

BS 7870-4.10 Aluminium MDPE 12.7/22 (24)kV Cable



APPLICATION

Medium Voltage cable for power distribution and power supply stations used in Utility and Industrial applications, for the rated voltage of 12.7/22 (24)kV.

CHARACTERISTICS

Voltage Rating U_0/U

12.7/22 (24)kV

Temperature Rating

Maximum conductor operating temperature: +90°C

Initial temperature at S.C.C for metallic screen: +80°C

Maximum conductor temperature during S.C: +250°C

Minimum Bending Radius

20 x overall diameter

STANDARDS

BS 7870-4.10, BS EN 60228, HD620 S2 Part 100 / 110

THE CABLE TEST

We have world-class testing facility, and made rigorous testing regime, every meter of cable before leaving the factory must go through strict testing, testing qualified products will be shipped to customers, effectively ensure product quality and meet customer requirements.

SUSTAINABILITY COMMITMENT

Guowang Cable actively implements the "carbon reduction" goal, strives to promote the green's low-carbon transformation, strengthens energy-saving and emission reduction technology innovation, and promotes the company's healthy and sustainable development.

CONSTRUCTION

Conductor

Class 2 Stranded Aluminium

Conductor Screen

Semi-conductive extruded XLPE (Cross-linked Polyethylene) (Bonded)

Insulation

XLPE (Cross-Linked Polyethylene)

Insulation Screen

Semi-conductive extruded XLPE (Cross-linked Polyethylene) (Strippable)

Longitudinal Waterblocking

Semi-conductive waterblocking tape

Metallic Screen

Copper Wires and Open Helix Copper Tape

Longitudinal Waterblock

Non-conductive waterblocking tape

Outer Sheath

MDPE (Medium Density Polyethylene)

Sheath Colour

● Black

DIMENSIONS

NO. OF CORE	NOMINAL CROSS SECTIONAL AREA	NOMINAL INSULATION THICKNESS	NOMINAL SCREEN SECTIONAL AREA	NOMINAL SHEATH THICKNESS	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT
	mm2	mm	mm2	mm	mm	kg/km
1	70	5.5	35	1.51	32.2	1099
1	95	5.5	35	1.51	33.7	1204
1	120	5.5	35	1.6	35.3	1327
1	150	5.5	35	1.6	37.5	1467
1	185	5.5	35	1.68	38.6	1593
1	240	5.5	35	1.77	41.2	1825
1	300	5.5	35	1.77	43.5	2058
1	400	5.5	35	1.85	46.3	2407
1	500	5.5	35	1.94	49.9	2812
1	630	5.5	35	2.02	54.2	3386
1	800	5.5	35	2.19	59.4	4118

ELECTRICAL CHARACTERISTICS

NOMINAL CROSS SECTIONAL AREA mm2	MAXIMUM CONDUCTOR DC RESISTANCE AT 20°C Ω/Km	MAXIMUM CONDUCTOR AC RESISTANCE AT OPERATING TEMP. AND 50 HZ Ω/Km	CAPACITANCE uF/km	CHARGING CURRENT A/Km	DIELECTRIC LOSSES W/Km	REACTANCE AT 50HZ ohm/km	S.C.C FOR 1SEC KA		CURRENT RATING A	
							Conductor	Screen	Laid in ground	Laid in free air
70	0.443	0.569	0.203	0.81	41.16	0.136	6.559	4.1	222	247
95	0.32	0.411	0.223	0.889	45.14	0.130	8.9015	4.1	266	298
120	0.253	0.325	0.241	0.961	48.83	0.125	11.244	4.1	306	344
150	0.206	0.265	0.269	1.075	54.61	0.118	14.055	4.1	339	391
185	0.164	0.211	0.281	1.121	56.96	0.116	17.3345	4.1	388	449
240	0.125	0.161	0.312	1.244	63.22	0.111	22.488	4.1	445	534
300	0.1	0.129	0.341	1.362	69.20	0.107	28.11	4.1	498	615
400	0.0778	0.101	0.375	1.495	75.94	0.103	37.48	4.1	574	714
500	0.0605	0.079	0.418	1.668	84.73	0.099	46.85	4.1	646	838
630	0.0469	0.062	0.47	1.876	95.31	0.097	59.031	4.1	756	966
800	0.0367	0.049	0.531	2.119	107.68	0.093	74.96	4.1	855	1113

Laying conditions at trefoil formation are as below:

- Soil thermal resistivity 120 °C.Cm/Watt
- Burial depth 0.5 m
- Ground temperature 15°C | Air temperature 25°C | Frequency 50 Hz

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.