

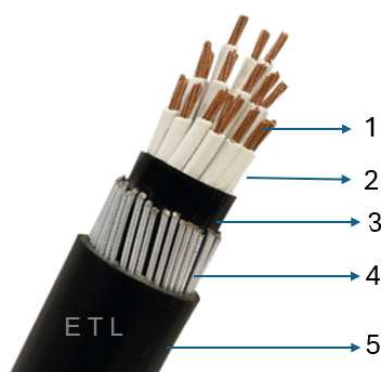


ETL SINAR SOLUTIONS SDN BHD (1344715-H)

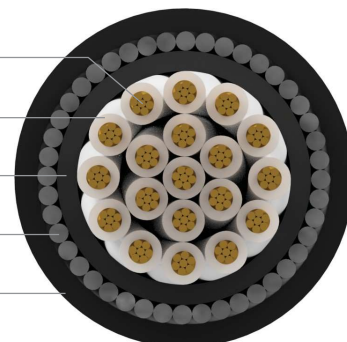
10-G, Jalan LP 7/5B, Taman Lestari Perdana, 43300 Seri Kembangan, Selangor.

Tel : 018-3970397 www.etlss.com.my

PVC INSULATED, PVC SHEATHED ARMoured CABLE (MULTI CORE) AUXILIARY CABLE – CU/PVC/SWA/PVC



1. Cu Conductor
2. PVC Insulation
3. Bedding
4. Steel Wire Armoured
5. PVC Outer Sheath



APPLICATION

Power cable with steel wire armoring suitable for use in power networks, underground, outdoor and indoor applications and in cable ducting.

STANDARDS

Design Specification	MS 2103
Conductor	IEC 60228

CABLE CONSTRUCTION

Conductor	Plain Annealed Copper, Class 2, Stranded Circular or Compacted
Insulation	Polyvinyl Chloride (PVC) compound, PVC/A
Core Identification	White Insulation with Black Numbering
Assembly	Stranded together and the interstices may be filled with the sheathing compound. A non-hygroscopic binder tape may be applied over the laid-up cores.
Bedding	Polyvinyl Chloride (PVC) compound, PVC/ST-1
Bedding Colour	Black
Armour	Galvanised Steel Wire Armour (SWA)
Outer Sheath	Polyvinyl Chloride (PVC) compound, PVC/ST-1
Outer Sheath Colour	Black

ELECTRICAL CHARACTERISTICS

Operating Voltage, U_0/U	600/1000 V	Test Voltage	3.5kV for 5 minutes
Operating Temperature	-15°C to 70°C	Max Conductor Temperature	70°C



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CU/PVC/SWA/PVC - MULTI CORE

Nominal Area (mm ²)	Number of Cores	Number / Wire Diameter (No./mm)	Thickness of Insulation (mm)	Armour Wire Diameter (mm)	Thickness of Sheath (mm)	Approx. Overall Diameter (mm)	Approx. Cable Weight (kg/km)
1.5	7	7/0.53	0.80	0.90	1.80	17.00	555
1.5	12	7/0.53	0.80	1.25	1.80	21.40	900
1.5	19	7/0.53	0.80	1.60	1.80	24.80	1300
1.5	27	7/0.53	0.80	1.60	1.80	28.50	1520
1.5	37	7/0.53	0.80	1.60	1.90	31.40	2005
1.5	48	7/0.53	0.80	1.60	2.00	35.30	2440
2.5	7	7/0.67	0.80	1.25	1.80	18.90	775
2.5	12	7/0.67	0.80	1.25	1.80	23.00	1110
2.5	19	7/0.67	0.80	1.60	1.80	26.80	1600
2.5	27	7/0.67	0.80	1.60	1.90	31.00	2070
2.5	37	7/0.67	0.80	1.60	2.00	34.40	2570
2.5	48	7/0.67	0.80	2.00	2.10	39.90	3460
4	7	7/0.85	1.00	1.25	1.80	21.90	1040
4	12	7/0.85	1.00	1.60	1.80	27.80	1560
4	19	7/0.85	1.00	1.60	1.90	32.00	2240
4	27	7/0.85	1.00	2.00	2.10	38.80	3250
4	37	7/0.85	1.00	2.00	2.20	43.00	4040
4	48	7/0.85	1.00	2.50	2.40	49.00	5790



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Electrical Characteristic – PVC/SWA/PVC Steel Wire Armoured Cables

Table A3.1b: Current Carrying Capacity

Conductor Cross-Sectional Area (mm ²)	Reference Method C (Clipped Direct)		Reference Method E (In Free Air or On A Perforated Cable Tray, Horizontal or Vertical)		Reference Method D (Direct In Ground or In Ducting In Ground, In or Around Buildings)	
	One 2-Core Cable, Single-Phase AC or DC (Amp)	One 3 or 4-Core Cable, Three-Phase AC (Amp)	One 2-Core Cable, Single-Phase AC or DC (Amp)	One 3 or 4-Core Cable, Three-Phase AC (Amp)	One 2-Core Cable, Single-Phase AC or DC (Amp)	One 3 or 4-Core Cable, Three-Phase AC (Amp)
1.5	21	18	22	19	22	18
2.5	28	25	31	26	29	24
4	38	33	41	35	37	30

Table A3.2: Voltage Drop

Conductor Cross-Sectional Area (mm ²)	2-Core Cable, DC (mV/A/m)	2-Core Cable, Single-Phase AC (mV/A/m)	3, 4-Core Cable, Three-Phase AC (mV/A/m)
1.5	29	29	25
2.5	18	18	15
4	11	11	9.5

Ambient Air Temp 30°C

Ambient Ground Temp 20°C

Conductor Operating Temp 70°C

Soil Thermal Resistivity (cable buried in ground): 2.5 K.m/W

Note:

1. Correction factors for ambient temperature and group installation, please refer Derating Factor section.