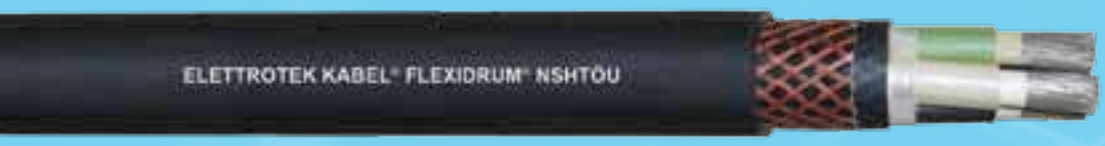
FLEXIDRUM® NSHTÖU



Construction:

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Insulation:	rubber HEPR type 3GI3 acc. to DIN VDE 0207
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores black cores with consecutive numbers acc. to EN 50334; green-yellow earth-wire from 3 cores
Stranding:	short lay-length
Wrapping:	tape
Inner sheath:	Rubber EPR type GM1b
Supporting screen:	anti-twisting protection of hightech yarns
Outer sheath:	black(RAL 9005), rubber PCP type, 5GM2

Features:

- **ON request yellow version**
- **VDE approved**
- **acc. to standard DIN VDE 0250 part 814**
- **UL types on request**
- **possible use in festoon systems up to 240 m/min**
- **UV and chemical resistant**

for SPEEDS and MINIMUM BENDING RADIUS see pages 1,2,3,4,5,6 of catalogue

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV Max. 1,2 kV
Test voltage:	3,5 kV
Max voltage permissible in C.C.:	0,9/1,8 kV
Temperature range Fixed installation: Flexible application:	- 45°C up to + 80°C - 35°C up to + 80°C
Min. bending radius:	10 x d
Conductor resistance:	as per VDE 0295 Class 5
Insulation resistance:	> 20 MOhm x km
Tensile strength:	20 N/mm²
Max speed:	180 m/min. Please inquire for higher speeds
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:** as per DIN VDE 0472 part 803 and IEC standard

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01010G7L010M61	1x10	10,5	96	200	200	8
01010G7L010M62	1x16	11,7	153	265	320	6
01010G7L010M63	1x25	13,3	240	370	500	4
01010G7L010M64	1x35	15	336	505	700	2
01010G7L010M65	1x50	17,2	480	650	1000	0
01010G7L010M66	1x70	18,6	672	875	1400	2/0
01010G7L010M67	1x95	21	912	1120	1900	3/0
01010G7L010M68	1x120	24	1152	1440	2400	4/0
01010G7L010M69	1x150	26	1440	1730	3000	250 MCM
01010G7L010M70	1x185	27,7	1776	2070	3700	350 MCM
01010G7L010M71	1x240	30,5	2304	2660	4800	450 MCM
01010G72031M15	3G1,5	13	43,2	255	68	16
01010G72031M25	3G2,5	14,5	72	310	113	14
01010G72031M40	3G4	16	115	395	240	12
01010G72031M60	3G6	18,2	172	525	360	10
01010G72031M61	3G10	21,3	288	765	600	8
01010G72031M62	3G16	24,6	460	1080	960	6
01010G72031M63	3G25	28	720	1470	1500	4
01010G72031M64	3G35	32	1008	2030	2100	2
01010G72031M65	3G50	37	1440	2680	3000	0
01010G72031M66	3G70	41	2016	3530	4200	2/0
01010G72031M67	3G95	45,5	2736	4400	5700	3/0
01010G72031M68	3G120	51,5	3456	5730	7200	4/0

FLEXIDRUM® NSHTÖU

RoHS VDE CE

Other construction and sizes are available on request

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01010G72031M69	3G150	57,5	4320	7040	9000	250 MCM
01010G72031M70	3G185	62	5328	8320	11100	350 MCM
01010G72031M71	3G240	70	6912	10850	14400	450 MCM
01010G72037M65	3x50 + 3G25/3	35,8	1680	2730	3000	0
01010G72037M66	3x70 + 3G35/3	41,2	2352	3740	4200	2/0
01010G72037M67	3x95 + 3G50/3	45,5	3216	4690	5700	3/0
01010G72037M68	3x120 + 3G70/3	51,7	4128	6220	7200	4/0
01010G72037M69	3x150 + 3G70/3	57,5	4992	7480	9020	250 MCM
01010G72037M70	3x185 + 3G95/3	62	6240	9020	11100	350 MCM
01010G72037M71	3x240 + 3G120/3	69,8	8064	11760	14400	450 MCM
01010G72037M72	3x300 + 3G150/3	72,5	9429	13946	21000	550 MCM
01010G72041M15	4G1,5	14,3	58	285	90	16
01010G72041M25	4G2,5	15,3	96	355	150	14
01010G72041M40	4G4	17	154	460	320	12
01010G72041M60	4G6	19,5	230	615	480	10
01010G72041M61	4G10	23	384	920	800	8
01010G72041M62	4G16	26,5	614	1310	1280	6
01010G72041M63	4G25	31,2	960	1860	2000	4
01010G72041M64	4G35	34,8	1344	2490	2800	2
01010G72041M65	4G50	40	1920	3300	4000	0
01010G72041M66	4G70	44	2688	4420	5600	2/0
01010G72041M67	4G95	50,8	3684	5610	7600	3/0
01010G72041M68	4G120	58	4608	7360	9600	4/0
01010G72041M69	4G150	63,2	5760	8770	12000	250 MCM
01010G72041M70	4G185	69,8	7100	10730	14800	350 MCM
01010G72041M71	4G240	76,2	9216	13560	19200	450 MCM
01010G72051M15	5G1,5	15	72	320	113	16
01010G72051M25	5G2,5	16,8	120	410	188	14
01010G72051M40	5G4	19	192	575	400	12
01010G72051M60	5G6	21	308	725	600	10
01010G72051M61	5G10	25,5	480	1140	1000	8
01010G72051M62	5G16	28,6	768	1550	1600	6
01010G72051M63	5G25	34,3	1200	2170	2500	4
01010G72051M64	5G35	38,5	1680	3080	3500	2
01010G72051M65	5G50	43,8	2400	4010	5000	0
01010G72051M66	5G70	50,2	3360	5480	7000	2/0
01010G72051M67	5G95	56,8	4560	7010	9500	3/0
01010G72048M61	4G10 + 4x2,5	24,3	480	1060	800	8
01010G72048M62	4G16 + 4x2,5	26,6	710	1360	1280	16
01010G72048M63	4G25 + 4x2,5	31,2	1056	1910	2000	16
01010G72048M64	4G35 + 4x2,5	34,5	1440	2530	2800	16
01010G72048M65	4G50 + 4x4	39,6	2073	3370	4000	0
01010G70071M15	7G1,5	16,8	101	415	158	16
01010G70121M15	12G1,5	20,1	173	585	270	16
01010G70181M15	18G1,5	22,7	259	765	405	6
01010G70241M15	24G1,5	26,7	346	1040	540	4
01010G70301M15	30G1,5	27,7	432	1140	675	2
01010G70361M15	36G1,5	30,2	518	1370	810	16
01010G70071M25	7G2,5	19,1	168	570	263	14
01010G70121M25	12G2,5	22,2	288	760	450	14
01010G70181M25	18G2,5	25,7	432	1070	675	14
01010G70241M25	24G2,5	30,2	576	1450	900	14
01010G70301M25	30G2,5	31,5	720	1600	1125	14
01010G70361M25	36x2,5	33,4	864	1850	1350	14
01010G70071M40	7G4	21,5	268	1850	420	12
01010G70071M60	7G6	26,3	429	960	630	10
01010G70121M40	12G4	26	460	1851	720	12
01010G70181M40	18G4	29,4	691	1852	1080	12
01010G71032M10	3x(2x1)C	22	-	670	90	18
01010G71032M15	3x(2x1,5)C	22,5	-	740	135	16
01010G71062M10	6x(2x1)C	28	-	1080	180	18
01010G71062M15	6x(2x1,5)C	29,3	-	1210	270	16
01010G71062M25	6x(2x2,5)C	32,1	-	1570	450	14
01010G72049900	4G16+2x(4x1,5)	-	-	-	-	6
01010G70199901	19G2,5 + 5x1(C)	32,2	556	1580	713	14
01010G70199902	19G2,5 + 5x1,5(C)	33,7	-	1630	713	14
01010G70259903	25G2,5 + 5x1(C)	34,2	700	1820	938	14
01010G70259904	25G2,5 + 5x1,5(C)	34,2	-	1850	938	14
01010G70269905	26G2,5 + 10x1 (C)	37,8	-	2150	975	14
01010G70169906	16G4+(45x1)(C)	46	1028	2808	2180	12
01010G70129907	12G2,5+12x1,5	-	-	-	-	14
01010G72048908	4G25+4x(6x2,5)	51,8	1499	3390	-	14
01010G7203B909	3x150+2x70/2+6FO	-	-	-	-	250 MCM
01010G70 129910	12G2,5+12x1	-	-	-	-	14
01010G72049911	4G25+7x1,5	-	-	-	-	4

FLEXIDRUM® NSHTÖU (V)

RoHS VDE CE

Construction:

Conductor:	Flexible tinned copper conductor Cl. 6, up to 6 mm² Flexible tinned copper conductor Cl. 5 from 10 mm²
Insulation:	Rubber EPR type 3GI3
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores black cores with consecutive numbers acc. to EN 50334; green-yellow earth-wire from 3 cores
Central element:	Special Kevlar
Stranding:	in layers
Inner sheath:	yellow (RAL 1021), rubber PCP compound
Supporting screen:	anti-twisting protection of hightech yarns
Outer sheath:	yellow (RAL 1021), rubber PCP compound

Features:

- **Vertical use**
- **for SPEEDS and MINIMUM BENDING RADIUS see pages 1,2,3,4,5,6 of catalogue**

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV
Test voltage:	3,5 kV
Max voltage permissible in A.C.:	0,7/1,2 kV
Max voltage permissible in C.C.:	0,9/1,8 kV
Temperature range Fixed installation: Flexible application:	- 50°C up to + 80°C - 40°C up to + 80°C
Max permissible temp. on conductor:	+ 90°C
Max permissible temp. on short circuit:	+ 200°C
Min. bending radius:	acc. to DIN VDE 0298-3
Current carrying capacity:	acc. to Acc. to DIN VDE 0298-4
Tensile strength:	until 30 N/mm²
Inner torsion strength:	± 50°/m
Max speed:	240 m/min. Please inquire for higher speeds
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:** DIN VDE 0473 part 811-2-1, IE C EN 60811-2 **Weather resistance:** outdoor use, UV rays and humidity **Water stability:** proved in long-period tests

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01020GY2041M40	4G4	16	153,6	465	2000	12
01020GY2041M60	4G6	18,4	230,4	568	2000	10
01020GY2041M61	4G10	26,1	384,0	1155	2000	8
01020GY2041M62	4G16	29	614,4	1533	2000	6
01020GY2041M63	4G25	34,4	960	2172	2000	4
01020GY2041M64	4G35	37,4	1344	2790	2800	2
01020GY2041M65	4G50	43,4	1920	3715	4000	1
01020GY2041M66	4G70	47,8	2688	4820	5600	2/0
01020GY2041M67	4G95	55,2	3648	6315	7600	3/0
01020GY2051M40	5G4	18,4	192	438	2000	12
01020GY2051M60	5G6	20	288	698	2000	10
01020GY2051M61	5G10	24,4	480	1085	2000	8
01020GY2051M62	5G16	27,6	768	1512	2400	6
01020GY2037M64	3x35+3G16/3	30	1161,6	2169	3150	2
01020GY2037M65	3x50+3G25/3	35,9	1680	2853	4500	0
01020GY2037M66	3x70+3G35/3	41,2	2352	3915	6300	2/0
01020GY2037M67	3x95+3G50/3	45,8	3216	5025	8550	3/0
01020GY2037M68	3x120+3G70/3	53	4128	6640	10800	4/0
01020GY2037M69	3x150+3G70/3	55,9	4992	7699	13500	250 MCM
01020GY2037M70	3x185+3G95/3	60,9	6240	9318	16650	350 MCM
01020GY2037M71	3x240+3G120/3	69,4	8064	12215	21600	450 MCM
01020GY2041M15	4G1,5	13	57,6	248	2000	16
01020GY2051M15	5G1,5	13,8	72	275	2000	16
01020GY0071M15	7G1,5	18,3	100,8	498	2000	16
01020GY0121M15	12G1,5	24,6	172,8	895	2000	16

FLEXIDRUM® NSHTÖU (V)

RoHS VDE CE

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx kg/km	Tensile strength N	AWG no.*)
01020GY0181M15	18G1,5	25,2	259,2	950	2000	16
01020GY0241M15	24G1,5	29,8	276,5	1056	2000	16
01020GY0301M15	30G1,5	32,4	432	1350	2000	16
01020GY0361M15	36G1,5	33,8	518,4	1400	2000	16
01020GY0441M15	44G1,5	35	633,6	1720	2000	16
01020GY0561M15	56G1,5	36,9	806,4	2215	2520	16
01020GY2031M25	3G2,5	13,8	72	310	2000	14
01020GY2041M25	4G2,5	14,3	96	370	2000	14
01020GY2051M25	5x2,5	15,2	120	439	2000	14
01020GY0071M25	7x2,5	20,9	168	630	2000	14
01020GY0121M25	12x2,5	24,7	288	1132	2000	14
01020GY0181M25	18x2,5	28,8	432	1234	2000	14
01020GY0241M25	24x2,5	31,7	576	1530	2000	14
01020GY0301M25	30x2,5	33,8	720	1810	2000	14
01020GY0361M25	36x2,5	35,9	864	1940	2000	14
01020GY0441M25	44x2,5	40,5	1056	2510	3300	14
01020GY0561M25	56x2,5	44,5	1344	3215	4200	14
01020GY0071M40	7G4	34	268,8	1080	2000	12
01020GY0121M40	12G4	34,4	460,8	1260	2000	12
01020GY0121M40	18G4	27	565,1	1770	2000	12
01020GY1032M10	3x(2x1)C	23	-	330	2000	18
01020GY1062M05	6x(2x0,5)C	24,1	-	402	2000	20
01020GY1062M10	6x(2x1)C	29,9	-	585	2000	18
01020GY1129900	(12x1)C	24,9	-	718	2000	18
01020GY1129900	12G2,5+(12x1)C	27,7	-	1154	2000	14
01020GY0199901	19G2,5+(5x1)C	28,5	545	1561	2000	14
01020GY0259902	25G2,5+(5x1)C	30,9	710	2158	2100	14

Other construction and sizes are available on request

FOR SPREADER APPLICATION

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01021GY0461M10	46G1	26,5	441,6	970	4700	18
01021GY0491M10	49G1	28,5	470,4	1100	-	18
01021GY0241M25	24G2,5	28,1	576	1200	3800	14
01021GY0301M25	30G2,5	31,3	720	1260	-	14
01021GY0361M25	36G2,5	32	864	1500	5700	14
01021GY0441M25	44G2,5	35,9	1056	1890	6900	14
01021GY0561M25	56G2,5	39	1344	2300	8800	14

FLEXIDRUM® R 500

RoHS CE

Tunneling machines

Construction:

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Insulation:	GAALTHERM® 590
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores black cores with consecutive numbers acc. to EN 50334; green-yellow earth-wire from 3 cores
Inner sheath:	PUR compound
Stranding:	in layers
Supporting Screen:	anti-twisting protection of hightech yarns
Outer sheath :	yellow (RAL 1021), PUR compound

Features:

- ***Possible version without antitwisting protection***
- ***for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue***

Applications:

- ***Cable for reeling apllications with high mechanical stress***
- ***FLEXIDRUM® R 500 can be used in mining and tunneling machines***

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV
Test voltage:	3,5 kV
Temperature range: Fixed installation: Flexible application:	 - 40°C up to + 80°C - 30°C up to + 80°C
Min. bending radius: Fixed laying: Flexible installation:	 6 x d 8 x d
Tensile strenght:	25 n/mm²
Max speed:	120 m/min. please inquire for higher speeds
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:** DIN VDE 0473 part 811-2-1, IEC EN 60811-2 **Weather resistance:** very good **Chemical resistance:** very good

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight approx. kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01030GY2041M25	4G2,5	10,9	96	190	250	14
01030GY2041M40	4G4	12,2	153,6	260	400	12
01030GY2041M60	4G6	13,7	230,4	370	600	10
01030GY2041M61	4G10	16,2	384	580	1000	8
01030GY2041M62	4G16	20,5	614,4	920	1600	6
01030GY2041M63	4G25	26,5	960	2150	2500	4
01030GY2041M64	4G35	31	1344	2900	3500	2
01030GY2041M65	4G50	34	1920	4100	5000	1
01030GY2041M66	4G70	39,5	2688	5750	7000	2/0
01030GY2037M63	3x25+3G6	24,5	892,8	1240	1960	4
01030GY2037M64	3x35+3G6	28,2	1180,8	1640	2650	2
01030GY2037M65	3x50+3G10	31,2	1728	2240	3750	1
01030GY2037M66	3x70+3G16	36,2	2476,8	3100	5250	2/0
01030GY2037M67	3x95+3G16	40,5	3196,8	3890	7150	3/0
01030GY2037M68	3x120+3G25	45,5	4176	5080	9000	4/0
01030GY2037M69	3x150+3G25	50,7	5040	6160	11250	250 MCM
01030GY2037M70	3x185+3G35	56	6336	7680	13800	350 MCM
01030GY2037M71	3x240+3G50	62,5	8354	9870	18000	450 MCM
01030GY2037M72	3x300+3G50	70,5	10080	12300	22500	550 MCM

