



CAMERA CONNECTOR SYSTEM

DRAGONFLY

opticalCON®

**TRUST
THE
ORIGINAL**

NEUTRIK®

A brand of the Neutrik Group



DRAGONFLY

opticalCON®



CAMERA CONNECTOR

Neutrik's new fiber optic connector series offers advanced lens technology for Broadcast and AV Market.

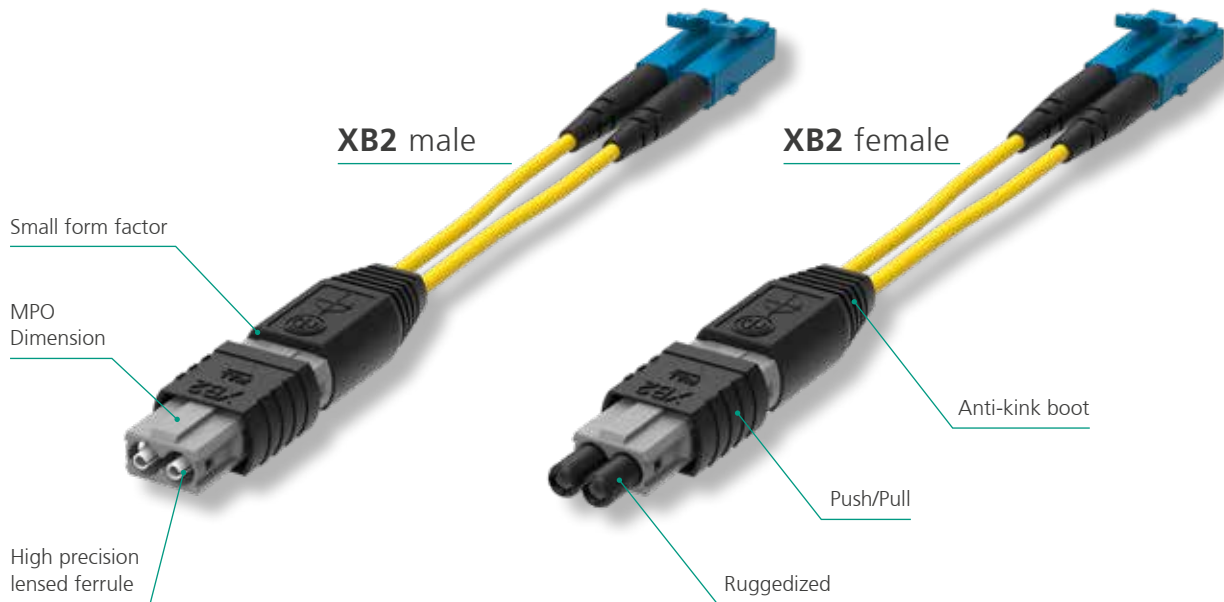
DRAGONFLY is more robust, reliable and easier to maintain than common hybrid camera signal transmission systems. With technology based on fiber lenses and fusion splicing, Neutrik's DRAGONFLY achieves an extremely robust signal with minimal loss. opticalCON DRAGONFLY combines all the advantages of lens technology and makes it competitive with physical contact connectivity.

The DRAGONFLY connector offers long life with very low maintenance. It can also withstand harsh and demanding environments and is dust and moisture insensitive. Additionally, DRAGONFLY is robust against vibration and therefore has low potential for damage. And if there ever is a problem, DRAGONFLY is field repairable. With this new technology, DRAGONFLY provides a complete solution for the Broadcast and AV Market.



**TRUE
OUTDOOR
PROTECTION**

CORE TECHNOLOGY EXPANDED BEAM

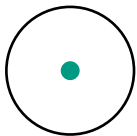


DRAGONFLY is based on the patented XB2-Technology. Its innovative fusion splice high-performance lens transmits UHD 4K and 8K signals with very low loss as the signal surface of the

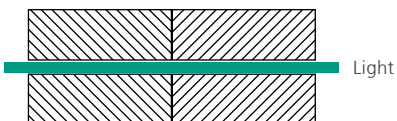
XB2 lens is 322 times bigger than physical contact surfaces. This further results in low insensitivity against dust and dirt.

