

NYY-J Cable

Application: A VDE approved, solid conductor, black PVC jacketed, 600/1kV power and control cable. These power cables are designed for energy supply cable ducts, power station, industry and distribution boards and in subscriber networks. May also be used in brickwork and in concrete with the exception of cabling in shaken, vibrated or compressed concrete. NYY-J cables can be installed in open air, underground, in water and indoors where mechanical damages are not to be expected. Available in single wire round core, multi-wire round core and sectorial core depending on conductor AWG size. The UV-resistant jacket allows for outdoor use.

Technical Data:



1	Conductor	Class 2 plain stranded copper conductor to BS EN 60228:2005 (previously BS6360)
2	Insulation	XLPE (Cross-Linked Polyethylene)
3	Bedding	PVC (Polyvinyl Chloride)
4	Armouring	Single Core : AWA (Aluminium Wire Armour) Multi Core : SWA (Steel Wire Armoured)
5	Sheath	PVC (Polyvinyl Chloride)

Voltage Rating 600 / 1000V

Conductor Operating Temperature -40°C to +70°C

Core Identification

Up to and including 5 core: colour coded or number coded
7 core and above: number coded.



Sizes and Dimensions - 2 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
2	1.5	78.54	10.00	20s	4	147	12.1
2	2.5	89.92	10.70	20s	5	179	7.41
2	4.0	132.73	13.00	20	6	268	4.61
2	6.0	158.37	14.20	25	6	337	3.08
2	10.0	206.12	16.20	25	7	472	1.83

Sizes and Dimensions - 3 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
3	1.5	84.95	10.4	20	5	166	12.1
3	2.5	100.29	11.3	20	5	212	7.41
3	4.0	134.78	13.1	20	6	299	4.61
3	6.0	176.71	15.0	25	6	402	3.08
3	10.0	229.66	17.1	25	7	570	1.83
3	16.0	277.59	18.8	32	8	789	1.15
3	25.0	383.60	22.1	32	9	1141	0.727
3	35.0	456.17	24.1	32	10	1462	0.524
3	50.0	598.28	27.6	40	11	1964	0.387

Sizes and Dimensions - 4 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
4	1.5	105.68	11.6	20s	5	220	12.1
4	2.5	114.99	12.1	20	5	290	7.41
4	4.0	153.94	14	20	5	400	4.61
4	6.0	186.26	15.4	25	7	510	3.08
4	10.0	271.72	18.6	32	8	751	1.83
4	16.0	339.29	20.6	32	9	1057	1.15
4	25.0	459.96	24.2	32	10	1431	0.727
4	35.0	555.72	26.6	40	11	1861	0.524
4	50.0	749.91	30.9	40	12	2535	0.387
4	70.0	951.15	34.8	50	14	3441	0.268
4	95.0	1281.89	40.4	63	16	4691	0.193
4	120.0	1534.39	44.2	63	18	5757	0.153

The information contained within this datasheet is for guidance only. Please note the actual cable dimensions may vary due to manufacturing tolerance.



Sizes and Dimensions - 5 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
5	1.5	113.10	12	20	5	232	12.1
5	2.5	134.78	13.1	20	6	302	7.41
5	4.0	181.46	15.2	25	6	428	4.61
5	6.0	240.53	17.5	25	8	618	3.08
5	10.0	323.65	20.3	32	8	853	1.83
5	16.0	419.10	23.1	40	10	1212	1.15
5	25.0	555.72	26.6	50	11	1759	0.727

Sizes and Dimensions - 7 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
7	1.5	130.7	12.9	20	6	280	12.1
7	2.5	156.14	14.1	25	10	368	7.41

Sizes and Dimensions - 12 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
12	1.5	216.42	16.6	25	7	475	12.1
12	2.5	260.16	18.2	32	8	628	7.41

Sizes and Dimensions - 19 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
19	1.5	280.56	18.90	32	8	648	12.1
19	2.5	323.65	20.30	32	8	843	7.41

Sizes and Dimensions - 27 Cores

No Cores	Conductor Cross Section Area (mm ²)	Cable Cross Section Area (mm ²)	Overall Diameter (mm)	Gland Size	Cleat Size	Nominal Weight (kg/km)	Resistance of Copper Conductor (Ω/Km) at 20°C
27	1.5	401.15	22.60	32	9	895	12.1



Table 4D2A - Multicore 70°C thermoplastic insulated and thermoplastic sheathed cables, non armoured
(COPPER CONDUCTORES)

Ambient Temperature: 30°C

CURRENT-CARRYING CAPACITY (amperes)

Conductor operating temperature: 70°C

Conductors cross-sectional area (mm ²)	Reference Method A (enclosed in conduit in thermally insulating wall etc.)		Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference Method C (Clipped direct)		Reference Method E (In free air or on a perforated cable tray etc, horizontal or vertical)	
	1 Two - core cable*, single phase a.c. or d.c.	1 three-core cable*, or 1 four core cable, three-phase a.c.	1 two core cable*, Tsingle phase a.c. or d.c.	1 three core cable* or 1 four core cable, three phase a.c.	1 two core cable*, single phase a.c. or d.c.	1 three core cable* or 1 four core cable, three phase a.c.	1 two core cable*, single phase a.c. or d.c.	1 three core cable* or 1 four core cable, three phase a.c.
	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	11	10	13	11.5	15	13.5	17	14.5
1.5	14	13	16.5	15	19.5	17.5	22	18.5
2.5	18.5	17.5	23	20	27	24	30	25
4	25	23	30	27	36	32	40	34
6	32	29	38	34	46	41	51	43
10	43	39	52	46	63	57	70	60
16	57	52	69	62	85	76	94	80
25	75	68	90	80	112	96	119	101
35	92	83	111	99	138	119	148	126
50	110	99	133	118	168	144	180	153
70	139	125	168	149	213	184	232	196
95	167	150	201	179	258	223	282	238
120	192	172	232	206	299	259	328	276
150	219	196	258	225	344	299	379	319
185	248	223	294	255	392	341	434	364
240	291	261	344	297	461	403	514	430
300	334	298	349	339	530	464	593	497
400	-	-	470	402	634	557	715	597

* with or without a protective conductor

TABLE 4D2B

VOLTAGE DROP (per ampere per metre);

Conductor operating temperature: 70°C

Conductor cross sectional area (mm ²)	Two-core cable, d.c	Two-core cable, single-phase a.c.			Three- or four-core cable, three-phase a.c.		
	(mV/A/m)	r	x	z	r	x	z
1	44						
1.5	29						
2.5	18						
4	11						
6	7.3						
10	4.4						
16	2.8						
		r	x	z	r	x	z
25	1.75	1.75	0.170	1.75	1.50	0.145	1.50
35	1.25	1.25	0.165	1.25	1.10	0.145	1.10
50	0.93	0.93	0.165	0.94	0.80	0.140	0.81
70	0.63	0.63	0.160	0.65	0.55	0.140	0.57
95	0.46	0.47	0.155	0.50	0.41	0.135	0.43
120	0.36	0.38	0.155	0.41	0.33	0.135	0.35
150	0.29	0.30	0.155	0.34	0.26	0.130	0.29
185	0.23	0.25	0.150	0.29	0.21	0.130	0.25
240	0.180	0.190	0.150	0.24	0.165	0.130	0.21
300	0.145	0.155	0.145	0.21	0.135	0.130	0.185
400	0.105	0.115	0.145	0.185	0.100	0.125	0.160