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight approx. kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01030GY2051M25	5G2,5	11,7	120	220	310	16
01030GY2051M40	5G4	13,7	192	320	500	16
01030GY2051M60	5G6	15,7	288	450	750	16
01030GY2051M61	5G10	19	480	700	1250	16
01030GY2051M62	5G16	23	768	1100	2000	16
01030GY2051M63	5G25	28,2	1200	1550	3100	16
01030GY2051M64	5G35	32,2	1680	2050	4350	16
01030GY0071M15	7G1,5	12,2	100,8	210	260	16
01030GY0121M15	12G1,5	16,7	172,8	330	450	16
01030GY0181M15	18G1,5	16,7	259,2	410	670	16
01030GY0241M15	24G1,5	20,2	345,6	680	900	14
01030GY0361M15	36G1,5	23	518,4	900	1350	14
01030GY0071M25	7G2,5	13,2	168	30	430	14
01030GY0121M25	12G2,5	19,5	288	610	750	14
01030GY0181M25	18G2,5	19,5	432	740	1120	14
01030GY0241M25	24G2,5	23,5	576	1050	1500	14
01030GY0361M25	36G2,5	26,5	864	1430	2250	14
01030GY0421M25	42G2,5	28,2	1008	1500	2620	14
01030GY0269900	26G2,5+(4x2,5)C	25,7	720	1260	1870	14

Other construction and sizes are available on request

FLEXIDRUM® R 501

RoHS CE

Tunneling machines

Construction:

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Insulation:	**POWER:** rubber EPR special compound **EARTH:** XLPE special compound
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 3 conductors + 3 earth conductors: grey, brown, black and green/yellow divided in 3 cores
Inner sheath:	special PVC compound
Outer sheath :	yellow (RAL 1021), PUR compound

Features:

- **Possible version with antitwisting protection**
- **for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue**

Applications:

- **Power supply to mobile equipment with high risk of mechanical damage in mining and tunneling.**
  FLEXIDRUM® R 501 cable is suitable for application where it is deflected in one plane only.

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV Max.1,2 kV
Test voltage:	3,5 kV
Temperature range Fixed installation: Flexible application:	 - 30°C up to + 80°C - 20°C up to + 80°C
Max temperature on the conductor: In service: Flexible installation:	 + 90°C + 250°C
Min bending radius: for laying and installation (fixed laying): for repeated winding action (flexible): guided on deflection pulleys (flexible):	 6 x d 10 x d 10 x d
Max speed:	60 m/min. please inquire for higher speeds
Oil resistance:	very good
Chemical resistance:	very good
Fire performance:	flame retardant acc. to IEC 60332-1
Weather resistance:	very good

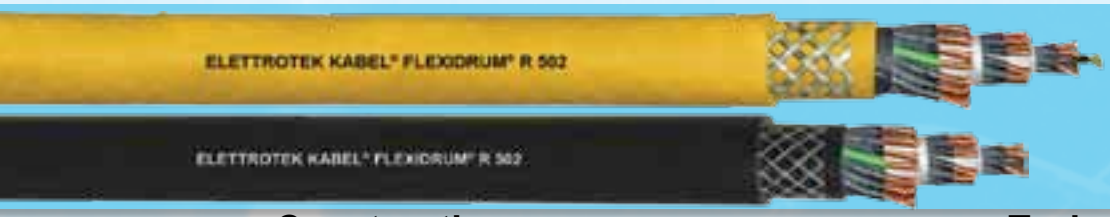
Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01040GY2037M63	3x25+3G6	25,5	892,8	1260	1500	4
01040GY2037M64	3x35+3G6	27,5	1180,8	1550	2100	2
01040GY2037M65	3x50+3G10	31	1728	2220	3000	1
01040GY2037M66	3x70+3G16	35,8	2476,8	3110	4200	2/0
01040GY2037M67	3x95+3G16	40,3	3196,8	3770	5700	3/0
01040GY2037M68	3x120+3G25	45,3	4176	4980	7200	4/0
01040GY2037M69	3x150+3G25	50,3	5040	6010	9000	250 MCM
01040GY2037M70	3x185+3G35	54,5	6336	7300	11100	350 MCM
01040GY2037M71	3x240+3G50	61	8352	9450	14400	450 MCM
01040GY2037M72	3x300+3G50	70,5	10080	12315	21000	550 MCM

Other construction and sizes are available on request

Correction factors for ambient temperature other than 30°C						
°C	20	25	35	40	45	50
K	1,1	1,05	0,95	0,89	0,84	0,77

FLEXIDRUM® R 502

RoHS Halogen Free CE



Construction:

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Insulation:	GAALTHERM® 530
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores black cores with consecutive numbers acc. to EN 50334; green-yellow earth-wire from 3 cores
Stranding:	special adjusted layering around central textile suspension unit with partial non-woven tape over the outer layer
Inner sheath:	PUR compound
Supporting screen:	textile anti-twisting braiding
Outer sheath:	PUR, black (RAL9005), yellow (RAL 1021)

Features:

- **Small outer diameter**
- **small cable weight**
- **high winding and unwinding strength**
- **possible yellow version**
- **for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue**

Applications:

- **FLEXIDRUM® R 502 is used on heavy appliances like motor cable reel hoists, transport systems, movable motors and farm vehicles with high mechanical stress.**

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV
Test voltage:	4 kV
Temperature range	
Fixed laying:	- 50°C up to + 90°C
Flexible application:	- 40°C up to + 90°C
Temperature Max on conductor:	
In service:	+ 90°C
Flexible application:	+ 250°C
Min bending radius: for laying and installation	
(fixed laying):	≤12 mm 3 x d / >12 mm 4 x d
for repeated winding action (flexible):	6 x d
guided on deflection pulleys (flexible):	7,5 x d
Max speed:	Max 180 m/min. please inquire for higher speeds
Max torsion:	± 25°/1mt.
Resistance:	**Oil resistant:** very good **Chemical resistant:** good **Fire resistant:** acc. to 60332-1 **UV-resistance:** very good

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01050GY2041M15	4G1,5	10,2	57,6	160	1875	16
01050GY2051M15	5G1,5	11,1	72	200	2225	16
01050GY0071M15	7G1,5	12,9	100,8	250	2090	16
01050GY0121M15	12G1,5	16,6	172,8	450	2540	16
01050GY0181M15	18G1,5	16,8	259,2	500	2540	16
01050GY0241M15	24G1,5	19,5	345,6	700	2740	16
01050GY0301M15	30G1,5	22,5	432	850	2840	16
01050GY0361M15	36G1,5	25	518,4	880	2840	12
01050GY0421M15	42G1,5	27,2	604,8	1050	2840	12
01050GY2041M25	4G2,5	11,7	96	240	1620	14
01050GY2051M25	5G2,5	12,5	120	260	2375	14
01050GY0071M25	7G2,5	14,3	168	350	2825	14
01050GY0121M25	12G2,5	19,1	288	650	3175	14
01050GY0181M25	18G2,5	19,3	432	700	3725	14
01050GY0241M25	24G2,5	22,6	576	950	3525	14
01050GY0301M25	30G2,5	25,7	720	1250	4525	14
01050GY0361M25	36G2,5	25,3	864	1300	4825	14
01050GY2041M40	4G4	15,5	153,6	350	1790	12
01050GY2041M60	4G6	16,7	230,4	400	1760	12
01050GY2041M61	4G10	19,8	384	650	2200	12

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight approx. kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01050GY2041M62	4G16	22,2	614,4	850	2700	14
01050GY2041M63	4G25	28	960	1350	3200	12
01050GY2041M64	4G35	30,5	1344	1800	4200	12
01050GY2041M65	4G50	35,5	1920	2500	6000	12
01050GY2041M66	4G70	41,2	2688	3500	8400	12
01050GY2041M67	4G95	46,2	3648	4600	8400	12
01050GY2041M68	4G120	51	4608	5750	14400	12
01050GY2041M69	4G150	55,5	5760	7400	18000	250 MCM
01050GY2051M40	5G4	16,6	192	410	2600	12
01050GY2051M60	5G6	18,1	288	520	2900	10
01050GY2051M61	5G10	21,6	480	800	2900	8
01050GY2051M62	5G16	25	768	1100	2900	6
01050GY2051M63	5G25	30,5	1200	1780	3750	4
01050GY2051M64	5G35	34,3	1680	2350	5250	2
01050GY2031M65	3x50+3G25/3	32,3	1680	2320	4500	1
01050GY2037M66	3x70+3G35/3	36,1	2352	3180	6300	2/0
01050GY2037M67	3x95+3G50/3	41	3216	4020	8550	3/0
01050GY2037M68	3x120+3G70/3	45,8	4128	5370	10800	4/0
01050GY2037M69	3x150+3G70/3	51	4992	6440	13500	250 MCM
01050GY2037M70	3x185+3G95/3	54,6	6240	7780	16650	350 MCM

Other construction and sizes are available on request

FLEXIDRUM® R 700

RoHS Halogen Free VDE CE

For spreader application

Construction:

Conductor:	Flexible red copper conductor Cl. 6, acc to IEC 60228, DIN VDE 0295
Insulation:	GAALTHERM® 585
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores white cores with consecutive numbers green-yellow earth-wire from 3 cores
Stranding:	special adjusted layering around central textile suspension unit with partial non-woven tape over the outer layer
Inner sheath:	special PUR
Supporting screen:	high-tech yarns
Outer sheath:	special yellow PUR, yellow (RAL 1021)

Features:

- ***Vertical use***
- ***halogen-free and flame resistant***
- ***small cable weight***
- ***small outer diameter***
- ***for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue***

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV
Test voltage:	2,5 kV
Temperature range	
Fixed installation:	- 40°C up to + 90°C
Flexible application:	- 30°C up to + 90°C
Min bending radius: for laying and installation	
(fixed laying):	≤12 mm 3 x d / >12 mm 4 x d
for repeated winding action (flexible):	6 x d
guided on deflection pulleys (flexible):	7,5 x d
Insulation resistance:	> 20 MOhm x km
Tensile strength:	2000 N (up to 4000 N on request)
Max speed:	up to 250 m/min. Please inquire for higher speeds
Resistance:	**Halogen free:** acc. to IEC 60754-1-2 **Fire resistant:** VDE 0482, EN, IEC 60332-1-2 **Oil resistant:** acc. to DIN VDE 0472 part 803 test B

FLEXIDRUM® R 700

For spreader application

FOR SPREADER APPLICATION

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01060GYA181M25	18G2,5	21,5	432	815	2000	14
01060GYA371M25	37G2,5	31	888	1550	4000	14
01060GYA441M25	44G2,5	34	1056	1800	4000	14
01060GYA561M25	56G2,5	-	1344	-	-	14

Other construction and sizes are available on request

FLEXIDRUM® R 701 UL

Construction:

Conductor:	Flexible red copper conductor Cl. 6, acc to IEC 60228, DIN VDE 0295 (from 1,5 to 35) mm² Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295 (from 50 mm²)
Insulation:	GAALTHERM® 585
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores white cores with consecutive numbers green-yellow earth-wire from 3 cores
Stranding:	special adjusted layering around central textile suspension unit with partial non-woven tape over the outer layer
Inner sheath:	special PUR
Supporting screen:	high-tech yarns
Outer sheath:	special yellow PUR, yellow (RAL 1021), black (RAL 9005)

Features:

- **Vertical use**
- **halogen-free and flame resistant**
- **small cable weight**
- **small outer diameter**
- **AWM style 10264/20235 80° 1000 V CSA AWM II A/B 90°C 600 V FT1**
- **for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue**

Technical data:

Nominal voltage:	**DIN VDE:** U/oU 0,6/1 kV **UL/CSA:** 1000 V
Test voltage:	4 kV
Temperature range Fixed installation: Flexible application:	- 50°C up to + 80°C - 40°C up to + 80°C
Min bending radius: for laying and installation (fixed laying): for repeated winding action (flexible): guided on deflection pulleys (flexible):	≤12 mm 3 x d / >12 mm 4 x d 6 x d 7,5 x d
Insulation resistance:	> 20 MOhm x km
Tensile strength:	25 N per mm² (standard type) 35 N per mm² (reinforced type)
Resistance:	**Halogen free:** acc. to IEC 60754-1-2 **Fire resistant:** VDE 0482, EN, IEC 60332-1-2 **Oil resistant:** acc. to DIN VDE 0472 part 803 test B **Max speed:** up to 250 m/min. Please inquire for higher speeds

Other construction and sizes are available on request

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01070HY2041A16	4G1,5	10,5	57,6	165	150	16
01070HY2051A16	5G1,5	11	72	185	190	16
01070HYA071A16	7G1,5	13	100,8	255	265	16
01070HYA121A16	12G1,5	18,5	172,8	345	450	16
01070HYA181A16	18G1,5	18,8	259,2	540	675	16
01070HYA241A16	24G1,5	21,5	345,6	670	900	16
01070HYA301A16	30G1,5	24,8	432	910	1125	16
01070HYA361A16	36G1,5	25,7	518,4	945	1350	16
01070HYA421A16	42G1,5	26,7	604,8	1070	1575	16
01070HYA511A16	51G1,5	31,3	734,4	1530	1920	16
01070HY2041A14	4G2,5	12	96	220	250	14
01070HY2051A14	5G2,5	13	120	280	315	14
01070HYA071A14	7G2,5	15	168	340	440	14
01070HYA121A14	12G2,5	20,5	288	550	750	14
01070HYA181A14	18G2,5	21,3	432	740	1125	14
01070HYA241A14	24G2,5	25,1	576	995	1500	14
01070HYA301A14	30G2,5	27,9	720	1260	1875	14
01070HYA361A14	36G2,5	28,5	864	1335	2250	14
01070HYA421A14	42G2,5	31,5	1008	1525	2625	14
01070HYA501A14	50G2,5	34,9	1200	2150	3125	14
01070HYA511A14	51G2,5	35,5	1224	2200	3190	14
01070HY2041A12	4G4	12,8	153,6	280	400	12
01070HY2051A12	5G4	14,5	192	370	500	12
01070HY2041A10	4G6	17,2	230,4	420	600	10
01070HY2051A10	5G6	18	288	520	750	10
01070HY0071A10	7G6	21,2	403,2	730	1050	10

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01070HY2041A08	4G10	19,9	384	645	1000	8
01070HY2051A08	5G10	21,2	480	780	1250	8
01070HYA071A08	7G10	26	672	1060	1750	8
01070HY2041A06	4G16	24	614,4	950	1600	6
01070HY2051A06	5G16	26	768	1180	2000	6
01070HY2041A04	4G25	28	960	1500	2500	4
01070HY2041A02	4G35	30,4	1344	2130	3500	2
01070HY2041A1C	4G50	35,5	1920	2620	5000	1
01070HY2041A2C	4G70	40,5	2688	3715	7000	2/0
01070HY2041A3C	4G95	50,9	3648	4810	9500	3/0
01070HY2041A4C	4G120	53,2	4608	5915	12000	4/0
01070HYA041A5C	4G150	56,3	5760	7120	15000	250 MCM
01070HY2037A1C	3G50+3x10	35	1728	2620	3750	1
01070HY2048A06	4G16+4x2,5	24	710,4	1060	2050	6
01070HY2169900	4G16+2x(4x1,5)C	29,5	925	1525	1600	6
REINFORCED TYPE						
01071HYA241A16	24G1,5	23,5	345,6	690	1260	16
01071HYA301A16	30G1,5	27,7	432	935	1575	16
01071HYA361A16	36G1,5	29,3	518,4	970	1890	16
01071HYA421A16	42G1,5	29,8	604,8	1200	2200	16
01071HYA491A16	49G1,5	32,9	705,6	1520	2580	16
01071HYA241A14	24G2,5	26,7	576	1015	2100	14
01071HYA301A14	30G2,5	29,1	720	1310	2625	14
01071HYA361A14	36G2,5	32,5	864	1425	3150	14
01071HYA421A14	42G2,5	33,8	1008	1650	3675	14
01071HYA491A14	49G2,5	38,3	1176	1700	4280	14

FLEXIDRUM® R 702

RoHS Halogen Free CE

New version! Reduced weight and diameter

Construction:

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Insulation:	GAALTHERM® 585
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores black cores with consecutive numbers acc. to EN 50334; green-yellow earth-wire from 3 cores
Stranding:	special adjusted layering around central Kevlar with black insulation suspension unit with partial non woven-tape over the outer layer
Inner sheath:	PUR
Supporting screen:	high-tech yarns
Outer sheath:	PUR
Sheath color:	black (RAL 9005) or yellow (RAL 1021)

