

64/115 (123) kV COPPER CONDUCTOR WITH COPPER WIRE SHIELD AND LAMINATED ALUMINIUM TAPE IEC 60840 STANDARD

APPLICATION :

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

Advantage :

Light weight, small overall diameter and easy to bend.

Max. Conductor Temperature :

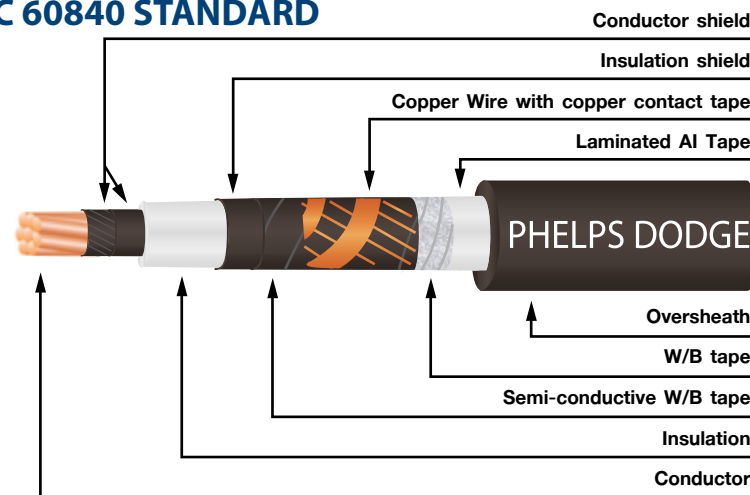
90 °C

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 : Semi-conductive water blocking tape blocking layer
- Metallic shield : Annealed uncoated copper wire with copper contact tape
- Longitudinal water : Water blocking tape blocking layer
- Radial water barrier : Laminated aluminium tape
- 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 Al tape mm	Nominal thickness of oversheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Standard packing m
240	18.2	48.5	220	0.2	2.8	64	6,665	1,000/R
300	20.3	49.5	220	0.2	2.8	65	7,280	1,000/R
400	23.0	52.5	220	0.2	2.9	68	8,230	1,000/R
500	25.9	56.0	220	0.2	3.0	71	9,465	1,000/R
630	29.9	61.0	220	0.2	3.2	77	11,185	1,000/R
800	33.8	64.5	220	0.2	3.3	81	13,135	500/R
1,000	39.8	71.5	220	0.2	3.5	89	15,600	500/R
1,200	43.0	75.0	220	0.2	3.6	92	17,440	500/R
1,000(M)	39.1	72.0	220	0.2	3.5	89	15,580	500/R
1,200(M)	42.2	75.0	220	0.2	3.6	93	17,390	500/R
1,400(M)	45.7	78.5	220	0.2	3.7	97	19,480	500/R
1,600(M)	48.8	82.0	220	0.2	3.8	100	21,500	500/R
1,800(M)	51.6	85.5	220	0.2	3.9	104	23,580	500/R
2,000(M)	54.7	88.5	220	0.2	4.0	107	25,795	500/R
2,500(M)	61.1	95.0	220	0.2	4.2	114	30,830	400/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
240	0.0754	10,310	595	679	424	448	408	425
300	0.0601	9,390	677	779	475	504	459	480
400	0.0470	8,690	778	901	536	573	521	546
500	0.0366	7,930	889	1,038	601	649	591	623
630	0.0283	7,430	1,018	1,202	673	736	672	712
800	0.0221	6,830	1,148	1,375	742	823	750	803
1,000	0.0176	6,270	1,282	1,560	806	910	832	898
1,200	0.0151	5,920	1,366	1,680	846	966	881	957
1,000(M)	0.0176	6,220	1,352	1,616	850	947	869	931
1,200(M)	0.0151	5,890	1,455	1,755	901	1,013	932	1,004
1,400(M)	0.0129	5,560	1,563	1,906	953	1,083	998	1,082
1,600(M)	0.0113	5,300	1,654	2,038	994	1,142	1,051	1,147
1,800(M)	0.0101	5,240	1,731	2,146	1,029	1,192	1,098	1,204
2,000(M)	0.0090	5,010	1,810	2,264	1,062	1,243	1,144	1,262
2,500(M)	0.0072	4,600	1,958	2,496	1,123	1,338	1,232	1,375

(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).