

ARE4H5E 18/30KV

Aluminum medium voltage cables 30kV



Single core cables with aluminium conductors for medium voltage transport and distribution of electrical energy in dry, humid or moist outdoor application, direct buried or in underground pipes or in wind applications. The cables can handle medium mechanical stresses due to their aluminum tape screen. They are designed to replace heavy and rigid cables armoured with metal in places where protection against damage is needed.

Conductor shape round, class 2 = stranded; red outer sheath

GENERAL INFORMATION

Brand	Prysmian
Application	Industrial Installations; Sustainable Energy & Installations; Power Distribution

STANDARDS AND CERTIFICATIONS

RoHS 

EN 60228	Conductors of insulated cables
IEC 60502-2	Cables for rated voltages from 6 kV ($U_m = 7,2$ kV) up to 30 kV ($U_m = 36$ kV)
EN 60754-2	Test on gases evolved during combustion of materials from cables. Acidity and corrosivity

CABLE DESIGN

Conductor material	Aluminium
Core insulation material	XLPE
Longitudinal water blocking cable	Yes
Longitudinal water blocking construction	Water swellable tape(s)
Radial water blocking cable	Yes
Protective barrier	Al/PE
Material outer sheath	HDPE
Cable shape	Round

ELECTRICAL & THERMAL PARAMETERS

Nominal voltage U0 [V]	18,000
Nominal voltage U [V]	30,000
Test voltage [kV]	63
Rated voltage U0/U (Um)	18/30 (36) kV
Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Laying temperature (min) [°C]	-20
Laying temperature (max) [°C]	50

CHEMICAL PROPERTIES

Halogen free	acc. IEC/EN 60754-1/2
UV resistant	Yes
Silicon free	Yes
Lead free	Yes

CHARACTERISTICS

Outdoor installation	Yes
Underground installation	Yes
Suitable as installation cable	Yes
Bending radius (rule)	During installing: 15 x D single-core cables

SUSTAINABILITY COMMITMENT

Our commitment to low-carbon future remains unwavering as we strive to create sustainable solutions while upholding quality standards. We prioritize sustainability and environmental protection in our daily operations, collaborating with local communities to ensure workplace safety and safeguard the areas we operate in. Check for more details here about our sustainability commitment here: [Sustainability: report and responsibility](#)



CABLE PROPERTIES

Basic construction	SAP code	Nominal thickness insulation [mm]	Nominal diameter over insulation [mm]	Nominal outer diameter [mm]	Cable weight [kg/km]	Bending radius, during laying (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Short circuit current conductor (1sec) [kA]	Short circuit current screen (1sec) [kA]
1x95RM	22011030002	8	28	34	1,134	510	0.32	9.2	2.4
1x120RM	22011030003	8	29.5	36	1,146	540	0.253	11.6	2.5
1x150RM	22011030014	8	31	37	1,257	555	0.206	14.5	2.5
1x185RM	20419020	8	32.6	39	1,427	585	0.164	17.9	2.7
1x240RM	20438948	8	35.7	42.5	1,710	638	0.125	23.1	2.9
1x300RM	22011030007	8	37.7	44.4	1,936	666	0.1	28.8	3.1
1x400RM	20439043	8	40.6	47.8	2,288	717	0.0778	38.3	3.3
1x500RM	22011030009	8	43.6	50.8	2,691	762	0.0605	47.8	3.5
1x630RM	20419023	8	46.9	54.6	3,224	819	0.0469	60.2	3.7

CURRENT CARRYING CAPACITY

Cross-section (mm²)	Direct in ground trefoil (A)	Direct in ground flat spaced (A)	Air trefoil (A)	Air flat spaced (A)
70	186	192	230	278
95	221	229	280	338
120	252	260	324	391
150	281	288	368	440
185	317	324	424	504
240	367	373	502	593
300	414	419	577	677
400	470	466	673	769
500	535	524	781	884
630	608	578	903	996
800	681	630	1029	1105
1000	753	681	1165	1219
1200	885	790	1274	1305

Ground temperature: 20°C; Air temperature: 30°C
 Depth of laying: 0,8 m; Soil resistivity, moist: 1,5 K.m/W
 Screen bonded at both ends