

CABLE REELS

FLEXIDRUM® MEDIUM PLUS (N)TSCGEWÖU OPTICAL FIBER

From 3,6/6 Kv up to 18/30 Kv with antitwisting protection and optical fiber

ELETTROTEK KABEL® FLEXIDRUM® MEDIUM PLUS (N)TSCGEWÖU OPTICAL FIBER



Suitable for reeling application



Suitable for festoon application

Construction:

Conductor:	flexible red copper conductor Cl. 5, acc. to IEC 60228, DIN VDE 0295
Inner semi-conductive layer:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Outer semi-conductive layer:	semi-conducting compound
Earth Conductor:	Flexible red copper conductor Cl. 5, acc. to IEC 60228, DIN VDE 0295
Earth semi-conductive layer:	semi-conducting compound
Cores color:	Power: natural color with black semi-conducting compound Earth: black semi-conducting compound
Fiber optics:	6/12/24 fiber-optics laid-up as below*: ≤35 mm²: 12 fibers laying in 1 reinforced tube ≥ 50 mm²: 6 fibers laying in 2 gel filled tubes * laid-up referred for 12 fiber-optics version
Central unit:	semi-conducting rubber compound
Stranding:	phase units laid up with earth-conductors and fiber optics in interstices
Inner sheath:	rubber EPR type GM1b
Supporting screen:	anti-twisting protection of synthetic yarns
Outer sheath:	red (similar to RAL 3000) rubber PCP type 5GM5

Technical data:

Nominal voltage:	U/oU 3,6/6 kV, U/oU 6/10 kV U/oU 8,7/15, U/oU 12/20 kV, U/oU 14/25 kV, U/oU 18/30 kV
Max. operating voltage:	U/oU 3,6/6 kV = 7,2 kV U/oU 6/10 kV = 12 kV U/oU 8,7/15 = 18 kV U/oU 12/20 kV = 24 kV U/oU 14/25 kV = 30 kV U/oU 18/30 kV = 36 kV
Test voltage:	U/oU 3,6/6 kV = 11 kV U/oU 6/10 kV = 17 kV U/oU 8,7/15 = 24 kV U/oU 12/20 kV = 29 kV U/oU 14/25 kV = 36 kV U/oU 18/30 kV = 43 kV
Temperature range:	
<i>Fixed laying:</i>	-50°C up to +80°C
<i>Flexible installation:</i>	-35°C up to +80°C
Max. temperature on conductor:	+ 90°C
Max. temperature in short circuit:	+ 250 °C
Min. bending radius:	
<i>Fixed laying:</i>	6 x D
<i>On drums:</i>	12 x D
<i>On deflection pulley:</i>	15 x D
Min. distance for change of direction:	20 x D
Max speed (main application):	300 m/min
Max torsion:	± 25°/m

Resistance:



Self-extinguishing and flame retardant acc. to:
DIN VDE 0482 part 265-2-1
EN 50265-2-1
IEC 60332-1-2



Oil resistance acc. to:
DIN VDE 0473 part 811-2-1
IEC EN 60811-2-1

Features:

max. speed up to 300 m/min!
new version reduced weight and diameter!
acc. to DIN VDE 0250 part 813, and 0298-3/4
UL and MSHA approval on request

*after verify of the application by Elektrotek Kabel

6 fiber-optics construction:
identified with "6" on the 5th number of the Part. no

12 fiber-optics construction:
identified with "5" on the 5th number of the Part. no

18 fiber-optics construction:
identified with "7" on the 5th number of the Part. no

24 fiber-optics construction:
identified with "8" on the 5th number of the Part. no

for SPEED and MINIMUM BENDING RADIUS
see pages from 2 to 8 of catalogue

RoHS approval



Applications:

power supply to mobile units with high risk of mechanical damage. It is designed to work with forced guidance systems with deflection on different floors and equipment with reel axis in direction of travel