Features:

- **Small outer diameter**
- **small cable weight**
- **for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue**

Applications:

- **FLEXIDRUM® R 702 is used on heavy appliances, cable reels, for vertical use**

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV
Test voltage:	4 kV
Temperature range Fixed installation: Flexible application:	- 50°C up to + 90°C - 40°C up to + 90°C
Min bending radius: for laying and installation (fixed laying): for repeated winding action (flexible): guided on deflection pulleys (flexible):	≤12 mm 3 x d / >12 mm 4 x d 6 x d 7,5 x d
Max speed:	120 m/min. please inquire for higher speeds
Resistance:	**Halogen free:** acc. to DIN VDE 0472 part 815 and IEC 60754-1 **Oil resistance:** very good **Chemical resistance:** good **Fire performance:** flame retardant and self-extinguishing acc. to IEC EN 60332-1-2 **UV-resistance:** very good, better black sheath color version

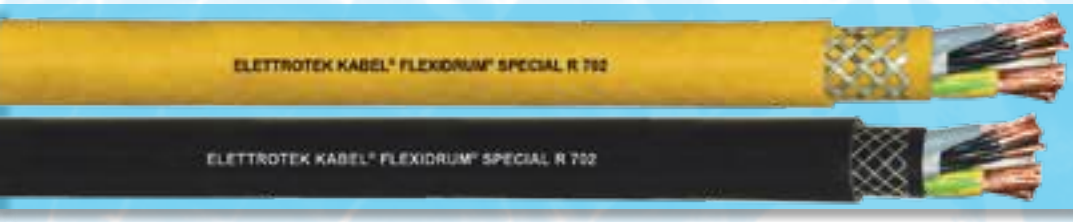
Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01080GY0491M10	49G1	25	470,4	880	-	19
01080GY2041M15	4G1,5	9,1	57,6	111	1340	16
01080GY2051M15	5G1,5	9,9	72	133	1690	16
01080GY0071M15	7G1,5	11,9	100,8	193	2150	16
01080GY0121M15	12G1,5	16,7	172,8	341	2600	16
01080GY0181M15	18G1,5	16,5	259,2	411	2600	16
01080GY2041M25	4G2,5	10,5	96	163	1345	14
01080GY2051M25	5G2,5	11,7	120	200	2100	14
01080GY0071M25	7G2,5	13,9	168	295	2500	14
01080GY0081M25	8G2,5	14,9	192	-	-	14
01080GY0121M25	12G2,5	19,7	288	506	2900	14
01080GY0181M25	18G2,5	19,6	432	611	3450	14
01080GY0241M25	24G2,5	23,9	576	843	2700	14
01080GY0301M25	30G2,5	26,7	720	1057	4200	14
01080GY0361M25	36G2,5	26,8	864	1164	5000	14
01080GY0421M25	42G2,5	28,7	1008	1405	5750	14
01080GY0501M25	50G2,5	32,5	1200	1688	6750	14
01080GY0561M25	56G2,5	33,7	1344	1783	7900	14

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01080GY2041M40	4G4	12,5	153,6	240	1690	12
01080GY0071M40	7G4	16,6	268,8	425	2600	12
01080GY0161M40	16G4	23,9	614,4	880	3500	12
01080GY2041M60	4G6	14,6	230,4	344	1860	10
01080GY2041M61	4G10	18,1	384	574	2300	8
01080GY2041M62	4G16	22,4	614,4	873	2800	6
01080GY2048M62	4G16+4x2,5	-	-	-	-	6
01080GY2037M63	3x25+3G6	24,3	892,8	1181	3300	4
01080GY2041M63	4G25	26,6	960	1341	3300	4
01080GY2037M64	3x35+3G6	28,1	1180,8	1569	3300	2
01080GY2041M64	4G35	31,2	1344	1880	3300	2
01080GY2037M65	3x50+3G10	31,9	1728	2219	3800	1
01080GY2041M65	4G50	35,4	1920	2592	4000	1

Other construction and sizes are available on request

FLEXIDRUM® SPECIAL R 702

RoHS Halogen Free CE



New version! Reduced weight and diameter

Construction:

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Insulation:	GAALTHERM® 585
Cores color:	acc. to DIN VDE 0293-308, HD 308 S2 from 6 cores black cores with consecutive numbers acc. to EN 50334; green-yellow earth-wire from 3 cores
Stranding:	special adjusted layering around central Kevlar with black insulation suspension unit with partial non woven-tape over the outer layer
Inner sheath:	PUR
Supporting screen:	high-tech yarns
Outer sheath:	PUR
Sheath color:	black (RAL 9005) or yellow (RAL 1021)

Features:

- **Small outer diameter**
- **small cable weight**
- **for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue**

Applications:

- **FLEXIDRUM® SPECIAL R 702 is used on heavy appliances, cable reels, for vertical use**

Technical data:

Nominal voltage:	Uo/U 0,6/1 kV
Test voltage:	4 kV
Temperature range Fixed installation:	- 50°C up to + 90°C
Flexible application:	- 40°C up to + 90°C
Min bending radius: for laying and installation (fixed laying):	≤12 mm 3 x d / >12 mm 4 x d
for repeated winding action (flexible):	6 x d
guided on deflection pulleys (flexible):	7,5 x d
Max speed:	120 m/min. please inquire for higher speeds
Resistance:	**Halogen free:** acc. to DIN VDE 0472 part 815 and IEC 60754-1 **Oil resistance:** very good **Chemical resistance:** good **Fire performance:** flame retardant and self-extinguishing acc. to IEC EN 60332-1-2 **UV-resistance:** very good, better black sheath color version

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
01080GY2049900	4G16+4x2x1,5	28,2	729,6	1030	-	6
01080GY2049901	4G35+25x1,5	37,4	1704	2287	-	2
01080GY2049902	4G50+3x2x1	35,3	2069	2700	-	1
01080G72049903	4G50+7x2,5	39,2	2088	2786	5000	1
01080GY0449904	44G4	36,8	1689,6	2330	6200	12
01080GY0429905	42G4+3x1G62,5/125µm	37,9	1612,8	2251	5000	12
01080GY0189906	18G2,5+(4x2x0,14)PN	26,7	650	903	-	14/26
01080GY0309907	30G2,5+(8x2,5)C	31,5	980	1450	-	14/14
01080GY2049908	4G16+12x1,5+(4x1,5)C	36,5	868,5	1480	-	6/16/16
01080GY2049909	4G35+(3x2,5)ST+(2x1,5)ST(2x1)C	48	1486,5	3070	-	2/14/16/19
01080GY0169910	16G1,5+2x(1x1,5)C	19,1	280	530	-	16/16
01080GY3039911	3x35+1x16+(2x2,5)C	34,1	1231,1	1957	-	2/6/14
01080GY3039912	3x35+1x16+3x2,5	33,9	1233,6	1955	-	2/6/14
01080GY2059913	(4x2x0,14)S GE+9G4+5G6	34,8	674,2	1397	-	26/12/10
01080GY2059914	(2x2x0,34) PN+7G4+5G6	26,6	591,3	995	-	22/12/10
01080GY2049915	4G4+4x1,5+4x(1,5)C	21,6	310,3	609	-	12/16/16
01080GY3039916	3x35+2x10+12x1,5+(4x1,5)	41	1454,1	2323	-	2/8/16/16
01080GY3039917	3x50+(3G10)C	33	1924,4	2408	-	1/8
01080GY2049918	4G16+2x(4x1,5)C	25,6	840	1184	-	4/16
01080GY0089919	8G2,5+(4x2,5)C	21,9	310,8	632	-	14/14
01080GY0709920	70G4	45,4	2668	3586	-	12
01080GY1049921	4x2x0,14	10,7	40,6	120	-	26
01080GY2039922	3G2,5+40x0,5+20x1,5	-	-	-	-	14
01080G70359923	(35G2,5)+18x2,5	-	-	-	-	14
01080G70049924	4G10+2x2,5+2x(2x0,75)C+3x3x0,7	32,4	557,4	1230	-	8
01080G72049927	4x1,50+2x(2x0,75)C+(4x0,14+4x0,34)C	18,9	149,1	418	-	16
01080G72049928	4G4+2x2,5+2x(2x0,34)	19,1	285	540	-	12/14/24

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM R 902

RoHS

Mining excavator

Construction:

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR special compound
Core screen:	semi-conducting compound
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound
Inner sheath:	PUR
Supporting screen:	high-tech yarns
Outer sheath:	special PUR
Sheath color:	red

Technical data:

Nominal voltage:	U/oU 3,6/6 kV up to 12/20 kV
Temperature range Fixed installation: Flexible application:	 - 40°C up to + 80°C - 25°C up to + 80°C
Max permissible temperature on conductor:	+ 90°C
Max permissible temperature on short circuit:	+ 250°C
Min bending radius: for laying and installation (fixed): for repeated winding action (flexible): guided on deflection pulleys (flexible):	 6 x d 10 x d 15 x d
Tensile strenght:	25 N/mm²
Max speed:	120 m/min. please inquire for higher speeds
Resistance:	**Oil resistance:** very good **Fire performance:** flame retardant acc. to IEC 60332-1 **Weather resistance:** outdoor use, resistant to ozone moisture, water and UV

Features:

- **Possible without anti-twisting reinforcement**
- **small outer diameter and light weight**
- **for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue**

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
3,6/6 (7,2) kV						
02010MR1037M63	3x25+3x25/3	35	960	1900	2500	4
02010MR1037M64	3x35+3x25/3	39,5	1248	2300	3250	2
02010MR1037M65	3x50+3x25/3	42,5	1680	2860	4375	0
02010MR1037M66	3x70+3x35/3	46,5	2352	3800	6125	2/0
02010MR1037M67	3x95+3x50/3	51,2	3216	4700	8375	3/0
02010MR1037M68	3x120+3x70/3	55,7	4128	5900	10750	4/0
02010MR1037M69	3x150+3x70/3	59,5	4992	6950	13000	250 MCM
02010MR1037M70	3x185+3x95/3	-	6240	-	16250	350 MCM
02010MR1037M71	3x240+3x120/3	-	8064	-	21000	450 MCM
02010MR1037M72	3x300+3x150/3	-	10080	-	26250	600 MCM
6/10 (12) kV						
02010QR1037M63	3x25+3x25/3	35	960	1900	2500	4
02010QR1037M64	3x35+3x25/3	39,5	1248	2300	3250	2
02010QR1037M65	3x50+3x25/3	42,5	1680	2860	4375	0
02010QR1037M66	3x70+3x35/3	46,5	2352	3800	6125	2/0
02010QR1037M67	3x95+3x50/3	51,2	3216	4700	8375	3/0
02010QR1037M68	3x120+3x70/3	55,7	4128	5900	10750	4/0
02010QR1037M69	3x150+3x70/3	59,5	4992	6950	13000	250 MCM
02010QR1037M70	3x185+3x95/3	-	6240	-	16250	350 MCM
02010QR1037M71	3x240+3x120/3	-	8064	-	21000	450 MCM
02010QR1037M72	3x300+3x150/3	-	10080	-	26250	600 MCM

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
8,7/15 (18) kV						
02010SR1037M63	3x25+3x25/3	35	960	1900	2500	4
02010SR1037M64	3x35+3x25/3	39,5	1248	2300	3250	2
02010SR1037M65	3x50+3x25/3	42,5	1680	2860	4375	0
02010SR1037M66	3x70+3x35/3	46,5	2352	3800	6125	2/0
02010SR1037M67	3x95+3x50/3	51,2	3216	4700	8375	3/0
02010SR1037M68	3x120+3x70/3	55,7	4128	5900	10750	4/0
02010SR1037M69	3x150+3x70/3	59,5	4992	6950	13000	250 MCM
02010SR1037M70	3x185+3x95/3	-	6240	-	16250	350 MCM
02010SR1037M71	3x240+3x120/3	-	8064	-	21000	450 MCM
02010SR1037M72	3x300+3x150/3	-	10080	-	26250	600 MCM
12/20 (24) kV						
02010UR1037M63	3x25+3x25/3	45,5	960	2650	2500	4
02010UR1037M64	3x35+3x25/3	46	1248	2900	3250	2
02010UR1037M65	3x50+3x25/3	47,2	1680	3300	4375	0
02010UR1037M66	3x70+3x35/3	51,5	2352	4300	6125	2/0
02010UR1037M67	3x95+3x50/3	54,7	3216	5100	8375	3/0

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM R 902 OPTICAL FIBER

RoHS

Construction:

Conductor:	*Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295*
Conductor screen:	*semi-conducting compound*
Insulation:	*rubber EPR special compound*
Core screen:	*semi-conducting compound*
Color cores:	*POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound*
Inner sheath:	*PUR*
Supporting screen:	*high-tech yarns*
Optical fibres element:	*6 fiber optics, multimode 62.5/125 µm*
Outer sheath:	*RED, special PUR*

Technical data:

Nominal voltage:	*U/oU 3,6/6 kV up to 12/20 kV*
Temperature range *Fixed installation:* *Flexible installation:*	*- 40°C up to + 80°C* *- 25°C up to + 80°C*
Max permissible temperature on conductor:	*+ 90°C*
Max permissible temperature on short circuit:	*+ 250°C*
Tensile strenght:	*25 N/mm²*
Min. Bending radius: *(fixed):* *for repeated winding action (flexible):* *guided on deflection pulleys (flexible):*	*6 x d* *10 x d* *15 x d*
Max Speed:	*120 m/min. Please inquire for higher speeds*
Resistance:	***Oil resistant:*** *very good* ***Fire performance:*** *flame retardant acc. to IEC 60332-1* ***Weather resisatnce:*** *outdoor using, resistant to ozone moisture, water and UV*

Features:

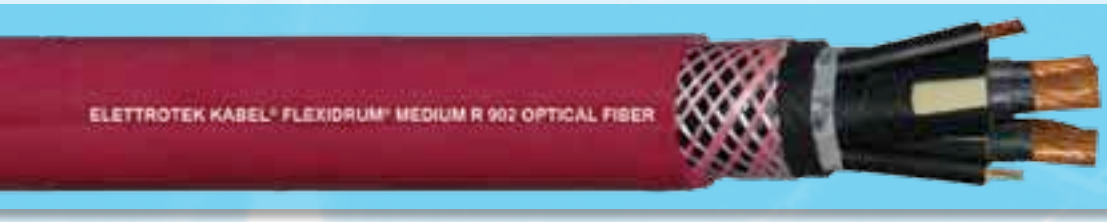
- ***Possible without anti-twisting reinforcement***
- ***small outer diameter and light weight***
- ***for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue***

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
3,6/6 (7,2) kV						
02020MR1037M63	3x25+2x25/2+FO	35	960	1900	2500	4
02020MR1037M64	3x35+2x25/2+ FO	39,5	1248	2300	3250	2
02020MR1037M65	3x50+2x25/2+FO	42,5	1680	2860	4375	0
02020MR1037M66	3x70+2x35/2+FO	46,5	2352	3800	6125	2/0
02020MR1037M67	3x95+2x50/2+FO	51,2	3216	4700	8375	3/0
02020MR1037M68	3x120+2x70/2+FO	55,7	4128	5900	10750	4/0
02020MR1037M69	3x150+2x70/2+FO	59,5	4992	6950	13000	250 MCM
02020MR1037M70	3x185+2x95/2+FO	-	6240	-	16250	350 MCM
02020MR1037M71	3x240+2x120/2+FO	-	8064	-	21000	450 MCM
02020MR1037M72	3x300+2x150/2+FO	-	10080	-	26250	600 MCM

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
8,7/15 (18) kV						
02020SR1037M63	3x25+2x25/2+FO	35	960	1900	2500	4
02020SR1037M64	3x35+2x25/2+FO	39,5	1248	2300	3250	2
02020SR1037M65	3x50+2x25/2+FO	42,5	1680	2860	4375	0
02020SR1037M66	3x70+2x35/2+FO	46,5	2352	3800	6125	2/0
02020SR1037M67	3x95+2x50/2+FO	51,2	3216	4700	8375	3/0
02020SR1037M68	3x120+2x70/2+FO	55,7	4128	5900	10750	4/0
02020SR1037M69	3x150+2x70/2+FO	59,5	4992	6950	13000	250 MCM
02020SR1037M70	3x185+2x95/2+FO	-	6240	-	16250	350 MCM
02020SR1037M71	3x240+2x120/2+FO	-	8064	-	21000	450 MCM
02020SR1037M72	3x300+2x150/2+FO	-	10080	-	26250	600 MCM

