4	4
Mode	- Multimode PC	•	-
	- Single mode PC / APC	-	•
Fiber	- 50 / 125-OM3	•	-
	- 9 / 125-G657A2	-	•
Bend optimized fiber		•	•
Laser optimized fiber		•	-
Cable retention			
	- Aramid yarn	•	•
	- Crimp type	-	-
Overall diameter	(mm)	3.5	3.5
Jacket	- PUR black matte	•	•
Optical connector			
	- LC-Duplex	-	-
	- LC based	•	•
Min. bending radius	(cm)	3.5	3.5
Weight	(kg / km)	14	12
Attenuation	(dB / km)	@ 850 nm ≤ 3.0 @ 1300 nm ≤ 1.0	@ 1310 nm ≤ 3.0 @ 1550 nm ≤ 1.0
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500
Refraction index		@ 850 nm - 1.481 @ 1300 nm - 1.476	@ 850 nm - 1.481 @ 1300 nm - 1.476

ACCESSORIES
FOR CABLE CONNECTOR



SCNKO-L NOR-*

SCNKO-L	Rubber dirt protection for opticalCON® LITE cable connector (spare part)
NOR-*	Color coding ring for cable connector chassis



NOR-*
* 0-black / 1-brown / 2-red / 3-orange / 4-yellow / 5-green / 6-blue / 7-violet / 8-grey / 9-white

PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0... Only airspool packaging available

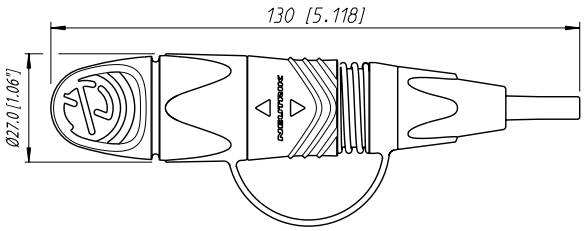
opticalCON® MTP® 12 LITE CABLE CONNECTOR ASSEMBLY

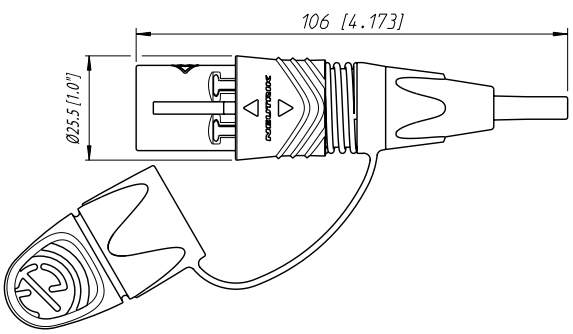


NKO12M-L*

- 12-channel MTP® based fiber optic connection system
- Waterproof acc. to IP65 safety standard in mated condition
- Recommended for multi-signal transmission
- Push-pull locking mechanism
- Custom color coding
- Rugged housing
- Rubber protection cap
- Compatible with standard opticalCON® ADVANCED NO12FDW-A chassis

* ... MTP® is a trademark of US Conec (www.usconec.com)





TECHNICAL DATA
OPTICAL CABLE CONNECTOR

Optical connector		MTP® ELITE female
Fiber	Multimode, Singlemode APC	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM APC > 60 dB	•

MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 1'500	•
Cable retention force	> 250 N	•

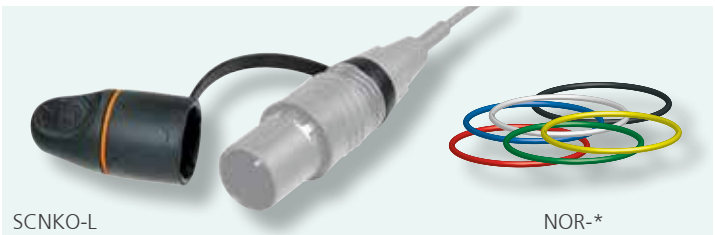
MATERIAL		
Shell	PBT	•
Insert / Insulation	PC, PEI	•
Strain relief	Brass, Ni plated	•
Bushing	PA6	•
Boot	EPDM, rubber boot	•

ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA
CABLES

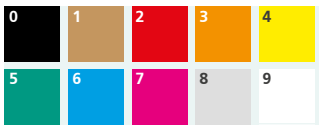
		12M	12SA
Max. number of fibers		12	12
Mode	- Multimode PC	•	-
	- Single mode APC	-	•
Fiber	- 50 / 125-OM3	•	-
	- 9 / 125-G657A2	-	•
Bend optimized fiber		•	•
Laser optimized fiber		•	-
Cable retention			
	- Aramid yarn	•	•
	- Crimp type	-	-
Overall diameter	(mm)	3.5	3.5
Jacket	- PUR black matte	•	•
Optical connector			
	- LC-Duplex	-	-
	- LC based	•	•
Min. bending radius	(cm)	3.5	3.5
Weight	(kg / km)	12.0	12.0
Attenuation	(dB / km)	@ 850 nm ≤ 3.0 @ 1300 nm ≤ 1.0	@ 1310 nm ≤ 3.0 @ 1550 nm ≤ 1.0
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500
Refraction index		@ 850 nm - 1.481 @ 1550 nm - 1.476	@ 1310 nm - 1.481 @ 1550 nm - 1.476

ACCESSORIES
FOR CABLE CONNECTOR



SCNKO-L NOR-*

SCNKO-L	Rubber dirt protection for opticalCON® LITE cable connector (spare part)
NOR-*	Color coding ring for cable connector chassis



NOR-*
* 0-black / 1-brown / 2-red / 3-orange / 4-yellow / 5-green / 6-blue / 7-violet / 8-grey / 9-white

PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0... Only airspool packaging available