STANDARD PHYSICAL CONTACT

Single Mode

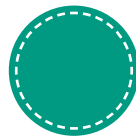


$\varnothing = 9 \mu\text{m}$
 $A = 64 \mu\text{m}^2$
 Factor A = 1



XB2 LENSED SOLUTION

Single Mode



$\varnothing = 162 \mu\text{m}$
 $A = 20.612 \mu\text{m}^2$
 Factor A = 322



DRAGONFLY is a ruggedized and low maintenance hybrid cable connector for indoor and outdoor use.



INNOVATIVE AND FUTURE PROOF

- fusion splice technology – field repairable
- High performance – low loss
- Consistent quality
- 100% reliable even at extreme temperature fluctuations
- Permanent connection

SIMPLE AND EFFICIENT

- hybrid connection – power and data over one connection
- Low maintenance interval
- Easy switching to DRAGONFLY – fits into standardized cutouts
- Easy cleaning with compressed air and water
- Competitive price

ROBUST AND RELIABLE

- Extremely robust system
 - Reliable push/pull locking mechanism
 - Dust and waterproof according to IP68
 - Proven anti-kink boot design
 - Long life – 10.000 mating cycles
-



TRUE OUTDOOR PROTECTION



UV



IP68



CORROSION

The highly innovative entertainment industry is permanently evolving accompanied by increasing demands on interconnection systems. Particularly environmentally sealed connectors are highly requested for heavy-duty and harsh environment applications of entertainment equipment like Broadcast, PA systems, signs and LED screens or lightings.



Neutrik took up the challenge and developed a new line of TRUE OUTDOOR PROTECTION (TOP) products for demanding outdoor applications. This new range includes the popular **powerCON** TRUE1, **etherCON**, XLR series and **opticalCON** DRAGONFLY and ensure highest reliability and very long lifetime in the outdoor applications.

opticalCON DRAGONFLY was developed and tested in accordance to UL50E and IEC60529. UL50E and IEC60529 are the most common and globally recognized for outdoor applications. The performed tests confirmed **opticalCON** DRAGONFLY's very high resistance against water and dust ingress, ultraviolet light and corrosion.

FEATURES AND BENEFITS



Low maintenance and easy to clean

High performance – low loss

Dust and waterproof according to IP68 in mated condition

Reliable push/pull locking mechanism



Fusion splice technology – field repairable

hybrid connection – power and data

Long life – 10 000 mating cycles

Proven anti-kink boot design

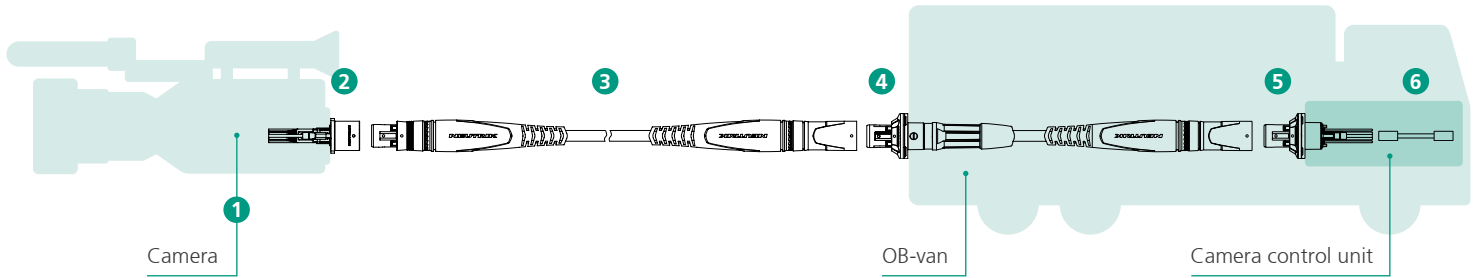


DRAGONFLY APPLICATION

*The opticalCON DRAGONFLY system
is the perfect solution for live broadcast
productions.*