FLEXIDRUM® MEDIUM R 902 OPTICAL FIBER

RoHS



Mining excavator

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
6/10 (12) kV						
02020QR1037M63	3x25+2x25/2+FO	35	960	1900	2500	4
02020QR1037M64	3x35+2x25/2+FO	39,5	1248	2300	3250	2
02020QR1037M65	3x50+2x25/2+FO	42,5	1680	2860	4375	0
02020QR1037M66	3x70+2x35/2+FO	46,5	2352	3800	6125	2/0
02020QR1037M67	3x95+2x50/2+FO	51,2	3216	4700	8375	3/0
02020QR1037M68	3x120+2x70/2+FO	55,7	4128	5900	10750	4/0
02020QR1037M69	3x150+2x70/2+FO	59,5	4992	6950	13000	250 MCM
02020QR1037M70	3x185+2x95/2+FO	-	6240	-	16250	350 MCM
02020QR1037M71	3x240+2x120/2+FO	-	8064	-	21000	450 MCM
02020QR1037M72	3x300+2x150/2+FO	-	10080	-	26250	600 MCM

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
12/20 (24) kV						
02020UR1037M63	3x25+2x25/2+FO	45,5	960	2650	2500	4
02020UR1037M64	3x35+2x25/2+FO	46	1248	2900	3250	2
02020UR1037M65	3x50+2x25/2+FO	47,2	1680	3300	4375	0
02020UR1037M66	3x70+2x35/2+FO	51,5	2352	4300	6125	2/0
02020UR1037M67	3x95+2x50/2+FO	54,7	3216	5100	8375	3/0

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM R 901

Flexible single core 8,7/15 kV up to 12/24 kV

RoHS

Tunneling machines

Construction:

Conductor:	*Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295*
Conductor screen:	*semi-conducting compound*
Insulation:	*rubber EPR special compound*
Core screen:	*semi-conducting compound*
Color core:	*natural color with black semi-conductive compound*
Screen:	*copper braid*
Outer sheat:	*special PUR*
Color:	*red*

Technical data:

Nominal voltage:	*Uo/U 8,7 kV up to 12/20 kV*
Temperature range *Fixed installation:* *Flexible application:*	*- 50°C up to + 80°C* *- 30°C up to + 80°C*
Temperature at conductor: *in service:* *in short circuit:*	*+ 90°C* *+ 250°C*
Tensile strenght:	*≤ 20 N/mm²*
Max speed:	*60 m/min. Please inquire for higher speeds*
Resistance:	***Fire resistant:*** *Flame retardant acc. to IEC 60332-1*

Features:

- ***Small cable weight***
- ***small outer diameter***
- ***other voltage on request***
- ***other colors on request***
- ***oil resistant, water UV and ozone ray resistant***
- ***using in reel, festoon, and flexible fixed installation***
- ***for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue***

8,7/15 (18) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02030SRL010M63	1x25	18,5	-	550	500	4
02030SRL010M64	1x35	20	-	680	700	2
02030SRL010M65	1x50	21	-	880	1000	1
02030SRL010M66	1x70	23,3	-	1170	1400	2/0
02030SRL010M67	1x95	25,3	-	1500	1900	3/0
02030SRL010M68	1x120	27,3	-	1840	2400	4/0
02030SRL010M69	1x150	29,25	-	2230	3000	250 MCM

12/20 (24) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02030URL010M63	1x25	22	-	550	500	4
02030URL010M64	1x35	22,5	-	680	700	2
02030URL010M65	1x50	23	-	880	1000	1
02030URL010M66	1x70	25,5	-	1170	1400	2/0
02030URL010M67	1x95	27	-	1500	1900	3/0
02030URL010M68	1x120	28,75	-	1840	2400	4/0
02030URL010M69	1x150	30,25	-	2230	3000	250 MCM

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv with antitwisting protection

RoHS

New version!
Reduced weight and diameter

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Core screen:	semi-conducting compound
Earth Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Earth core screen:	semi-conducting compound
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound
Stranding:	Phase unit laid up with earth cores in the interstices
Inner sheath:	EPR compound 5GM3
Anti-twisting braid:	anti-twisting braid of synthetic yarns
Outer sheath:	RED PCP compound 5GM5

Features:

- ***Power supply to mobile units with high risk of mechanical damage.***
  It is designed to work with forced guidance systems with defection on different floors and equipment with reel axis in direction of travel
- ***Possible cold version -45°C***

Technical data:

Nominal voltages:	Uo/U Kv	3,6/6	6/10	8,7/15	12/20
Max oper. voltage:	Uo/U Kv	7,2	12	18	24
Test voltage:	Kv	11	17	24	29

Temperature range Fixed installation: Flexible application:	 - 40°C up to + 80°C - 30°C up to + 60°C
Max permissible temperature on conductor:	+ 90°C
Max permissible temperature on short circuit:	+ 250°C
Min. Bending radius: Fixed installation: On drums: On deflect. pulley: Free movement:	 6 x d 12 x d 15 x d 12 x d
Minimum distance for change of direction:	20 x d
Max speed: Operating: Rewinding with drum car:	 up to 180 m/min. 100 m/min
Max torsion:	± 25°/m
Resistance:	**Flame retardant acc. to:** IEC 60332-1-2, DIN VDE 0482 part.265-2-1, EN 50265-2-1; **Oil resistant acc. to:** IEC 60811-2-1, DIN VDE 0473 part.811-2-1.

Uo/U (Um) 3,6/6(7,2) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02040MR1037M63	3x25+3x25/3	40	960	2450	1500	4
02040MR1037M64	3x35+3x25/3	42,7	1248	2960	2100	2
02040MR1037M65	3x50+3x25/3	45,5	1680	3495	3000	1
02040MR1037M66	3x70+3x35/3	49,6	2352	4450	4200	2/0
02040MR1037M67	3x95+3x50/3	54,7	3216	5545	5700	3/0
02040MR1037M68	3x120+3x70/3	59	4128	6920	7200	4/0
02040MR1037M69	3x150+3x70/3	64,7	4992	8180	9000	250 MCM
02040MR1037M70	3x185+3x95/3	68,8	6240	9730	11100	350 MCM
02040MR1037M71	3x240+3x120/3	75,9	8064	12445	14400	450 MCM

FLEXIDRUM® MEDIUM (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv with antitwisting protection

RoHS

New version! Reduced weight and diameter

Uo/U (Um) 6/10(12) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02040QR1037M63	3x25+3x25/3	40,9	960	2520	1500	4
02040QR1037M64	3x35+3x25/3	43,5	1248	3040	2100	2
02040QR1037M65	3x50+3x25/3	46,5	1680	3570	3000	1
02040QR1037M66	3x70+3x35/3	50,4	2352	4540	4200	2/0
02040QR1037M67	3x95+3x50/3	55,5	3216	5665	5700	3/0
02040QR1037M68	3x120+3x70/3	59,8	4128	7028	7200	4/0
02040QR1037M69	3x150+3x70/3	65,5	4992	8300	9000	250 MCM
02040QR1037M70	3x185+3x95/3	69,4	6240	9805	11100	350 MCM
02040QR1037M71	3x240+3x120/3	76,8	8064	12590	14400	450 MCM

Uo/U (Um) 8,7/15(18) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02040SR1037M63	3x25+3x25/3	44,3	960	2820	1500	4
02040SR1037M64	3x35+3x25/3	47	1248	3370	2100	2
02040SR1037M65	3x50+3x25/3	49,8	1680	3935	3000	1
02040SR1037M66	3x70+3x35/3	55,1	2352	5070	4200	2/0
02040SR1037M67	3x95+3x50/3	59	3216	6085	5700	3/0
02040SR1037M68	3x120+3x70/3	64,9	4128	7715	7200	4/0
02040SR1037M69	3x150+3x70/3	69	4992	8790	9000	250 MCM
02040SR1037M70	3x185+3x95/3	72	6240	10215	11100	350 MCM
02040SR1037M71	3x240+3x120/3	79,4	8064	13010	14400	450 MCM

Uo/U (Um) 12/20(24) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02040UR1037M63	3x25+3x25/3	49,5	960	3340	1500	4
02040UR1037M64	3x35+3x25/3	53,4	1248	4060	2100	2
02040UR1037M65	3x50+3x25/3	56,2	1680	4650	3000	1
02040UR1037M66	3x70+3x35/3	60,3	2352	5720	4200	2/0
02040UR1037M67	3x95+3x50/3	65,7	3216	7010	5700	3/0
02040UR1037M68	3x120+3x70/3	70	4128	8460	7200	4/0
02040UR1037M69	3x150+3x70/3	75,9	4992	9880	9000	250 MCM
02040UR1037M70	3x185+3x95/3	79	6240	11360	11100	350 MCM
02040UR1037M71	3x240+3x120/3	84,6	8064	13870	14400	450 MCM

Other construction and sizes are available on request

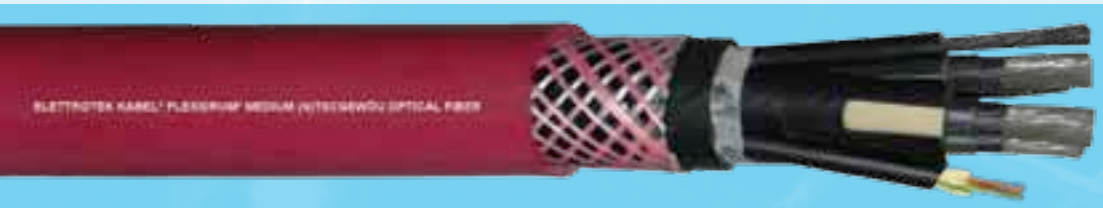
Nominal cross section mm²	Max resistance D.C. at 20°C Ohm/km	Max resistance A.C. at 90°C Ohm/km	Reactance att 50 Hz for nominal voltage 3,6/6 Ohm/km	6/10 Ohm/km	8,7/15 Ohm/km	12/20 Ohm/km
25	0,780	0,995	0,106	0,107	0,114	0,123
35	0,554	0,707	0,100	0,101	0,107	0,116
50	0,386	0,493	0,095	0,097	0,102	0,110
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	20	25	30	40	45	50	55
K	1,1	1,05	0,95	0,89	0,84	0,77	0,71

FLEXIDRUM® MEDIUM (N)TSCGEWÖU OPTICAL FIBER

From 3,6/6 Kv to 12/20 Kv, with antitwisting protection and optical element

RoHS



New version! Reduced weight and diameter

Construction:

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Core screen:	semi-conducting compound
Earth Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound
Fibre optics:	6-12-18 fibre-optics in a structur consisting by 6 free tubes (1,2 or 3 fibres per tube)
Stranding:	Phase unit laid up with earth cores in the interstices
Inner sheath:	EPR compound 5GM3
Anti-twisting braid:	anti-twisting braid of synthetic yarns
Outer sheath:	RED PCP compound 5GM5

Technical data:

Nominal voltages: / **Max oper. voltage:** / **Test voltage:**	Uo/U Kv 3,6/6 6/10 8,7/15 12/20 Kv 7,2 12 18 24 Kv 11 17 24 29
Temperature range Fixed installation: Flexible application:	- 40°C up to + 80°C - 30°C up to + 60°C
Max permissible temperature on conductor:	+ 90°C
Max permissible temperature on short circuit:	+ 250°C
Min. Bending radius: Fixed installation: On drums: On deflect. pulley: Free movement:	 6 x d 12 x d 15 x d 12 x d
Minimum distance for change of direction:	20 x d
Max speed: Operating: Rewinding with drum car:	 up to 180 m/min. 100 m/min
Max torsion:	± 25°/m
Resistance:	**Flame retardant acc. to:** IEC 60332-1-2, DIN VDE 0482 part.265-2-1, EN 50265-2-1; **Oil resistant acc. to:** IEC 60811-2-1, DIN VDE 0473 part.811-2-1.

Features:

- **Power supply to mobile units with high risk of mechanical damage.**
  It is designed to work with forced guidance systems with defection on different floors and equipment with reel axis in direction of travel
- **Possible cold version - 45°C**

OPTICAL PARAMETERS			
Trasmission data of the fiber-optics	Graded-index fibre 50/125	Graded-index fibre 62.5/125	Monomode fibre E9/125
Max attenuation at wavelength 850 m	2,8 dB/km	3,3 dB/km	-
Max attenuation at wavelength 1300 m	0,8 dB/km	0,4 dB/km	0,9 dB/km
Max attenuation at wavelength 1550 m	-	-	0,3 dB/km
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

Uo/U (Um) 3,6/6(7,2) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02050MR1037M63	3x25+2x25/2+FO	40,3	960	2495	1500	4
02050MR1037M64	3x35+2x25/2+FO	42,7	1248	2990	2100	2
02050MR1037M65	3x50+2x25/2+FO	45,5	1680	3520	3000	1
02050MR1037M66	3x70+2x35/2+FO	49,6	2352	4518	4200	2/0
02050MR1037M67	3x95+2x50/2+FO	54,7	3216	5590	5700	3/0
02050MR1037M68	3x120+2x70/2+FO	58,9	4128	6960	7200	4/0
02050MR1037M69	3x150+2x70/2+FO	64,7	4992	8200	9000	250 MCM
02050MR1037M70	3x185+2x95/2+FO	68,4	6240	9770	11100	350 MCM
02050MR1037M71	3x240+2x120/2+FO	78,1	8064	12790	14400	450 MCM

FLEXIDRUM® MEDIUM (N)TSCGEWÖU OPTICAL FIBER

From 3,6/6 Kv to 12/20 Kv, with antitwisting protection and optical element

RoHS

New version! Reduced weight and diameter

Uo/U (Um) 6/10(12) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02050QR1037M63	3x25+2x25/2+FO	41	960	2550	1500	4
02050QR1037M64	3x35+2x25/2+FO	43,5	1248	3070	2100	2
02050QR1037M65	3x50+2x25/2+FO	46,3	1680	3600	3000	1
02050QR1037M66	3x70+2x35/2+FO	50,3	2352	4584	4200	2/0
02050QR1037M67	3x95+2x50/2+FO	55,5	3216	5690	5700	3/0
02050QR1037M68	3x120+2x70/2+FO	59,6	4128	7050	7200	4/0
02050QR1037M69	3x150+2x70/2+FO	65,3	4992	8834	9000	250 MCM
02050QR1037M70	3x185+2x95/2+FO	69,0	6240	9840	11100	350 MCM
02050QR1037M71	3x240+2x120/2+FO	78,8	8064	12890	14400	450 MCM

Uo/U (Um) 8,7/15(18) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%.*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02050SR1037M63	3x25+2x25/2+FO	48,2	960	2850	1500	4
02050SR1037M64	3x35+2x25/2+FO	47	1248	3404	2100	2
02050SR1037M65	3x50+2x25/2+FO	49,8	1680	3970	3000	1
02050SR1037M66	3x70+2x35/2+FO	55,1	2352	5140	4200	2/0
02050SR1037M67	3x95+2x50/2+FO	59	3216	6125	5700	3/0
02050SR1037M68	3x120+2x70/2+FO	64,9	4128	7786	7200	4/0
02050SR1037M69	3x150+2x70/2+FO	69	4992	8830	9000	250 MCM
02050SR1037M70	3x185+2x95/2+FO	72	6240	10268	11100	350 MCM
02050SR1037M71	3x240+2x120/2+FO	80,7	8064	13207	14400	450 MCM

Uo/U (Um) 12/20(24) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02050UR1037M63	3x25+2x25/2+FO	49,5	960	3380	1500	4
02050UR1037M64	3x35+2x25/2+FO	53,4	1248	4095	2100	2
02050UR1037M65	3x50+2x25/2+FO	57,2	1680	4675	3000	1
02050UR1037M66	3x70+2x35/2+FO	60,3	2352	5807	4200	2/0
02050UR1037M67	3x95+2x50/2+FO	65,7	3216	7040	5700	3/0
02050UR1037M68	3x120+2x70/2+FO	70	4128	8530	7200	4/0
02050UR1037M69	3x150+2x70/2+FO	75,9	4992	9935	9000	250 MCM
02050UR1037M70	3x185+2x95/2+FO	79	6240	11395	11100	350 MCM
02050UR1037M71	3x240+2x120/2+FO	84,6	8064	13915	14400	450 MCM

Other construction and sizes are available on request

Nominal cross section mm²	*Max resistance D.C. at 20°C Ohm/km*	*Max resistance A.C. at 90°C Ohm/km*	*Reactance at 50 Hz for nominal voltage 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	20	25	30	40	45	50	55
K	1,1	1,05	0,95	0,89	0,84	0,77	0,71

FLEXIDRUM® MEDIUM PLUS (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv with antitwisting protection

Max. speed up to 300 m/min!