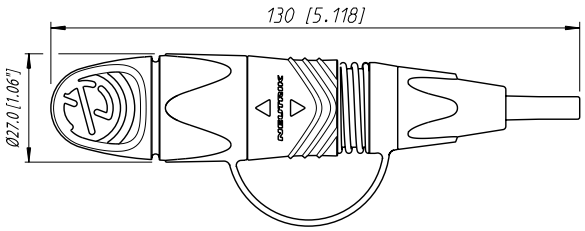
opticalCON® MTP® 24 LITE CABLE CONNECTOR ASSEMBLY

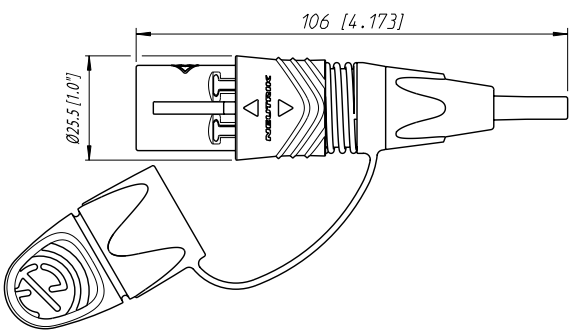


NKO24M-L*

- 24-channel MTP® based fiber optic connection system
- Waterproof acc. to IP65 safety standard in mated condition
- Recommended for multi-signal transmission
- Push-pull locking mechanism
- Custom color coding
- Rugged housing
- Rubber protection cap
- Compatible with standard opticalCON® ADVANCED NO24FDW-A chassis

* ... MTP® is a trademark of US Conec (www.usconec.com)





TECHNICAL DATA
OPTICAL CABLE CONNECTOR

Optical connector		MTP® ELITE female
Fiber	Multimode, Singlemode APC	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM APC > 60 dB	•

MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 1'500	•
Cable retention force	> 250 N	•

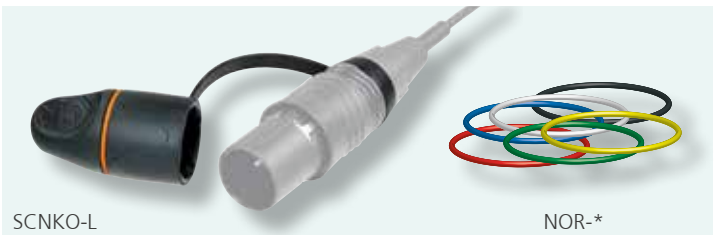
MATERIAL		
Shell	PBT	•
Insert / Insulation	PC, PEI	•
Strain relief	Brass, Ni plated	•
Bushing	PA6	•
Boot	EPDM, rubber boot	•

ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flammability	UL94 HB	•
Protection class	in mated condition IP65	•

TECHNICAL DATA
CABLES

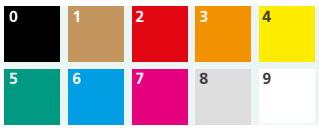
		24M	24SA
Max. number of fibers		24	24
Mode	- Multimode PC	•	-
	- Single mode APC	-	•
Fiber	- 50 / 125-OM3	•	-
	- 9 / 125-G657A2	-	•
Bend optimized fiber		•	•
Laser optimized fiber		•	-
Cable retention			
	- Aramid yarn	•	•
	- Crimp type	-	-
Overall diameter	(mm)	3.5	3.5
Jacket	- PUR black matte	•	•
Optical connector			
	- LC-Duplex	-	-
	- LC based	•	•
Min. bending radius	(cm)	3.5	3.5
Weight (kg / km)		12.0	12.0
Attenuation	(dB / km)	@ 850 nm ≤ 3.0 @ 1300 nm ≤ 1.0	@ 1310 nm ≤ 3.0 @ 1550 nm ≤ 1.0
Bandwidth	(MHz-km)	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500	@ 850 nm ≥ 1500 @ 1300 nm ≥ 500
Refraction index		@ 850 nm - 1.481 @ 1550 nm - 1.476	@ 1310 nm - 1.481 @ 1550 nm - 1.476

ACCESSORIES
FOR CABLE CONNECTOR



SCNKO-L NOR-*

SCNKO-L	Rubber dirt protection for opticalCON® LITE cable connector (spare part)
NOR-*	Color coding ring for cable connector chassis



NOR-*
* 0-black / 1-brown / 2-red / 3-orange / 4-yellow / 5-green / 6-blue / 7-violet / 8-grey / 9-white

