

BS 6883 657TQ Type SW4 Cable



Eland Product Group: **ASH**

APPLICATION

Power, control or lighting cable for fixed installations in all areas including accommodation and open deck in ships and offshore units.

CONSTRUCTION

Conductor

1mm² to 1.5mm²: Class 5 tinned copper conductor according to BS EN 60228 (previously 6360)

2.5mm² and above: Class 2 tinned copper conductor according to BS EN 60228 (previously 6360)

Insulation

Halogen free elastomer compound EPR Type GP4 according to BS 7655

Sheath

HOFR (Heat and Oil Resistant and Flame Retardant), halogen free elastomer compound Type SW4 according to BS 7655

CABLE STANDARDS

BS 6883, BS EN 50266-2-2 Category A/F, IEC 60332-3-22, BS EN 61034-2, IEC 61034-2, IEC 60754-1: Acid gas for Type SW4 cables is 0.5% HCL or less



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.

CHARACTERISTICS

Voltage Rating (U_o/U)

600/1000V

Temperature Rating

Fixed: -40°C to +90°C

Flexed: -15°C to +90°C

Minimum Bending Radius

Up to 10mm²: 3 x overall diameter

16mm² to 25mm²: 4 x overall diameter

Above 25mm²: 6 x overall diameter

Core Identification

○ White with ● Black printed numbers

Sheath Colour

● Black

Note

Coloured cores are available on request

DIMENSIONS

ELAND PART NO.	CORE NO.	CONDUCTOR CLASS	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL THICKNESS OF OUTER SHEATH mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASH1010BK	1	5	1	0.8	1	4.8	34
ASH1015BK	1	5	1.5	0.8	1	5.1	40
ASH1025BK	1	2	2.5	0.8	1	5.6	54
ASH1040BK	1	2	4	1	1	6.5	78
ASH1060BK	1	2	6	1	1	7.1	101
ASH110BK	1	2	10	1	1	8.1	144
ASH116BK	1	2	16	1	1.1	9.5	216
ASH125BK	1	2	25	1.2	1.2	11.4	328
ASH135BK	1	2	35	1.2	1.2	12.6	429
ASH150BK	1	2	50	1.4	1.3	14.3	551
ASH170BK	1	2	70	1.4	1.3	16	753
ASH195BK	1	2	95	1.6	1.4	18.6	1049
ASH1120BK	1	2	120	1.6	1.5	20.3	1274
ASH1150BK	1	2	150	1.8	1.6	22.4	1568
ASH1185BK	1	2	185	2	1.7	24.9	1949
ASH1240BK	1	2	240	2.2	1.8	28	2530
ASH1300BK	1	2	300	2.4	1.9	30.9	3134
ASH1400BK	1	2	400	2.6	2	35.3	4258
ASH1500BK	1	2	500	2.8	2.2	39.3	5337
ASH2010	2	5	1	0.8	1	8.1	86
ASH2015	2	5	1.5	0.8	1.1	8.5	103
ASH2025	2	2	2.5	0.8	1.1	9.5	140
ASH2040	2	2	4	1	1.2	11.6	210
ASH2060	2	2	6	1	1.2	12.7	270
ASH210	2	2	10	1	1.3	14.9	391
ASH216	2	2	16	1	1.4	17.5	574
ASH225	2	2	25	1.2	1.5	21.2	864
ASH235	2	2	35	1.2	1.6	23.7	1129
ASH250	2	2	50	1.4	1.7	26.9	1452
ASH270	2	2	70	1.4	1.9	30.8	1991
ASH295	2	2	95	1.6	2.1	35.9	2766
ASH2120	2	2	120	1.6	2.2	39.1	3338
ASH2150	2	2	150	1.8	2.3	43.2	4097
ASH3010	3	5	1	0.8	1.1	8.4	100
ASH3015	3	5	1.5	0.8	1.1	9	122
ASH3025	3	2	2.5	0.8	1.1	10.1	169
ASH3040	3	2	4	1	1.2	12.3	257
ASH3060	3	2	6	1	1.2	13.5	335
ASH310	3	2	10	1	1.3	15.9	490
ASH316	3	2	16	1	1.4	18.6	732
ASH325	3	2	25	1.2	1.6	22.7	1121
ASH335	3	2	35	1.2	1.7	25.4	1474
ASH350	3	2	50	1.4	1.8	28.9	1893
ASH370	3	2	70	1.4	2	33	2611
ASH395	3	2	95	1.6	2.2	38.5	3638