New version! Reduced weight and diameter

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Core screen:	semi-conducting compound
Earth Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Earth core screen:	semi-conducting compound
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-conductive compound
Central unit:	semi-conducting rubber compound
Stranding:	Phase unit laid up with earth cores in the interstices over semi-conducting rubber compound
Inner sheath:	EPR compound GM1b
Anti-twisting braid:	anti-twisting braid of synthetic yarns
Outer sheath:	RED PCP compound 5GM5

Features:

- ***Power supply to mobile units with high risk of mechanical damage. It is designed to work with forced guidance systems with defection on different floors and equipment with reel axis in direction of travel***
- ***acc. to DIN VDE 0250 part 813, and 0298-3/4***
- ***UL and MSHA approval***
- **** After verify of the application by Elettrotek Kabel***

Technical data:

Nominal voltages:	Uo/U Kv	3,6/6	6/10	8,7/15	12/20
Max oper. voltage:	Kv 7,2	12	18	24	
Test voltage:	Kv 11	17	24	29	

Temperature range Fixed installation: Flexible application:	 - 50°C + 80°C - 35°C + 80°C
Max permissible temperature on conductor:	+ 90°C
Max permissible temperature on short circuit:	+ 250°C
Min. Bending radius Fixed installation: On drums: On deflect. pulley:	 6 x d 12 x d 15 x d
Minimum distance for change of direction:	20 x d
Max speed: Operating:	 up to 300 m/min*
Max torsion:	± 25°/m
Resistance:	**Flame retardant acc. to:** IEC 60332-1-2, DIN VDE 0482 part.265-2-1, EN 50265-2-1; **Oil resistant acc. to:** IEC 60811-2-1, DIN VDE 0473 part.811-2-1.

Uo/U (Um) 3,6/6(7,2) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02045MR1037M63	3x25+3x25/3	42	960	2540	3000	4
02045MR1037M64	3x35+3x25/3	43,5	1248	2825	3000	2
02045MR1037M65	3x50+3x25/3	47,5	1680	3560	3000	1
02045MR1037M66	3x70+3x35/3	51,5	2352	4370	4200	2/0
02045MR1037M67	3x95+3x50/3	56	3216	5470	5700	3/0
02045MR1037M68	3x120+3x70/3	59,5	4156	6500	7200	4/0
02045MR1037M69	3x150+3x70/3	65,5	4992	7830	9000	250 MCM
02045MR1037M70	3x185+3x95/3	69,5	6240	9370	11100	350 MCM
02045MR1037M71	3x240+3x95/3	74,5	7824	11360	14400	450 MCM

FLEXIDRUM® MEDIUM PLUS (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv with antitwisting protection

Max. speed up to 300 m/min!

New version! Reduced weight and diameter

Uo/U (Um) 6/10(12) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02045QR1037M63	3x25+3x25/3	42	960	2540	3000	4
02045QR1037M64	3x35+3x25/3	43,5	1248	2825	3000	2
02045QR1037M65	3x50+3x25/3	47,5	1680	3560	3000	1
02045QR1037M66	3x70+3x35/3	51,5	2352	4370	4200	2/0
02045QR1037M67	3x95+3x50/3	56	3216	5470	5700	3/0
02045QR1037M68	3x120+3x70/3	59,5	4156	6500	7200	4/0
02045QR1037M69	3x150+3x70/3	65,5	4992	7830	9000	250 MCM
02045QR1037M70	3x185+3x95/3	69,5	6240	9370	11100	350 MCM
02045QR1037M71	3x240+3x95/3	74,5	7824	11360	14400	450 MCM

Uo/U (Um) 8,7/15(18) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02045SR1037M63	3x25+3x25/3	42	960	2540	3000	4
02045SR1037M64	3x35+3x25/3	43,5	1248	2825	3000	2
02045SR1037M65	3x50+3x25/3	47,5	1680	3560	3000	1
02045SR1037M66	3x70+3x35/3	51,5	2352	4370	4200	2/0
02045SR1037M67	3x95+3x50/3	56	3216	5470	5700	3/0
02045SR1037M68	3x120+3x70/3	59,5	4156	6500	7200	4/0
02045SR1037M69	3x150+3x70/3	65,5	4992	7830	9000	250 MCM
02045SR1037M70	3x185+3x95/3	69,5	6240	9370	11100	350 MCM
02045SR1037M71	3x240+3x95/3	74,5	7824	11360	14400	450 MCM

Uo/U (Um) 12/20 (24) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02045UR1037M63	3x25+3x25/3	47	960	2990	3000	4
02045UR1037M64	3x35+3x25/3	48,5	1248	3300	3000	2
02045UR1037M65	3x50+3x25/3	50,5	1680	3820	3000	1
02045UR1037M66	3x70+3x35/3	56,5	2352	4880	4200	2/0
02045UR1037M67	3x95+3x50/3	61	3216	5950	5700	3/0
02045UR1037M68	3x120+3x70/3	63,5	4156	7000	7200	4/0
02045UR1037M69	3x150+3x70/3	67,5	4992	8250	9000	250 MCM
02045UR1037M70	3x185+3x95/3	71,5	6240	9650	11100	350 MCM
02045UR1037M71	3x240+3x95/3	78,5	7824	12150	14400	450 MCM
02045UR1037M72	3x300+3x120/3	82	9792	14400	18000	550 MCM

Nominal cross section mm²	Max resistance D.C. at 20°C Ohm/km	Max resistance A.C. at 90°C Ohm/km	Reactance at 50 Hz for nominal voltage 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

FLEXIDRUM® MEDIUM PLUS (N)TSCGEWÖU OPTICAL FIBER

From 3,6/6 Kv to 12/20 Kv, with antitwisting protection and optical element

RoHS

Max. speed up to 300 m/min!

New version! Reduced weight and diameter

Construction:

Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Core screen:	semi-conducting compound
Earth Conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-conductive compound
Fibre optics:	12 fibre-optics in a structur consisting by: **≤35 mm²:** 1 reinforced tube with 12 fibres **≥ 50 mm²:** 2 gel filled tubes with 6 fibres each
Central unit:	semi-conducting rubber compound
Stranding:	Phase unit laid up with earth cores in the interstices over semi-conducting rubber compound
Inner sheath:	EPR compound GM1b
Anti-twisting braid:	anti-twisting braid of synthetic yarns
Outer sheath:	RED, PCP compound 5GM5

Technical data:

Nominal voltages:	Uo/U Kv	3,6/6	6/10	8,7/15	12/20
Max oper. voltage:	Kv	7,2	12	18	24
Test voltage:	Kv	11	17	24	29

Temperature range Fixed installation: Flexible application:	 - 50°C + 80°C - 30°C + 80°C
Max permissible temperature on conductor:	+ 90°C
Max permissible temperature on short circuit:	+ 250°C
Min. Bending radius: Fixed installation: On drums: On deflect. pulley:	 6 x d 12 x d 15 x d
Minimum distance for change of direction:	20 x d
Max speed: Operating:	 up to 300 m/min*
Max torsion:	± 25°/m
Resistance:	**Flame retardant acc. to:** IEC 60332-1-2, DIN VDE 0482 part.265-2-1, EN 50265-2-1; **Oil resistant acc. to:** IEC 60811-2-1, DIN VDE 0473 part.811-2-1

Features:

- **Power supply to mobile units with high risk of mechanical damage. It is designed to work with forced guidance systems with defection on different floors and equipment with reel axis in direction of travel**
- **acc. to DIN VDE 0250 part 813, and 0298-3/4**
- **UL and MSHA approval**
- **** After verify of the application by Elettrotek Kabel***

OPTICAL PARAMETERS			
Trasmission data of the fiber-optics	Graded-index fibre 50/125	Graded-index fibre 62.5/125	Monomode fibre E9/125
Max attenuation at wavelength 850 m	≤ 3 dB/km	≤ 3 dB/km	-
Max attenuation at wavelength 1300 m	≤ 1 dB/km	≤ 0,8 dB/km	≤ 0,5 dB/km
Max attenuation at wavelength 1550 m	-	-	≤ 0,4 dB/km
Bandwidth at 850 nm	> 600 MHz	> 220 MHz	-
Bandwidth at 1300 nm	>1200 MHz	> 600 MHz	-
Numerical aperture	0,275+/-0,015	0,275+/-0,015	-
Chromatic dispersion at 1300 nm	-	-	≤ 3,5 ps/nm x km
Chromatic dispersion at 1550 nm	-	-	≤ 18 ps/nm x km

Uo/U (Um) 3,6/6(7,2) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02055MR1037M63	3x25+2x25/2+12FO	41,5	960	2600	3000	4
02055MR1037M64	3x35+2x25/2+12FO	43,5	1248	2900	3000	2
02055MR1037M65	3x50+2x25/2+12FO	47,5	1680	3475	3000	1
02055MR1037M66	3x70+2x35/2+12FO	51,5	2352	4330	4200	2/0
02055MR1037M67	3x95+2x50/2+12FO	56,5	3216	5460	5700	3/0
02055MR1037M68	3x120+2x70/2+12FO	60,5	4128	6490	7200	4/0
02055MR1037M69	3x150+2x70/2+12FO	65,5	4992	7800	9000	250 MCM
02055MR1037M70	3x185+2x95/2+12FO	69,5	6240	9400	11100	350 MCM
02055MR1037M71	3x240+2x120/2+12FO	74,5	8064	11400	14400	450 MCM

FLEXIDRUM® MEDIUM PLUS (N)TSCGEWÖU OPTICAL FIBER

From 3,6/6 Kv to 12/20 Kv, with antitwisting protection and optical element

Max. speed up to 300 m/min!

New version! Reduced weight and diameter

Uo/U (Um) 6/10(12) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02055QR1037M63	3x25+2x25/2+12FO	41,5	960	2600	3000	4
02055QR1037M64	3x35+2x25/2+12FO	43,5	1248	2900	3000	2
02055QR1037M65	3x50+2x25/2+12FO	47,5	1680	3475	3000	1
02055QR1037M66	3x70+2x35/2+12FO	51,5	2352	4330	4200	2/0
02055QR1037M67	3x95+2x50/2+12FO	56,5	3216	5460	5700	3/0
02055QR1037M68	3x120+2x70/2+12FO	60,5	4128	6490	7200	4/0
02055QR1037M69	3x150+2x70/2+12FO	65,5	4992	7800	9000	250 MCM
02055QR1037M70	3x185+2x95/2+12FO	69,5	6240	9400	11100	350 MCM
02055QR1037M71	3x240+2x120/2+12FO	74,5	8064	11400	14400	450 MCM

Uo/U (Um) 8,7/15(18) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%.	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02055SR1037M63	3x25+2x25/2+12FO	41,5	960	2600	3000	4
02055SR1037M64	3x35+2x25/2+12FO	43,5	1248	2900	3000	2
02055SR1037M65	3x50+2x25/2+12FO	47,5	1680	3475	3000	1
02055SR1037M66	3x70+2x35/2+12FO	51,5	2352	4330	4200	2/0
02055SR1037M67	3x95+2x50/2+12FO	56,5	3216	5460	5700	3/0
02055SR1037M68	3x120+2x70/2+12FO	60,5	4128	6490	7200	4/0
02055SR1037M69	3x150+2x70/2+12FO	65,5	4992	7800	9000	250 MCM
02055SR1037M70	3x185+2x95/2+12FO	69,5	6240	9400	11100	350 MCM
02055SR1037M71	3x240+2x120/2+12FO	74,5	8064	11400	14400	450 MCM

Uo/U (Um) 12/20(24) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02055UR1037M63	3x25+2x25/2+12FO	47,5	960	2990	3000	4
02055UR1037M64	3x35+2x25/2+12FO	49,5	1248	3480	3000	2
02055UR1037M65	3x50+2x25/2+12FO	51,5	1680	3880	3000	1
02055UR1037M66	3x70+2x35/2+12FO	56,5	2352	4900	4200	2/0
02055UR1037M67	3x95+2x50/2+12FO	59,5	3216	5800	5700	3/0
02055UR1037M68	3x120+2x70/2+12FO	62,5	4128	6900	7200	4/0
02055UR1037M69	3x150+2x70/2+12FO	67,5	4992	8250	9000	250 MCM
02055UR1037M70	3x185+2x95/2+12FO	72	6240	9600	11100	350 MCM
02055UR1037M71	3x240+2x120/2+12FO	78,5	8064	12100	14400	450 MCM

Other construction and sizes are available on request

Nominal cross section mm²	Max resistance D.C. at 20°C Ohm/km	Max resistance A.C. at 90°C Ohm/km	Reactance at 50 Hz for nominal voltage 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

FLEXIDRUM® MEDIUM (N)TSCGEWÖU TUNNEL

From 3,6/6 Kv to 12/20 Kv

RoHS

New version! for use with TBM'S

Construction:

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Core screen:	semi-conducting compound
Color cores:	POWER: natural color with black semi-conductive compound CONTROL: black semi-contuctive compound
Earth conductor screen:	Individual copper/textile braid combination laid-up in a concentric around to each power cores
Inner sheath:	EPR compound Gm1b, acc. to DIN VDE 0207, part 21
Monitoring conductor:	Overall concentric lay of copper wire (6 ÜL KON)
Outer sheath:	RED, PCP compound type 5GM5

Technical data:

Nominal voltages:	Uo/U Kv	3,6/6	6/10	12/20
Max oper. voltage A.C.:	Uo/U Kv	4,2/7,2	6,9/12	13,9/24
Max oper. voltage D.C.:	Uo/U Kv	5,4/10,8	9/18	18/36
A.C. test voltage:	Kv	11	17	29
Temperature range				
Fixed installation:	- 40°C up to + 80°C			
Flexible application:	- 20°C up to + 80°C			
Max temperature of conductor:	+ 90°C			
Short-circuit temperature:	+ 250°C			
Min. Bending radius:	acc. to DIN VDE 0298, part 3			
Minimum reccomended bending radius on reels:	20 x d			
Current carrying capacity:	acc. to DIN VDE 0298, part 4			
Tensile strenght:	up to 15 N/mm²			
Max torsion:	± 25°/m			
Max speed:	60 m/min.			
Max torsion:	± 25°/m			
Resistance:	**Oil resistance:** acc. to DIN VDE 0473, part 811-2-1, par. 10, IEC-EN 60811-2-1 **Fire resistance:** VDE 0482, part 332-1-2, IEC-EN 60332-1-2			

Features:

- **Appropriate for reeling power supply cables mines in TBM'S machines and underground mines for tunnel construction applications**
- **Outdoors and Indoor use**
- **Ozone resistant**
- **Moisture and water resistant**

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

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02060MR1037M63	3x25+3x16/3E +3x2,5ST + 6ÜL KON	41,7	-	2775	1125	4
02060MR1037M64	3x35+3x25/3E +3x2,5ST + 6ÜL KON	45,4	-	3205	1575	2
02060MR1037M65	3x50+3x25/3E +3x2,5ST + 6ÜL KON	49,9	-	4040	2250	1
02060MR1037M66	3x70+3x35/3E +3x2,5ST + 6ÜL KON	53,1	-	5030	3150	2/0
02060MR1037M67	3x95+3x50/3E +3x2,5ST + 6ÜL KON	59,1	-	6278	4275	3/0
02060MR1037M68	3x120+3x70/3E +3x2,5ST + 6ÜL KON	62,9	-	7365	5400	4/0

FLEXIDRUM® MEDIUM (N)TSCGEWÖU TUNNEL

From 3,6/6 Kv to 12/20 Kv

RoHS

New version! for use with TBM'S

6/10 kV (12) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02060QR1037M63	*3x25+3x16/3E +3x2,5ST + 6ÜL KON*	*44,2*	*-*	*2975*	*1125*	*4*
02060QR1037M64	*3x35+3x25/3E +3x2,5ST + 6ÜL KON*	*46,7*	*-*	*3420*	*1575*	*2*
02060QR1037M65	*3x50+3x25/3E +3x2,5ST + 6ÜL KON*	*51,2*	*-*	*4257*	*2250*	*1*
02060QR1037M66	*3x70+3x35/3E +3x2,5ST + 6ÜL KON*	*56,1*	*-*	*5268*	*3150*	*2/0*
02060QR1037M67	*3x95+3x50/3E +3x2,5ST + 6ÜL KON*	*61,4*	*-*	*6538*	*4275*	*3/0*
02060QR1037M68	*3x120+3x70/3E +3x2,5ST + 6ÜL KON*	*65,1*	*-*	*7637*	*5400*	*4/0*

12/20 (24) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02060UR1037M63	*3x25+3x16/3E +3x2,5ST + 6ÜL KON*	*50,5*	*-*	*3527*	*1125*	*4*
02060UR1037M64	*3x35+3x25/3E +3x2,5ST + 6ÜL KON*	*53,3*	*-*	*4140*	*1575*	*2*
02060UR1037M65	*3x50+3x25/3E +3x2,5ST + 6ÜL KON*	*58,4*	*-*	*5060*	*2250*	*1*
02060UR1037M66	*3x70+3x35/3E +3x2,5ST + 6ÜL KON*	*62*	*-*	*6059*	*3150*	*2/0*
02060UR1037M67	*3x95+3x50/3E +3x2,5ST + 6ÜL KON*	*68,1*	*-*	*7512*	*4275*	*3/0*
02060UR1037M68	*3x120+3x70/3E +3x2,5ST + 6ÜL KON*	*71,9*	*-*	*8815*	*5400*	*4/0*

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM R 903 TUNNEL

From 3,6/6 Kv to 12/20 Kv

RoHS

New version! for use with TBM'S

Construction:

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR compound acc. to IEC 60502-2
Core screen:	semi-conducting compound + red copper braid
Earth conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Earth core screen:	semi-conducting compound
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound
Central element:	aramid yarns
Earth conductor screen:	bare copper braid on each power cores
Central element:	aramid yarns
Inner sheath:	HFC
Monitoring conductor:	semi-conducting compound + red copper braid
Outer sheath:	RED, special PUR

Technical data:

Nominal voltages:	Uo/U Kv	3,6/6	6/10	12/20
Max oper. voltage A.C.:	Uo/U Kv	4,2/7,2	6,9/12	13,9/24
Max oper. voltage D.C.:	Uo/U Kv	5,4/10,8	9/18	18/36
A.C. test voltage: (15 min.)	Kv	13	21	42

Temperature range
Fixed installation: - 40°C up to + 80°C
Flexible application: - 25°C up to + 80°C

Max temperature of conductor: + 90°C
Short-circuit temperature: + 250°C

Min. bending radius:
Fixed laying: 8 x d
Flexible installation:
6/10 kV: 10 x d
12/20 kV: 12 x d

Current carrying capacity: acc. to DIN VDE 0298, part 4

Tensile strenght: up to 20 N/mm²

Max torsion: ± 25°/m

Max speed: 60 m/min.

