

**76/132 (145) kV COPPER CONDUCTOR WITH LEAD SHEATH  
IEC 60840 STANDARD**

**APPLICATION :**

Preferably used for urban networks.  
Suitable for use in duct, trays and direct burial in ground.

**Advantage :**

Perfect radial moisture barrier.  
Excellent sulfide, oil and chemical resistance.

**Max. Conductor Temperature :**

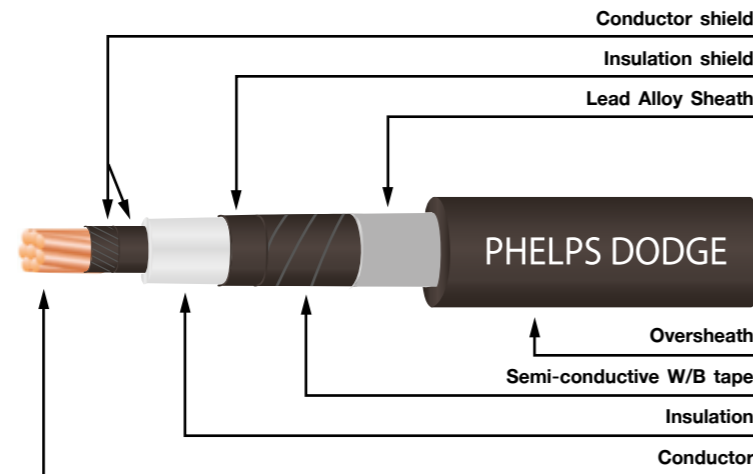
90 °C

**AC TEST VOLTAGE :**

190 kV (30 minutes)

**REFERENCE STANDARD :**

IEC 60840



**CONSTRUCTION :**

- Conductor : Round compact stranded or Milliken conductor
- Conductor shield : Semi-conducting tape and/or extruded semi-conducting cross-linked polyethylene
- Insulation : Cross-linked polyethylene
- Insulation shield : Semi-conducting cross-linked polyethylene
- Longitudinal water blocking layer : Semi-conductive water blocking tape
- Metallic shield : Lead Alloy Sheath and moisture barrier
- Oversheath : Black PE (ST-7)

**Cable Construction**

Nominal cross-sectional area mm <sup>2</sup>	Diameter of conductor (Approx.) mm	Diameter over insulation (Approx.) mm	Nominal thickness of lead sheath mm	Nominal thickness of oversheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Standard packing m
240	18.2	54.5	2.0	3.0	69	9,290	1,000/R
300	20.3	55.5	2.0	3.0	70	9,950	1,000/R
400	23.0	56.5	2.1	3.1	71	10,990	1,000/R
500	26.0	59.0	2.1	3.1	74	12,310	500/R
630	29.9	64.0	2.2	3.3	79	14,650	500/R
800	33.8	68.0	2.3	3.4	84	17,140	500/R
1,000	39.8	75.0	2.4	3.6	91	20,470	500/R
1,200	43.0	78.0	2.5	3.7	95	22,890	500/R
1,000(M)	39.1	75.0	2.4	3.6	92	20,450	500/R
1,200(M)	42.2	78.5	2.5	3.7	95	22,790	500/R
1,400(M)	45.7	83.0	2.6	3.8	100	25,890	500/R
1,600(M)	48.8	86.0	2.7	4.0	104	28,570	400/R
1,800(M)	51.6	88.5	2.8	4.1	107	31,120	400/R
2,000(M)	54.7	92.0	2.8	4.2	111	33,630	300/R
2,500(M)	61.1	99.0	3.0	4.4	119	40,340	300/R

(M) is Milliken conductor

R = Packing in reel

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**Electrical Properties and Current Rating (A)**

Nominal cross-sectional area mm <sup>2</sup>	Maximum DC resistance of conductor at 20°C Ω/km	Minimum insulation resistance at 20°C MΩ-km	Current rating in air* (A)		Current rating direct burial* (A)		Current rating in PE duct in ground* (A)	
			Trefoil ≥0.5xD <sub>c</sub>	Flat ≥0.5xD <sub>c</sub>	Trefoil 1 m	Flat 1 m	Trefoil 1 m	Flat 1 m
240	0.0754	11,860	599	670	434	450	413	426
300	0.0601	10,910	684	768	490	509	465	481
400	0.047	9,670	791	895	556	580	530	548
500	0.0366	8,600	911	1,038	630	660	603	626
630	0.0283	8,070	1,051	1,204	713	753	687	716
800	0.0221	7,420	1,193	1,382	795	847	772	809
1,000	0.0176	6,810	1,344	1,574	873	943	860	907
1,200	0.0151	6,440	1,440	1,701	923	1,005	916	971
1,000(M)	0.0176	6,760	1,423	1,633	927	983	902	943
1,200(M)	0.0151	6,410	1,544	1,782	992	1,059	972	1,019
1,400(M)	0.0129	6,220	1,668	1,933	1,059	1,138	1,047	1,103
1,600(M)	0.0113	5,930	1,776	2,072	1,114	1,206	1,108	1,172
1,800(M)	0.0101	5,690	1,868	2,194	1,158	1,263	1,160	1,232
2,000(M)	0.009	5,450	1,964	2,322	1,204	1,323	1,216	1,296
2,500(M)	0.0072	5,140	2,139	2,565	1,283	1,434	1,317	1,417

(M) is Milliken conductor

**\*CONDITION :**

1. Ambient air temperature 40°C
2. Ground temperature 30°C
3. Thermal resistivity of soil 1.2 K-m/W
4. Depth of laying 1.0 m
5. Axial spacing between phase cable is 2xOD<sub>cable</sub> or 2xOD<sub>duct</sub>
6. Metallic shield and/or sheath bonded at single point or cross-bonded (no sheath circulating current).