

36/69 (72.5) kV COPPER CONDUCTOR WITH COPPER WIRE SHIELD AND 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. Increase earth fault current carrying capacity by added copper wire shield.

Max. Conductor Temperature :

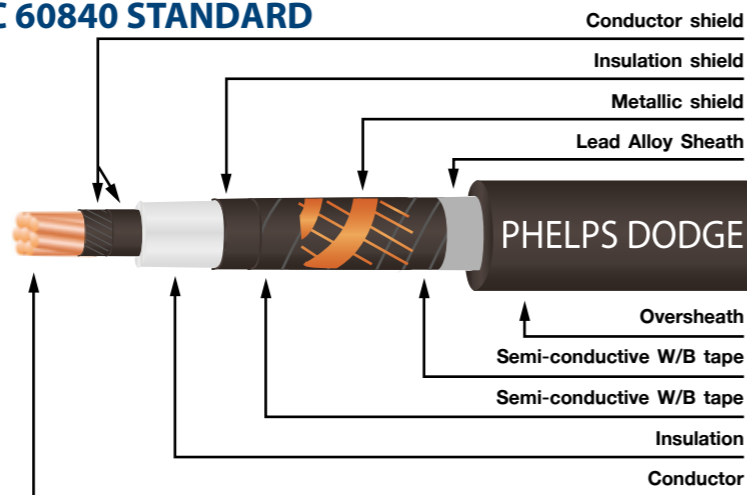
90 °C

AC TEST VOLTAGE :

90 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 : Annealed uncoated copper wire with copper contact tape
- Longitudinal water blocking layer : Semi-conductive water blocking tape
- Metallic Shield and moisture barrier : Lead alloy sheath
- Oversheath : Black PE (ST-7)

Cable Construction

Nominal cross-sectional area mm ²	Diameter of conductor (Approx.) mm	Diameter over insulation (Approx.) mm	Nominal area of copper wire shield mm ²	Nominal thickness of lead sheath mm	Nominal thickness of oversheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Standard packing m
150	14.2	44.5	155	1.9	2.8	63	8,570	1,000/R
185	15.8	45.0	155	1.9	2.8	63	8,935	1,000/R
240	18.2	45.5	155	1.9	2.8	64	9,460	1,000/R
300	20.3	47.5	145	2.0	2.8	66	10,425	1,000/R
400	23.0	49.0	145	2.0	2.9	68	11,370	1,000/R
500	26.0	53.0	140	2.0	3.0	72	12,815	500/R
630	29.9	56.5	135	2.1	3.1	76	14,825	500/R
800	33.8	60.5	125	2.2	3.3	80	17,200	500/R
1,000	39.8	66.5	115	2.3	3.4	87	20,110	500/R
1,200	43.0	70.0	105	2.4	3.5	90	22,390	500/R
1,000(M)	39.1	67.0	110	2.3	3.4	88	20,180	500/R
1,200(M)	42.2	70.0	100	2.4	3.5	92	22,470	500/R
1,400(M)	45.7	73.5	90	2.5	3.6	95	25,050	500/R
1,600(M)	48.8	77.5	80	2.6	3.8	100	27,525	400/R
1,800(M)	51.6	80.5	75	2.6	3.9	103	29,930	400/R
2,000(M)	54.7	83.5	65	2.7	3.9	106	32,575	300/R
2,500(M)	61.1	90.0	55	2.8	4.2	113	38,435	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 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
150	0.124	11,850	453	509	334	346	318	328
185	0.0991	10,880	516	583	376	391	359	371
240	0.0754	9,460	607	692	434	453	415	429
300	0.0601	8,850	692	793	488	512	468	485
400	0.0470	7,910	797	921	551	582	532	553
500	0.0366	7,170	914	1,064	621	661	605	632
630	0.0283	6,530	1,051	1,237	699	751	687	721
800	0.0221	5,980	1,189	1,417	775	843	772	815
1,000	0.0176	5,310	1,337	1,617	848	936	856	911
1,200	0.0151	5,010	1,431	1,747	895	997	912	976
1,000(M)	0.0176	5,270	1,418	1,679	900	977	899	949
1,200(M)	0.0151	4,980	1,535	1,828	962	1,050	967	1,025
1,400(M)	0.0129	4,700	1,662	1,994	1,026	1,128	1,040	1,107
1,600(M)	0.0113	4,640	1,769	2,130	1,080	1,196	1,104	1,179
1,800(M)	0.0101	4,440	1,860	2,255	1,124	1,253	1,157	1,240
2,000(M)	0.0090	4,250	1,955	2,387	1,170	1,312	1,212	1,303
2,500(M)	0.0072	3,890	2,142	2,648	1,256	1,427	1,317	1,427

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