Resistance:
Oil resistance:
acc. to DIN VDE 0473, part 811-2-1, par. 10, IEC-EN 60811-2-1
Fire resistance:
VDE 0482, Part. 60332-1-2, IEC-EN 60332-1-2

Features:

- **Appropriate for reeling power supply cables mines in TBM'S machines and underground mines for tunnel construction applications**
- **Outdoors and Indoor use**
- **Ozone resistant**
- **Moisture and water resistant**

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

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02130MR1037M63	3x25+3x16/3E +3x2,5 + 6ÜL KON	40	-	2130	1500	4
02130MR1037M64	3x35+3x25/3E +3x2,5 + 6ÜL KON	43,5	-	2460	2100	2
02130MR1037M65	3x50+3x25/3E +3x2,5 + 6ÜL KON	47,5	-	3310	3000	1
02130MR1037M66	3x70+3x35/3E +3x2,5 + 6ÜL KON	51	-	4270	4200	2/0
02130MR1037M67	3x95+3x50/3E +3x2,5 + 6ÜL KON	57	-	5520	5700	3/0
02130MR1037M68	3x120+3x70/3E +3x2,5 + 6ÜL KON	61	-	6480	7200	4/0

FLEXIDRUM® MEDIUM R 903 TUNNEL

From 3,6/6 Kv to 12/20 Kv

New version! for use with TBM'S

6/10 kV (12) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02130QR1037M63	*3x25+3x16/3E +3x2,5 + 6ÜL KON*	*42,5*	*-*	*2800*	*1500*	*4*
02130QR1037M64	*3x35+3x25/3E +3x2,5 + 6ÜL KON*	*46*	*-*	*3400*	*2100*	*2*
02130QR1037M65	*3x50+3x25/3E +3x2,5 + 6ÜL KON*	*50,5*	*-*	*4000*	*3000*	*1*
02130QR1037M66	*3x70+3x35/3E +3x2,5 + 6ÜL KON*	*54*	*-*	*5050*	*4200*	*2/0*
02130QR1037M67	*3x95+3x50/3E +3x2,5 + 6ÜL KON*	*60,5*	*-*	*6350*	*5700*	*3/0*
02130QR1037M68	*3x120+3x70/3E +3x2,5 + 6ÜL KON*	*64*	*-*	*7600*	*7200*	*4/0*

12/20 (24) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02130UR1037M64	*3x35+3x25/3E +3x2,5 + 6ÜL KON*	*52*	*-*	*3950*	*2100*	*2*
02130UR1037M65	*3x50+3x25/3E +3x2,5 + 6ÜL KON*	*55*	*-*	*4550*	*3000*	*1*
02130UR1037M66	*3x70+3x35/3E +3x2,5 + 6ÜL KON*	*59,5*	*-*	*5700*	*4200*	*2/0*
02130UR1037M67	*3x95+3x50/3E +3x2,5 + 6ÜL KON*	*66*	*-*	*7050*	*5700*	*3/0*
02130UR1037M68	*3x120+3x70/3E +3x2,5 + 6ÜL KON*	*69,5*	*-*	*8250*	*7200*	*4/0*

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM (N)TSCGEWÖU WATER

From 1,8/3 Kv to 18/30 kV

RoHS

For use in water!

Construction:

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Core screen:	semi-conducting compound
Earth conductor:	Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Earth core screen:	semi-conducting compound
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound
Stranding:	three power conductor placed with earth-conductor divided in three in the outer interstices
Inner sheath:	EPR compound GM1b
Outer sheath:	RED PCP compound 5GM3

Technical data:

Nominal voltages Uo/U Kv:	1,8/3	3,6/6	6//10	8,7/15	12/20	14/25	18/30
Max oper. voltage in A.C. systems Uo/U kV:	2,1/3,6	4,7/7,2	6,9/12	10,4/18	13,9/24	17,3/30	20.8/36
Max oper. voltage in D.C. systems Uo/U kV:	2,7/5,4	5,4/10,8	9/18	13,5/27	18/36	22,5/45	27/54
A.C. test voltage Kv:	6	11	17	24	29	36	43
Temperature range Fixed installation: Flexible application:	- 40°C up to + 80°C - 25°C up to + 60°C						
Max permissible water temp. :	+ 40°C						
Max permissible temp. on conductor:	+ 90°C						
Short circuit temp. of the conductor:	+ 250°C						
Min. Bending radius:	see TABLES pag. 6/7 (Min. bending radius tables)						
Tensile strenght:	up to 15 N/mm²						
Max torsion:	+/-100°/mm						
Resistance:	**Oil resistant:** acc. to DIN VDE 0473, part 811-2-1, par. 10, IEC-EN 60811-2-1 **Fire resistant:** acc. to VDE 0482, part 332-1-2, IEC-EN 60332-1-2 **Water resistant:** very good, acc. to HD 22.16 **Weather resistant:** outdoors and indoors use ozone, UV and moisture resistant						

Features:

- **Power supply cable for use in water: connection to dredgers, pumps, ect.**
- **High-mechanical stresses**
- **Use in waste water, salt water and salty water**
- **Cold version -45°C possible**
- **GOST-R and others approvals on request**

1,8/3 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02080KR1037M63	3x25+3x16/3	36,9	873,6	2180	1125	4
02080KR1037M64	3x35+3x16/3	39,5	1161,6	2610	1575	2
02080KR1037M65	3x50+3x25/3	43,8	1680	3330	2250	1
02080KR1037M66	3x70+3x35/3	49,1	2352	4370	3150	2/0
02080KR1037M67	3x95+3x50/3	55,3	3216	5660	4275	3/0
02080KR1037M68	3x120+3x70/3	58,6	4128	6725	5400	4/0
02080KR1037M69	3x150+3x70/3	62,6	4992	7820	6750	250 MCM
02080KR1037M70	3x185+3x95/3	68,2	6240	9435	8325	350 MCM

FLEXIDRUM® MEDIUM (N)TSCGEWÖU WATER

From 1,8/3 Kv to 18/30 kV

RoHS

For use in water!

3,6/6 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02080MR1037M63	3x25+3x16/3	41,8	873,6	2625	1125	4
02080MR1037M64	3x35+3x16/3	44,3	1161,6	3080	1575	2
02080MR1037M65	3x50+3x25/3	47,3	1680	3695	2250	1
02080MR1037M66	3x70+3x35/3	54,7	2352	4984	3150	2/0
02080MR1037M67	3x95+3x50/3	57,9	3216	5972	4275	3/0
02080MR1037M68	3x120+3x70/3	61,2	4128	7051	5400	4/0
02080MR1037M69	3x150+3x70/3	66,9	4992	8469	6750	250 MCM
02080MR1037M70	3x185+3x95/3	70,8	6240	9855	8325	350 MCM

6/10 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02080QR1037M63	3x25+3x16/3	43,5	873,6	2780	1125	4
02080QR1037M64	3x35+3x16/3	46	1161,6	3225	1575	2
02080QR1037M65	3x50+3x25/3	48,9	1680	3842	2250	1
02080QR1037M66	3x70+3x35/3	56	2352	5166	3150	2/0
02080QR1037M67	3x95+3x50/3	59,6	3216	6199	4275	3/0
02080QR1037M68	3x120+3x70/3	62,9	4128	7280	5400	4/0
02080QR1037M69	3x150+3x70/3	68,8	4992	8675	6750	250 MCM
02080QR1037M70	3x185+3x95/3	72,5	6240	10100	8325	350 MCM

8,7/15 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02080SR1037M63	3x25+3x16/3	48,1	873,6	3230	1125	4
02080SR1037M64	3x35+3x16/3	50,7	1161,6	3715	1575	2
02080SR1037M65	3x50+3x25/3	55,5	1680	4630	2250	1
02080SR1037M66	3x70+3x35/3	60,7	2352	5793	3150	2/0
02080SR1037M67	3x95+3x50/3	66,1	3216	7111	4275	3/0
02080SR1037M68	3x120+3x70/3	69,4	4128	8262	5400	4/0
02080SR1037M69	3x150+3x70/3	73,3	4992	9418	6750	250 MCM
02080SR1037M70	3x185+3x95/3	78,9	6240	11175	8325	350 MCM

FLEXIDRUM® MEDIUM (N)TSCGEWÖU WATER

From 1,8/3 Kv to 18/30 kV

RoHS

For use in water!

12/20 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02080UR1037M63	3x25+3x16/3	54,3	873,6	3970	1125	4
02080UR1037M64	3x35+3x16/3	56,7	1161,6	4470	1575	2
02080UR1037M65	3x50+3x25/3	59,6	1680	5185	2250	1
02080UR1037M66	3x70+3x35/3	66,8	2352	6645	3150	2/0
02080UR1037M67	3x95+3x50/3	70,4	3216	7750	4275	3/0
02080UR1037M68	3x120+3x70/3	73,6	4128	8920	5400	4/0
02080UR1037M69	3x150+3x70/3	79,2	4992	10510	6750	250 MCM
02080UR1037M70	3x185+3x95/3	82,9	6240	11975	8325	350 MCM

14/25 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02080WR1037M63	3x25+3x16/3	59,5	873,6	4680	1125	4
02080WR1037M64	3x35+3x16/3	62,4	1161,6	5235	1575	2
02080WR1037M65	3x50+3x25/3	67	1680	6215	2250	1
02080WR1037M66	3x70+3x35/3	72,3	2352	7515	3150	2/0
02080WR1037M67	3x95+3x50/3	77,7	3216	8990	4275	3/0
02080WR1037M68	3x120+3x70/3	80,8	4128	10215	5400	4/0
02080WR1037M69	3x150+3x70/3	84,8	4992	11505	6750	250 MCM
02080WR1037M70	3x185+3x95/3	90,5	6240	13427	8325	350 MCM

18/30 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02080XR1037M63	3x25+3x16/3	66,4	873,6	5638	1125	4
02080XR1037M64	3x35+3x16/3	70,1	1161,6	6241	1575	2
02080XR1037M65	3x50+3x25/3	72,1	1680	7045	2250	1
02080XR1037M66	3x70+3x35/3	80	2352	8722	3150	2/0
02080XR1037M67	3x95+3x50/3	82,8	3216	9917	4275	3/0
02080XR1037M68	3x120+3x70/3	85,9	4128	11189	5400	4/0
02080XR1037M69	3x150+3x70/3	91,7	4992	12902	6750	250 MCM
02080XR1037M70	3x185+3x95/3	95,4	6240	14470	8325	350 MCM

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM (N)TSCGEWÖU WATER.../3E

From 1,8/3 Kv to 18/30 kV, with core copper screen

RoHS

For use in water!

Construction:

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compound
Insulation:	rubber EPR type 3GI3
Core screen:	semi-conducting compound
Color cores:	POWER: natural color with black semi-conductive compound
Stranding of earth conductor:	single concentric earth conductors arranged over the insulation of the three power cores
Stranding:	Three power conductors placed
Inner sheath:	EPR compound GM1b
Outer sheath:	RED PCP compound 5GM3

Technical data:

Nominal voltages Uo/U Kv:	1,8/3	3,6/6	6//10	8,7/15	12/20	14/25	18/30
Max oper. voltage in A.C. systems Uo/U kV:	2,1/3,6	4,7/7,2	6,9/12	10,4/18	13,9/24	17,3/30	20.8/36
Max oper. voltage in A.C. systems Uo/U kV:	2,7/5,4	5,4/10,8	9/18	13,5/27	18/36	22,5/45	27/54
A.C. test voltage Kv:	6	11	17	24	29	36	43
Temperature range: Fixed installation: Flexible application:	- 40°C up to + 80°C - 25°C up to + 60°C						
Max permissible water temp. :	+ 40°C						
Max permissible temp. on conductor:	+ 90°C						
Short circuit temp. of the conductor:	+ 250°C						
Min. Bending radius:	see MIN. BENDING RADIUS table						
Tensile strenght:	up to 15 N/mm²						
Max torsion:	+/-25°/mm						
Resistance:	**Oil resistant:** acc. to DIN VDE 0473, part 811-2-1, par. 10, IEC-EN 60811-2-1 **Fire resistant:** acc. to VDE 0482, part 332-1-2, IEC-EN 60332-1-2 **Water resistant:** very good, acc. to HD 22.16 **Weather resistant:** outdoors and indoors use ozone, UV and moisture resistant						

Features:

- **Power supply cable for use in water: connection to dredgers, pumps, ect.**
- **High-mechanical stresses**
- **Use in waste water, salt water and salty water**
- **Cold version -45°C possible**
- **GOST-R and others approvals on request**

1,8/3 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight. kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02070KR1037M63	3x25+3x16/3E	39,5	873,6	2440	1125	4
02070KR1037M64	3x35+3x16/3E	43,4	1161,6	3020	1575	2
02070KR1037M65	3x50+3x25/3E	49,1	1680	3615	2250	1
02070KR1037M66	3x70+3x35/3E	53,5	2352	4910	3150	2/0
02070KR1037M67	3x95+3x50/3E	58,4	3216	6114	4275	3/0
02070KR1037M68	3x120+3x70/3E	61,9	4128	7305	5400	4/0
02070KR1037M69	3x150+3x70/3E	67,7	4992	8698	6750	250 MCM
02070KR1037M70	3x185+3x95/3E	71,5	6240	10167	8325	350 MCM

FLEXIDRUM® MEDIUM (N)TSCGEWÖU WATER.../3E

From 1,8/3 Kv to 18/30 kV, with core copper screen

RoHS

For use in water!

3,6/6 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02070MR1037M63	3x25+3x16/3E	44,5	873,6	2920	1125	4
02070MR1037M64	3x35+3x16/3E	47,3	1161,6	3345	1575	2
02070MR1037M65	3x50+3x25/3E	51,1	1680,0	3998	2250	1
02070MR1037M66	3x70+3x35/3E	57,1	2352,0	5339	3150	2/0
02070MR1037M67	3x95+3x50/3E	61,2	3216,0	6460	4275	3/0
02070MR1037M68	3x120+3x70/3E	66,5	4128,0	8150	5400	4/0
02070MR1037M69	3x150+3x70/3E	70,6	4992,0	9020	6750	250 MCM
02070MR1037M70	3x185+3x95/3E	74,3	6240,0	10575	8325	350 MCM

6/10 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02070QR1037M63	3x25+3x16/3E	45,6	873,6	3055	1125	4
02070QR1037M64	3x35+3x16/3E	48,3	1161,6	3530	1575	2
02070QR1037M65	3x50+3x25/3E	53,3	1680,0	4377	2250	1
02070QR1037M66	3x70+3x35/3E	58,7	2352,0	5543	3150	2/0
02070QR1037M67	3x95+3x50/3E	62,6	3216,0	6672	4275	3/0
02070QR1037M68	3x120+3x70/3E	68,1	4128,0	8170	5400	4/0
02070QR1037M69	3x150+3x70/3E	72,0	4992,0	9340	6750	250 MCM
02070QR1037M70	3x185+3x95/3E	77,6	6240,0	11145	8325	350 MCM

8,7/15 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02070SR1037M63	3x25+3x16/3E	50,6	873,6	3570	1125	4
02070SR1037M64	3x35+3x16/3E	55,0	1161,6	4270	1575	2
02070SR1037M65	3x50+3x25/3E	57,9	1680,0	4930	2250	1
02070SR1037M66	3x70+3x35/3E	65,1	2352,0	6430	3150	2/0
02070SR1037M67	3x95+3x50/3E	68,9	3216,0	7620	4275	3/0
02070SR1037M68	3x120+3x70/3E	72,6	4128,0	8890	5400	4/0
02070SR1037M69	3x150+3x70/3E	78,5	4992,0	10420	6750	250 MCM
02070SR1037M70	3x185+3x95/3E	82,3	6240,0	11990	8325	350 MCM

FLEXIDRUM® MEDIUM (N)TSCGEWÖU WATER.../3E

From 1,8/3 Kv to 18/30 kV, with core copper screen

RoHS

For use in water!

