OPTOFLEX G62,5/125: rubber cables with fiber optic

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.

Global data

Brand	OPTOFLEX
Type designation	G62,5/125µ
Standard	Based on FDDI, ISO/IEC 9314 Part 3, DIN VDE 0888

Design features

Optical Fiber	Fibre core diameter: 62.5 µm, 50 µm or 9 µm; Diameter across the cladding: 125 µm; Diameter over the coating: 250 µm;
Fiber coding	Specially developed colour code for identification of the individual fibres
Fiber covering	Hollow core with filling compound, Basic material: ETFE, Compound: 7YI 1, Natural color
Core arrangement	Six cores, especially laid-up in one layer around a GFK supporting element (GFK=glass-fibre reinforced plastic)
Inner sheath	Special compound
Reinforcement	Special braid made of polyester threads. Surface covered: approx. 80%
Outer sheath	Basic material PCP, rubber compound 5GM3 Colour black
Marking	(Year of manufacture) OPTOFLEX e.g. 6 G 62.5/125 Micron Germany

Chemical parameters

Resistance to oil	Acc. to DIN EN 60811-404 and DIN VDE 0473-811-404, paragraph 10
Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

Thermal parameters

Ambient temperature for fixed installation	min -40 °C ; max +80 °C
Ambient temperature in fully flexible operation	min -35 °C ; max +80 °C

Mechanical parameters

Max. tensile load	500 N
Torsional stress	± 50 °/m
Min. bending radius	- fixed installation and on festoon system: 125 mm; - for reeling: 250mm;
Min. distance with S-type directional changes	20 x D (D=cable diameter)
Travel speed	- Gantry (reeling operation): up to 120 m/min (no random wound reel, cylindrical reel); - Trolley (festoon systems): up to 240 m/min (festoon, cable tender); - Hoist: no application;
Additional tests	Bending and reversed bending test

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Number of cores x cross section	Part number	MLFB Number	Outer diameter min. mm	Outer diameter max. mm	Net weight approx. kg/km	Max. attenuation at wavelength 850 nm dB/km	Max. attenuation at wavelength 1300 nm dB/km	Min. Bandwidth at 850 nm MHz	Min. Bandwidth at 1300 nm MHz	Numerical aperture (± 0.02)
6G62,5/125µ	20003597	5DG8002	14.9	17	280	3.3	0.9	400	600	0.275
12G62,5/125µ	20003608	5DG8035	14.9	17	280	3.3	0.9	400	600	0.275
18G62,5/125µ	20003599	5DG8012	14.9	17	280	3.3	0.9	400	600	0.275
24G62,5/125µ	20160114	5DG8…	14.9	17	280	3.3	0.9	400	600	0.275

A special design is also available, OPTOFLEX(M) with orange outer sheath (only for fixed installation, not suitable for reeling operation)

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OPTOFLEX G50/125: rubber cables with fiber optic

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.

Global data

Brand	OPTOFLEX
Type designation	G50/125µ
Standard	Based on FDDI, ISO/IEC 9314 Part 3, DIN VDE 0888

Design features

Optical Fiber	Fibre core diameter: 62.5 µm, 50 µm or 9 µm; Diameter across the cladding: 125 µm; Diameter over the coating: 250 µm;
Fiber coding	Specially developed colour code for identification of the individual fibres
Fiber covering	Hollow core with filling compound, Basic material: ETFE, Compound: 7YI 1, Natural color
Core arrangement	Six cores, especially laid-up in one layer around a GFK supporting element (GFK=glass-fibre reinforced plastic)
Inner sheath	Special compound
Reinforcement	Special braid made of polyester threads. Surface covered: approx. 80%
Outer sheath	Basic material PCP, rubber compound 5GM3 Colour black
Marking	(Year of manufacture) OPTOFLEX e.g. 6 G 62.5/125 Micron Germany

Chemical parameters

Resistance to oil	Acc. to DIN EN 60811-404 and DIN VDE 0473-811-404, paragraph 10
Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

Thermal parameters

Ambient temperature for fixed installation	min -40 °C ; max +80 °C
Ambient temperature in fully flexible operation	min -35 °C ; max +80 °C

