76/132 (145) kV COPPER CONDUCTOR WITH CORRUGATED COPPER SHEATH IEC 60840 STANDARD

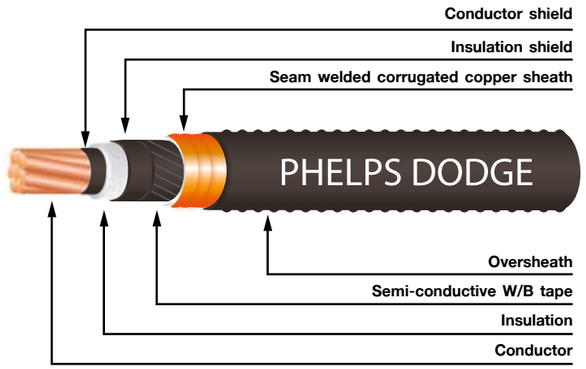
APPLICATION :
Preferably used for urban networks. Suitable for use in duct, trays and direct burial in ground.

Advantages :
Perfect radial moisture barrier and excellent earth fault current carrying capacity.

Max. Conductor Temperature :
90 °C

AC TEST VOLTAGE :
190 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)

Cable Construction

Nominal cross-sectional area mm²	Diameter of conductor (Approx.) mm	Diameter over insulation (Approx.) mm	Nominal thickness of Cu sheath mm	Nominal thickness of oversheath mm	Overall diameter (Approx.) mm	Cable weight (Approx.) kg/km	Standard packing m
240	18.2	54.5	1.0	3.2	81	7,750	1,000/R
300	20.3	55.5	1.0	3.3	82	8,400	1,000/R
400	23.0	56.5	1.0	3.3	83	9,170	1,000/R
500	26.0	59.0	1.0	3.4	86	10,430	1,000/R
630	29.9	64.0	1.0	3.5	91	12,330	500/R
800	33.8	68.0	1.0	3.7	95	14,430	500/R
1,000	39.8	75.0	1.0	3.8	103	17,160	500/R
1,200	43.0	78.0	1.0	4.0	107	19,160	500/R
1,000(M)	39.1	75.0	1.0	3.8	103	17,160	500/R
1,200(M)	42.2	78.5	1.0	4.0	107	19,080	500/R
1,400(M)	45.7	83.0	1.0	4.1	112	21,500	500/R
1,600(M)	48.8	86.0	1.0	4.2	115	23,640	500/R
1,800(M)	51.6	88.5	1.0	4.3	118	25,680	500/R
2,000(M)	54.7	92.0	1.0	4.4	122	28,010	400/R
2,500(M)	61.1	99.0	1.0	4.6	129	33,490	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	11,860	602	669	431	451	419	434
300	0.0601	10,910	685	767	484	509	472	490
400	0.0470	9,670	789	891	547	579	535	558
500	0.0366	8,600	904	1,031	616	656	607	635
630	0.0283	8,070	1,035	1,192	689	744	689	725
800	0.0221	7,420	1,167	1,362	761	832	770	817
1,000	0.0176	6,810	1,302	1,544	825	919	851	911
1,200	0.0151	6,440	1,387	1,662	866	976	903	973
1,000(M)	0.0176	6,760	1,365	1,598	865	955	888	946
1,200(M)	0.0151	6,410	1,468	1,735	916	1,021	951	1,019
1,400(M)	0.0129	6,220	1,573	1,879	966	1,090	1,016	1,097
1,600(M)	0.0113	5,930	1,663	2,006	1,006	1,148	1,071	1,162
1,800(M)	0.0101	5,690	1,738	2,116	1,038	1,197	1,116	1,218
2,000(M)	0.0090	5,450	1,814	2,232	1,069	1,245	1,162	1,277
2,500(M)	0.0072	5,140	1,952	2,448	1,123	1,335	1,248	1,388

(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).