12/20 kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02070QR1037M63	*3x25+3x16/3E*	*56,6*	*873,6*	*4290*	*1125*	*4*
02070QR1037M64	*3x35+3x16/3E*	*59,2*	*1161,6*	*4800*	*1575*	*2*
02070QR1037M65	*3x50+3x25/3E*	*62,1*	*1680*	*5530*	*2250*	*1*
02070QR1037M66	*3x70+3x35/3E*	*69,3*	*2352*	*7105*	*3150*	*2/0*
02070QR1037M67	*3x95+3x50/3E*	*73,4*	*3216*	*8290*	*4275*	*3/0*
02070QR1037M68	*3x120+3x70/3E*	*78,6*	*4128*	*9920*	*5400*	*4/0*
02070QR1037M69	*3x150+3x70/3E*	*82,7*	*4992*	*11187*	*6750*	*250 MCM*
02070QR1037M70	*3x185+3x95/3E*	*86,5*	*6240*	*12770*	*8325*	*350 MCM*

14/25 kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02070WR1037M63	*3x25+3x16/3E*	*62,3*	*873,6*	*5030*	*1125*	*4*
02070WR1037M64	*3x35+3x16/3E*	*66,4*	*1161,6*	*5828*	*1575*	*2*
02070WR1037M65	*3x50+3x25/3E*	*69,5*	*1680*	*6612*	*2250*	*1*
02070WR1037M66	*3x70+3x35/3E*	*74,8*	*2352*	*7978*	*3150*	*2/0*
02070WR1037M67	*3x95+3x50/3E*	*80,6*	*3216*	*9550*	*4275*	*3/0*
02070WR1037M68	*3x120+3x70/3E*	*84,1*	*4128*	*10925*	*5400*	*4/0*
02070WR1037M69	*3x150+3x70/3E*	*89,8*	*4992*	*12578*	*6750*	*250 MCM*
02070WR1037M70	*3x185+3x95/3E*	*93,9*	*6240*	*14275*	*8325*	*350 MCM*

18/30 kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02070XR1037M63	*3x25+3x16/3E*	*69*	*873,6*	*6045*	*1125*	*4*
02070XR1037M64	*3x35+3x16/3E*	*71,5*	*1161,6*	*6610*	*1575*	*2*
02070XR1037M65	*3x50+3x25/3E*	*74,6*	*1680*	*7418*	*2250*	*1*
02070XR1037M66	*3x70+3x35/3E*	*81,7*	*2352*	*9189*	*3150*	*2/0*
02070XR1037M67	*3x95+3x50/3E*	*85,5*	*3216*	*10505*	*4275*	*3/0*
02070XR1037M68	*3x120+3x70/3E*	*91,2*	*4128*	*12280*	*5400*	*4/0*
02070XR1037M69	*3x150+3x70/3E*	*94,6*	*4992*	*13638*	*6750*	*250 MCM*
02070XR1037M70	*3x185+3x95/3E*	*100,8*	*6240*	*15780*	*8325*	*350 MCM*

Other construction and sizes are available on request

FLEXIDRUM® MEDIUM RS (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv, on request 14/25 kV

RoHS

Mining excavator

Construction:

Conductor:	*Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295*
Conductor screen:	*semi-conducting compuound*
Insulation:	*rubber EPR type 3GI3*
Core screen:	*semi-conducting compuound*
Earth conductor:	*Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295*
Earth core screen:	*semi-conducting compound*
Color cores:	*POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound*
Stranding:	*Phase core placed with earth-conductors in the interstices*
Inner sheath:	*PCP compound*
Outer sheath:	*RED PCP compound*

Features:

- ***Double layer***
- ***small outer diameter and light weight***
- ***possible version with antitwisting protection***
- ***possible version with tinned Cu-conductors***
- ***GOST-R WUG and others approvals on request***
- ***Cold version -45°C possible***

Applications:

- ***Power supply cable suitable for mobile devices with high risk of mechanical damage***
- ***Suitable for application where it is deflected in one level only, because it's without anti-twisting protection.***

Technical data:

Nominal voltages:	*Uo/U Kv 3,6/6 6/10 8,7/15 12/20*
Max oper. voltage:	*Kv 5,4 12 18 24*
Test voltage:	*Kv 11 17 24 29*
	on request 14/25 kV
Temperature range:	
Fixed installation:	*- 40°C up to + 80°C*
Flexible application:	*- 30°C up to + 80°C*
Min. Bending radius:	
Fixed installation:	*6 x d*
On drums:	*12 x d*
On deflect. pulley:	*15 x d*
Free movement:	*12 x d*
Min. distance for change of direction:	*20 x d*
Max temperature on conductor:	*+90°C*
Max temperature in short circuit:	*+250°C*
Current carryng capacity:	*Acc. to DIN VDE 0298-4*
Tensile strenght:	*20 N/mm²*
Max speed:	
Operating:	*up to 180 m/min.*
Rewinding with drum car:	*120 m/min*
Resistance:	***Fire performance:*** *flame retardant acc. to IEC 60332-1* ***Oil resistant:*** *very good, acc. to DIN VDE 0473 part 811-2-1 par. 10* ***Athmosperic conditions resistance:*** *outdoor use, resistant to ozone moisture and UV rays* ***Water resistance:*** *very good, acc. to HD 22.16*

Uo/U (Um) 3,6/6 (7,2) kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02090MR1037M63	*3x25+3x25/3*	*40,3*	*960*	*2410*	*1500*	*4*
02090MR1037M64	*3x35+3x25/3*	*43*	*1248*	*2935*	*2100*	*2*
02090MR1037M65	*3x50+3x25/3*	*45,8*	*1680*	*3455*	*3000*	*1*
02090MR1037M66	*3x70+3x35/3*	*49,8*	*2352*	*4360*	*4200*	*2/0*
02090MR1037M67	*3x95+3x50/3*	*53,7*	*3216*	*5365*	*5700*	*3/0*
02090MR1037M68	*3x120+3x70/3*	*58*	*4128*	*6746*	*7200*	*4/0*
02090MR1037M69	*3x150+3x70/3*	*62,5*	*4992*	*7743*	*9000*	*250 MCM*
02090MR1037M70	*3x185+3x95/3*	*65,6*	*6240*	*9169*	*11100*	*350 MCM*
02090MR1037M71	*3x240+3x120/3*	*74*	*8064*	*11980*	*14400*	*450 MCM*

FLEXIDRUM® MEDIUM RS (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv, on request 14/25 kV

RoHS

Mining excavator

Uo/U (Um) 6/10 (12) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02090QR1037M63	3x25+3x25/3	42	960	2560	1500	4
02090QR1037M64	3x35+3x25/3	44,8	1248	3111	2100	2
02090QR1037M65	3x50+3x25/3	47,6	1680	3648	3000	1
02090QR1037M66	3x70+3x35/3	51,7	2352	4566	4200	2/0
02090QR1037M67	3x95+3x50/3	55,5	3216	5558	5700	3/0
02090QR1037M68	3x120+3x70/3	59,8	4128	6950	7200	4/0
02090QR1037M69	3x150+3x70/3	64,2	4992	7972	9000	250 MCM
02090QR1037M70	3x185+3x95/3	67,4	6240	9425	11100	350 MCM
02090QR1037M71	3x240+3x120/3	75,2	8064	12175	14400	450 MCM

Uo/U (Um) 8,7/15 (18) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02090SR1037M63	3x25+3x25/3	45,5	960	2880	1500	4
02090SR1037M64	3x35+3x25/3	48,1	1248	3326	2100	2
02090SR1037M65	3x50+3x25/3	50,9	1680	3400	3000	1
02090SR1037M66	3x70+3x35/3	55,1	2352	4935	4200	2/0
02090SR1037M67	3x95+3x50/3	60,2	3216	5970	5700	3/0
02090SR1037M68	3x120+3x70/3	63,7	4128	7430	7200	4/0
02090SR1037M69	3x150+3x70/3	67,8	4992	8444	9000	250 MCM
02090SR1037M70	3x185+3x95/3	72,2	6240	10165	11100	350 MCM
02090SR1037M71	3x240+3x120/3	77,8	8064	12595	14400	450 MCM

Uo/U (Um) 12/20 (24) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02090UR1037M63	3x25+3x25/3	50,2	960	3360	1500	4
02090UR1037M64	3x35+3x25/3	53	1248	3946	2100	2
02090UR1037M65	3x50+3x25/3	55,8	1680	4533	3000	1
02090UR1037M66	3x70+3x35/3	59,8	2352	5515	4200	2/0
02090UR1037M67	3x95+3x50/3	64,1	3216	6639	5700	3/0
02090UR1037M68	3x120+3x70/3	68,4	4128	8098	7200	4/0
02090UR1037M69	3x150+3x70/3	73,9	4992	9375	9000	250 MCM
02090UR1037M70	3x185+3x95/3	76,9	6240	10865	11100	350 MCM
02090UR1037M71	3x240+3x120/3	-	8064	13550	14400	450 MCM

Other construction and sizes are available on request

Nominal cross section mm²	Max resistance D.C. at 20°C Ohm/km	Max resistance A.C. at 90°C Ohm/km	Reactance at 50 Hz for nominal voltage 3,6/6 Ohm/km	6/10 Ohm/km	8,7/15 Ohm/km	12/20 Ohm/km
25	0,780	0,995	0,107	0,111	0,117	0,125
35	0,554	0,707	0,075	0,104	0,110	0,117
50	0,386	0,493	0,075	0,100	0,105	0,112
70	0,272	0,348	0,073	0,094	0,099	0,106
95	0,206	0,264	0,072	0,091	0,095	0,101
120	0,161	0,207	0,071	0,087	0,091	0,097
150	0,129	0,167	0,071	0,085	0,088	0,093
185	0,106	0,139	0,072	0,083	0,087	0,091
240	0,0801	0,107	0,072	0,082	0,084	0,089

Correction factors for ambient temperature other than 30°C							
°C	20	25	30	40	45	50	55
K	1,1	1,05	0,95	0,89	0,84	0,77	0,71

FLEXIDRUM® MEDIUM RS (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv with antitwisting protection, on request 14/25 kV

RoHS

Mining excavator

Construction:

Conductor:	*Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295*
Conductor screen:	*semi-conducting compuound*
Insulation:	*rubber EPR type 3GI3*
Core screen:	*semi-conducting compuound*
Earth Conductor:	*Flexible red copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295*
Earth core screen:	*semi-conducting compound*
Color cores:	*POWER: natural color with black semi-conductive compound EARTH: black semi-contuctive compound*
Stranding:	*Phase core placed with earth cores in the interstices*
Inner sheath:	*PCP compound*
Antitwisting braid:	*anti-twisting of synthetic yarns*
Outer sheath:	*RED PCP compound*

Features:

- ***Double layer with anti-twisting reinforcement***
- ***small outer diameter and light weight***
- ***possible version without antitwisting protection***
- ***possible version with tinned Cu-conductors***
- ***GOST-R WUG and others approvals on request***

Applications:

- ***Power supply cable suitable for mobile devices with high risk of mechanical damage***
- ***Suitable to operate with forced guidance systems with deflection on different levels and with reel axis in direction of travel.***
- ***Cold version -45°C possible***

Technical data:

Nominal voltages:	*Uo/U Kv 3,6/6 6/10 8,7/15 12/20*
Max oper. voltage:	*Kv 5,4 12 18 24*
Test voltage:	*Kv 11 17 24 29*
	on request 14/25 kV
Temperature range:	
Fixed installation:	*- 40°C up to + 80°C*
Flexible application:	*- 30°C up to + 80°C*
Max temperature on conductor:	*+90°C*
Max temperature in short circuit:	*+250°C*
Min. Bending radius:	
Fixed installation:	*6x d*
On drums:	*12 x d*
On deflect. pulley:	*15 x d*
Free movement:	*12 x d*
Min. distance for change of direction:	*20 x d*
Current carryng capacity:	*acc. to DIN VDE 0298-4*
Tensile strenght:	*20 N/mm²*
Max speed:	
Operating:	*up to 180 m/min.*
Rewinding with drum car:	*120 m/min.*
Max torsion:	*± 25°/m*
Resistance:	***Fire performance:*** *flame retardant acc. to IEC 60332-1* ***Oil resistant:*** *very good, acc. to DIN VDE 0473 part 811-2-1 par. 10* ***Athmosperic conditions resistance:*** *outdoor use, resistant to ozone moisture and UV rays* ***Water resistance:*** *very good, acc. to HD 22.16*

Uo/U (Um) 3,6/6 (7,2) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02091MR1037M63	3x25+3x25/3	41,2	960	2535	1500	4
02091MR1037M64	3x35+3x25/3	43,7	1248	3025	2100	2
02091MR1037M65	3x50+3x25/3	46,6	1680	3560	3000	1
02091MR1037M66	3x70+3x35/3	50,7	2352	4480	4200	2/0
02091MR1037M67	3x95+3x50/3	54,7	3216	5478	5700	3/0
02091MR1037M68	3x120+3x70/3	58,9	4128	6875	7200	4/0
02091MR1037M69	3x150+3x70/3	63,4	4992	7920	9000	250 MCM
02091MR1037M70	3x185+3x95/3	66,5	6240	9335	11100	350 MCM
02091MR1037M71	3x240+3x120/3	74,8	8064	12140	14400	450 MCM

FLEXIDRUM® MEDIUM RS (N)TSCGEWÖU

From 3,6/6 Kv to 12/20 Kv with antitwisting protection, on request 14/25 kV

RoHS

Other construction and sizes are available on request

Uo/U (Um) 6/10 (12) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02091QR1037M63	3x25+3x25/3	42,8	960	2667	1500	4
02091QR1037M64	3x35+3x25/3	45,6	1248	3215	2100	2
02091QR1037M65	3x50+3x25/3	51,4	1680	3733	3000	1
02091QR1037M66	3x70+3x35/3	52,5	2352	4682	4200	2/0
02091QR1037M67	3x95+3x50/3	56,3	3216	5701	5700	3/0
02091QR1037M68	3x120+3x70/3	60,3	4128	7105	7200	4/0
02091QR1037M69	3x150+3x70/3	65,1	4992	8128	9000	250 MCM
02091QR1037M70	3x185+3x95/3	68,1	6240	9578	11100	350 MCM
02091QR1037M71	3x240+3x120/3	75,9	8064	12365	14400	450 MCM

Uo/U (Um) 8,7/15 (18) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02091SR1037M63	3x25+3x25/3	46,2	960	2987	1500	4
02091SR1037M64	3x35+3x25/3	48,9	1248	3530	2100	2
02091SR1037M65	3x50+3x25/3	51,7	1680	4121	3000	1
02091SR1037M66	3x70+3x35/3	55,8	2352	5080	4200	2/0
02091SR1037M67	3x95+3x50/3	59,7	3216	6146	5700	3/0
02091SR1037M68	3x120+3x70/3	64,7	4128	7590	7200	4/0
02091SR1037M69	3x150+3x70/3	68,5	4992	8605	9000	250 MCM
02091SR1037M70	3x185+3x95/3	72,9	6240	10305	11100	350 MCM
02091SR1037M71	3x240+3x120/3	78,6	8064	12730	14400	450 MCM

Uo/U (Um) 12/20 (24) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02091UR1037M63	3x25+3x25/3	50,7	960	3465	1500	4
02091UR1037M64	3x35+3x25/3	53,7	1248	4055	2100	2
02091UR1037M65	3x50+3x25/3	56,6	1680	4670	3000	1
02091UR1037M66	3x70+3x35/3	60,6	2352	5685	4200	2/0
02091UR1037M67	3x95+3x50/3	64,9	3216	6804	5700	3/0
02091UR1037M68	3x120+3x70/3	69,2	4128	8268	7200	4/0
02091UR1037M69	3x150+3x70/3	74,5	4992	9573	9000	250 MCM
02091UR1037M70	3x185+3x95/3	78,1	6240	11060	11100	350 MCM
02091UR1037M71	3x240+3x120/3	-	8064	13215	14400	450 MCM

Uo/U (Um) 14/25 (30) kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02091WR1037M63	3x25+3x25/3	51,6	960	3375	1500	4
02091WR1037M64	3x35+3x25/3	55,7	1248	4038	2100	2
02091WR1037M65	3x50+3x25/3	59,4	1680	4810	3000	1
02091WR1037M66	3x70+3x35/3	63	2352	5838	4200	2/0
02091WR1037M67	3x95+3x50/3	68,6	3216	7290	5700	3/0
02091WR1037M68	3x120+3x70/3	72,3	4128	8510	7200	4/0
02091WR1037M69	3x150+3x70/3	77,7	4992	10075	9000	250 MCM
02091WR1037M70	3x185+3x95/3	81,5	6240	11620	11100	350 MCM
02091WR1037M71	3x240+3x120/3	89,4	8064	14675	14400	450 MCM