ELAND PART NO.	CORE NO.	CONDUCTOR CLASS	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL THICKNESS OF OUTER SHEATH mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASH3120	3	2	120	1.6	2.3	41.9	4400
ASH2150	3	2	150	1.8	2.5	46.5	5425
ASH3185	3	2	185	2	2.7	51.8	6754
ASH3240	3	2	240	2.2	2.9	58.6	8770
ASH4010	4	5	1	0.8	1.1	9.1	122
ASH4015	4	5	1.5	0.8	1.1	9.8	149
ASH4025	4	2	2.5	0.8	1.1	11	210
ASH4040	4	2	4	1	1.2	13.4	321
ASH4060	4	2	6	1	1.3	15	428
ASH410	4	2	10	1	1.4	17.6	627
ASH416	4	2	16	1	1.5	20.7	940
ASH425	4	2	25	1.2	1.7	25.3	1442
ASH435	4	2	35	1.2	1.8	28.3	1899
ASH450	4	2	50	1.4	1.9	32.1	2439
ASH470	4	2	70	1.4	2.1	36.7	3370
ASH495	4	2	95	1.6	2.3	42.8	4700
ASH4120	4	2	120	1.6	2.5	46.8	5710
ASH4150	4	2	150	1.8	2.7	51.9	7035
ASH5015	5	5	1.5	0.8	1.1	10.7	180
ASH5025	5	2	2.5	0.8	1.2	12.2	260
ASH5040	5	2	4	1	1.3	15.2	394
ASH5060	5	2	6	1	1.4	16.9	463
ASH510	5	2	10	1	1.5	19.6	685.0
ASH7015	7	5	1.5	0.8	1.2	12.8	252
ASH7025	7	2	2.5	0.8	1.2	14.4	359
ASH12015	12	5	1.5	0.8	1.3	15.6	370
ASH12025	12	2	2.5	0.8	1.4	17.9	543
ASH19015	19	5	1.5	0.8	1.4	19.4	570
ASH19025	19	2	2.5	0.8	1.5	22.2	842
ASH27015	27	5	1.5	0.8	1.6	22.4	766
ASH37015	37	5	1.5	0.8	1.7	26.2	1037

CONDUCTORS

Class 5 Flexible Copper Conductors

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM DIAMETER OF WIRES IN CONDUCTOR mm	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	
		Plain Wires ohms/km	Metal-Coated Wires ohms/km
1	0.21	19.5	20
1.5	0.26	13.3	13.7

Class 2 Stranded Copper Conductors

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
	Cu	Al	Cu	Al	Cu	Al	Metal-Coated Wires ohms/km
2.5	7	-	6	-	-	-	7.56
4	7	-	6	-	-	-	4.7
6	7	-	6	-	-	-	3.11
10	7	7	6	6	-	-	1.84
16	7	7	6	6	-	-	1.16
25	7	7	6	6	6	6	0.734
35	7	7	6	6	6	6	0.529
50	19	19	6	6	6	6	0.391
70	19	19	12	12	12	12	0.27
95	19	19	15	15	15	15	0.195
120	37	37	18	15	18	15	0.154
150	37	37	18	15	18	15	0.126
185	37	37	30	30	30	30	0.1
240	37	37	34	30	34	30	0.0762
300	61	61	34	30	34	30	0.0607
400	61	61	53	53	53	53	0.0475
500	61	61	53	53	53	53	0.0369

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NOMINAL CROSS SECTIONAL AREA mm ²	SINGLE CORE Amps	2 CORE Amps	3 AND 4 CORE Amps	5 CORE Amps	7 CORE Amps	12 CORE Amps	19 CORE Amps	27 CORE Amps	37 CORE Amps
1	18	15	13	10.5	-	-	-	-	-
1.5	23	20	16	12	10	9	7	6.5	6
2.5	30	26	21	16	15	12	10	9	8
4	40	34	28	-	-	-	-	-	-
6	52	44	36	-	-	-	-	-	-
10	72	61	50	-	-	-	-	-	-
16	96	82	67	-	-	-	-	-	-
25	127	108	89	-	-	-	-	-	-
35	157	133	110	-	-	-	-	-	-
50	196	167	137	-	-	-	-	-	-
70	242	206	169	-	-	-	-	-	-
95	293	249	205	-	-	-	-	-	-
120	339	288	237	-	-	-	-	-	-
150	389	331	272	-	-	-	-	-	-
185	444	377	311	-	-	-	-	-	-
240	522	444	365	-	-	-	-	-	-
300	601	511	421	-	-	-	-	-	-
400	719	611	503	-	-	-	-	-	-
500	827	703	579	-	-	-	-	-	-

Ambient air temperature of 45°C

DE-RATING FACTORS

AMBIENT TEMPERATURE	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
DE-RATING FACTOR	1.10	1.05	1.0	0.94	0.88	0.82	0.74	0.67	0.58	0.47

Where more than six bunched cables on cable trays, in cable conduits, pipes or trunking are expected to operate simultaneously full rated capacity, a correction factor of 0.85 should be applied.