PACKAGING OPTIONS

with max. cable length see on the opticalCON® Configurator – **www.neutrik.com**



-0... Only airspool packaging available

opticalCON® ADVANCED CHASSIS CONNECTORS



FEATURES AND BENEFITS



SMALL FORM FACTOR

AUTOMATIC SEALING SHUTTER

SIMPLE INTEGRATION

opticalCON® DUO



NO2-4FDW-A

Standard LC connector



opticalCON® QUAD



NO4FDW-A

Standard LC connector



opticalCON® MTP® 12



NO12FDW-A

MTP® ELITE MALE connnector



opticalCON® MTP® 16



NO16FDW-A

MTP® ELITE MALE connnector



opticalCON® MTP® 24



NO24FDW-A

MTP® ELITE MALE connnector



opticalCON® MTP® 48



NO48FDW-A

MTP® ELITE MALE connnector



opticalCON® DUO ADVANCED CHASSIS CONNECTOR



NO2-4FDW-A

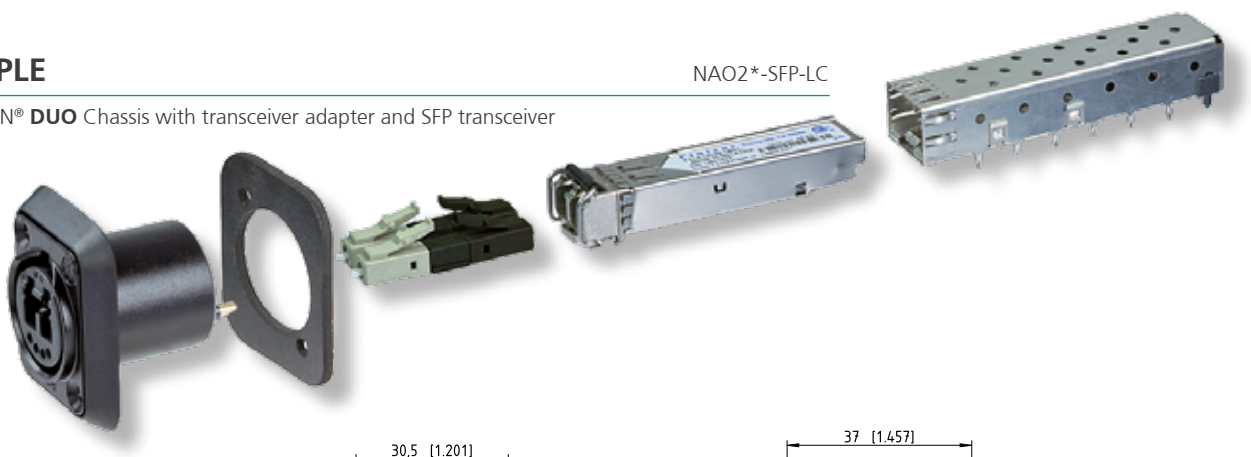


- Ruggedized and dirt-protected 2-channel fiber optic connection system
- Shutter with silicon gasket protects optical connection from dust and dirt
- Suggested OEM equipment connectors due to LC front compatibility
- Accommodates standard LC connectors on the rear for simple installation
- IP65 ingress protection in mated condition with SCDP-*
- Connection on the front side either by rugged opticalCON® or standard LC connector

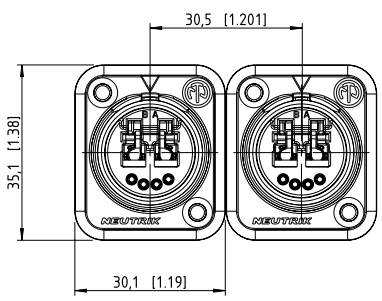
EXAMPLE

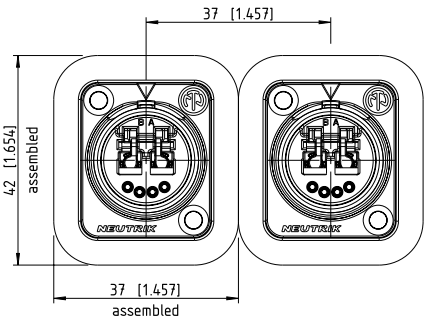
opticalCON® **DUO** Chassis with transceiver adapter and SFP transceiver

NAO2*-SFP-LC



NO2-4FDW-A with SCDP-FX*





NO2-4FDW-A with SCDP-*

TECHNICAL DATA

OPTICAL CHASSIS CONNECTOR

Optical connector			LC-Duplex
			Feedthrough
Fiber	Multimode, Singlemode PC / APC		•
Insertion loss	< 0.45 dB / connection		•
min. Return loss	MM PC > 25 dB		•
	SM PC > 50 dB		•
	SM APC > 60 dB		•
MECHANICAL			
Insertion / withdrawal force		< 45 N	•
Lifetime (mating cycles)		> 5'000	•
ELECTRICAL			
Number of electrical contacts		4 (5)2	•
Rated current	Mains	6 A (contact 1+4)	•
	Sense	3 A	•
Contact resistance		< 7 mΩ	•
Insulation resistance	- initial:	> 10 GΩ	•
	- after damp heat test:	> 1 GΩ	•
Dielectric strength		1500 V dc	•
Rated voltage	Mains	65 V ac/dc	• [1]
	Sense	50 V ac/dc	• [1]
MATERIAL			
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating		•
Insert / Insulation	Polyamid PA 6, PBT 30% GR		•
Contacts	female: Brass (CuZn39Pb3)		•
Contact surface	Gold (gal 0.2 µm Au over 2 µm Ni)		•
Split sleeve	Ceramics		•
ENVIRONMENTAL			
Operating temp.	-40°C to +75°C		•
Flamability	UL94 V-0		•
Solderability	complies with IEC 68-2-20		•
Protection class	IP65 in mated condition in combination with SCDP-*		•

1 ... Not compatible to SMPTE 304M standard. Suitable for indoor (studio) camera links considering specific conditions acc. to IEC 60664-1 like pollution degree 1, overvoltage category 1 and rated voltage. For detailed information ask for the White Paper "opticalCON® @ SMPTE Indoor Applications".
2 ... Shell ground contacts

TECHNICAL DATA

opticalCON® **DUO** CHASSIS

	Type	Plating	Fiber	Solder contacts	Shell ground contact
NO2-4FDW-A	Chassis	Black Chrome	2	4	-
NO2-4FDW-1-A	Chassis	Black Chrome	2	4	1

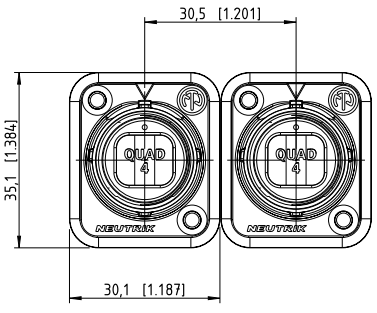
opticalCON® QUAD ADVANCED CHASSIS CONNECTOR



