

**RONDOFLEX (CHAIN)  
(N)GRDGÖU**  
**High Flexible Chain Cable**





### Selection and dimensioning criteria

	Type	RONDoflex (CHAIN)
	Type designation	(N)GRDGÖU
	Approvals/ standards	Based on DIN VDE 0250, Part 814
	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.
<b>Electrical parameters</b>	Rated voltage	U <sub>0</sub> /U=0.6/1 kV
	Maximum permissible operating voltage in AC systems	U <sub>0</sub> /U=0.7/1.2 kV
	Maximum permissible operating voltage in DC systems	U <sub>0</sub> /U=0.9/1.8 kV
	AC test voltage	3.5 kV over 5 min
	Current-carrying capacity	According to DIN VDE 0298, Part 4
	EMC	Given because of a special cable design
<b>Thermal parameters</b>	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
<b>Mechanical parameters</b>	Tensile load	Up to 15 N/mm <sup>2</sup>
	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 container test facility
<b>Chemical parameters</b>	Resistance to oil	Given to 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	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 10 <sup>2</sup> mm: 4-core design from 16 <sup>2</sup> mm: 3-energy cores and splitted earth conductor into three parts
Inner sheath	special compound based on EPR (at least GM1b); color: black
Overall shield	braid screen made of tinned copper wires, surface covered >80%
Outer sheath	high grade compound based on EVA with excellent abrasion and aging performance
Marking	RONDOFLEX (CHAIN) (N)GRDGÖU (Aderzahl)x(Querschnitt) 0,6/1 kV

### Selection and ordering data

Number of cores and nominal cross-section	Order No.	Conductor diameter	Overall diameter of cable Min. value	Overall diameter of cable Max. value	Approx. net weight for 1000 m [kg/km]	Maximum permissible tensile force [N]
		[mm]	[mm]	[mm]		
<b>(N)GRDGÖU - power cable, single core design</b>						
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
1x150	5DG4 018	17,2	23,0	26,0	1740	2250
<b>(N)GRDGCGÖU - power cable, single core design, screened</b>						
1x16	5DG4 211	5,7	10,1	12,1	320	240
1x25	5DG4 212	7,10	12,8	14,8	450	375
1x35	5DG4 213	8,3	13,9	15,9	555	525
1x50	5DG4 214	9,8	15,7	17,7	745	750
1x70	5DG4 215	11,6	18,7	20,7	1090	1050
1x95	5DG4 216	13,8	20,8	22,8	1330	1425
1x150	5DG4 218	17,2	25,6	28,6	2000	2250
<b>(N)GRDGÖU-J - power cable, 3/4- core design</b>						
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	6,0	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
3x50+3x25/3	5DG4 117	10,0	31,5	34,5	2510	2250
<b>(N)GRDGCGÖU-J - power cable, 3/4-core design, overall screened</b>						
4x2,5	5DG4 240	1,9	11,3	13,3	390	150
4x4	5DG4 241	2,9	15,7	17,7	505	240
4x10	5DG4 243	4,6	19,7	21,7	930	600
3x16+3x2,5	5DG4 254	5,9	20,4	22,4	1070	720
3x25+3x4	5DG4 255	7,2	25,8	28,8	1810	1125
3x35+3x6	5DG4 256	8,5	28,6	31,6	2220	1575
<b>(N)GRDGÖU-J - power cable, 5/7-core design</b>						
5x6	5DG4 122	3,6	15,8	17,8	535	450
5x10	5DG4 123	4,6	19,7	21,7	850	750
7x4	5DG4 171	2,9	16,7	18,7	535	420
<b>(N)GRDGÖU-J - power cable, 5-core design, overall screened</b>						
5x2,5	5DG4 260	1,9	12,7	14,7	435	188
<b>(N)GRDGÖU-J - control cable</b>						
12x1,5	-	1,5	11,7	13,7	305	270
24x1,5	-	1,5	17,1	19,1	625	540
7x2,5	-	1,9	11,3	13,3	290	263
12x2,5	-	2,0	13,6	15,6	430	450
18x2,5	-	2,0	16,9	18,9	680	675

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		[mm]	[mm]	[mm]		

### (N)GRDGÖU-O - bus cable

1x(2x0,5)C	-	0,9	8,0	10,0	135	15
4x(2x0,5)C	-	0,9	19,0	21,0	625	60
(4x2x0,5)C	-	0,9	19,2	21,2	605	60
6x(2x0,5)C	-	0,9	20,2	22,2	730	90
6x(2x1)C	-	-	26,3	29,3	1120	180