64/115 (123) kV COPPER CONDUCTOR WITH COPPER WIRE SHIELD AND LEAD SHEATH IEC 60840 STANDARD

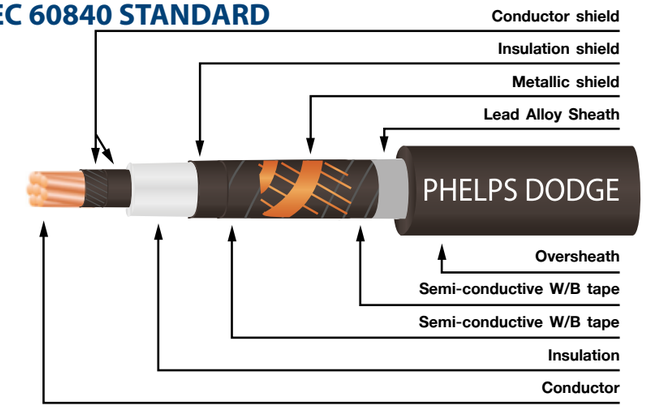
APPLICATION :
Preferably used for urban networks. Suitable for use in duct, trays and direct burial in ground.

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 :
160 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 mm²	Diameter of conductor (Approx.) mm	Diameter over insulation (Approx.) mm	Nominal area of copper wire shield mm²	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	48.5	145	2.0	2.9	67	10,105	1,000/R
300	20.3	49.5	145	2.0	2.9	68	10,745	1,000/R
400	23.0	52.5	140	2.0	3.0	71	11,845	500/R
500	26.0	56.0	135	2.1	3.1	75	13,520	500/R
630	29.9	61.0	125	2.2	3.3	81	15,765	500/R
800	33.8	64.5	115	2.3	3.4	85	18,170	500/R
1,000	39.8	71.5	100	2.5	3.6	93	21,650	500/R
1,200	43.0	75.0	90	2.5	3.7	96	23,720	500/R
1,000	39.1	72.0	95	2.5	3.6	94	21,740	500/R
1,200	42.2	75.0	90	2.5	3.7	97	23,805	500/R
1,400(M)	45.7	78.5	80	2.6	3.8	101	26,450	400/R
1,600(M)	48.8	82.0	75	2.6	3.9	104	28,430	400/R
1,800(M)	51.6	85.5	65	2.7	4.0	108	31,335	400/R
2,000(M)	54.7	88.5	55	2.8	4.1	112	34,125	300/R
2,500(M)	61.1	95.0	35	3.0	4.3	119	40,355	300/R

(M) is Milliken conductor

R = Packing in reel

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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	10,310	606	686	432	452	415	430
300	0.0601	9,390	690	788	486	510	467	485
400	0.0470	8,690	794	912	549	580	531	552
500	0.0366	7,910	912	1,054	620	659	605	632
630	0.0283	7,430	1,048	1,221	698	749	688	722
800	0.0221	6,830	1,187	1,399	774	841	773	815
1,000	0.0176	6,270	1,336	1,593	850	935	858	912
1,200	0.0151	5,920	1,429	1,719	897	995	914	976
1,000	0.0176	6,220	1,413	1,653	900	974	900	950
1,200	0.0151	5,890	1,528	1,798	961	1,047	968	1,025
1,400(M)	0.0129	5,560	1,654	1,961	1,026	1,126	1,041	1,107
1,600(M)	0.0113	5,300	1,760	2,101	1,078	1,192	1,102	1,176
1,800(M)	0.0101	5,240	1,851	2,217	1,125	1,250	1,157	1,238
2,000(M)	0.0090	5,010	1,950	2,349	1,172	1,310	1,214	1,303
2,500(M)	0.0072	4,600	2,143	2,609	1,264	1,427	1,322	1,428

(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).