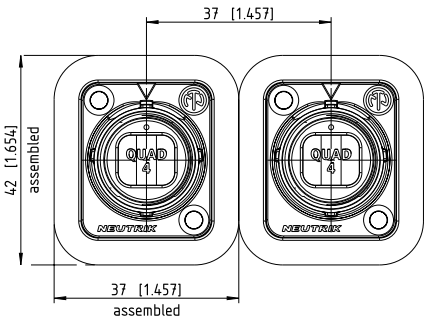
NO4FDW-A



- Ruggedized and dirt-protected 4-channel fiber optic connection system
- For point-to-point multichannel routing
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- IP65 ingress protection in mated condition with SCDP-*
- Accommodates standard LC connectors on the rear for simple installation



NO4FDW-A with SCDP-FX*



NO4FDW-A with SCDP-*

TECHNICAL DATA

OPTICAL CHASSIS CONNECTOR

Optical connector		PC
		Feedthrough
Fiber	Multimode, Singlemode PC / APC	•
Insertion loss	< 0.45 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM PC > 50 dB	•
	SM APC > 60 dB	•
MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 5'000	•
MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating	•
Insert / Insulation	Polyamid PA 6, PBT	•
Split sleeve	Ceramics	•
ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flamability	UL94 V-0	•
Protection class	IP65 in mated condition in combination with SCDP-*	•

TECHNICAL DATA

opticalCON® **QUAD** CHASSIS

	Type	Plating	Fiber	Solder contacts	Shell ground contact
NO4FDW-A	Chassis	Black Chrome	4	-	-

opticalCON® MTP® 12 ADVANCED CHASSIS CONNECTOR

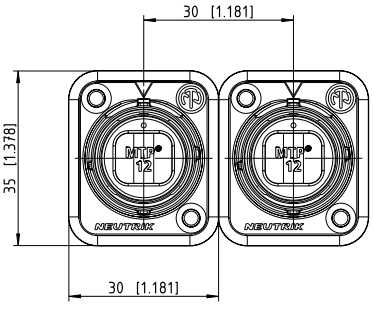


NO12FDW-A

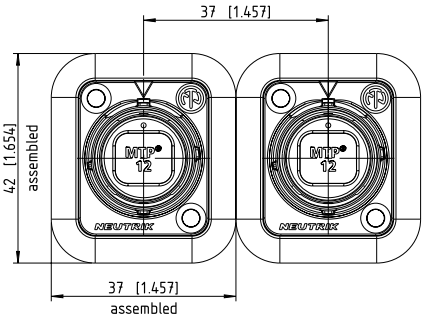


- Ruggedized and dirt-protected 12-channel fiber optic connection system
- For point-to-point multichannel routing
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- IP65 ingress protection in mated condition with SCDP-*
- Accommodates standard MTP® ELITE MALE connectors on the rear for simple installation*

* ... MTP® is a trademark of US Conec (www.usconec.com)



NO12FDW-A with SCDP-FX*



NO12FDW-A with SCDP-*

TECHNICAL DATA

OPTICAL CHASSIS CONNECTOR

Optical connector		MTP® ELITE female
		Feedthrough
Fiber	Multimode, Singlemode APC	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM APC > 60 dB	•
MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 2'500	•
MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating	•
Insert / Insulation	Polyamid PA 6, PBT	•
ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flamability	UL94 V-0	•
Protection class	IP65 in mated condition in combination with SCDP-*	•

TECHNICAL DATA

opticalCON® **MTP® 12** CHASSIS

	Type	Plating	Fiber	Solder contacts	Shell ground contact
NO12FDW-A	Chassis	Black Chrome	12	-	-

opticalCON® MTP® 16 ADVANCED CHASSIS CONNECTOR



NO16FDW-A

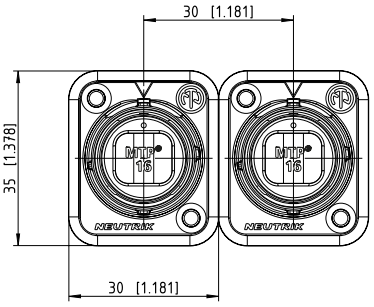


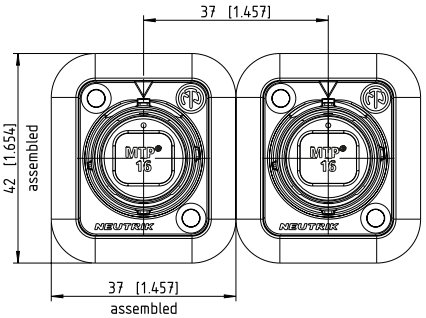
opticalCON MTP®
point to point
multichannel routing

- Ruggedized and dirt-protected 16-channel fiber optic connection system
- For point-to-point multichannel routing
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- IP65 ingress protection in mated condition with SCDP-*
- Accommodates standard MTP® ELITE MALE connectors on the rear for simple installation*

* ... MTP® is a trademark of US Conec (www.usconec.com)

NO16FDW-A with SCDP-FX*





NO16FDW-A with SCDP-*

TECHNICAL DATA

OPTICAL CHASSIS CONNECTOR

Optical connector		MTP® ELITE female
		Feedthrough
Fiber	Singlemode APC	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	SM APC > 60 dB	•
MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 2'500	•
MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating	•
Insert / Insulation	Polyamid PA 6, PBT	•
ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flamability	UL94 V-0	•
Protection class	IP65 in mated condition in combination with SCDP-*	•