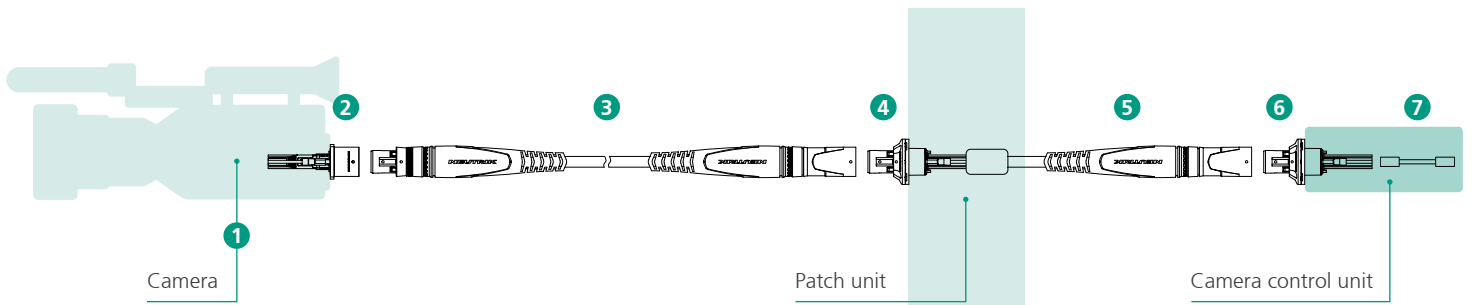


OB CONFIGURATION



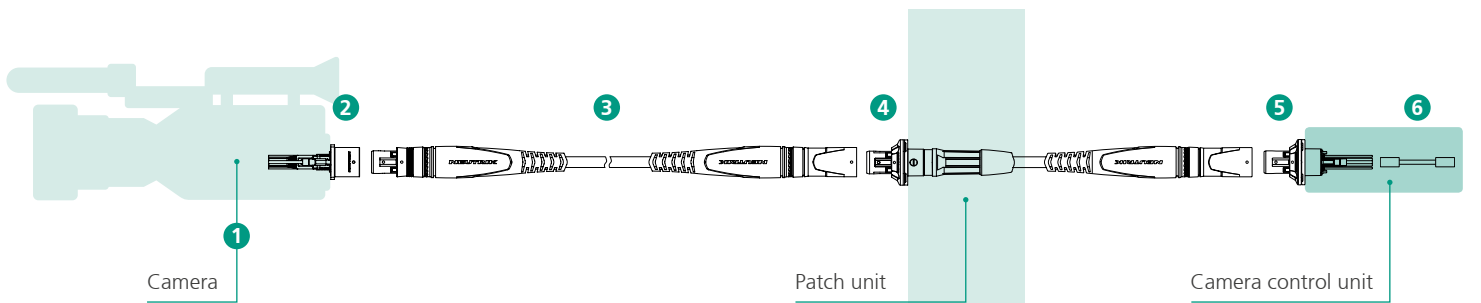
1 / NKOBF2S-XP-0-1 2 / NO2FW-XP 3 / NKO2S-XP-0-100 4 / NKO2SMW-XP-0-10 5 / NO2MW-XP 6 / NKOBM2S-XP-0-1

