AHXAMK-W 3-core

20 kV completely watertight power cable Wiski™

APPLICATION

Underground installations, can be installed by ploughing
Fixed indoor and outdoor installations on racks and in ducts

Highest permissible conductor temperature:

- continuous operation:	90 °C
- short circuit (duration up to 5 s):	250 °C

Lowest recommended temperature during laying: -20 °C

CONSTRUCTION

Conductor	Round, stranded and compacted watertight aluminium conductor
Conducter screen	Semi-conducting XLPE
Insulation	XLPE compound
Insulation screen	Semi-conducting XLPE
Longitudinal water-tightness	Water swellable semi-conducting tape
Metallic screen	Aluminium foil bonded tightly to sheath providing radial watertightness
Sheath	Black weather resistant PE compound
Centre conductor	Round, stranded and compacted copper conductor
Laying up	Three cores are stranded around the centre conductor

MARKING

Prysmian, product name, date of manufacture, outer sheath material designation, meter marking.

STANDARDS

SFS 5636
IEC 60502-2
HD 620-5F

CERTIFICATE/APPROVAL

FI (FIMKO)

RATED VOLTAGE

Uo/U = 12/20 kV and 14/24 kV, Um = 24 kV

AHXAMK-W 3-core

Product name			AHXAMK-W 3x50Al+35Cu 20 kV	AHXAMK-W 3x95Al+35Cu 20 kV	AHXAMK-W 3x120Al+35Cu 20 kV	AHXAMK-W 3x150Al+35Cu 20 kV	AHXAMK-W 3x185Al+35Cu 20 kV	AHXAMK-W 3x240Al+70Cu 20 kV *)	AHXAMK-W 3x300Al+70Cu 20 kV *)
EAN-code		**64 100+**	**06 242 50-4**	**06 242 52-8**	**06 242 53-5**	**06 242 54-2**	**06 242 55-9**	**06 242 56-6**	**06 242 57-3**
Customs code			8544 60 90						
CONSTRUCTION DATA									
Diameter over conductor (1)		mm	8.0	11.3	12.7	14.1	15.7	18.1	20.3
Diameter over sheath (1)		mm	28	32	34	35	37	40	43
Diameter over cable (diameter of a circle drawn around the cable) (1)		mm	64	71	74	76	80	89	94
Weight (1)	aluminium	kg/km	510	910	1100	1350	1650	2200	2700
	copper	kg/km	305	305	305	305	305	600	600
	cable	kg/km	2350	3100	3450	3800	4300	5500	6250
DELIVERY DATA									
Standard delivery length		m	500	500	500	500	500	500	500
Standard delivery drum			K24	K26	K26	K26	K26	K28	K28
Weight (1)	cable+drum	kg	1630	2450	2630	2800	3050	3930	4305
MECHANICAL DATA (2)									
Minimum permissible bending radius during laying	phase	m	0.42	0.48	0.51	0.53	0.56	0.60	0.65
	cable	m	0.52	0.57	0.60	0.61	0.64	0.71	0.76
Minimum permissible bending radius at final installation (3)	phase	m	0.31	0.34	0.36	0.37	0.39	0.42	0.46
	cable	m	0.36	0.40	0.42	0.43	0.45	0.50	0.53
Maximum permissible pulling force with a pulling grip		kN	2.2	4.3	5.4	6.8	8.3	8.5	8.5
Maximum permissible pulling force with a pulling eye		kN	7.5	14.3	18.0	20.0	20.0	20.0	20.0
ELECTRICAL DATA (2)									
Maximum DC resistance of phase conductor	conductor 20°C	Ω/km	0.641	0.320	0.253	0.206	0.164	0.125	0.100
AC resistance of phase conductor (1) (4)	conductor 65°C	Ω/km	0.76	0.38	0.30	0.25	0.20	0.15	0.12
	conductor 90°C	Ω/km	0.82	0.41	0.33	0.27	0.21	0.16	0.13
Maximum DC resistance of centre conductor	conductor 20°C	Ω/km	0.524	0.524	0.524	0.524	0.524	0.268	0.268
Inductance (1)		mH/km	0.46	0.40	0.39	0.37	0.36	0.35	0.34
Operating capacitance (1)		µF/km	0.17	0.21	0.23	0.24	0.26	0.30	0.32
Charging current (1)	at 20 kV	A/km	0.6	0.8	0.8	0.9	1.0	1.1	1.2
Earth fault current (1)	at 20 kV	A/km	1.8	2.3	2.5	2.6	2.9	3.2	3.5
CURRENT RATINGS (2)									
In ground (4)	conductor 65°C	A	155	235	265	300	330	385	435
In air (4)	conductor 65°C	A	160	230	265	300	345	400	460
	conductor 90°C	A	195	280	325	370	425	510	565
SHORT CIRCUIT CURRENTS (2)									
Maximum permissible short circuit current for 1 second	phase conductor (5)	kA	4.7	8.9	11.3	14.1	17.4	22.6	28.3
	metallic screen (6)	kA	2.2	2.5	2.6	2.8	2.9	4.3	4.5
	centre conductor (7)	kA	5.0	5.0	5.0	5.0	5.0	9.7	9.7

(1) Approximate value

(2) See the basic assumptions at general information of products.

(3) Final installation with careful single bending.

(4) Metallic screen and centre conductor connected together at both ends and earthed at least at one end.

(5) Initial temperature of conductor before short circuit 90 °C, final temperature of conductor after short circuit 250 °C.

(6) Initial temperature of metallic screen before short circuit 85 °C, final temperature of metallic screen after short circuit 250 °C.

(7) Initial temperature of centre conductor before short circuit 55 °C, final temperature of centre conductor after short circuit 200 °C.

*) Optionally with 35 mm2 centre conductor.