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3,6/6 kV (7,2) kV

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strenght N	AWG no.®)
02055MR1037M63	3x25+2x25/2+12FO	41,5	960	2600	1500	4
02055MR1037M64	3x35+2x25/2+12FO	43,5	1248	2840	2100	2
02055MR1037M65	3x50+2x25/2+12FO	47,5	1680	3550	3000	1
02055MR1037M66	3x70+2x35/2+12FO	51,5	2352	4350	4200	2/0
02055MR1037M67	3x95+2x50/2+12FO	56,5	3216	5470	5700	3/0
02055MR1037M68	3x120+2x70/2+12FO	60,5	4128	6490	7200	4/0
02055MR1037M69	3x150+2x70/2+12FO	65,5	4992	7980	9000	250 MCM
02055MR1037M70	3x185+2x95/2+12FO	69,5	6240	9450	11100	350 MCM
02055MR1037M71	3x240+2x120/2+12FO	75	8064	11590	14400	450 MCM

6/10 kV (12) kV

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strenght N	AWG no.®)
02055QR1037M63	3x25+2x25/2+12FO	41,5	960	2600	1500	4
02055QR1037M64	3x35+2x25/2+12FO	43,5	1248	2840	2100	2
02055QR1037M65	3x50+2x25/2+12FO	47,5	1680	3550	3000	1
02055QR1037M66	3x70+2x35/2+12FO	51,5	2352	4350	4200	2/0
02055QR1037M67	3x95+2x50/2+12FO	56,5	3216	5470	5700	3/0
02055QR1037M68	3x120+2x70/2+12FO	60,5	4128	6490	7200	4/0
02055QR1037M69	3x150+2x70/2+12FO	65,5	4992	7980	9000	250 MCM
02055QR1037M70	3x185+2x95/2+12FO	69,5	6240	9450	11100	350 MCM
02055QR1037M71	3x240+2x120/2+12FO	75	8064	11590	14400	450 MCM

8,7/15 kV (18) kV

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strenght N	AWG no.®)
02055SR1037M63	3x25+2x25/2+12FO	43,5	960	2600	1500	4
02055SR1037M64	3x35+2x25/2+12FO	44,5	1248	2840	2100	2
02055SR1037M65	3x50+2x25/2+12FO	47,5	1680	3550	3000	1
02055SR1037M66	3x70+2x35/2+12FO	51,5	2352	4350	4200	2/0
02055SR1037M67	3x95+2x50/2+12FO	56,5	3216	5470	5700	3/0
02055SR1037M68	3x120+2x70/2+12FO	60,5	4128	6490	7200	4/0
02055SR1037M69	3x150+2x70/2+12FO	65,5	4992	7980	9000	250 MCM
02055SR1037M70	3x185+2x95/2+12FO	69,5	6240	9450	11100	350 MCM
02055SR1037M71	3x240+2x120/2+12FO	75	8064	11590	14400	450 MCM

12/20 kV (24) kV

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strenght N	AWG no.®)
02055UR1037M63	3x25+2x25/2+12FO	49,5	960	3160	1500	4
02055UR1037M64	3x35+2x25/2+12FO	50,5	1248	3480	2100	2
02055UR1037M65	3x50+2x25/2+12FO	51,5	1680	3900	3000	1
02055UR1037M66	3x70+2x35/2+12FO	56,5	2352	4950	4200	2/0
02055UR1037M67	3x95+2x50/2+12FO	59,5	3216	5900	5700	3/0
02055UR1037M68	3x120+2x70/2+12FO	62,5	4128	7000	7200	4/0
02055UR1037M69	3x150+2x70/2+12FO	67,5	4992	8210	9000	250 MCM
02055UR1037M70	3x185+2x95/2+12FO	71,5	6240	9680	11100	350 MCM
02055UR1037M71	3x240+2x120/2+12FO	78,5	8064	12180	14400	450 MCM

Other dimensions and colors available on request.

