87/150 (170) 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 :

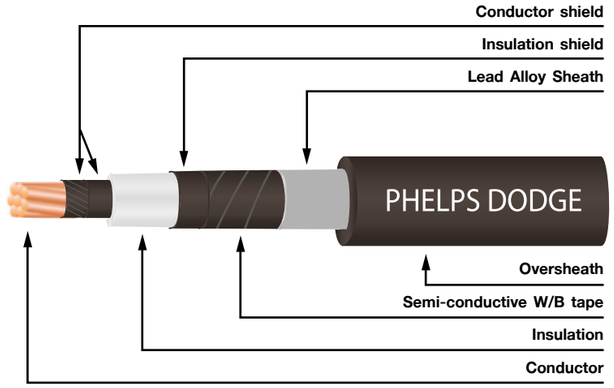
90 °C

AC TEST VOLTAGE :

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 moisture barrier	:	Lead Alloy Sheath
Oversheath	:	Black PE (ST-7)

Cable Construction

Nominal cross-sectional area mm²	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	62.0	2.2	3.2	77	11,040	1,000/R
300	20.3	62.0	2.2	3.2	77	11,540	1,000/R
400	23.0	62.5	2.2	3.3	78	12,360	500/R
500	26.0	64.0	2.2	3.3	79	13,530	500/R
630	29.9	67.0	2.3	3.4	83	15,520	500/R
800	33.8	71.0	2.4	3.5	87	18,050	500/R
1,000	39.8	78.0	2.5	3.7	95	21,460	500/R
1,200	43.0	82.0	2.6	3.8	99	24,150	500/R
1,000(M)	39.1	78.5	2.5	3.7	95	21,440	500/R
1,200(M)	42.2	82.5	2.6	3.8	100	24,050	500/R
1,400(M)	45.7	86.0	2.7	4.0	104	27,000	400/R
1,600(M)	48.8	89.0	2.8	4.1	108	29,690	400/R
1,800(M)	51.6	93.0	2.9	4.2	112	32,540	300/R
2,000(M)	54.7	96.0	2.9	4.3	115	35,080	300/R
2,500(M)	61.1	102.5	3.1	4.5	122	41,610	300/R

(M) is Milliken conductor

R = Packing in reel

PHELPS DODGE CABLE TYPE HXLP-LS

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

Electrical Properties and Current Rating (A)

Nominal cross-sectional area mm²	Maximum DC resistance of conductor at 20°C Ω/km	Minimum insulation resistance at 20°C MΩ-km	Current rating in air* (A) Trefoil ≥0.5xD$_e$	Current rating in air* (A) Flat ≥0.5xD$_e$	Current rating direct burial* (A) Trefoil	Current rating direct burial* (A) Flat	Current rating in PE duct in ground* (A) Trefoil	Current rating in PE duct in ground* (A) Flat
240	0.0754	13,460	597	661	434	450	415	428
300	0.0601	12,270	682	759	489	508	468	483
400	0.047	11,010	788	883	556	579	532	551
500	0.0366	9,680	908	1,025	630	660	604	627
630	0.0283	8,670	1,048	1,195	712	752	687	716
800	0.0221	8,000	1,190	1,371	794	846	773	810
1,000	0.0176	7,330	1,340	1,561	872	941	860	907
1,200	0.0151	7,100	1,435	1,681	923	1,004	917	972
1,000(M)	0.0176	7,280	1,417	1,619	924	981	902	944
1,200(M)	0.0151	7,070	1,535	1,761	989	1,056	971	1,020
1,400(M)	0.0129	6,690	1,660	1,915	1,055	1,135	1,045	1,102
1,600(M)	0.0113	6,380	1,767	2,053	1,110	1,203	1,108	1,172
1,800(M)	0.0101	6,270	1,856	2,167	1,154	1,260	1,161	1,233
2,000(M)	0.009	6,010	1,951	2,293	1,200	1,319	1,214	1,295
2,500(M)	0.0072	5,540	2,127	2,539	1,278	1,429	1,314	1,415

(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).