MZX SensorLaser Pro

Safety Cable

These special linear heat sensor cables are suited for indoor and outdoor use. Each cable includes two MM fibers for temperature sensing. These sensor cables have a halogen-free and flame-retardant FRNC cable sheath.

MZX SensorLaser Pro Safety Cable Safety FRNC (m) Tight Buffered Design

Part Number: 580.400.018

The MZX SensorLaser Pro Safety Cable is a fast-responding sensor cable with a tight buffered fiber, compact dimensions, high flexibility, and good bending behavior. Due to the aramid yarns, the cable has a high tensile strength. Upon request, this cable is available in other colors.

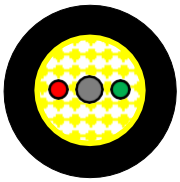
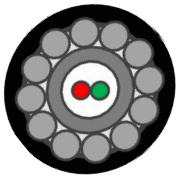
MZX SensorLaser Pro Safety Cable Steel FRNC (m) Loose Steel Tube Design / Steel Armored

Part Number: 580.400.020

The MZX SensorLaser Pro Safety Cable Steel is a fast-responding armored sensor cable with stainless steel loose tubes and outer sheath. Due to this design the sensor cable has a high tensile strength, high crush resistance provides an excellent rodent protection and is longitudinally and laterally watertight. Upon request, this cable is available in other colors.

Features

- Flame-Retardant Non-Corrosive (FRNC)
- UV-Resistent
- EN, VdS, UL521, FM, CAN/ULC, IEC approvals
- Indoor or outdoor

Design Components		
Cable Types	**580.400.018**	**580.400.020**
Cable Version	Safety	Steel armored
		
Outer sheath material	Flame Retardant Non-Corrosive (FRNC)	
Armoring	Swellable aramid yarns (metal-free)	Stainless steel AISI 316L tube Stainless steel AISI 316L wires
Cable design	GRP strength member, fiber tight buffered in aramid yarn	Gel free, fiber loose in FIMT (fiber in metal tube)
Standard fiber count / cable	2 MM	
UV-resistant	Yes	
Longitudinal water-resistant	no	yes

Mechanical / Physical Details		
Cable Types	**580.400.018**	**580.400.020**
Approximate weight [1]	17 kg/km	29 kg/km
Outer diameter [1]	4.0 mm	3.8 mm
Crush resistance [2]	1,000 N/10 cm	9,600 N/10 cm [5]
Tensile strength (installation) [2]	1,000 N	1,500 N
Tensile strength (operation) [2]	800 N	1,100 N
Operating temperature	-40°C to +85°C	
Short term temperature	-40°C to +150°C	
Functional integrity [4]	up to +750°C	
Optical Details		
MM fiber type	OM2 (50/125 µm)	
MM-Attenuation	850nm wavelength: Maximum: 2,7 dB/km / Typical: 2.5 dB/km 850nm wavelength: Maximum: 0,8 dB/km / Typical: 0.7 dB/km	
Installation Details		
Outer diameter [1]	4.0 mm	3.8 mm
Static bending radius [2]	15 x D (outer Ø)	
Repeated bending (2)	20 x D (outer Ø)	
Installation temperature	-5 °C to +50 °C	
Cable Length		
Max. length / drum	8,000 m	8,500 m
Typical length / drum	4,000 m	4,500 m
Approvals		
Applicable Standards	• EN-54 • VdS • UL 521 • CAN/ULC S530 • FM 3210 • EN187000	• IEC 60331 (part 25) • IEC60332 (parts 1, 2 and 3-24) • IEC 60754 (parts 1 and 2) • IEC 60793 • IEC 60794 (parts 1 and 2) • IEC 61034 (part 2)

Optional Features		
580.400.019	- For 580.400.018 - 2 x Pigtail with E2000 8° APC connector - Splice Protection and Strain Relief - Pre-assembled on one cable end	
580.400.021	- For 580.400.020 - 2 x Pigtail with E2000 8° APC connector - Splice Protection and Strain Relief - Pre-assembled on one cable end	
580.400.023	- Pigtail with E2000 8° APC connector, length: 5 m - For splicing to the sensor fiber (Either to connect DTS, or for termination)	
580.400.024	- Pigtail with E2000 8° APC connector, length: 30m - For splicing to the sensor fiber (Either to connect DTS, or for termination)	

Part Numbers:

580.400.018	MZX SensorLaser Pro Safety Cable- Safety FRNC (m)- Tight Buffered Design
580.400.019	MZX SensorLaser Pro Safety Connector- 2 x Pigtail with E2000 8° APC Connector
580.400.020	MZX SensorLaser Pro Safety Cable Steel FRNC (m)- Loose Steel Tube Design / Steel Armored
580.400.021	MZX SensorLaser Pro Safety Steel Connector- 2 x Pigtail with E2000 8° APC Connector
580.400.022	Cable Drum
580.400.023	E2000 8° APC Pigtail- MM GI 50/125 µm, approx. 2.8 mm, 5 m
580.400.024	E2000 8° APC Pigtail- MM GI 50/125 µm, approx. 2.8 mm, 30 m

(1) Tolerance of-5% / +10%
(2) Crush resistance IEC 60794-1-2 method E3A
Tensile strength short term (installation) IEC 60794-1-2 method E1 A/B Tensile strength long term (operation) IEC 60794-1-2 method E1 A/B Static bend radius IEC 60794-1-2 method E11
Repeated bending IEC 60794-1-2 method E6
(3) Pre-assembled sensor cable connectors are optionally available to reduce deployment cost and time. These enable a quicker and easier installation, with no need to organize a fusion splicer and splice box to connect the sensor cable to the DTS or DAS. Pigtails are supplied with E2000 8° connectors. For safe transportation they are covered with a flexible protective tube when shipped.
(4) Functional integrity of the sensor cable tested for 2 hours with min. flame temperature of 750 °C as per IEC 60331-25. In tunnel fire testing it has been demonstrated that the functional integrity of the cable was maintained for several minutes with temperatures exceeding 1000 °C.
[5] 600N/cm in operation / max. 960N/cm during installation.