PRYSMIAN
CABLES & SYSTEMS

RONDOFLEX (CHAIN)

(N)GRDGOEU
High Flexible Cable
for Energy Chain Systems

ENERGY

Technical Data

	Type	RONDOFLEX (CHAIN)
	Type designation	(N)GRDGOEU
	Approvals/ standards	Based on DIN VDE 0250, Part 814; GOST R
	Application	All chain systems (e.g. container cranes, stacking cranes, indoor cranes, material handling equipment). Especially in outdoor application and at long travel distances, high speed travels and high expectations (such as long lifetime, reliability, abrasion resistance, etc.) to the cable.
Electrical parameters	Rated voltage	Uo/U = 0.6/1 kV
	Maximum permissible operating voltage in AC systems	Uo/U = 0.7/1.2 kV
	Maximum permissible operating voltage in DC systems	Uo/U = 0.9/1.8 kV
	AC test voltage	3.5 kV, 5 min
	Current-carrying capacity	According to DIN VDE 0298, Part 4
	- single core	table 15-section 2
	- multiple core	tabel 15-section 4
	EMC	Given because of a special cable design
Thermal parameters	Ambient temperature	
	- Fully flexible operation	-35°C to +80°C
	- Fixed installation	-50°C to +80°C
	Maximum permissible operating temperature of the conductor	90°C
	Short-circuit temperature of the conductor	250°C
Mechanical parameters	Tensile load	Up to 15 N/mm²
	Torsional stresses	No application
	Minimum bending radii	According to DIN VDE 0298, Part 3
	Travel speed	
	- Trolley	Guidance value: up to 300 m/min (tested on own test equipment)
	- Other	all other chain applications
	Additional tests	Bending test, abrasion test, practical test on own long distance testing facility
Chemical parameters	Resistance to oil	DIN VDE 0473, Part 811-2-1, Para. 10
	Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

Design features

Type	RONDOFLEX (CHAIN)
Conductor	bare Elektrolyt copper, finely stranded class 5
Earth conductor	electrolytic copper, very finely stranded, class FS (better than class 5)
Insulation (refer also to DIN VDE 0207)	PROTOLON MS High grade insulation compound based on EPR (at least. 3GI3); improved mechanical and electrical performance; alternative at control cables: ETFE
Core identification	light colored compound with black number prints, earth yellow-green
Core arrangement	up to 10²mm: 4-core design from 16²mm: 3-energy cores and splitted earth conductor into three parts
Inner sheath	special compound based on EPR (at least GM1b); color: black
Overall shield (where applicable)	braid screen made of tinned copper wires, surface covered >80%
Outer sheath	high grade compound based on EVA with exellent abrasion and aging performance
Marking	RONDOFLEX (CHAIN) (N)GRDGOEU (number of cores)x(cross section) 0,6/1 kV

