

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

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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 :

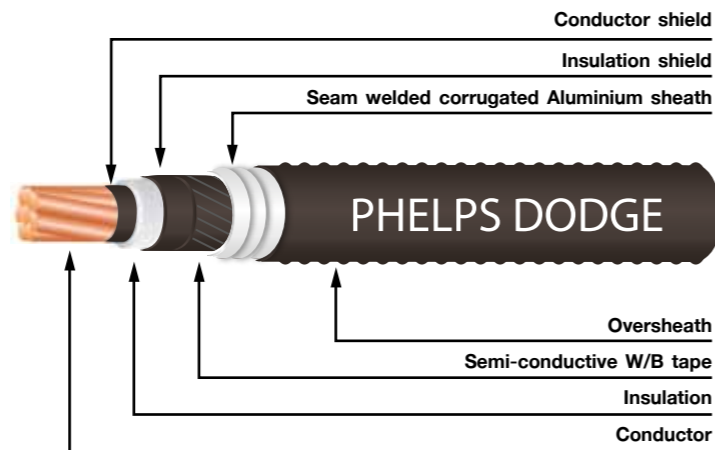
90 °C

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)

Electrical Properties and Current Rating (A)

Nominal cross-sectional area mm ²	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 _c	Flat ≥0.5xD _c	Trefoil 1 m	Flat 1 m	Trefoil 1 m	Flat 1 m
240	0.0754	13,460	599	660	431	451	421	437
300	0.0601	12,270	683	758	483	509	474	493
400	0.0470	11,010	785	880	545	578	538	561
500	0.0366	9,680	901	1,020	613	655	609	638
630	0.0283	8,670	1,032	1,184	686	742	689	727
800	0.0221	8,000	1,161	1,352	754	829	770	818
1,000	0.0176	7,330	1,291	1,530	813	913	849	912
1,200	0.0151	7,100	1,373	1,642	852	968	900	974
1,000(M)	0.0176	7,280	1,349	1,582	849	947	884	946
1,200(M)	0.0151	7,070	1,445	1,712	895	1,010	945	1,018
1,400(M)	0.0129	6,690	1,549	1,857	942	1,078	1,008	1,095
1,600(M)	0.0113	6,380	1,630	1,981	975	1,131	1,059	1,159
1,800(M)	0.0101	6,270	1,701	2,082	1,006	1,178	1,105	1,215
2,000(M)	0.0090	6,010	1,773	2,195	1,034	1,225	1,149	1,272
2,500(M)	0.0072	5,540	1,909	2,412	1,086	1,313	1,233	1,382

(M) is Milliken conductor

Cable Construction

Nominal cross-sectional area mm ²	Diameter of conductor (Approx.) mm	Diameter over insulation (Approx.) mm	Nominal thickness of Al sheath mm	Nominal thickness of oversheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Standard packing m
240	18.2	62.0	1.8	3.6	91	7,880	1,000/R
300	20.3	62.0	1.8	3.6	91	8,370	1,000/R
400	23.0	62.5	1.9	3.6	92	9,200	1,000/R
500	26.0	64.0	1.9	3.6	93	10,290	1,000/R
630	29.9	67.0	1.9	3.7	96	11,870	500/R
800	33.8	71.0	2.0	3.8	101	13,990	500/R
1,000	39.8	78.0	2.2	4.0	109	16,870	500/R
1,200	43.0	82.0	2.2	4.2	114	19,020	500/R
1,000(M)	39.1	78.5	2.2	4.0	109	16,860	500/R
1,200(M)	42.2	82.5	2.3	4.2	114	19,030	500/R
1,400(M)	45.7	86.0	2.3	4.3	118	21,250	500/R
1,600(M)	48.8	89.0	2.5	4.4	122	23,570	500/R
1,800(M)	51.6	93.0	2.5	4.6	126	25,840	500/R
2,000(M)	54.7	96.0	2.5	4.6	129	28,130	400/R
2,500(M)	61.1	102.5	2.5	4.9	136	33,430	300/R

(M) is Milliken conductor

R = Packing in reel

***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_{cable} or 2xOD_{duct}
6. Metallic shield and/or sheath bonded at single point or cross-bonded (no sheath circulating current).