TECHNICAL DATA

opticalCON® **MTP® 16** CHASSIS

	Type	Plating	Fiber	Solder contacts	Shell ground contact
NO16FDW-A	Chassis	Black Chrome	16	-	-

opticalCON® MTP® 24 ADVANCED CHASSIS CONNECTOR

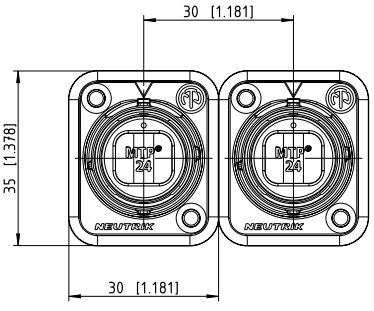


NO24FDW-A

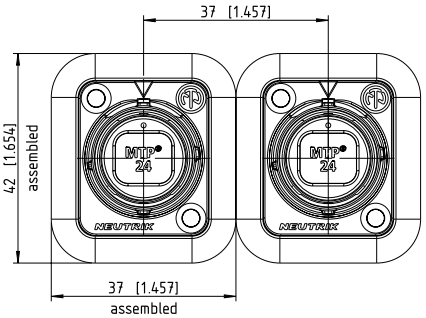


- Ruggedized and dirt-protected 24-channel fiber optic connection system
- For point-to-point multichannel routing
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- IP65 ingress protection in mated condition with SCDP-*
- Accommodates standard MTP® ELITE MALE connectors on the rear for simple installation*

* ... MTP® is a trademark of US Conec (www.usconec.com)



NO24FDW-A with SCDP-FX*



NO24FDW-A with SCDP-*

TECHNICAL DATA

OPTICAL CHASSIS CONNECTOR

Optical connector		MTP® ELITE female
		Feedthrough
Fiber	Multimode, Singlemode APC	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	MM PC > 25 dB	•
	SM APC > 60 dB	•
MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 2'500	•
MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating	•
Insert / Insulation	Polyamid PA 6, PBT	•
ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flamability	UL94 V-0	•
Protection class	IP65 in mated condition in combination with SCDP-*	•

TECHNICAL DATA

opticalCON® **MTP® 24** CHASSIS

	Type	Plating	Fiber	Solder contacts	Shell ground contact
NO24FDW-A	Chassis	Black Chrome	24	-	-

opticalCON® MTP® 48 ADVANCED CHASSIS CONNECTOR



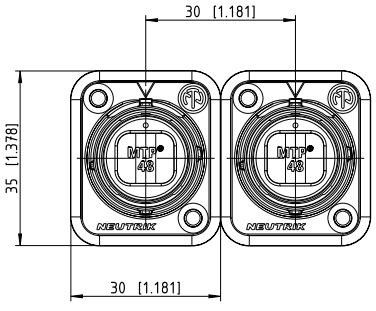
NO48FDW-A

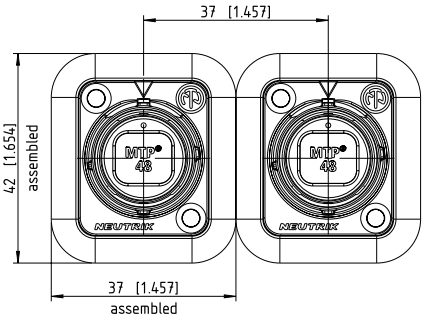


- Ruggedized and dirt-protected 48-channel fiber optic connection system
- For point-to-point multichannel routing
- Laser protective metal shutter seals dust proof with two-component rubber gasket
- IP65 ingress protection in mated condition with SCDP-*
- Accommodates standard MTP® ELITE MALE connectors on the rear for simple installation*

* ... MTP® is a trademark of US Conec (www.usconec.com)

NO48FDW-A with SCDP-FX*





NO48FDW-A with SCDP-*

TECHNICAL DATA

OPTICAL CHASSIS CONNECTOR

Optical connector		MTP® ELITE female
		Feedthrough
Fiber	Multimode	•
Insertion loss	< 0.9 dB / connection	•
min. Return loss	MM PC > 25 dB	•
MECHANICAL		
Insertion / withdrawal force	< 45 N	•
Lifetime (mating cycles)	> 2'500	•
MATERIAL		
Shell	Zinc diecast (ZnAl4Cu1), black chrome plating	•
Insert / Insulation	Polyamid PA 6, PBT	•
ENVIRONMENTAL		
Operating temp.	-40°C to +75°C	•
Flamability	UL94 V-0	•
Protection class	IP65 in mated condition in combination with SCDP-*	•

TECHNICAL DATA

opticalCON® **MTP® 48** CHASSIS

	Type	Plating	Fiber	Solder contacts	Shell ground contact
NO48FDW-A	Chassis	Black Chrome	48	-	-

ORDERING INFORMATION

ACCESSORIES

FOR CHASSIS



SCNO-FDW-A



SCD-NC



SCCD-W

SEALING COVER	
SCNO-FDW-A	Rugged sealing cover for opticalCON chassis connectors
SCD-NC	Rubber sealing cover for opticalCON chassis connectors
SCCD-W	Spring-loaded cover to seals D-size chassis connectors, IP65 rated



SCDP-*



SCDP-FX-*

SEALING GASKETS	
SCDP-*	D-Size sealing gaskets for chassis, color coding according to ANSI/TIA-568-3-D Standard
SCDP-FX-*	D-Size sealing gaskets for chassis, color coding according to ANSI/TIA-568-3-D Standard



SCDP-* 0-black / 1-brown / 2-red / 3-orange / 4-yellow / 5-green / 6-blue / 7-violet / 8-grey / 9-white
SCDP-FX-* 0-black / 2-red / 4-yellow / 5-green / 6-blue / 9-white

COUPLER

WEATHERPROOF **optical**CON® coupler (adapter) for cable extensions.



