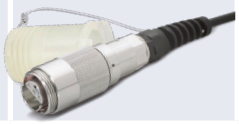
Fiber Optic Connectivity Systems for Harsh Environments

	RDC	RQC RQC-HYBRID	HEAVY DUTY 600	HEAVY DUTY 1000	Q-RMC
					
Number of fibers	2	4 or 2 fibers + 2 electrical contacts	6	12	12 (24 fibers on request)
Mating cycles	500		5000	1000	100
Tensile load (depending on the cable type)	> 500 N		> 1500 N		400 N
Protection class IEC 60529	IP67				
Operating temperature IEC 61300-2-22	-40°C to +125°C (depending on the cable type)		-40°C to +85°C (depending on the cable type)		-40°C to +80°C (depending on the cable type)
Storage temperature IEC 61300-2-22	-40°C to +85°C (depending on the cable type)				-40°C to +80°C (depending on the cable type)
Salt mist IEC 61300-2-26	30 days				30 days
IL (Insertion Loss)	SM / MM - typical 0.25 dB, max. 0.50 dB		SM / MM - typical 0.30 dB, max. 0.60 dB		SM max. 0.80 dB MM max. 0.70 dB
RL SM (Return Loss)	≥ 50 dB (PC) and ≥ 65 dB (APC)		≥ 45 dB (PC) and ≥ 65 dB (APC)		≥ 50 dB (PC) and ≥ 65 dB (APC)
RL MM (Return Loss)	≥ 20 dB				
Connector types	male / female / receptacle		hermaphrodite / receptacle		male / female / recaptacle
Dust caps	metal / plastic / silicone				metal / silicone
Fiber contact	singlemode (SM): PC and APC - multimode (MM): PC (APC one request)				
Ferrule diameter Ø	1.25 mm		2.5 mm		MT-Ferrule (standard or elite)
Features	screw-lock	srew-lock RQC-Hybrid: max. 2A max. 48V (indoor) and 30V (outdoor)	screw-lock / hermaphrodite design		push-pull locking
Applications	Telecommunication Broadcast Transportation Wind & solar energy Industrial automation		Broadcast Industrial automation Mining Oil and gas industry	Industrial automation Mining Oil and gas industry	Telecommunication Broadcast Wind & solar energy Transportation Defense & security Medical technology Industrial automation
Cable diameter Ø	4.0 - 7.5 mm 1.8 ~ 2.1 mm (receptacle type)		6.0 ~ 9.0 mm 1.8 ~ 2.1 mm (receptacle type)		6.0 mm (12 fibers) 7.0 mm (24 fibers - on request)

Rosenberger

Fiber Optic Connectivity Inserts for Harsh Environments

98MS101-128
MINI Optical Contact

For connectors according to DIN EN 60603-2, variant M: DIN FO inserts for use in connector strips as per DIN EN 60603-2, variant M or D-Sub shells etc.

When used in combination with Rosenberger's electrical contacts, it is also possible to construct hybrid plug connections.

The contacts are assembled by simply snapping them in; a tool is required to disassemble them.

Size 16
Optical Contact

Modular system for the design of customized layouts pin-and-socket contacts compatible with MIL-PRF-29504/4 and /05.

Suitable for circular connectors according to MIL-DTL-38999 with cavities of size 16.

Size 12
Expanded Beam Connector

Is particularly well suited for tough environments and use in indoor and outdoor multimode applications.

These contacts have a robust, reliable optical fiber connection. Its transmission performances are unaffected even in tough environments and when subjected to mechanical stresses. Thanks to the expansion of the optical beam, these expanded beam connectors are insensitive to contamination and allow for a variable working distance.

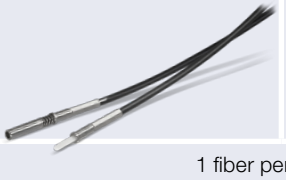
The Size 12 expanded beam contact is suitable for use in circular connectors but can also be used in hybrid systems.

Size 5
PL230 Connector Insert

The connector insert Size 5 | PL230 ensures a robust, reliable optical fiber connection. Its transmission performances are unaffected even in tough environments and when subjected to mechanical stresses.

A sprung insert compensates for even significant tolerances and movements in the carrier system. Optical beam expansion makes the connectors, which are based on expanded beam technology, insensitive to contamination.

The connector is coupled by means of a snap-on connecting sleeve.

	PHYSICAL CONTACTS		EXPANDED BEAM CONTACT	
	98MS101-128 MINI Optical Contact	**Size 16 Optical Contact**	**Size 12 Expanded beam connector**	**Size 5 PL230 Connector Insert**
				
Number of fibers	1 fiber per contact			
Mating cycles	500		< 100,000	1000
Operating temperature IEC 61300-2-22 (depending on the cable type)	-40°C to +85°C	-65°C to +150°C	-40°C to +85°C	-40°C to +90°C
IL (Insertion Loss)	SM: typical < 0.5 dB MM: typical < 0.40 dB (depending on housing system)	SM / MM: typical 0.5 dB	MM: max. 1.5 dB	MM: typical <1.0 dB max. 1.5 dB
RL SM (Return Loss)	≥ 50 dB (PC) and ≥ 65 dB (APC)			
RL MM (Return Loss)	≥ 20 dB			
Connector types	pin (male) / socket (female) contacts			
Fiber contact	singlemode (SM): PC and APC multimode (MM): PC (APC on request)		multimode (MM): PC	
Features	A variety of contact configurations can be created thanks to the large selection of optical contacts for various carrier systems. Hybrid layouts are also possible by additionally incorporating electrical contacts. For a very wide range of cavities.		EBO - Expanded Beam Optical Technology Optical contact in expanded beam technology for use in circular shells according to MIL-DTL-38999. An insertion and release tool is required for inserting and releasing the contacts.	EBO - Expanded Beam Optical Technology Insensitive to contamination Robust connector design Easy to clean due to fused silica protective glass covers. The contacts can be inserted and released without any need for tools.
Applications	Industrial automation Aerospace Marine Hybrid connector for test beds Medical engineering Backplane applications Broadcasting Laboratory and experimental setups Defense & security		Industrial automation Aerospace Medical Transportation Mining Broadcast Defense & security	Aerospace (e.g. ARINC 600 rectangular shells as well as for 38999 circular and rectangular shells) Wind & solar energy
Cable diameter Ø	0.9 - 2.9 mm	0.9 - 2.2 mm	0.9 ~ 3.9 mm	1.7 ~ 3.0 mm

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