

Power cables in line with **VDE 0250 part. 814**

Cable type

PANZERFLEX-L 0,6/1 kV

(N)SHTÖU-J / -0 rubber cables suitable for reeling & festoon system

Main application

Flexible power cables for use on connecting movable parts of machine tools and any material handling equipment (i.e. Stacker/reclaimer, ship to shore crane, container crane festoon, grabtype ship unloading, gantry festoons, timber crane festoons, etc.). Suitable for any energy supply on cable reels and festoon systems associated to high mechanical stresses, frequent bending/torsional operation and fast movement with strong acceleration.

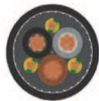
Construction

Conductor:	Tinned copper conductor, flexible cl. 5 IEC 60228 Specially designed for mobile application
Insulation:	HEPR compound better than 3GI3 New specially developed crushproof compound with improved electrical and mechanical characteristics
Cores identification:	Colours according to DIN VDE 0293 part 308 / HD 308 S2 Standard colours: - 3 cores: brown, black, grey - 3+3 cores: brown, black, grey + 3 green/yellow - 4 cores: green/yellow, brown, black, grey - 5 cores: green/yellow, blue, brown, black, grey
Laying-up:	Short lay length for better flexibility ≤7,5 times the laying-up cores diameter
Separation (if any):	Tape(s)
Inner sheath:	Polychloroprene rubber based compound Better than GM1b
Antitwisting protection:	Synthetic yarns Firmly bonded between inner and outer sheath
Outer sheath:	Black polychloroprene rubber compound UV resistant oil and chemical resistant better than 5GM2
Marking:	PALAZZO - PANZERFLEX-L 0,6/1 kV <i>nc x</i> cross section

Parameters

Electrical	Rated voltage	U ₀ /U = 0,6/1 kV
	Maximum permissible operating voltage in AC systems	U _m = 1,2 kV
	AC test voltage over 5 minutes	3,5 kV
	Current Carrying Capacity	According to DIN VDE 0298 part 4
Thermal	Fully flexible operation	- 25 °C
	Fixed installation	- 40 °C
	Maximum permissible operating temperature of the conductor	90 °C
	Short-circuit temperature of the conductor	250 °C
Mechanical	Tensile load	Up to 20 N/mm ²
	Minimum bending radii	According to DIN VDE 0298 part 3
	Reeling operation	No restriction. Consult the manufacturer if speed exceeds 180 m/min
	Festoon systems	Up to 240 m/min
	Chemical	Resistance to oil Weather resistance

If the environment reaches - 40 °C, Palazzo can provide a special version of this cable (differentiated from the standard one by the "-K" add to the code name), which is constructed with a special rubber compound that can face this condition. For temperature down to - 40 °C we suggest to use the Panzerflex-K. To allow this cable operating at - 40 °C we use an outer-sheath compound that is less resistant to abrasion and tear so please contact our sales department for more information regarding application.