STUDIO CONFIGURATION PATCHING



1 / NKOBF2S-XP-0-1 2 / NO2FW-XP 3 / NKO2S-XP-0-100 4 / NO2MW-XP 5 / NKOFM2S-XP-0-100 6 / NO2MW-XP 7 / NKOBM2S-XP-0-1

STUDIO CONFIGURATION FIXED



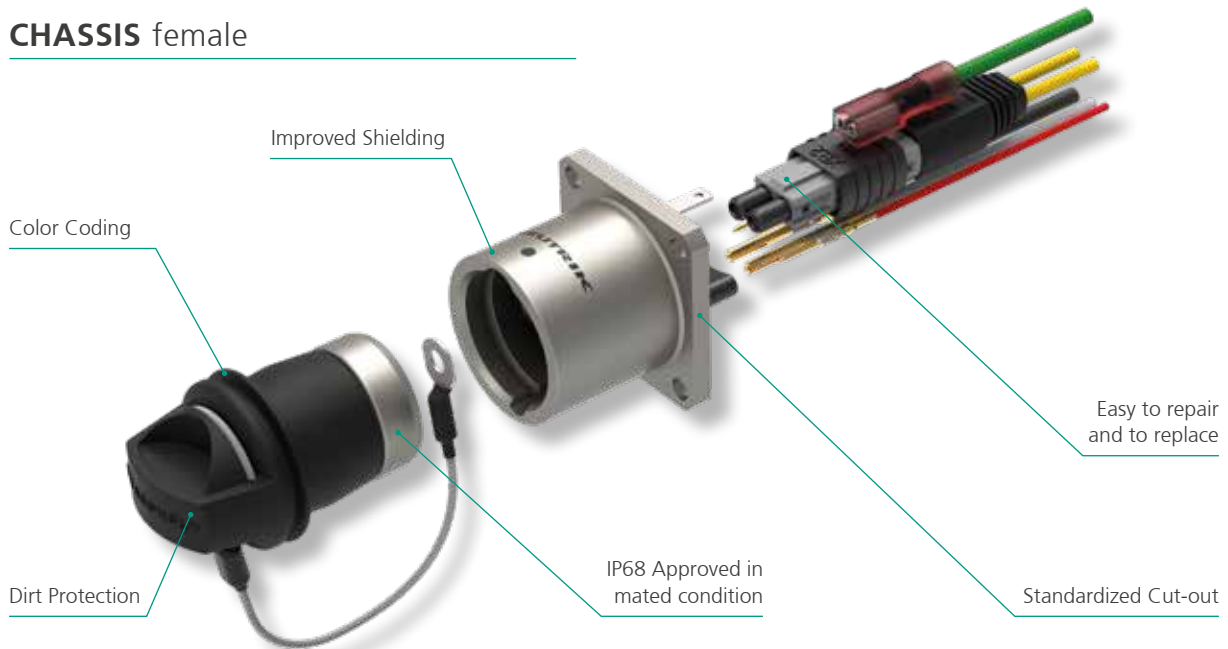
1 / 1 NKOBF2S-XP-0-1 2 / NO2FW-XP 3 / NKO2S-XP-0-100 4 / NKO2SMW-XP-0-50 5 / NO2MW-XP 6 / NKOBM2S-XP-0-1

