

**87/150 (170) kV COPPER CONDUCTOR WITH CORRUGATED COPPER SHEATH  
IEC 60840 STANDARD**

**APPLICATION :**

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

**Advantages :**

Perfect radial moisture barrier and excellent earth fault current carrying capacity.

**Max. Conductor Temperature :**

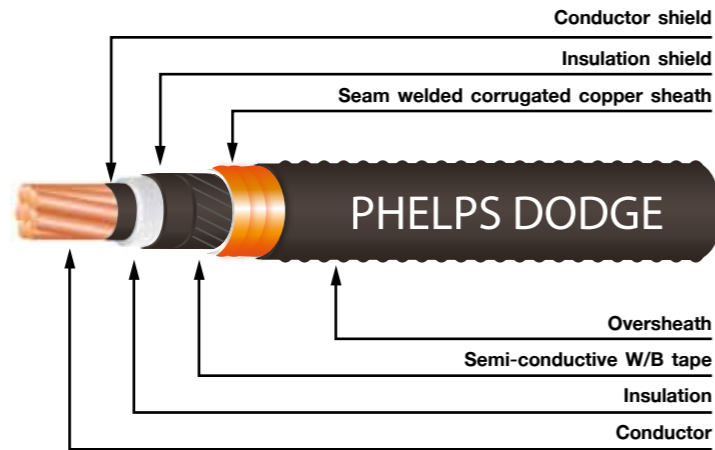
90 °C

**AC TEST VOLTAGE :**

218 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 and radial water barrier : Seam welded corrugated Aluminium sheath
- 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 Cu sheath mm	Nominal thickness of oversheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Standard packing m
240	18.2	62.0	1.0	3.5	89	8,830	1,000/R
300	20.3	62.0	1.0	3.5	89	9,320	1,000/R
400	23.0	62.5	1.0	3.5	90	10,100	1,000/R
500	26.0	64.0	1.0	3.6	91	11,230	1,000/R
630	29.9	67.0	1.0	3.6	94	12,820	500/R
800	33.8	71.0	1.0	3.8	99	14,940	500/R
1,000	39.8	78.0	1.0	3.9	106	17,700	500/R
1,200	43.0	82.0	1.0	4.1	111	19,900	500/R
1,000(M)	39.1	78.5	1.0	3.9	107	17,700	500/R
1,200(M)	42.2	82.5	1.0	4.1	111	19,830	500/R
1,400(M)	45.7	86.0	1.0	4.2	115	22,080	500/R
1,600(M)	48.8	89.0	1.0	4.3	118	24,240	500/R
1,800(M)	51.6	93.0	1.0	4.5	123	26,530	400/R
2,000(M)	54.7	96.0	1.0	4.5	126	28,840	400/R
2,500(M)	61.1	102.5	1.0	4.8	133	34,190	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	13,460	598	659	430	450	420	435
300	0.0601	12,270	681	756	483	508	473	491
400	0.0470	11,010	784	878	546	577	537	559
500	0.0366	9,680	899	1,017	614	655	608	637
630	0.0283	8,670	1,031	1,182	688	742	689	725
800	0.0221	8,000	1,162	1,350	759	830	770	817
1,000	0.0176	7,330	1,297	1,531	823	917	851	911
1,200	0.0151	7,100	1,380	1,643	864	973	904	973
1,000(M)	0.0176	7,280	1,358	1,584	862	952	887	946
1,200(M)	0.0151	7,070	1,459	1,715	912	1,018	950	1,019
1,400(M)	0.0129	6,690	1,566	1,862	962	1,087	1,015	1,096
1,600(M)	0.0113	6,380	1,655	1,988	1,002	1,145	1,069	1,161
1,800(M)	0.0101	6,270	1,728	2,092	1,035	1,193	1,116	1,219
2,000(M)	0.0090	6,010	1,804	2,206	1,065	1,242	1,161	1,276
2,500(M)	0.0072	5,540	1,944	2,425	1,120	1,332	1,247	1,387

(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).