



OPTOFLEX

Flexible Fiber-optic Cable
for Reels and Festoons

With Reinforced Neoprene Outer Jacket

ENERGY



Technical Data

	Type	OPTOFLEX		
	Type designation	G62.5/125µm G50/125µm E9/125µm		
	Approvals	based on FDDI, ISO/IEC 9314 Part 3, DIN VDE 0888, MSHA-SC 189-1		
	Application	Flexible fibre optic cable for signal and data transmission on cranes and material handling equipment; suitable for cable handling systems, such as reels, festoon systems, cable tenders, etc. at high data rates, large bandwidth and absolute immunity to electromagnetic interference.		
Optical parameters	Transmission data of the fibre-optics	Graded-index fibre 50/125	Graded-index fibre 62.5/125	Monomode fibre E9/125
	Max. attenuation at wavelength 850 nm	2.8 dB/km	3.3 dB/km	-
	Max. attenuation at wavelength 1300 nm	0.8 dB/km	0.9 dB/km	0.4 dB/km
	Max. attenuation at wavelength 1550 nm	- km	-	0.3 dB/
	Bandwidth at 850 nm	> 400 MHz	> 400 MHz	-
	Bandwidth at 1300 nm	> 1200 MHz	> 600 MHz	-
	Numerical aperture	0.200 +/- 0.200	0.275+/-0.02	0.14+/-0.02
	Chromatic dispersion at 1300 nm	-	-	<3.5 ps/nm km
	Chromatic dispersion at 1550 nm	-	-	<3.5 ps/nm km
Thermal parameters	Ambient temperature			
	- Fully flexible operation - Fixed installation	-35°C to +80°C -40°C to +80°C		
Mechanical parameters	Tensile load	Max. 500 N		
	Torsional stresses	50°/m		
	Minimum bending radii - Fixed installation and on festoon system - for reeling	125 mm 125mm		
	Minimum distance with S-type directional changes	20 x D (D=cable diameter)		
	Travel Speed - Gantry (reeling operation) - Trolley (festoon systems)	Up to 120 m/min (no random wound reel, cylindrical reel) Up to 240 m/min (festoon, cable tender)		
	Additional tests	Bending and reversed bending test		
Chemical parameters	Resistance to oil	DIN VDE 0473, Part 811-2-1 Para. 10		
	Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture		



Design features

Type	OPTOFLEX
Fibre-optics	Fibre core diameter: 62.5 µm, 50 µm or 9 µm Diameter across the cladding: 125 µm Diameter over the coating: 250 µm
Fibre covering	Hollow core with filling compound, basic material ETFE Compound 7YI 1 natural colour
Identification of the fibres	- Specially developed colour code for identification of the individual fibres
Core arrangement	Six cores, especially laid-up in one layer around a GFK supporting element (GFK=glass-fibre reinforced plastic)
Inner sheath	Special compound, wall thickness 0.8 mm
Braid	Special braid made of polyester threads Surface covered: approx. 80%
Outer sheath	Basic material PCP, rubber compound 5GM3 Colour black, wall thickness 2.6 mm
Marking	(Year of manufacture) OPTOFLEX e.g. 6 G 62.5/125 Micron Germany P-MSHA-SC 189/1
Note	The cable is also available in a special design (not suitable for reeling operation) (Design OPTOFLEX(M), color of the outer sheath: orange)
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FEATURES	BENEFITS
glass fibers	- best performance and quality in data transmission
special fiber coating	- max. robustness of the fragile fiber elements
buffer tubes	- hosting the fibers and provides max. protection against side forces
fiber arrangement	- max. three fibers inside the buffer tubes ensures a minimum of attenuation
core arrangement	- six buffer tubes around central messenger provides a compact arrangement and max. of stability and flexibility
torsion braid	- provide high torsion resistance
heavy duty neoprene jacket	- superior low temperature sub-zero performance - high resistance to oil, flame, etc.

Selection and ordering data

Ordering Part No.	Prysmian Part No.	Number of glass fibers	nominal OD of the fiber µm	max. OD Inch -- mm	Cable weight Lbs/1000 ft -- kg/km	Max. Continuous Safe Tension
OPTOFLEX -- Multi Mode 62,5/125µm						
4EC-60F-R	5DG8 002	6	62,5/125	0.669 -- 17	188 -- 280	100 -- 500
-	5DG8 035	12	62,5/125	0.669 -- 17	188 -- 280	100 -- 500
-	5DG8 012	18	62,5/125	0.669 -- 17	188 -- 280	100 -- 500
OPTOFLEX -- Multi Mode 50/125µm						
-	5DG8 004	6	50/125	0.669 -- 17	188 -- 280	100 -- 500
-	5DG8 036	12	50/125	0.669 -- 17	188 -- 280	100 -- 500
-	5DG8 014	18	50/125	0.669 -- 17	188 -- 280	100 -- 500
OPTOFLEX -- Single Mode E9/125µm						
-	5DG8 023	6	E9/125	0.669 -- 17	188 -- 280	100 -- 500
-	5DG8 037	12	E9/125	0.669 -- 17	188 -- 280	100 -- 500
-	5DG8 010	18	E9/125	0.669 -- 17	188 -- 280	100 -- 500