CONCEPT AND DESIGN CABLE CONNECTOR MALE

CABLE CONNECTOR male

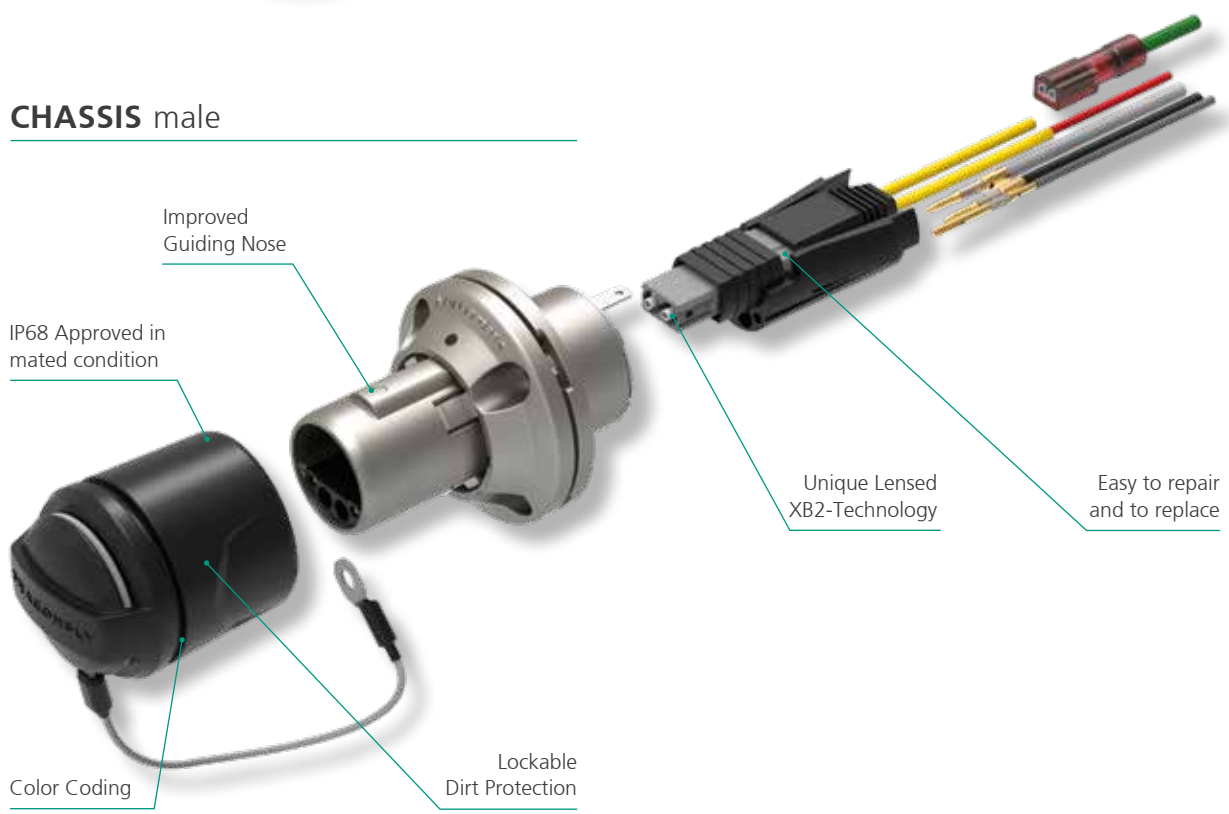


CHASSIS female



CONCEPT AND DESIGN

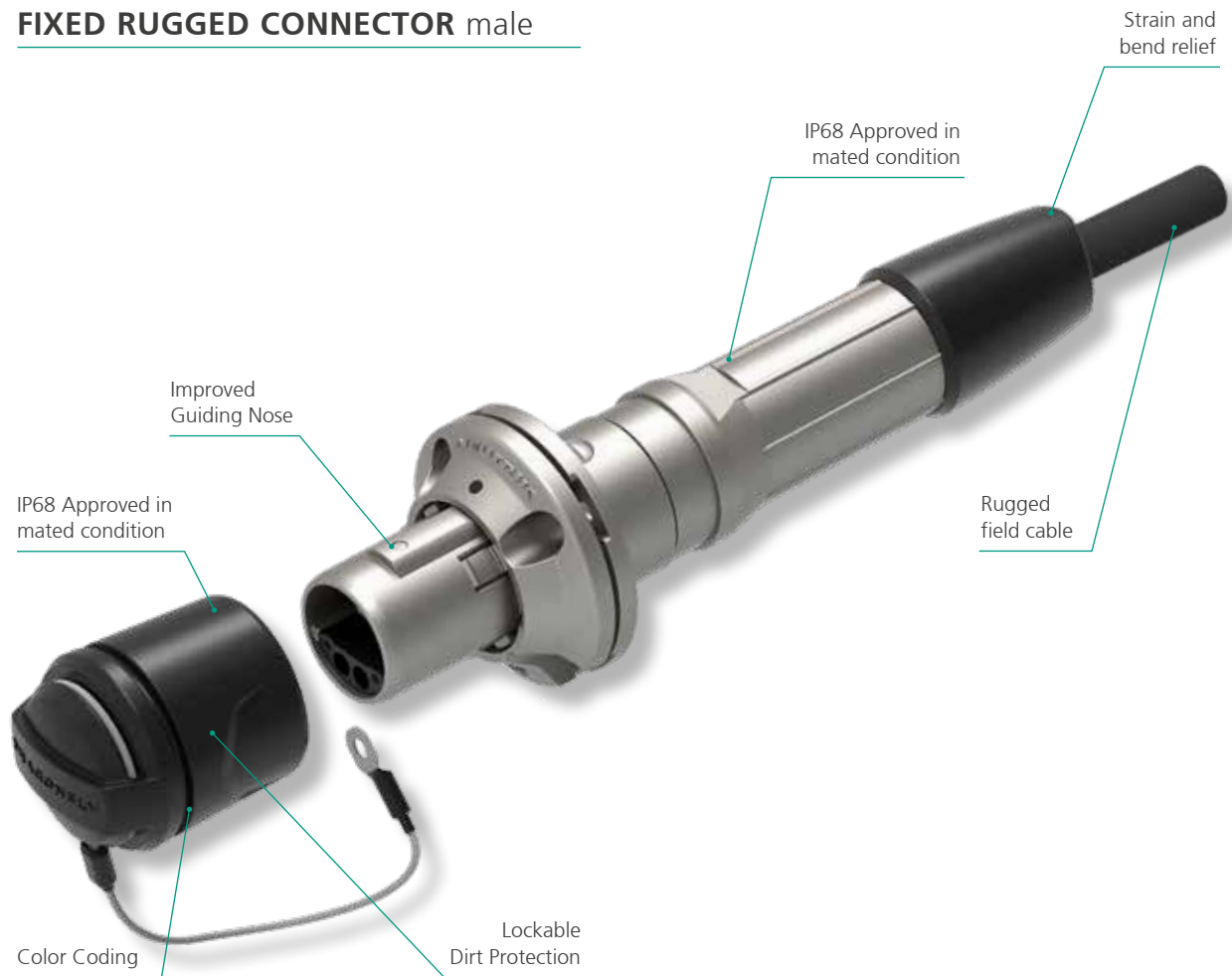
CABLE CONNECTOR FEMALE



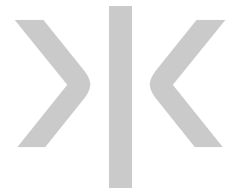
CONCEPT AND DESIGN

FIXED RUGGED CONNECTOR

FIXED RUGGED CONNECTOR male



ACCESSORIES SPARE PARTS



ORDERING INFORMATION

SCNO2MW-XP	Rugged lockable metal sealing cover for opticalCON DRAGONFLY male chassis connector.
SCNO2FW-XP	Rugged metal sealing cover for opticalCON DRAGONFLY female chassis connector
SCNO2SMX-XP	Rugged lockable metal sealing cover for opticalCON DRAGONFLY male cable connector.
SCNO2SFX-XP	Rugged metal sealing cover for opticalCON DRAGONFLY female cable connector.
SCXP-M	SCXP-M sealing kit for dust and water proof assembly of NO2MW-XP chassis connectors.
SCXP-F	SCXP-F sealing kit for dust and water proof assembly of NO2FW-XP chassis connectors.
NOR-*	Color coding ring for opticalCON cable and chassis connectors (SCNO-FDW-A)
NOPF-XP	The NOPF-XP includes 10 power and 10 sense spare contacts for 5 NO2FW-XP Chassis assemblies.
POS-XP-SENSE	The POS-XP-SENSE Crimp die is used for the assembly of the sense cooper pins.
POS-XP-POWER	The POS-XP-POWER Crimp die is used for the assembly of the power cooper pins.
FOPR-XP	FOPR-XP pull-in aid for Dragonfly cables. The pull through tool allows passing the cable through narrow sections and protects the optical fiber during installation.