Selection and ordering data

Number of cores and nominal cross-section	Order No.	Conductor diameter [mm]	Overall diameter of cable Min. value [mm]	Overall diameter of cable Max. value [mm]	Approx. net weight for 1000 m [kg/km]	Maximum permissible tensile force [N]
(N)GRDGOEU - power cable, single core design						
1x16	5DG4 011	5,7	7,7	9,7	210	240
1x25	5DG4 012	7,1	10,6	12,6	325	375
1x35	5DG4 013	8,3	12,1	14,1	445	525
1x50	5DG4 014	9,8	13,9	15,9	605	750
1x70	5DG4 015	11,6	15,9	17,9	830	1050
1x95	5DG4 016	13,8	19,1	21,1	1120	1425
1x120	5DG4 017	14,9	20,8	22,8	1390	1800
1x150	5DG4 018	17,2	23,0	26,0	1740	2250
1x185	5DG4 019	18,0	25,8	28,8	2130	2775
1x240	5DG4 020	22,5	29,9	32,9	2830	3600
(N)GRDGCGOEU - power cable, single core design, screened						
1x16C	5DG4 211	5,7	10,1	12,1	320	240
1x25C	5DG4 212	7,1	12,8	14,8	450	375
1x35C	5DG4 213	8,3	13,9	15,9	555	525
1x50C	5DG4 214	9,8	15,7	17,7	745	750
1x70C	5DG4 215	11,6	18,7	20,7	1090	1050
1x95C	5DG4 216	13,8	20,8	22,8	1330	1425
1x120C	5DG4 217	14,9	22,8	24,8	1580	1800
1x150C	5DG4 218	17,2	25,6	28,6	2000	2250
1x185C	5DG4 219	18,0	27,8	30,8	2330	2775
1x240C	5DG4 220	22,5	31,9	34,9	3130	3600
(N)GRDGOEU-J - power cable, 3/4- core design						
4x4	5DG4 111	2,9	12,7	14,7	325	240
4x6	5DG4 112	3,6	14,2	16,2	435	360
4x10	5DG4 113	4,6	16,6	18,6	650	600
4x16	5DG4 114	5,9	20,0	22,0	960	960
4x25	5DG4 115	7,2	25,9	28,9	1580	1500
3x35+3x16/3	5DG4 116	8,1	26,4	29,4	1770	1575
3x50+3x25/3	5DG4 117	10,0	31,5	34,5	2510	2250
(N)GRDGCGOEU-J - power cable, 3/4/5-core design, overal screened						
4x2,5C	5DG4 240	1,9	11,3	13,3	390	150
4x4C	5DG4 241	2,9	15,7	17,7	505	240
4x6C	5DG4 242	3,6	17,0	19,0	650	360
4x10C	5DG4 243	4,6	19,7	21,7	930	600
3x16+3x2,5C	5DG4 254	5,9	20,4	22,4	1070	720
3x25+3x4C	5DG4 255	7,2	25,8	28,8	1810	1125
3x35+3x6C	5DG4 256	8,1	28,6	31,6	2220	1575
3x50+3x10C	5DG4 257	10,0	35,0	38,0	3090	2250
3x70+3x10C	5DG4 258	11,8	39,7	42,8	4100	3150
5x16C	5DG4 264	5,9	25,7	28,7	1610	1200
(N)GRDGOEU-J - power cable, 5/7-core design						
7x4	5DG4 171	2,9	16,7	18,7	535	420
5x6	5DG4 122	3,6	15,8	17,8	535	450
5x10	5DG4 123	4,6	19,7	21,7	850	750
5x16	5DG4 124	5,9	22,8	24,8	1220	1200

Selection and ordering data

Number of cores and nominal cross-section	Order No.	Conductor diameter [mm]	Overall diameter of cable Min. value [mm]	Overall diameter of cable Max. value [mm]	Approx. net weight for 1000 m [kg/km]	Maximum permissible tensile force [N]
(N)GRDGOEU-J - control cable						
12x1,5	5DG4 152	1,5	11,7	13,7	305	270
24x1,5	5DG4 154	1,5	17,1	19,1	705	540
7x2,5	5DG4 141	1,9	11,3	13,3	290	263
12x2,5	5DG4 190	1,9	13,6	15,6	485	450
18x2,5	5DG4 191	1,9	16,9	18,9	760	675
24x2,5	5DG4 192	1,9	22,5	24,5	1010	900
(N)GRDGOEU-J - control cable with overall screen						
5x2,5C	5DG4 260	1,9	12,7	14,7	435	188
12x1,5C	5DG4 252	1,5	14,7	16,7	440	270
Fibre optic cable						
6xG62,5/125µ	5DG4 290	-	14,0	16,0	260	500
12xG62,5/125µ	5DG4 291	-	14,0	16,0	260	500
6xE9/125µ	5DG4 292	-	14,0	16,0	260	500
(N)GRDGOEU-O - bus cable						
1x(2x0,5)C	5DG4 ...	0,9	8,0	10,0	135	15
4x(2x0,5)C	5DG4 280	0,9	19,0	21,0	625	60
(4x2x0,5)C	5DG4 ...	0,9	19,2	21,2	605	60
6x(2x0,5)C	5DG4 ...	0,9	20,2	22,2	730	90
6x(2x1)C	5DG4 ...	1,3	26,3	29,3	1120	180