NAO2S-H1W-A NAO4SAW-A NAO12MW-A NAO16SAW-A NAO24SAW-A NAO48MW-A

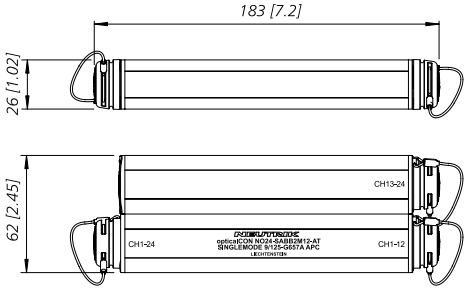
	Type	Colour	Plating	Fiber	Solder contacts	Shell ground contact	Wiring
NAO2M-H1W-A	Coupler	black	black	2 x LC-Duplex Multimode PC	4 x 0.75 mm²	•	ISO/IEC 11801
NAO2S-H1W-A	Coupler	blue	black	2 x LC-Duplex Singlemode PC	4 x 0.75 mm²	•	ISO/IEC 11801
NAO2SA-H1W-A	Coupler	green	black	2 x LC-Duplex Singlemode APC	4 x 0.75 mm²	•	ISO/IEC 11801
NAO2SA-H1W-AX	Coupler	green	black	2 x LC-Duplex Singlemode APC	4 x 0.75 mm²	•	crossed
NAO4MW-A	Coupler	black	black	4 x Multimode PC	-	-	ISO/IEC 11801
NAO4MW-AX	Coupler	black	black	4 x Multimode PC	-	-	crossed
NAO4SW-A	Coupler	blue	black	4 x Singlemode PC	-	-	ISO/IEC 11801
NAO4SW-AX	Coupler	blue	black	4 x Singlemode PC	-	-	crossed
NAO4SAW-A	Coupler	green	black	4 x Singlemode APC	-	-	ISO/IEC 11801
NAO4SAW-AX	Coupler	green	black	4 x Singlemode APC	-	-	crossed
NAO4SW-A-X	Coupler	red	black	4 x Singlemode PC	-	-	ISO/IEC 11801
NAO12MW-A	Coupler	black	black	12 x Multimode PC	-	-	Type A
NAO12SAW-A	Coupler	green	black	12 x Singlemode APC	-	-	Type A
NAO16SAW-A	Coupler	green	black	16 x Singlemode APC	-	-	Type A
NAO24MW-A	Coupler	black	black	24 x Multimode PC	-	-	Type A
NAO24SAW-A	Coupler	green	black	24 x Singlemode APC	-	-	Type A
NAO48MW-A	Coupler	black	black	48 x Multimode PC	-	-	Type A

COUPLER

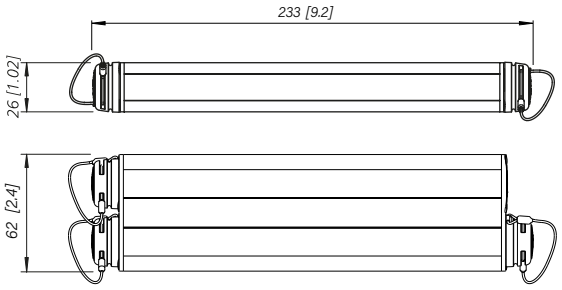
INDOOR **optical**CON® coupler (adapter) for cable extensions (not weatherproof).

	Type	Colour	Plating	Fiber
NO24SABB2M12-A	Coupler	black	black	1 x NO24FDW-A to 2 x NO12FDW-A, Singlemode APC
NO24MBB2M12-A	Coupler	black	black	1 x NO24FDW-A to 2 x NO12FDW-A, Multimode PC
NO48MBB2M24-A	Coupler	black	black	1 x NO48FDW-A to 2 x NO24FDW-A, Multimode PC

NO24SABB2M12-A



NO48MBB2M24-A



ACCESSORIES

FOR TRANSCEIVER ADAPTER







MM Transceiver Adapter grey



SM Transceiver Adapter blue



SM APC Tranceiver Adapter green

The opticalCON® Transceiver Adapter connects an opticalCON® chassis (NO2-4FDW*) and a LC SFP transceiver. NAO2*-SFP-LC consists of two LC-SFP adapters, 2 flat gaskets (1 mm and 2 mm) and one NO2-4FDW-A without copper contacts.

- Eases design integration of the opticalCON® chassis connectors (NO2-4FDW*) in combination with SFP transceivers
- Compatible with all LC SFP transceivers
- Automatic sealing shutter of the opticalCON® avoids transceiver soiling
- Enables use of rugged opticalCON® or conventional LC connectors
- Avoids vandalism, opticalCON® "protects" the transceiver

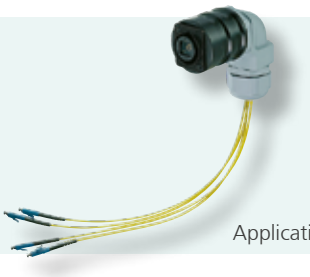
NAO2M-SFP-LC	grey	MM Transceiver Adapter + opticalCON® chassis (NO2-4FDW-A) without copper contacts
NAO2S-SFP-LC	blue	SM Transceiver Adapter + opticalCON® chassis (NO2-4FDW-A) without copper contacts
NAO2SA-SFP-LC	green	SM APC Transceiver Adapter + opticalCON® chassis (NO2-4FDW-A) without copper contacts

NAOBO

BREAKOUT ADAPTER



NAOBO (KIT)



Application example

NAOBO is a flexible chassis mounting and adaption solution with cable strain relief to meet any kind of standard fiber connector (e.g. LC, SC, ST, MTP®). It can be fixed to a rack with a cable tie. The breakout adapter can be mounted straight or angled.

