

BS EN 60332-3-24 NHXCH - FE180-E30 0.6/1kV Cable



Eland Product Group: **A5K**

APPLICATION

Safety cables are used in all locations where a high degree of protection against fire and fire damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground or into water. Fire resistant to FE 180 and Circuit integrity to E 30.

CABLE STANDARDS

Adapted to DIN VDE 0266, DIN VDE 0276-604
DIN VDE 0472-814, DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification), BS EN 60332-3-24
IEC 60332-3.Cat C.



The electrical and dimensional properties of this product are measured by the Technical and Quality Assurance department at the Eland Cables laboratory. Cable performance in respect of conductor resistance, construction quality (workmanship), dimensional consistency, and other parameters are verified to published standards and approved product drawings. Conformance to RoHS (Restriction of the use of Hazardous Substances) is determined and confirmed.

CONSTRUCTION

Conductor

Solid or stranded copper conductor

Class 1 solid copper conductor to BS EN 60228
(previously BS 6360)

Class 2 stranded copper conductor to BS EN 60228
(previously BS 6360)

Insulation

Halogen-free, ceramic polymer compound Type HXI 1 according to VDE 0266

Inner Sheath

Halogen-free compound

Concentric Conductor

Copper wires with counter helix of copper tape

Outer Sheath

Halogen-free polymer Type HM 4 according to VDE 0207

CHARACTERISTICS

Voltage Rating (U_o/U)

600/1000V

Test Voltage

4000V AC

Temperature Rating

-5°C to +90°C

Short Circuit Temperature

+250°C

Minimum Bending Radius

12 x overall diameter

Outer Sheath Colour

● Orange

DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	CONCENTRIC CONDUCTOR mm	CONDUCTOR CLASS	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
A5KCHE30-02015	2	1.5	1.5	1	10.8	133
A5KCHE30-02025	2	2.5	2.5	1	12	171
A5KCHE30-03015	3	1.5	1.5	1	11.2	166
A5KCHE30-03025	3	2.5	2.5	1	12.5	219
A5KCHE30-03040	3	4	4	1	13.4	291
A5KCHE30-03060	3	6	6	1	15.3	393
A5KCHE30-0310	3	10	10	1	17	576
A5KCHE30-0316	3	16	16	1	19.6	860
A5KCHE30-0325	3	25	16	2	23	1194
A5KCHE30-0335	3	35	16	2	25.6	1521
A5KCHE30-0350	3	50	25	2	28.8	2037
A5KCHE30-0370	3	70	35	2	33.7	2841
A5KCHE30-0395	3	95	50	2	38.2	384
A5KCHE30-03120	3	120	70	2	42.3	4.869
A5KCHE30-03150	3	150	70	2	46.6	5844
A5KCHE30-03185	3	185	95	2	52.3	7400
A5KCHE30-03240	3	240	120	2	59.7	9661
A5KCHE30-04015	4	1.5	1.5	1	11.9	192
A5KCHE30-04025	4	2.5	2.5	1	13.3	254
A5KCHE30-04040	4	4	4	1	14.3	341
A5KCHE30-04060	4	6	6	1	16.3	471
A5KCHE30-0410	4	10	10	1	18.2	685
A5KCHE30-0416	4	16	16	2	21.1	1035
A5KCHE30-0425	4	25	16	2	25	1465
A5KCHE30-0435	4	35	16	2	27.8	1886
A5KCHE30-0450	4	50	25	2	31.6	2539
A5KCHE30-0470	4	70	35	2	37	3556
A5KCHE30-0495	4	95	50	2	41.9	4816
A5KCHE30-04120	4	120	70	2	46.6	6101
A5KCHE30-04150	4	150	70	2	51.1	7323
A5KCHE30-04185	4	185	95	2	57.6	9285
A5KCHE30-04240	4	240	120	2	65.8	12141
A5KCHE30-05025	5	2.5	2.5	1	14.3	283
A5KCHE30-05060	5	6	6	1	17.5	530
A5KCHE30-07015	7	1.5	2.5	1	14.2	274
A5KCHE30-12015	12	1.5	2.5	1	17.4	399
A5KCHE30-24015	24	1.5	6	1	23.7	744
A5KCHE30-30015	30	1.5	6	1	24.8	873
A5KCHE30-07025	7	2.5	2.5	1	15.4	348
A5KCHE30-12025	12	2.5	4	1	19.2	556
A5KCHE30-24025	24	2.5	10	1	26.1	1027
A5KCHE30-30025	30	2.5	10	1	27.4	1216

CONDUCTORS

Class 1 Solid Conductor for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	
	Plain Wires ohms/km	
0.5	36	
0.75	24.5	
1	18.1	
1.5	12.1	
2.5	7.41	
4	4.61	
6	3.08	
10	1.83	
16	1.15	

The above table is in accordance with BS EN 60228 (previously BS 6360)

Class 2 Stranded Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm ²	MINIMUM NO. OF WIRES IN CONDUCTOR						MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C		
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor		Aluminium or Aluminium Alloy Conductor ohms/km
	Cu	Al	Cu	Al	Cu	Al	Plain Wires ohms/km	Metal-Coated Wires ohms/km	
10	7	7	6	6	-	-	1.83	1.84	3.08
16	7	7	6	6	-	-	1.15	1.16	1.91
25	7	7	6	6	6	6	0.727	0.734	1.2
35	7	7	6	6	6	6	0.524	0.529	0.868
50	19	19	6	6	6	6	0.387	0.391	0.641
70	19	19	12	12	12	12	0.268	0.27	0.443
95	19	19	15	15	15	15	0.193	0.195	0.32
120	37	37	18	15	18	15	0.153	0.154	0.253
150	37	37	18	15	18	15	0.124	0.126	0.206
185	37	37	30	30	30	30	0.0991	0.1	0.164
240	37	37	34	30	34	30	0.0754	0.0762	0.125
300	61	61	34	30	34	30	0.0601	0.0607	0.1

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm ²	CURRENT CARRYING CAPACITY					
	2 Core Cables			3 Core Cables		
	Clipped Direct	In Air	In Conduit	Clipped Direct	In Air	In Conduit
1.5	24	-	22	22	-	19,5
2.5	33	-	30	30	-	26
4	45	-	40	40	-	35
6	58	-	51	52	-	44
10	80	-	69	71	-	60
16	107	-	91	96	-	80
25	138	161	119	119	135	105
35	171	200	146	147	169	128
50	209	242	175	179	207	154
70	269	310	221	229	268	194
95	328	377	265	278	328	233
120	382	437	305	322	383	268
150	441	504	-	371	444	-
185	506	575	-	424	510	-
240	599	679	-	500	607	-
300	693	783	-	576	703	-