* Available colors	NOR-0 – black, NOR-1 – brown, NOR-2 – red, NOR-3 – orange, NOR-4 – yellow, NOR-5 – green, NOR-6 – blue, NOR-7 – violet, NOR-8 – grey, NOR-9 – white
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TECHNICAL DATA

OPTICAL SPECIFICATIONS

Insertion Loss	Typical 0.6 dB per connection / Maximum 1 dB per connection	•
	Typical 45 dB / Minimum 40 dB	
Return Loss	SM: 1310 nm / 1550 nm	•
Wavelengths	SM: 9/125-G657A2	•
Compatible fiber types	-40 °C to +75 °C	•
Operation Temperature	Fusion Splice	•
Termination	Yes	•
WDM Compatibility		•

MECHANICAL SPECIFICATIONS

Strain relief	> 500 N	•
Insertion force	< 45 N	•
Withdrawal force	< 45 N	•
Locking device	Push / Pull	•
Locking force	> 900 N	•
Lifetime	10.000 mating cycles	•
Anti-Kink protection	Identical to proven optical CON ADVANCED	•
Wiresize	2 x 24 AWG + 4 x 20 AWG	•
Cable	Standard SMPTE 311 Cable ø 9.2 mm	•

ELECTRICAL SPECIFICATIONS

Mains	240 V ac / 10 A / 50 Hz	•
	120 V ac / 10 A / 60 Hz	•
	300 V dc / 7A	•
Sense	42 V ac peak / 1-3 A / ≤ 1 kHz	•
	60 V dc / 1-3 A	•
Contact resistance	< 7 m Ω	•
Transfer resistance ground	< 10 m Ω	•
Insulation Resistance	> 10 G Ω	•

ENVIRONMENTAL

Flammability	UL94 V-0	•
Salt spray test	According to UL50E	•
UV Test	According to UL50E	•
Degree of protection	IP68 (1,5m / 30min.) acc. to IEC60529 NEMA enclosure type 4 acc. to UL50E	•

CONFORMITY

Certification according to	IEC 61984	•
	IEC 60529	•
	UL 1977	•
	CSA C22.2 No. 182.3	•





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