

# BS EN 60332-3-24 NHXH - 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), IEC 60332-3.CatC  
BS EN 60332-3-24



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, similar ceramic polymer Type HXI 1 according to VDE 0266

### Inner Sheath

Halogen-free compound

### Outer Sheath

Halogen-free polymer Type HM 4 according to VDE 0207

## CHARACTERISTICS

### Voltage Rating (U<sub>o</sub>/U)

600/1000V

### Test Voltage

4000V AC

### Temperature Rating

-5°C to +90°C

### Operating Temperature

+250°C

### Short Circuit Time

5 sec.

### Minimum Bending Radius

12 x overall diameter

15 x overall diameter

### Outer Sheath Colour

● Orange

## DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR CLASS	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
A5KNHE30-1016	1	16 RM	2	18.6	207
A5KNHE30-1025	1	25 RM	2	20.6	307
A5KNHE30-1035	1	35 RM	2	22.8	407
A5KNHE30-1050	1	50 RM	2	26.3	535
A5KNHE30-1070	1	70 RM	2	30	744
A5KNHE30-1095	1	95 RM	2	10.2	1009
A5KNHE30-1120	1	120 RM	2	18.6	1248
A5KNHE30-1150	1	150 RM	2	20.6	1538
A5KNHE30-1185	1	185 RM	2	22.8	1917
A5KNHE30-1240	1	240 RM	2	26.3	2521
A5KNHE30-1300	1	300 RM	2	30	3400
A5KNHE30-20015	2	1.5 RE	1	10.2	145
A5KNHE30-20025	2	2.5 RE	1	11	180
A5KNHE30-20040	2	4 RE	1	11.8	224
A5KNHE30-20060	2	6 RE	1	12.8	282
A5KNHE30-2010	2	10 RE	1	14.4	393
A5KNHE30-2016	2	16 RM	2	17.3	605
A5KNHE30-30015	3	1.5 RM	2	10.6	165
A5KNHE30-30025	3	2.5 RM	2	11.5	209
A5KNHE30-30040	3	4 RM	2	12.4	268
A5KNHE30-30060	3	6 RM	2	13.5	344
A5KNHE30-3010	3	10 RM	2	15.6	506
A5KNHE30-3016	3	16 RM	2	18	761
A5KNHE30-3025	3	25 RM	2	22.3	1160
A5KNHE30-3035	3	35 RM	2	24.9	1522
A5KNHE30-3050	3	50 RM	2	27.7	198
A5KNHE30-3070	3	70 RM	2	32	2746
A5KNHE30-3095	3	95 RM	2	36.5	3712
A5KNHE30-3025/16	3	25/16 RM	2	23.4	1335
A5KNHE30-3035/16	3	35/16 RM	2	25.7	1683
A5KNHE30-3050/25	3	50/25 RM	2	29	2244
A5KNHE30-3070/35	3	70/35 RM	2	33.4	3101
A5KNHE30-3095/50	3	95/50 RM	2	38.3	4207
A5KNHE30-3120/70	3	120/70 RM	2	42.6	5315
A5KNHE30-40015	4	1.5 RE	1	11.3	192
A5KNHE30-40025	4	2.5 RE	1	12.3	249
A5KNHE30-40040	4	4 RE	1	13.3	322
A5KNHE30-40060	4	6 RE	1	14.5	418
A5KNHE30-4010	4	10 RE	1	16.8	620
A5KNHE30-4016	4	16 RM	2	19.8	944
A5KNHE30-4025	4	25 RM	2	24.3	1452
A5KNHE30-4035	4	35 RM	2	27.1	1906
A5KNHE30-4050	4	50 RM	2	30.5	2514
A5KNHE30-4070	4	70 RM	2	35.3	3497
A5KNHE30-4095	4	95 RM	2	40.2	4728
A5KNHE30-4120	4	120 RM	2	44.5	5882
A5KNHE30-4150	4	150 RM	2	49	7199

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CONDUCTOR CLASS	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
A5KNHE30-5015	5	1.5 RE	1	12.2	228
A5KNHE30-50025	5	2.5 RE	1	13.3	295
A5KNHE30-50040	5	4 RE	1	14.4	386
A5KNHE30-50060	5	6 RE	1	16.1	518
A5KNHE30-5010	5	10 RE	1	18.3	755
A5KNHE30-5016	5	16 RM	2	22.2	1187
A5KNHE30-5025	5	25 RM	2	26.6	1773
A5KNHE30-5035	5	35 RM	2	29.8	2341
A5KNHE30-5050	5	50 RM	2	33.7	3100
A5KNHE30-700015	7	1.5 RE	1	13	274
A5KNHE30-100015	10	1.5 RE	1	16.4	397
A5KNHE30-120015	12	1.5 RE	1	16.8	438
A5KNHE30-190015	19	1.5 RE	1	19.2	606
A5KNHE30-240015	24	1.5 RE	1	22.6	785
A5KNHE30-300015	30	1.5 RE	1	23.7	917
A5KNHE30-700025	7	2.5 RE	1	14.2	358
A5KNHE30-120025	12	2.5 RE	1	18	580
A5KNHE30-190025	19	2.5 RE	1	21.8	852
A5KNHE30-240025	24	2.5 RE	1	25	1054
A5KNHE30-300025	30	2.5 RE	1	26.3	1245

RE = round conductor, RM = stranded conductor, SM = sectional conductor

## CONDUCTORS

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

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	
	Plain Wires ohms/km	Metal-Coated Wires ohms/km
0.5	36	36.7
1.5	12.1	12.2
2.5	7.41	7.56
4	4.61	4.7
6	3.08	3.11
10	1.83	1.84
25	0.727	-
35	0.524	-
50	0.387	-

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

## Class 2 Stranded Conductor for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	
	Plain Wires ohms/km	Metal-Coated Wires ohms/km
0.5	36	36.7
1.5	12.1	12.2
2.5	7.41	7.5
4	4.61	4.7
6	3.08	3.11
10	1.83	1.84
15	1.15	1.16
25	0.727	0.734
35	0.524	0.529
50	0.387	0.391
70	0.268	0.27
95	0.193	0.195
120	0.153	0.154
150	0.124	0.126
185	0.0991	0.1
240	0.0762	0.0762
300	0.0607	0.0607

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

## ELECTRICAL CHARACTERISTICS

## Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	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	-

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.