NYY

TIS 11 Part 101-2553

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper
- Single-core : Sizes 1 mm² up to 500 mm²
- Multi-cores : Sizes 50 mm² up to 300 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification
- Single-core : Black
- 2 Cores : Blue and Brown
- 3 Cores : Brown, Black and Grey
- 4 Cores : Blue, Brown, Black and Grey

Inner sheath : Black polyvinyl chloride (PVC) (Multi-cores only)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts
450 Volts between Line-to-Earth
750 Volts between Line-to-Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2553 Table 3

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Class of conductor	Insulation thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating maximum		Cable weight approx. (kg/km)	Standard length (m)
								Free air at 40 °C (A)	Under ground at 30 °C (A)		
1	1	1	1.5	1.8	8.6	18.1	0.0207	19	25	80	100/C
	1	2	1.5	1.8	8.8	18.1	0.0200	19	25	80	100/C
	1.5	1	1.5	1.8	9.0	12.1	0.0184	24	31	85	100/C
	1.5	2	1.5	1.8	9.2	12.1	0.0175	24	31	90	100/C
	2.5	1	1.5	1.8	9.4	7.41	0.0157	32	41	100	100/C
	2.5	2	1.5	1.8	9.8	7.41	0.0146	32	41	110	100/C
	4	1	1.5	1.8	10.0	4.61	0.0135	43	53	120	100/C
	4	2	1.5	1.8	10.5	4.61	0.0124	43	53	130	100/C
	6	2	1.5	1.8	11.0	3.08	0.0107	54	68	160	100/C
	10	2	1.5	1.8	12.0	1.83	0.0088	73	79	210	500/D
	16	2	1.5	1.8	13.0	1.15	0.0074	97	118	280	500/D
	25	2	1.5	1.8	14.5	0.727	0.0061	129	153	390	500/D
	35	2	1.5	1.8	16.0	0.524	0.0053	159	185	490	500/D
	50	2	1.5	1.8	17.0	0.387	0.0046	191	220	620	500/D
	70	2	1.5	1.8	19.0	0.268	0.0039	241	271	850	500/D
	95	2	1.7	1.8	21.5	0.193	0.0038	297	326	1,100	500/D
	120	2	1.7	1.8	23.0	0.153	0.0034	345	372	1,400	500/D
	150	2	1.9	2.0	26.0	0.124	0.0034	397	418	1,700	500/D
	185	2	2.1	2.0	28.0	0.0991	0.0034	456	473	2,100	500/D
	240	2	2.3	2.2	31.5	0.0754	0.0033	541	549	2,700	500/D
	300	2	2.5	2.2	35.0	0.0601	0.0032	628	624	3,400	500/D
	400	2	2.7	2.2	38.5	0.0470	0.0030	733	713	4,300	500/D
	500	2	3.1	2.4	43.0	0.0366	0.0031	848	810	5,400	500/D

Class of conductor 1 : Solid
2 : Strand

C : Packing in coil
D : Packing in drum

NYY

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CABLE STRUCTURE

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Insulation : Polyvinyl chloride (PVC/C)

Core identification
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Inner sheath : Black polyvinyl chloride (PVC) (Multi-cores only)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts
450 Volts between Line-to-Earth
750 Volts between Line-to-Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2553 Table 3

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
1	1 (1)	21.6987	0.770	0.24186	21.70000
	1 (7)	21.6987	0.758	0.23808	21.70000
	1.5 (1)	14.4982	0.735	0.23082	14.50000
	1.5 (7)	14.4982	0.720	0.22632	14.50000
	2.5 (1)	8.8703	0.693	0.21775	8.87300
	2.5 (7)	8.8705	0.675	0.21222	8.87300
	4 (1)	5.5201	0.657	0.20650	5.52400
	4 (7)	5.5204	0.639	0.20063	5.52400
	6	3.6900	0.610	0.19176	3.69500
	10	2.1896	0.575	0.18068	2.19700
	16	1.3804	0.546	0.17162	1.39100
	25	0.8610	0.522	0.16403	0.87649
	35	0.6271	0.504	0.15837	0.64679
	50	0.4633	0.490	0.15379	0.48816
	70	0.3210	0.474	0.14896	0.35388
	95	0.2314	0.466	0.14636	0.27380
	120	0.1836	0.458	0.14393	0.23329
	150	0.1491	0.458	0.14380	0.20715
	185	0.1195	0.453	0.14243	0.18592
	240	0.0914	0.450	0.14140	0.16837
	300	0.0734	0.445	0.13994	0.15802
	400	0.0582	0.441	0.13846	0.15018
	500	0.0462	0.411	0.13844	0.14595

(_) : No of copper wire

NYY

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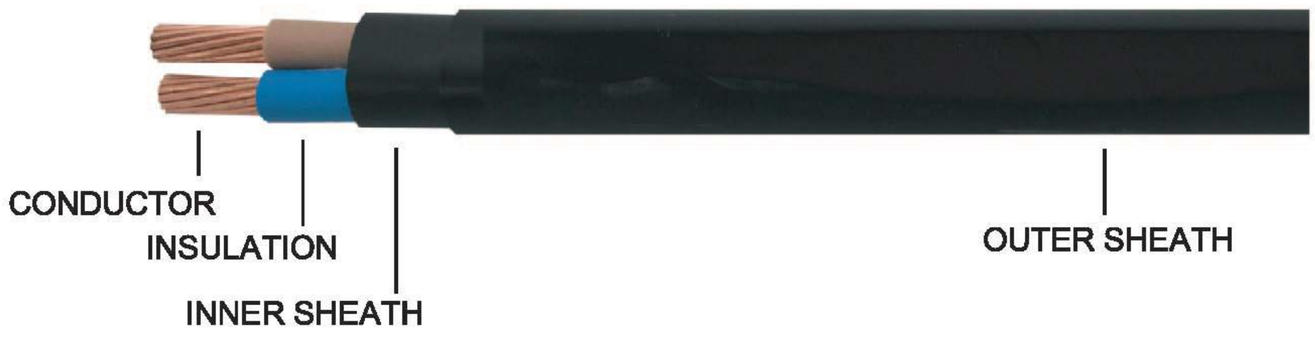

CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper
Single-core : Sizes 1 mm² up to 500 mm²
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Insulation : Polyvinyl chloride (PVC/C)
Core identification
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2 Cores : Blue and Brown
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4 Cores : Blue, Brown, Black and Grey
Inner sheath : Black polyvinyl chloride (PVC) (Multi-cores only)
Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts
450 Volts between Line-to-Earth
750 Volts between Line-to-Line

Testing voltage : 2,500 Volts
Reference standard : TIS 11 Part 101-2553 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Class of conductor	Insulation thickness nominal (mm)	Inner sheath thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating maximum		Cable weight approx. (kg/km)	Standard length (m)
									Free air at 40 °C (A)	Under ground at 30 °C (A)		
2	50	2	1.5	1.2	2.2	33.5	0.387	0.0046	160	195	1,800	500/D
	70	2	1.5	1.5	2.2	38.0	0.268	0.0039	200	239	2,400	500/D
	95	2	1.7	1.5	2.2	42.5	0.193	0.0038	245	288	3,200	500/D
	120	2	1.7	1.5	2.4	46.5	0.153	0.0034	285	329	3,900	500/D
	150	2	1.9	1.8	2.6	52.0	0.124	0.0034	325	368	4,800	500/D
	185	2	2.1	1.8	2.8	57.0	0.0991	0.0034	374	417	6,000	500/D
	240	2	2.3	2.0	3.0	64.0	0.0754	0.0033	440	481	7,500	300/D
	300	2	2.5	2.0	3.2	70.5	0.0601	0.0032	505	541	9,500	300/D

Class of conductor 2 : Strand D : Packing in drum

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	50	0.4635	0.250	0.07856	0.47011
	70	0.3214	0.241	0.07570	0.33019
	95	0.2319	0.239	0.07505	0.24374
	120	0.1843	0.235	0.07376	0.19851
	150	0.1499	0.234	0.07364	0.16701
	185	0.1205	0.234	0.07342	0.14111
	240	0.0928	0.232	0.07275	0.11793
	300	0.0752	0.230	0.07228	0.10427

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TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
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Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2553 Table 4

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									Free air at 40 °C (A)	Under ground at 30 °C (A)		
3	50	2	1.5	1.2	2.2	36.0	0.387	0.0046	136	164	1,800	500/D
	70	2	1.5	1.5	2.2	40.5	0.268	0.0039	174	205	2,400	500/D
	95	2	1.7	1.5	2.2	46.0	0.193	0.0038	213	245	3,200	500/D
	120	2	1.7	1.5	2.4	50.5	0.153	0.0034	247	279	3,900	500/D
	150	2	1.9	1.8	2.6	56.0	0.124	0.0034	284	315	4,800	500/D
	185	2	2.1	1.8	2.8	61.5	0.0991	0.0034	325	355	6,000	300/D
	240	2	2.3	2.0	3.0	69.0	0.0754	0.0033	384	411	7,500	300/D
	300	2	2.5	2.0	3.2	76.0	0.0601	0.0032	438	462	9,500	200/D

Class of conductor 2 : Strand

D : Packing in drum

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	50	0.4635	0.25000	0.07856	0.47011
	70	0.3214	0.24100	0.07570	0.33019
	95	0.2319	0.23900	0.07505	0.24374
	120	0.1843	0.23500	0.07376	0.19851
	150	0.1499	0.23400	0.07364	0.16701
	185	0.1205	0.23400	0.07342	0.14111
	240	0.0928	0.23200	0.07275	0.11793
	300	0.0752	0.23000	0.07228	0.10427

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									Free air at 40 °C (A)	Under ground at 30 °C (A)		
4	50	2	1.5	1.5	2.2	39.5	0.387	0.0046	136	164	2,900	500/D
	70	2	1.5	1.5	2.4	44.5	0.268	0.0039	174	205	3,900	500/D
	95	2	1.7	1.8	2.6	51.5	0.193	0.0038	213	245	5,500	500/D
	120	2	1.7	1.8	2.8	56.0	0.153	0.0034	247	279	6,500	500/D
	150	2	1.9	2.0	3.0	62.0	0.124	0.0034	284	315	8,000	300/D
	185	2	2.1	2.0	3.2	68.0	0.0991	0.0034	325	355	10,000	300/D
	240	2	2.3	2.2	3.4	76.5	0.0754	0.0033	384	411	13,000	200/D
	300	2	2.5	2.2	3.8	85.0	0.0601	0.0032	438	462	16,000	200/D

Class of conductor 2 : Strand

D : Packing in drum

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	50	0.4634	0.29700	0.09321	0.47268
	70	0.3213	0.28800	0.09035	0.33376
	95	0.2318	0.28600	0.08970	0.24855
	120	0.1842	0.28100	0.08842	0.20432
	150	0.1497	0.28100	0.08828	0.17379
	185	0.1203	0.28000	0.08809	0.14910
	240	0.0924	0.27800	0.08740	0.12722
	300	0.0747	0.27700	0.08694	0.11463