PLANOFLEX NGFLGÖU Flat Rubber-Sheathed Festoon Cables

RONDOFLEX NGRDGÖU Round Rubber-Sheathed Festoon Cables also Suitable for Simple Reeling

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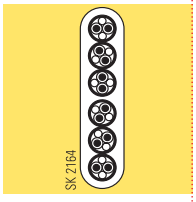
Selection and dimensioning criteria

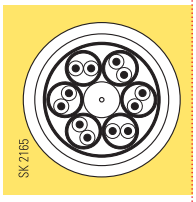
Refer to Section 4 for further details ➜

		PLANOFLEX	RONDOFLEX		
	Type			Page	4/2
	Type designation	NGFLGÖU-J/-O	NGRDGÖU-J/-O	Page	4/3
	Approvals/standards	DIN VDE 0250, Part 809 Ⓤ File E 113313	VDE certificate with VDE Reg. No. 9809	Pages and	4/4 4/5
	Application	Flexible power and control cable, for use on festoon systems and for connecting movable parts of machine tools, material handling equipment, etc., associated with high mechanical stresses and frequent bending during operation and for bending in one plane only.	Flexible power and control cable, for use on festoon systems and for connecting movable parts of machine tools, material handling equipment, etc., associated with high mechanical stresses and frequent bending during operation. Suitable for simple reeling.	Pages and	4/6 4/7
Electrical parameters	Rated voltage	U_0/U = 300/500 V	U_0/U = 0.6/1 kV	Pages to	4/8 4/13
	Maximum permissible operating voltage in AC systems	U_0/U = 0.7/1.2 kV	U_0/U = 0.7/1.2 kV		
	Maximum permissible operating voltage in DC systems	U_0/U = 0.9/1.8 kV	U_0/U = 0.9/1.8 kV		
	AC test voltage	2.5 kV over 5 min	2.5 kV over 5 min		
	Current-carrying capacity	According to DIN VDE 0298, Part 4	According to DIN VDE 0298, Part 4		
Thermal parameters	Ambient temperature			Pages and	4/14 4/15
	• Fully flexible operation	- 35 °C to + 60 °C	- 35 °C to + 60 °C		
	• Fixed installation	- 50 °C to + 80 °C	- 50 °C to + 80 °C		
	Maximum permissible operating temperature of the conductor	90 °C	90 °C		
	Short-circuit temperature of the conductor	250 °C	200 °C		
Mechanical parameters	Tensile load	Up to 15 N/mm^2	Up to 15 N/mm^2	Page	4/16
	Torsional stresses	Not permissible	± 90 °/m	Page	4/16
	Minimum bending radii	According to DIN VDE 0298, Part 3	According to DIN VDE 0298, Part 3	Page	4/17
	Minimum distance with S-type directional changes	No application	20 x D	Page	4/17
	Travel speed			Page	4/18
	• Gantry (reeling operation)	No application	60 m/min		
	• Trolley (festoon system)	Guidance value: up to 180 m/min Consult the manufacturer for higher values	Guidance value: up to 180 m/min Consult the manufacturer for higher values		
	Additional tests	Bending test	Bending test	Page	4/19
Chemical parameters	Resistance to oil	Given to DIN VDE 0473, Part 811-2-1, Para.10	Given to DIN VDE 0473, Part 811-2-1, Para.10	Page	4/21
	Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture		

1	Conductor
2	Insulation
3	Twisted and shielded pair
4	Outer sheath



1	Conductor
2	Insulation
3	Twisted and shielded pair
4	Inner sheath
5	Outer sheath



Design features

Refer to Section 4 for further details ➜

Type	**PLANOFLEX**	**RONDOFLEX**	Page	4/2
Conductor (refer also to DIN VDE 0295)	Electrolytic copper, not tinned Up to 25 mm^2: extremely finely stranded, class 6 Above 35 mm^2: finely stranded, class 5	Electrolytic copper, tinned finely stranded, class 5	Pages and	4/22 4/23
Insulation (refer also to DIN VDE 0207, Part 20)	PROTOLON Basic material EPR Rubber compound 3GI3	PROTOLON MS Newly developed special compound based on high-quality EPR (at least 3GI3); improved mechanical and electrical characteristics	Pages to	4/24 4/26
Shield for individually shielded cores and twisted and shielded pairs	Braid screen made of tinned copper wires, transfer impedance optimized at 30 MHz. Surface covered: approx. 60 % for shielded cores, approx. 80 % for twisted and shielded pairs	Braid screen made of tinned copper wires, transfer impedance optimized at 30 MHz. Surface covered: approx. 60 % for shielded cores, approx. 80 % for twisted and shielded pairs	Page	4/27
Core identification (in line with DIN VDE 0293)	Up to 5 cores, coloured: green/yellow (or black for version ...-O) black, blue, brown, black; For more than 5 cores: black with white numbering	Optimal identification as a result of light insulation with numbers printed in black for power and control cables, protective-earth conductor green/yellow		
Core arrangement	Parallel, for more than 12 cores: parallel bundles	Laid-up in a maximum of 3 layers Length of lay 10 x D	Pages and	4/28 4/29
Inner sheath (refer also to DIN VDE 0207, Part 21)		Basic material EPR Rubber compound GM1b Colour: black	Pages to	4/22 4/26
Outer sheath (refer also to DIN VDE 0207, Part 21)	Basic material PCP Rubber compound 5GM3 Colour: black	Basic material PCP Rubber compound 5GM3 Colour: black	Pages to	4/22 4/26
Marking	<VDE>PLANOFLEX NGFLGÖU-J/-O (number of cores) x (cross-section) 600 V, 90 °C, (UL), PLANOFLEX (cross-section)AWG/(number of cores) (type of core) OUTDOOR	RONDOFLEX NGRDGÖU-J/-O (number of cores) x (cross-section)	Page	4/31