- Flexible chassis mounting solution
- Adaption solution to meetexisting non-opticalCON fiber installation
- NAOBO can be equipped with any D-size chassis connector

NAOBO	Breakout Adapter Kit consisting of: 1 NAOBO plastic housing, 1 counter nut, 1 90° rear shell, 1 PG-gland, 1 cable tie and 2 screws

opticalCON®
BREAKOUT BOXES

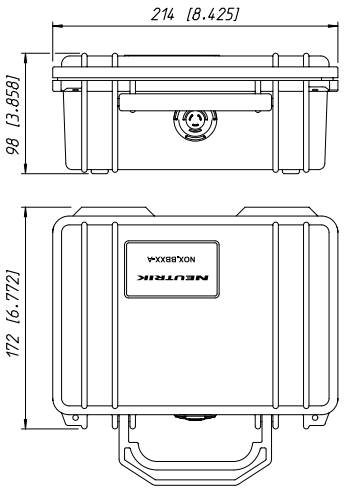


NO12SABB6D-A



- Breakout boxes are used to split multichannel connections such as opticalCON® QUAD and MTP® to either dual or single channels
- Dust and waterproof according to IP65 in mated condition
- Dust and waterproof according to IP67 when closed for transport

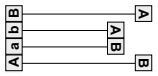
Breakout Box

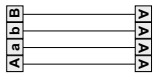


BREAKOUT BOX

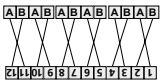
for **optical**CON® QUAD & MTP®

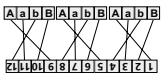
NO4SBB2D-A	1 x NO4FDW-A to 2 x NO2-4FDW-A, Singlemode PC
NO4SABB2D-A	1 x NO4FDW-A to 2 x NO2-4FDW-A, Singlemode APC
NO4MBB2D-A	1 x NO4FDW-A to 2 x NO2-4FDW-A, Multimode PC
NO4SBB4D-A	1 x NO4FDW-A to 4 x NO2-4FDW-A, Singlemode PC
NO4SABB4D-A	1 x NO4FDW-A to 4 x NO2-4FDW-A, Singlemode APC
NO4MBB4D-A	1 x NO4FDW-A to 4 x NO2-4FDW-A, Multimode PC





NO12SAABB6D-A	1 x NO12FDW-A to 6 x NO2-4FDW-A, Singlemode APC to APC
NO12SABB6D-A	1 x NO12FDW-A to 6 x NO2-4FDW-A, Singlemode APC to PC
NO12MBB6D-A	1 x NO12FDW-A to 6 x NO2-4FDW-A, Multimode PC
NO12SAABB3Q-A	1 x NO12FDW-A to 3 x NO4FDW-A, Singlemode APC to APC
NO12SABB3Q-A	1 x NO12FDW-A to 3 x NO4FDW-A, Singlemode APC to PC
NO12MBB3Q-A	1 x NO12FDW-A to 3 x NO4FDW-A, Multimode PC





PANEL SOLUTIONS
19“ D-SHAPE Z-PANELS & PLATES

NZPF1RU

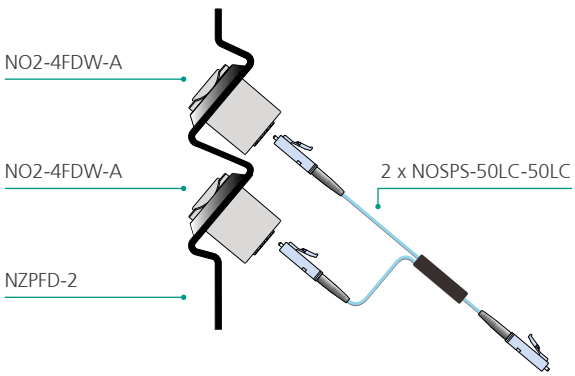


NZPF3RU

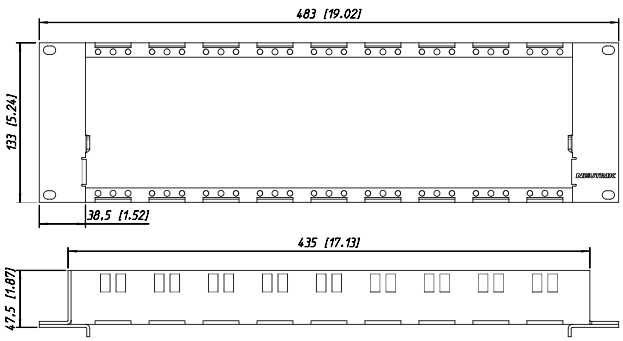
- Space saving design, ideal for cramped rack applications such as OB truck I/O panels
- Frame plate can be loaded with opticalCON® DUO or QUAD plus E2000 or ST or SC connectors
- Frames can be equipped with frame plates (D-shape) or blind plates
- Ideal cable bend protection
- 1 RU or 3 RU frame

