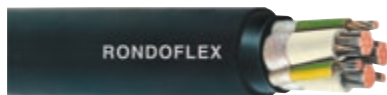


Rubber Sheathed Festoon Cable



APPLICATION

Flexible power and control cable, for use on festoon systems machine tools, material handling equipment, associated with high mechanical stresses and frequent bending during operation, also suitable for light duty reeling applications.

DESIGN

RONDOFLEX cables consist of electrolytic copper, tinned finely stranded conductors. The insulation is a PROTOLONMS which is a newly developed special compound based on high quality EPR which provides improved mechanical and electrical characteristics. For individually shielded cores and twisted and shielded pairs the overall braided screen consists of tinned copper wires. The transfer impedance is optimised at 30 MHz and the surface area covered is approx 60% for shielded cores and 80% for twisted and shielded pairs. The inner sheath is EPR, the outer sheath is PCP. RONDOFLEX remains flexible at sub zero temperatures and high ambient temperatures. The construction is in accordance with the Australian Standards AS1125, AS3116, AS3191 and VDE certificate with VDE Reg No. 9809.

CHEMICAL PARAMETERS

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

ELECTRICAL PARAMETERS

Rated voltage	$U_p/U = 0.6/1kV$
Max permissible operating voltage in AC systems	$U_p/U = 0.7/1.2kV$
Max permissible operating voltage in DC systems	$U_p/U = 0.9/1.8kV$
AC test voltage	2.5 kV over 5 min

THERMAL PARAMETERS

Ambient temperature	
• Fully flexible operation	-35°C to +60°C
• Fixed installation	-50°C to +80°C
Max permissible operating temperature of the conductor	90°C
Short-circuit temperature of the conductor	200°C

CURRENT CARRYING CAPACITY

Current ratings are based on continuous operation at an ambient temperature of 40°C. At other temperatures these values must be converted using the following table.

MECHANICAL PARAMETERS

Tensile load	Up to 15 N/mm ²
Torsional stresses	± 90°/m
Minimum bending radii	According to DIN VDE 0298, Part 3
Minimum distance for S-type directional changes	20 X D
Travel speed	
• Gantry (reeling operation)	60 m/min
• Trolley (festoon system)	up to 180 m/min
• For speeds above 180m/min consult the manufacturer	

CORE COLOUR IDENTIFICATION

Control and power conductors are light coloured with numbers printed in black for easy identification and include a green/yellow earth conductor.

CORE ARRANGEMENT


Laid-up in a maximum of 3 layers.

Length of lay 10 x D.

Selection and ordering data

	Number of Cores & Nominal Cross-section	Part No.	Conductor diameter	Overall Diameter of Cable		Approx. Net Weight for 1000 m	Maximum Permissible tensile force	Unenclosed Spaced
				Min	Max			
mm ²	mm ²		mm	mm	mm	kg	N	A
NGRDGÖU-O Power cables Single-core design	1 x 25	5DG6 610	6.8	11.4	12.6	330	375	150
	1 x 35	5DG6 611	8.1	12.3	13.9	430	525	185
	1 x 50	5DG6 612	9.6	15.0	16.6	625	750	230
	1 x 70	5DG6 613	11.2	16.5	18.5	835	1050	290
	1 x 95	5DG6 614	13.2	18.9	20.9	1070	1425	360
	1 x 120	5DG6 615	14.9	20.8	22.8	1340	1800	420
	1 x 150	5DG6 616	16.6	22.9	24.9	1650	2250	485
	1 x 185	5DG6 617	18.0	24.8	27.8	2010	2775	570
NGRDGÖU-J Power cables Four and five-core design	4 x 4	5DG6 642	3.0	13.9	15.5	350	240	38
	4 x 6	5DG6 643	3.2	15.9	17.9	475	360	48
	4 x 10	5DG6 644	4.2	18.2	20.2	680	600	66
	4 x 16	5DG6 645	5.7	22.9	24.9	1070	960	88
	4 x 25	5DG6 646	6.8	26.9	29.9	1600	1500	120
	4 x 35	5DG6 647	8.1	30.1	33.1	2090	2100	145
	4 x 50	5DG6 648	9.6	35.7	38.7	2970	3000	180
	5 x 4	5DG6 652	3.0	15.7	17.7	450	300	38
	5 x 6	5DG6 653	3.2	17.5	19.5	575	450	48
	5 x 10	5DG6 654	4.2	20.8	22.8	865	750	66
	5 x 16	5DG6 655	5.7	24.6	27.6	1300	1200	88
	5 x 25	5DG6 656	6.8	29.5	32.5	1940	1875	120
NGRDGÖU-J Power cables Three-core design with protective-earth conductor split into 3	3 x 35 + 3 x 16/3	5DG6 631	8.1	27.7	30.7	1800	1575	145
	3 x 50 + 3 x 25/3	5DG6 632	9.7	32.5	35.5	2540	2250	180
	3 x 70 + 3 x 35/3	5DG6 633	11.2	39.1	42.1	3570	3150	230

Selection and ordering data

	Number of Cores & Nominal Cross-section mm ²	Part No.	Conductor diameter mm	Overall Diameter of cable		Approx. Net Weight for 1000 m kg	Maximum Permissible tensile force N	Unenclosed Spaced  A
				Min mm	Max mm			
NGRDGÖU-J Control cables	12 x 1.5	5DG6 662	1.6	16.2	18.2	440	270	20
	18 x 1.5	5DG6 663	1.6	18.7	20.7	615	405	20
	24 x 1.5	5DG6 664	1.6	22.1	24.1	805	540	20
	30 x 1.5	5DG6 665	1.6	23.3	25.3	930	675	20
	36 x 1.5	5DG6 666	1.6	24.6	27.6	1090	810	20
	12 x 2.5	5DG6 672	2.0	17.9	19.9	580	450	28
	18 x 2.5	5DG6 673	2.0	21.5	23.5	865	650	28
	24 x 2.5	5DG6 674	2.0	24.0	27.0	1110	900	28
	30 x 2.5	5DG6 675	2.0	26.4	29.4	1330	1125	28
	36 x 2.5	5DG6 676	2.0	28.4	31.4	1550	1350	28
NGRDGÖU-O Bus cables	6 x (2 x 0.5)	5DG6 693	0.9	22.1	25.1	850	180	
	6 x (2 x 1) C	5DG6 694	1.3	28.1	31.1	1250	180	
	9 x (2 x 0.5) C	5DG6 691	0.9	28.3	31.3	1340	270	
	9 x (2 x 1) C	5DG6 692	1.3	35.9	38.9	2010	270	
	12 x 1(C)	5DG6 681	1.3	18.0	20.0	590	180	