Mechanical parameters

Max. tensile load	500 N
Torsional stress	± 50 °/m
Min. bending radius	- fixed installation and on festoon system: 125 mm; - for reeling: 250mm;
Min. distance with S-type directional changes	20 x D (D=cable diameter)
Travel speed	- Gantry (reeling operation): up to 120 m/min (no random wound reel, cylindrical reel); - Trolley (festoon systems): up to 240 m/min (festoon, cable tender); - Hoist: no application;
Additional tests	Bending and reversed bending test

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Number of cores x cross section	Part number	MLFB Number	Outer diameter min. mm	Outer diameter max. mm	Net weight approx. kg/km	Max. attenuation at wavelength 850 nm dB/km	Max. attenuation at wavelength 1300 nm dB/km	Min. Bandwidth at 850 nm MHz	Min. Bandwidth at 1300 nm MHz	Numerical aperture (± 0.02)
6G50/125µ	20003598	5DG8004	14.9	17	280	2.8	0.8	400	1200	0.2
12G50/125µ	20113041	5DG8036	14.9	17	280	2.8	0.8	400	1200	0.2
18G50/125µ	20003600	5DG8014	14.9	17	280	2.8	0.8	400	1200	0.2
24G50/125µ	20160115	5DG8…	14.9	17	280	2.8	0.8	400	1200	0.2

A special design is also available, OPTOFLEX(M) with orange outer sheath (only for fixed installation, not suitable for reeling operation)

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OPTOFLEX E9/125: rubber cables with fiber optic

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.

Global data

Brand	OPTOFLEX
Type designation	E9/125µ
Standard	Based on FDDI, ISO/IEC 9314 Part 3, DIN VDE 0888

Design features

Optical Fiber	Fibre core diameter: 62.5 µm, 50 µm or 9 µm; Diameter across the cladding: 125 µm; Diameter over the coating: 250 µm;
Fiber coding	Specially developed colour code for identification of the individual fibres
Fiber covering	Hollow core with filling compound, Basic material: ETFE, Compound: 7YI 1, Natural color
Core arrangement	Six cores, especially laid-up in one layer around a GFK supporting element (GFK=glass-fibre reinforced plastic)
Inner sheath	Special compound
Reinforcement	Special braid made of polyester threads. Surface covered: approx. 80%
Outer sheath	Basic material PCP, rubber compound 5GM3 Colour black
Marking	(Year of manufacture) OPTOFLEX e.g. 6 G 62.5/125 Micron Germany

Chemical parameters

Resistance to oil	Acc. to DIN EN 60811-404 and DIN VDE 0473-811-404, paragraph 10
Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

Thermal parameters

Ambient temperature for fixed installation	min -40 °C ; max +80 °C
Ambient temperature in fully flexible operation	min -35 °C ; max +80 °C

Mechanical parameters

Max. tensile load	500 N
Torsional stress	± 50 °/m
Min. bending radius	- fixed installation and on festoon system: 125 mm; - for reeling: 250mm;
Min. distance with S-type directional changes	20 x D (D=cable diameter)
Travel speed	- Gantry (reeling operation): up to 120 m/min (no random wound reel, cylindrical reel); - Trolley (festoon systems): up to 240 m/min (festoon, cable tender); - Hoist: no application;
Additional tests	Bending and reversed bending test

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Number of cores x cross section	Part number	MLFB Number	Outer diameter min. mm	Outer diameter max. mm	Net weight approx. kg/km	Max. attenuation at wavelength 1300 nm dB/km	Max. attenuation at wavelength 1550 nm dB/km	Numerical aperture (± 0.02)	Chromatic dispersion at 1300 nm	Chromatic dispersion at 1550 nm
6E9/125µ	20003603	5DG8023	14.9	17	280	0.4	0.3	0.14	3.5	3.5
12E9/125µ	20039933	5DG8037	14.9	17	280	0.4	0.3	0.14	3.5	3.5
18E9/125µ	20026458	5DG8010	14.9	17	280	0.4	0.3	0.14	3.5	3.5
24E9/125µ	20160116	5DG8…	14.9	17	280	0.4	0.3	0.14	3.5	3.5

A special design is also available, OPTOFLEX(M) with orange outer sheath (only for fixed installation, not suitable for reeling operation)

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