PLANOFLEX
NGFLGÖU
Flat Rubber-Sheathed Festoon Cables

Selection and ordering data

Number of cores and nominal cross-section mm²	Order No.	Conductor diameter (guidance value) mm	Overall dimensions of cable Min. value (guidance value) mm	Max. value (guidance value) mm	Approx. net weight for 1000 m kg	Maximum permissible tensile force N
NGFLGÖU - J power cables						
4 x 4 *	**5DG5 731**	2.8	8.5 x 23.0	9.0 x 24.0	402	240
4 x 6 *	**5DG5 741**	3.5	9.1 x 25.5	9.6 x 27.0	510	360
4 x 10 *	**5DG5 765**	4.5	10.5 x 31.3	11.3 x 32.8	770	600
4 x 16 *	**5DG5 766**	5.6	12.2 x 36.1	13.0 x 37.6	1 160	960
4 x 25 *	**5DG5 767**	6.6	13.7 x 42.3	14.5 x 43.8	1 560	1 500
4 x 35 *	**5DG5 768**	8.1	15.8 x 48.8	16.8 x 50.3	2 100	2 100
4 x 50 *	**5DG5 770**	9.7	18.3 x 57.0	19.3 x 59.0	2 930	3 000
4 x 70 *	**5DG5 771**	11.2	20.5 x 64.0	21.5 x 66.0	3 910	4 200
4 x 95	**5DG5 772**	13.1	23.5 x 74.2	24.5 x 76.2	5 120	5 700
7 x 4 *	**5DG5 734**	2.8	8.5 x 38.5	9.0 x 40.9	720	420
7 x 6 *	**5DG5 744**	3.5	9.1 x 42.9	9.6 x 45.3	910	630
7 x 10	**5DG5 865**	4.5	10.5 x 53.0	11.3 x 55.9	1 370	1 050
7 x 16	**5DG5 866**	5.6	12.6 x 60.7	13.4 x 63.9	1 990	1 680
7 x 25	**5DG5 867**	6.6	14.9 x 73.3	15.7 x 76.6	2 930	2 625
7 x 35	**5DG5 868**	8.1	16.4 x 83.7	17.4 x 87.0	3 820	3 675
NGFLGÖU - J control cables						
3 x 1.5	**5DG5 751**	1.5	5.5 x 11.7	6.0 x 12.5	126	68
4 x 1.5 *	**5DG5 711**	1.5	5.7 x 15.0	6.2 x 15.8	171	90
5 x 1.5 *	**5DG5 712**	1.5	5.5 x 18.5	6.0 x 20.1	214	113
7 x 1.5 *	**5DG5 714**	1.5	5.5 x 25.0	6.0 x 26.8	292	158
8 x 1.5 *	**5DG5 715**	1.5	5.5 x 27.5	6.0 x 28.3	325	180
10 x 1.5 *	**5DG5 717**	1.5	6.2 x 35.5	6.7 x 37.0	455	225
12 x 1.5 *	**5DG5 718**	1.5	6.3 x 42.0	6.8 x 43.5	550	270
24 x 1.5 *	**5DG5 720**	1.5	11.3 x 50.5	12.1 x 52.7	1 050	540
4 x 2.5 *	**5DG5 721**	2.0	6.8 x 18.6	7.4 x 19.6	257	150
5 x 2.5 *	**5DG5 722**	2.0	6.8 x 22.9	7.4 x 24.6	332	188
7 x 2.5 *	**5DG5 724**	2.0	6.8 x 31.0	7.4 x 32.8	452	263
8 x 2.5 *	**5DG5 725**	2.0	6.8 x 34.1	7.4 x 35.9	510	300
12 x 2.5 *	**5DG5 728**	2.0	7.0 x 50.6	8.0 x 53.5	810	450
24 x 2.5 *	**5DG5 730**	2.0	15.0 x 68.6	15.8 x 69.2	1 730	900
(N)GFLGÖU - O shielded cables		Individually shielded cores / twisted and shielded pairs				
12 x 1 (C)	**5DG5 670**	1.3	6.6 x 48.2	7.1 x 51.3	653	180
4 x 1.5 (C) *	**5DG5 880**	1.5	6.9 x 18.5	7.4 x 19.5	250	90
8 x 1.5 (C) *	**5DG5 884**	1.5	6.9 x 35.1	7.4 x 37.8	510	180
12 x 1.5 (C)	**5DG5 888**	1.5	7.5 x 51.8	8.0 x 55.6	820	270
4 x (2 x 1) C *	**5DG5 890**	1.3	10.6 x 31.8	11.4 x 33.8	663	120
6 x (2 x 2.5) C	**5DG5 898**	2.0	14.8 x 61.5	15.6 x 65.1	1 800	450