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14/25 kV (30) kV

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strenght N	AWG no.*)
02055WR1037M63	3x25+2x25/2+12FO	55,5	960	3880	1500	4
02055WR1037M64	3x35+2x25/2+12FO	55,5	1248	4010	2100	2
02055WR1037M65	3x50+2x25/2+12FO	57,5	1680	4550	3000	1
02055WR1037M66	3x70+2x35/2+12FO	60,5	2352	5500	4200	2/0
02055WR1037M67	3x95+2x50/2+12FO	66,5	3216	6940	5700	3/0
02055WR1037M68	3x120+2x70/2+12FO	67,5	4128	7560	7200	4/0
02055WR1037M69	3x150+2x70/2+12FO	71,5	4992	8710	9000	250 MCM
02055WR1037M70	3x185+2x95/2+12FO	75,5	6240	10250	11100	350 MCM
02055WR1037M71	3x240+2x120/2+12FO	82	8064	12600	14400	450 MCM

18/30 kV (36) kV

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strenght N	AWG no.*)
02055XR1037M63	3x25+2x25/2+12FO	61,5	960	4700	1500	4
02055XR1037M64	3x35+2x25/2+12FO	61,5	1248	4800	2100	2
02055XR1037M65	3x50+2x25/2+12FO	63,5	1680	5300	3000	1
02055XR1037M66	3x70+2x35/2+12FO	66,5	2352	6300	4200	2/0
02055XR1037M67	3x95+2x50/2+12FO	69,5	3216	7300	5700	3/0
02055XR1037M68	3x120+2x70/2+12FO	72,5	4128	8320	7200	4/0
02055XR1037M69	3x150+2x70/2+12FO	77,5	4992	9600	9000	250 MCM
02055XR1037M70	3x185+2x95/2+12FO	82	6240	11200	11100	350 MCM
02055XR1037M71	3x240+2x120/2+12FO	87	8064	13510	14400	450 MCM

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Nominal cross section mm ²	Max resistance		Reactance at 50 Hz for nominal voltage			
	D.C. at 20°C Ohm/km	A.C. at 90°C Ohm/km	3,6/6 Ohm/km	6/10 Ohm/km	8,7/15 Ohm/km	12/20 Ohm/km
25	0,780	0,995	0,106	0,107	0,114	0,123
35	0,554	0,707	0,100	0,101	0,107	0,116
50	0,386	0,493	0,095	0,097	0,102	0,110
70	0,272	0,348	0,090	0,092	0,097	0,104
95	0,206	0,264	0,087	0,088	0,093	0,099
120	0,161	0,207	0,084	0,085	0,089	0,095
150	0,129	0,167	0,082	0,083	0,087	0,092
185	0,106	0,139	0,080	0,081	0,085	0,090
240	0,0801	0,107	0,079	0,079	0,083	0,087

Correction factors for ambient temperature other than 30°C

°C	10	20	30	40	50	60	70
K	1,15	1,08	1	0,91	0,82	0,71	0,58

Optical parameters:

Transmission data of the fiber-optics	Graded-index fiber 50/125	Graded-index fiber 62.5/125	Monomode fiber E9/125
Max attenuation at wavelength 850 nm	nom. ≤ 2,6 max. ≤ 3,0	nom. ≤ 2,6 max. ≤ 3,5	-
Max attenuation at wavelength 1300 nm	nom. ≤ 0,8 max. ≤ 1	nom. ≤ 0,8 max. ≤ 1,5	-
Max attenuation at wavelength 1310 nm	-	≤ 3 dB/km	nom. ≤ 0,35 max. ≤ 0,40
Max attenuation at wavelength 1383 nm	-	≤ 0,8 dB/km	nom. ≤ 0,33 max. ≤ 0,40
Max attenuation at wavelength 1550 nm	-	-	nom. ≤ 0,20 max. ≤ 0,28
Bandwidth at 850 nm	600 MHz/km	200 MHz/km	-
Bandwidth at 1300 nm	1200 MHz/km	500 MHz/km	-
Numerical aperture	0,20+/-0,015	0,27+/-0,015	-
Chromatic dispersion at 1285/1330 nm	-	-	≤ 3,5 ps/nm x km
Chromatic dispersion at 1300 nm	-	-	-
Chromatic dispersion at 1550 nm	-	-	≤ 18 ps/nm x km
Chromatic dispersion at 1625 nm	-	-	≤ 22 ps/nm x km