Power cables in line with VDE 0250 part. 814

Table 1: PANZERFLEX-L 0,6/1 kV (N)SHTÖU-J /-O power cables

N. of cores and nominal section (n x mm ²)	Main conductor D.C. resist at 20 °C Ohm/km	Splitted protec. nom. diam. mm	earth cond. nom. diam. mm	Overall diameter min. value max. value mm mm		Net weight approx. kg/km	Maximum permissible tensile force N	Current carrying capacity at 30 °C*					Short circuit current 80 ° to 200 °C
				Laid straight A	Suspended in free air A			Spiral or 1 layer A	2 layers A	3 layers A			
3x4	5.09	2.4		14.9	17.0	395	240	41	43	33	25	20	0.51
3x6	3.39	3.1		17.2	19.3	525	360	53	56	42	32	26	0.77
3x10	1.95	4.2		20.3	22.4	765	600	74	78	59	45	36	1.3
3x16	1.24	5.4		23.6	25.7	1.080	960	99	104	79	60	49	2.0
3x25	0.795	6.6		27.0	29.1	1.470	1.500	131	138	105	80	64	3.2
3x35	0.565	8.0		30.4	33.6	2.030	2.100	162	170	130	99	79	4.5
3x50	0.393	9.3		35.4	38.6	2.680	3.000	202	212	162	123	99	6.4
3x70	0.277	11.2		39.6	42.8	3.530	4.200	250	263	200	153	123	9.0
3x95	0.210	13.0		43.8	47.0	4.400	5.700	301	316	241	184	147	12.2
3x120	0.164	15.0		49.5	54.0	5.730	7.200	352	370	282	215	172	15.4
3x150	0.132	16.9		55.5	60.0	7.040	9.000	404	424	323	246	198	19.2
3x185	0.108	18.3		59.5	64.0	8.320	11.100	461	484	369	281	226	23.7
3x240	0.0817	20.5		67.5	72.0	10.850	14.400	540	567	432	329	265	30.7
4x4	5.09	2.4		16.0	18.1	460	320	41	43	33	25	20	0.51
4x6	3.39	3.1		18.4	20.5	615	480	53	56	42	32	26	0.77
4x10	1.95	4.2		21.9	24.0	920	800	74	78	59	45	36	1.3
4x16	1.24	5.4		25.5	27.6	1.310	1.280	99	104	79	60	49	2.0
4x25	0.795	6.6		29.6	32.8	1.860	2.000	131	138	105	80	64	3.2
4x35	0.565	8.0		33.2	36.4	2.490	2.800	162	170	130	99	79	4.5
4x50	0.393	9.3		38.4	41.6	3.300	4.000	202	212	162	123	99	6.4
4x70	0.277	11.2		43.6	46.8	4.420	5.600	250	263	200	153	123	9.0
4x95	0.210	13.0		48.5	53.0	5.610	7.600	301	316	241	184	147	12.2
4x120	0.164	15.0		55.5	60.0	7.360	9.600	352	370	282	215	172	15.4
4x150	0.132	16.9		61.0	65.5	8.770	12.000	404	424	323	246	198	19.2
4x185	0.108	18.3		67.5	72.0	10.730	14.800	461	484	369	281	226	23.7
4x240	0.0817	20.5		74.0	78.5	13.560	19.200	540	567	432	329	265	30.7
5x4	5.09	2.4		18.0	20.1	575	400	41	43	33	25	20	0.51
5x6	3.39	3.1		19.8	21.9	725	600	53	56	42	32	26	0.77
5x10	1.95	4.2		24.5	26.6	1.140	1.000	74	78	59	45	36	1.3
5x16	1.24	5.4		27.6	29.7	1.550	1.600	99	104	79	60	49	2.0
5x25	0.795	6.6		32.2	35.4	2.170	2.500	131	138	105	80	64	3.2
5x35	0.565	8.0		37.0	40.2	3.080	3.500	162	170	130	99	79	4.5
5x50	0.393	9.3		42.2	45.4	4.010	5.000	202	212	162	123	99	6.4
5x70	0.277	11.2		48.0	52.5	5.480	7.000	250	263	200	153	123	9.0
5x95	0.210	13.0		54.5	59.0	7.010	9.500	301	316	241	184	147	12.2
3x50+3x25/3	0.393	9.3	4.0	35.4	38.6	2.820	3.000	202	212	162	123	99	6.4
3x70+3x35/3	0.277	11.2	4.9	39.6	42.8	3.740	4.200	250	263	200	153	123	9.0
3x95+3x50/3	0.210	13.0	5.4	43.8	47.0	4.690	5.700	301	316	241	184	147	12.2
3x120+3x70/3	0.164	15.0	6.6	49.5	54.0	6.220	7.200	352	370	282	215	172	15.4
3x150+3x70/3	0.132	16.9	6.6	55.5	60.0	7.480	9.000	404	424	323	246	198	19.2
3x185+3x95/3	0.108	18.3	8.0	59.5	64.0	9.020	11.100	461	484	369	281	226	23.7
3x240+3x120/3	0.0817	20.5	9.3	67.5	72.0	11.760	14.400	540	567	432	329	265	30.7
4x10+4x2.5	1.95	4.2		23.2	25.3	1.060	800	74	78	59	45	36	1.3
4x16+4x2.5	1.24	5.4		25.5	27.6	1.360	1.280	99	104	79	60	49	2.0
4x25+4x2.5	0.795	6.6		29.6	32.8	1.910	2.000	131	138	105	80	64	3.2
4x35+4x2.5	0.565	8.0		33.2	36.4	2.530	2.800	162	170	130	99	79	4.5
4x50+4x4	0.393	9.3		38.4	41.6	3.370	4.000	202	212	162	123	99	6.4

* Tabulated values are valid up to three loaded conductors with or without earth.