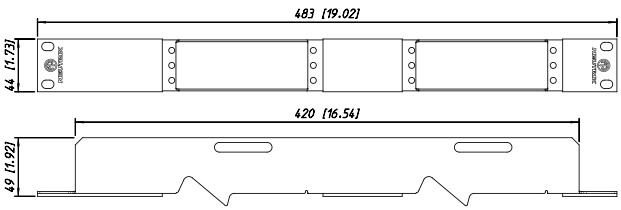
APPLICATION EXAMPLE

FOR **power**MONITOR®



Panel frame 3RU

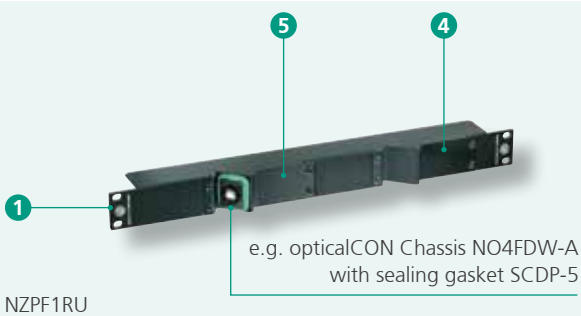




Panel frame 1RU

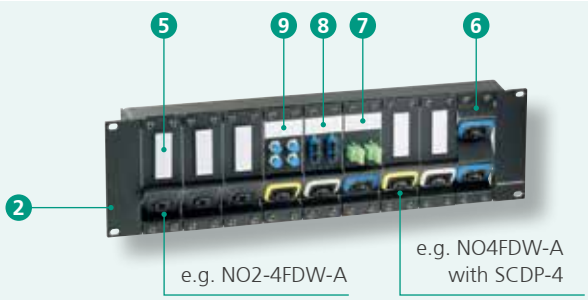
Z-PANELS

PANEL FRAME 1RU

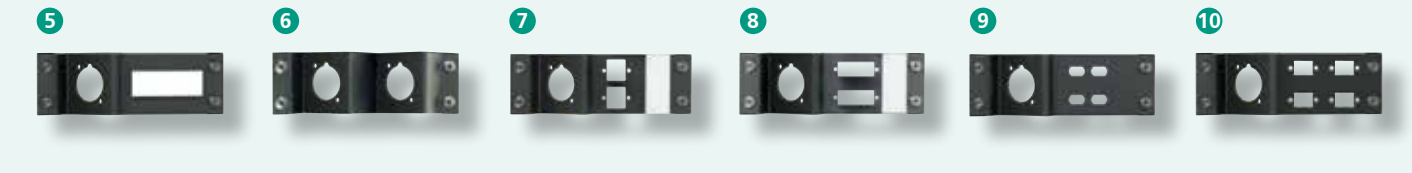


NZPF1RU

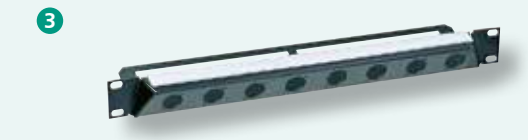
PANEL FRAME 3RU



NZPF3RU



ANGLED RACK PANEL



NZP1RU-8

SPLITTER



NOSPS-50LC-50LC

PANEL FRAME	
1 NZPF1RU	Panel frame 1RU for opticalCON® panel frames
2 NZPF3RU	Panel frame 3RU for opticalCON® panel frames
3 NZP1RU-8	Panel 1RU, 30° forward-turned and offers 8 x D-shape cutouts with M3 threaded fastening holes
3 NZP1RU-12	Panel 1RU, 30° forward-turned and offers 12 x D-shape cutouts with M3 threaded fastening holes

PANEL PLATE	
4 NZPFBP	Panel frame blind plate
5 NZPFD	Panel frame plate for opticalCON® chassis connector
6 NZPFD-2	Panel frame plate 2 x D-shape cutouts (works only on NZPF3RU Panel)
7 NZPFD-4E	Panel frame plate 1 x D-shape cutout, 2 E2000 compact chassis cutouts
8 NZPFD-4SC	Panel frame plate 1 x D-shape cutout, 2 SC compact chassis cutouts
9 NZPFD-4ST	Panel frame plate 1 x D-shape cutout, 4 ST chassis cutouts
10 NZPFD-4SC-S	Panel frame plate 1 x D-shape cutout, 4 SC simplex cutouts

SPLITTER	
11 NOSPM-LC50-LC50	Multimode 1 x 2 splitter LC*s
11 NOSPS-LC50-LC50	Singlemode PC 1 x 2 splitter LC*
	* ... other connectors (SC, ST, E200) on request

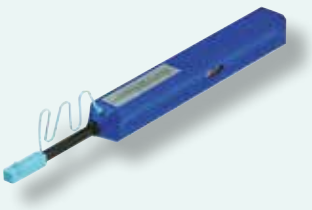
ORDERING INFORMATION

FIBER OPTIC

MEASUREMENT & CLEANING KIT



CAS-FOCD-ADV



FOCD-DC125/250



FOCD-DCM



FOCD-CF



FOMD-TC-SM1550

CAS-FOCD-ADV	Fiber Optic Cleaning Devices – CASE contains hand microscope, opticalCON measurement adapter, cleaning set	
	FOCD-CF 1)	Cleaning Fluid
	FOCD-DC125 1)	DRY Cleaner 1.25 mm
	FOCD-DC250 1)	DRY Cleaner 2.5 mm
	FOCD-DCM	DRY Cleaner MTP®, cleaning brush for guidance holes
	FOMD-TC-SM1550	Transceiver 1550 nm singlemode

1) ... refill consumable, in CAS-FOCD included

CABLE CONNECTOR

CLEANING ACCESSORIES



FOCD-STD



FOCD-STQ



FOCD-STM

- Enhanced inspection and cleaning procedure
- Lockable with opticalCON® cable connector
- Compatible with conventional cleaning and inspection equipment

FOCD-STD	Service tool for opticalCON® DUO
FOCD-STQ	Service tool for opticalCON® QUAD
FOCD-STM	Service tool for opticalCON® MTP®

CHASSIS CONNECTOR

CLEANING ACCESSORIES



FOCD-STC



FOID-STQC

FOCD-STC	Service tool for opticalCON® DUO chassis connector NO2-4FDW-*A / opticalCON® MTP® chassis connector NO12FDW-A, NO16FDW-A, NO24FDW-A and NO48FDW-A
FOID-STQC	Service tool for opticalCON® QUAD chassis connector NO4FDW-A

ORDERING INFORMATION

opticalCON®

CONNECTOR FIELD ASSEMBLY



- Neutrik opticalCON® field assembly kit
- Based on Corning UniCam pre-polished LC connectors
- No additional tooling required
- Requires completion of a certified Neutrik opticalCON® field assembly training
- Find more details on www.neutrik.com

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