Nominal cross section mm²	Max resistance D.C. at 20°C Ohm/km	Max resistance A.C. at 90°C Ohm/km	Reactance at 50 Hz for nominal voltage 3,6/6 Ohm/km	6/10 Ohm/km	8,7/15 Ohm/km	12/20 Ohm/km
25	0,780	0,995	0,107	0,111	0,117	0,125
35	0,554	0,707	0,075	0,104	0,110	0,117
50	0,386	0,493	0,075	0,100	0,105	0,112
70	0,272	0,348	0,073	0,094	0,099	0,106
95	0,206	0,264	0,072	0,091	0,095	0,101
120	0,161	0,207	0,071	0,087	0,091	0,097
150	0,129	0,167	0,071	0,085	0,088	0,093
185	0,106	0,139	0,072	0,083	0,087	0,091
240	0,0801	0,107	0,072	0,082	0,084	0,089

Correction factors for ambient temperature other than 30°C							
°C	20	25	30	40	45	50	55
K	1,1	1,05	0,95	0,89	0,84	0,77	0,71

FLEXIDRUM® MEDIUM RS-T (N)TSCGEWÖU

From 1,8/3 Kv to 12/20 Kv with antitwisting protection

RoHS

Mining excavator

Construction:

Conductor:	*Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295*
Conductor screen:	*semi-conducting compuound*
Insulation:	*rubber EPR type 3GI3*
Core screen:	*semi-conducting compuound*
Color cores:	*POWER: natural color with black semi-conductive compound EARTH: black semi-conductive compound*
Stranding:	*Three main conductors placed with earth-conductor divided into three in the outer interstices.*
Wrapping:	*tear-resistant tape*
Antitwisting braid:	*anti-twisting of synthetic yarns*
Inner sheath:	*PCP compound 5GM5,*
Outer sheath:	*BLACK PCP compound 5GM5*

Technical data:

Nominal voltages:	*Uo/U Kv*	*3,6/6*	*6/10*	*8,7/15*	*12/20*	*14/25*	*18/30*
Max perm. operating voltage in A.C. systems Uo/U kV:		*4,2/7,2*	*6,9/12*	*10,4/18*	*13,9/24*	*17,3/30*	*20,8/36*
Max perm. operating voltage in D.C. systems Uo/U kV:		*5,4/10*	*9/18*	*13,5/27*	*18/36*	*22,5/45*	*27/54*
A.C. test voltage:		*11*	*17*	*24*	*29*	*36*	*43*

Temperature range:	
Fixed installation:	*- 40°C up to + 80°C*
Flexible application:	*- 20°C up to + 60°C*
Max temperature on conductor:	*+90°C*
Max temperature in short circuit:	*+250°C*
Min. Bending radius:	*see MIN. BENDING RADIUS table*
Tensile strenght:	up to *15 N/mm²*
Max torsion:	*± 100°/m*
Resistance:	***Oil resistant:*** *acc. to DIN VDE 0473, part 811-2-1 par. 10, IEC-EN 60811-2-1* ***Fire resistant:*** *VDE 0482, part 332-1-2, IEC-EN 60322-1-2* ***Weather resistance:*** *outdoors and indoors use, resistant to ozone, UV, moisture and water resistant*

Applications:

- ***Suitable for connections to the excavators in open cast mines are subjected to extremely high mechanical abrasion and tear resistant.***

Features:

- ***GOST-R WUG and others approvals on request***

Uo/U (Um) 1,8/3 kV

Part no.	*No. of cores x cross-section n x mm²*	*Outer-Ø ca. mm ± 10%*	*Copper weight kg/km*	*Cable weight approx. kg/km*	*Tensile strength N*	*AWG no.*)*
02100K71037M63	*3x25+3x25/3*	*37,3*	*960*	*2460*	*1125*	*4*
02100K71037M64	*3x35+3x25/3*	*41,2*	*1248*	*3070*	*1575*	*2*
02100K71037M65	*3x50+3x25/3*	*44,8*	*1680*	*3738*	*2250*	*1*
02100K71037M66	*3x70+3x35/3*	*48,4*	*2352*	*4701*	*6150*	*2/0*
02100K71037M67	*3x95+3x50/3*	*56,7*	*3216*	*6202*	*4275*	*3/0*
02100K71037M68	*3x120+3x70/3*	*60,5*	*4128*	*7426*	*5400*	*4/0*
02100K71037M69	*3x150+3x70/3*	*65,9*	*4992*	*8893*	*6750*	*250 MCM*
02100K71037M70	*3x185+3x95/3*	*70*	*6240*	*10340*	*8325*	*350 MCM*

FLEXIDRUM® MEDIUM RS-T (N)TSCGEWÖU

From 1,8/3 Kv to 12/20 Kv with antitwisting protection

RoHS

Mining excavator

Uo/U (Um) 3,6/6 kV

Other construction and sizes are available on request

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02100M71037M63	3x25+3x25/3	41,8	960	2580	1125	4
02100M71037M64	3x35+3x25/3	44,2	1248	3045	1575	2
02100M71037M65	3x50+3x25/3	47,4	1680	3675	2250	1
02100M71037M66	3x70+3x35/3	54,3	2352	4952	6150	2/0
02100M71037M67	3x95+3x50/3	57,9	3216	5940	4275	3/0
02100M71037M68	3x120+3x70/3	61,2	4128	7212	5400	4/0
02100M71037M69	3x150+3x70/3	66,6	4992	8620	6750	250 MCM
02100M71037M70	3x185+3x95/3	70,5	6240	10030	8325	350 MCM

Uo/U (Um) 6/10 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02100Q71037M63	3x25+3x25/3	43,5	960	2730	1125	4
02100Q71037M64	3x35+3x25/3	45,5	1248	3215	1575	2
02100Q71037M65	3x50+3x25/3	50,1	1680	3835	2250	1
02100Q71037M66	3x70+3x35/3	56	2352	5125	3150	2/0
02100Q71037M67	3x95+3x50/3	59,7	3216	6130	4275	3/0
02100Q71037M68	3x120+3x70/3	64,9	4128	7710	5400	4/0
02100Q71037M69	3x150+3x70/3	67,9	4992	8855	6750	250 MCM
02100Q71037M70	3x185+3x95/3	72,2	6240	10265	8352	350 MCM

Uo/U (Um) 8,7/15 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02100S71037M63	3x25+3x25/3	48,1	960	3223	1125	4
02100S71037M64	3x35+3x25/3	52,5	1248	3915	1575	2
02100S71037M65	3x50+3x25/3	55,6	1680	4600	2250	1
02100S71037M66	3x70+3x35/3	60,7	2352	5773	3150	2/0
02100S71037M67	3x95+3x50/3	66,2	3216	7268	4275	3/0
02100S71037M68	3x120+3x70/3	69,4	4128	8435	5400	4/0
02100S71037M69	3x150+3x70/3	73,1	4992	9632	6750	250 MCM
02100S71037M70	3x185+3x95/3	78,7	6240	11450	8352	350 MCM

Uo/U (Um) 12/20 kV

* A protective earth conductor design ... 50/3 is also possible for application acc. to DIN VDE 0168

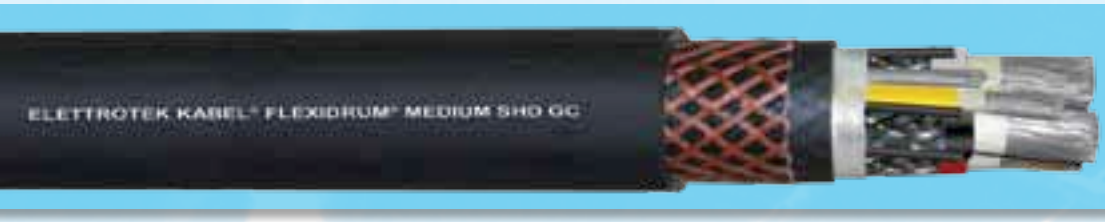
Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02100U71037M63	3x25+3x25/3	54,1	960	3930	1125	4
02100U71037M64	3x35+3x25/3	56,6	1248	4435	1575	2
02100U71037M65	3x50+3x25/3	59,8	1680	5175	2250	1
02100U71037M66	3x70+3x35/3	66,7	2352	6620	3150	2/0
02100U71037M67	3x95+3x50/3	70,3	3216	7930	4275	3/0
02100U71037M68	3x120+3x70/3	73,8	4128	9140	5400	4/0
02100U71037M69	3x150+3x70/3	79,2	4992	10700	6750	250 MCM
02100U71037M70	3x185+3x95/3	82,9	6240	12230	8352	350 MCM

Uo/U (Um) 18/30 kV

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
02100X71037M63	3x25+3x25/3	67,3	960	6670	1125	4
02100X71037M64	3x35+3x25/3	73,2	1248	7370	1575	2
02100X71037M65	3x50+3x25/3	74,5	1680	8455	2250	1
02100X71037M66	3x70+3x35/3	77,7	2352	9670	3150	2/0
02100X71037M67	3x95+3x50/3	82,1	3216	10950	4275	3/0
02100X71037M68	3x120+3x70/3	87,9	4128	12812	5400	4/0
02100X71037M69	3x150+3x70/3	91,6	4992	14230	6750	250 MCM
02100X71037M70	3x185+3x95/3	97,5	6240	16370	8352	350 MCM

FLEXIDRUM® MEDIUM SHD GC

8 and 15 kV



Construction:

Conductor:	Flexible tinned copper conductor, acc. to ASTM B-172
Conductor screen:	semi-conducting compuound
Insulation:	rubber EPR compound
Core screen:	semi-conducting compuound
Earth conductor:	Finely stranded tinned copper, acc. to ASTM B-172
Insulation:	PP compound
Color cores:	POWER: natural color with Polyamide braid black, white, red acc. to ICEA S-75-381 CONTROL: yellow semi-contuctive compound ICEA S-75-381 Tab. 3-22
Insulation screening:	tinned copper and color coded nylon braid
Strand screening:	semi-conducting layer
Earth conductor:	Finely stranded tinned copper, acc. to ASTM B-172, uninsulated
Outer sheath:	double chlorinated polyethilene (CPE), color BLACK, (RAL 9005)

Technical data:

Nominal voltage:	8 kV up to 15 kV
Temperature range Flexible installation:	- 50°C up to + 50°C
Min. Bending radius:	8 x d

Features:

- **Others colour on request**
- **long life**
- **mechanical and water protection**
- **MSHA, CSA and other approvals on request**
- **two Earth conductors are used giving a total cross sectional area equal to at least 60% of the power conductor**

Applications:

- ***FLEXIDRUM® MEDIUM cables are designed to provide safe, reliable performance on cable reelers and festoons at temperatures from -50°C to +50°C at speed up to 750 feet/minute. These cables are designed for use on gantry cranes,stacker/reclaimers and other equipment.***

	POWER CONDUCTORS 3x		GROUND CONDUCTORS 2+1x				
Part no.	AWG no.*)	Power conductor diameter (In)	AWG no.*) Kcmil	Earth conductor diameter (In)	Nominal outside diameter (In) ± 10%	Weight approx. lbs. x 1000 ft	Maximum tensile load (lbs)
				8 kV			
02110P70037A04	4	0,259	8/8	0.164	2	2200	293
02110P70037A02	2	0,321	6/8	0.204	2,2	2850	466
02110P70037A01	1	0,366	5/8	0.238	2,3	3370	587
02110P70037A1C	1/0	0,413	4/8	0.259	2,4	3600	741
02110P70037A2C	2/0	0,468	3/8	0.291	2,5	4200	934
02110P70037A3C	3/0	0,518	2/8	0.321	2,7	5100	1178
02110P70037A4C	4/0	0,584	1/8	0.366	2,6	5680	1178
02110P70037A5C	250 MCM	0,634	1/0/6	0.413	2,9	6750	1178
02110P70037A7C	350 MCM	0,757	2/0/6	0.468	3,3	8480	1178
02110P70037AAC	500 MCM	0,888	3/0/6	0.584	3,6	10720	1178

	POWER CONDUCTORS		GROUND CONDUCTORS				
Part no.	AWG no.*)	Power conductor diameter (In)	AWG no.*) Kcmil	Earth conductor diameter (In)	Nominal outside diameter (In) ± 10%	Weight approx. lbs. x 1000 ft	Maximum tensile load (lbs)
				15 kV			
02110T70037A02	2	0,321	6/8	0.204	2,5	3520	466
02110T70037A01	1	0,366	5/8	0.238	2,6	4100	587
02110T70037A1C	1/0	0,413	4/8	0.259	2,7	4630	741
02110T70037A2C	2/0	0,468	3/8	0.291	2,9	4900	934
02110T70037A3C	3/0	0,518	2/8	0.321	3	5600	1178
02110T70037A4C	4/0	0,584	1/8	0.366	3,1	6830	1178

FLEXIDRUM® MEDIUM FLAT (N)TSFLCGCWOEUS

Reeling flat cables

RoHS

Construction:

Conductor:	Flexible tinned copper conductor Cl. 5, acc to IEC 60228, DIN VDE 0295
Conductor screen:	semi-conducting compuound
Insulation:	rubber EPR special compound
Core screen:	semi-conducting compuound
Color cores:	POWER: natural color with black semi-conductive compound EARTH: black semi-conductive compound
Outer sheath:	RED, special PCP compound

Technical data:

Nominal Voltage:	Uo/U 3,6/6 kV up to 8,7/15 kV
Test voltage:	(acc. to DIN VDE 0250 part 813): 11 kV up to 24 kV in A.C. 27,5 kV up to 60 kV in D.C
Maximum operating voltage in A.C. systems:	Um 1,2 x U
Maximum operating voltage in D.C. systems:	Um 1,8 x U
Temperature range Fixed installation: Flexible installation:	 - 50°C up to + 80°C - 35°C up to + 80°C
Temperature at conductor: in service: in short circuit:	 + 90°C + 250°C
Max Speed:	180 m/min. Please inquire for higher speeds
Tensile strenght:	20 N/mm²
Resistance:	**Oil resistant** **Outdoor applications** **Moisture, UV and ozone resistance,** **Flame retardant:** acc. to IEC 60332 part 1

Features:

- ***Small cable weight***
- ***small outer diameter***
- ***possible with integrated optical fibers***
- ***for SPEED and MINIMUM BENDING RADIUS***
- ***see pages 1,2,3/5,6 of catalogue***

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
3,6/6 (7,2) kV						
02120MR1040M64	4x35	24x77 - 25x79	-	3600	2800	2
02120MR1049900	4x35/35+LWL	24x77 - 25x79	-	3600	2100	2
02120MR1040M65	4x50	26x83 - 27x85	-	4400	4000	1
02120MR1049901	3x50/50+LWL	26x83 - 27x85	-	4400	3000	0
6/10 (12) kV						
02120QR1040M64	4x35	26x78 - 27x80	-	3900	2800	1
02120MR1049902	3x35/35+LWL	26x78 - 27x80	-	3900	2100	1

Part no.	No. of cores x cross-section n x mm²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km	Tensile strength N	AWG no.*)
8,7/15 (18) kV						
02120SR1040M64	4x35	27x79 - 28x81	-	4200	2800	1
02120MR1049903	4x35/35+LWL	27x79 - 28x81	-	4200	2100	1

Other construction and sizes are available on request

FLEXIDRUM® FIBER 770

Construction:

Optical fibers:	*core ø: 50 µm, 62,5 µm, 9 µm* *cladding: 125 µm* *coating: 250 µm* *standard type: 62,5/125 (others on request)*
Outer sheath:	*black (RAL 9001), PCP type 5GM2*

Features:

- ***UV resistant***
- ***oil and chemical resistant***
- ***for SPEED and MINIMUM BENDING RADIUS see pages 1,2,3/5,6 of catalogue***

Technical data:

Temperature range: *Fixed installation:* *Flexible installation:*	 *- 40°C up to + 80°C* *- 30°C up to + 60°C*
Min. bending radius:	*20 x d (200 mm)*
Max torsion:	*± 120°/m*
Max Tensile strenght:	*1200 N*
Max transverse pressure:	*300 N/cm*
Max speed:	*240 m/min. Please inquire for higher speeds*
Max torsion:	*± 120°/m*
Resistance:	***Oil resistant:*** *acc. to DIN VDE 0473 part 811-2-1 par. 10*

Other construction and sizes are available on request

Part no.	*No. of cores x cross-section n x mm²*	*No. of fibres x tube*	*Outer-Ø ca. mm ± 10%*	*Cable weight approx. kg/km*	*Tensile strength N*
0109007F061F62	*6G62,5/125 Micron*	*1*	*14*	*230*	*1200*
0109007F061F52	*6G50/125 Micron*	*1*	*14*	*230*	*1200*
0109007F06AF09	*6E9/125 Micron*	*1*	*14*	*230*	*1200*
0109007F121F62	*12G62,5/125 Micron*	*2*	*14*	*230*	*1200*
0109007F121F52	*12G50/125 Micron*	*2*	*14*	*230*	*1200*
0109007F12AF09	*12E9/125 Micron*	*2*	*14*	*230*	*1200*
0109007F181F62	*18G62,5/125 Micron*	*3*	*14*	*230*	*1200*
0109007F181F52	*18G50/125 Micron*	*3*	*14*	*230*	*1200*
0109007F18AF09	*18E9/125 Micron*	*3*	*14*	*230*	*1200*