

BS 6883 / 658TQ Type SW4 Armoured Cable



Eland Product Group: **ASH**

APPLICATION

Armoured power, control or lighting cable for fixed installations in all areas including accommodation and open deck in ships and offshore units where halogen free cable protection is required.

CONSTRUCTION

Conductor

1.0mm² to 1.5mm²: Class 5 tinned copper conductor according to BS EN 60228 (previously BS 6360)

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

Insulation

Halogen free elastomer EPR Type GP4 according to BS 7655

Inner Sheath

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

Armour

Galvanized steel wire braid*

Separator

Suitable tape between the braid and outer sheath

Outer Sheath

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

Note

*Tinned copper wire braid version is available on request

CABLE STANDARDS

BS 6883, BS EN 50266-2-2 Category A/F, IEC 60332-3-22, BS EN/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 25mm²: 4 x overall diameter

Above 25mm²: 6 x overall diameter

Core Identification

○ White with ● Black printed numbers

Outer 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 INNER SHEATH mm	NOMINAL DIAMETER OF STEEL WIRES IN BRAID mm	NOMINAL THICKNESS OF OUTER SHEATH mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASH2010GSWB	2	5	1	0.8	1	0.3	1.2	11.6	200
ASH2015GSWB	2	5	1.5	0.8	1.1	0.3	1.2	12.4	241
ASH2025GSWB	2	2	2.5	0.8	1.1	0.3	1.2	13.4	283
ASH2040GSWB	2	2	4	1	1.2	0.3	1.3	15.6	387
ASH2060GSWB	2	2	6	1	1.2	0.3	1.4	16.9	476
ASH210GSWB	2	2	10	1	1.3	0.3	1.4	19.2	627
ASH216GSWB	2	2	16	1	1.4	0.3	1.5	22	853
ASH225GSWB	2	2	25	1.2	1.5	0.3	1.7	26.1	1212
ASH235GSWB	2	2	35	1.2	1.6	0.3	1.8	28.8	1532
ASH250GSWB	2	2	50	1.4	1.7	0.45	2	33	2038
ASH270GSWB	2	2	70	1.4	1.9	0.45	2.1	37.1	2680
ASH295GSWB	2	2	95	1.6	2.1	0.45	2.3	42.6	3593
ASH2120GSWB	2	2	120	1.6	2.2	0.45	2.5	46.2	4291
ASH2150GSWB	2	2	150	1.8	2.3	0.45	2.6	50.5	5120
ASH2185GSWB	2	2	185	2	2.5	0.45	2.8	55.7	6404
ASH2240GSWB	2	2	240	2.2	2.8	0.45	3.1	62.8	8210
ASH2300GSWB	2	2	300	2.4	3	0.45	3.3	69.1	10016
ASH3010GSWB	3	5	1	0.8	1.1	0.3	1.2	12.2	237
ASH3015GSWB	3	5	1.5	0.8	1.1	0.3	1.2	12.9	263
ASH3025GSWB	3	2	2.5	0.8	1.1	0.3	1.3	14.1	323
ASH3040GSWB	3	2	4	1	1.2	0.3	1.3	16.3	439
ASH3060GSWB	3	2	6	1	1.2	0.3	1.4	17.7	547
ASH310GSWB	3	2	10	1	1.3	0.3	1.5	20.4	743
ASH316GSWB	3	2	16	1	1.4	0.3	1.6	23.3	1029
ASH325GSWB	3	2	25	1.2	1.6	0.3	1.8	27.8	1515
ASH335GSWB	3	2	35	1.2	1.7	0.45	1.9	31.4	2032
ASH350GSWB	3	2	50	1.4	1.8	0.45	2	35	2547
ASH370GSWB	3	2	70	1.4	2	0.45	2.2	39.6	3340
ASH395GSWB	3	2	95	1.6	2.2	0.45	2.4	45.5	4514
ASH3120GSWB	3	2	120	1.6	2.3	0.45	2.6	49.3	5408
ASH3150GSWB	3	2	150	1.8	2.5	0.45	2.8	54.3	6587
ASH3185GSWB	3	2	185	2	2.7	0.45	3	59.9	8197
ASH3240GSWB	3	2	240	2.2	2.9	0.45	3.2	67	10475
ASH3300GSWB	3	2	300	2.4	3.2	0.45	3.5	74.1	12878
ASH4010GSWB	4	5	1	0.8	1.1	0.3	1.2	12.9	262
ASH4015GSWB	4	5	1.5	0.8	1.1	0.3	1.3	13.9	301
ASH4025GSWB	4	2	2.5	0.8	1.1	0.3	1.3	15.1	384
ASH4040GSWB	4	2	4	1	1.2	0.3	1.4	17.7	532
ASH4060GSWB	4	2	6	1	1.3	0.3	1.5	19.4	673
ASH410GSWB	4	2	10	1	1.4	0.3	1.6	22.3	917
ASH416GSWB	4	2	16	1	1.5	0.3	1.7	25.6	1287
ASH425GSWB	4	2	25	1.2	1.7	0.45	1.9	31.3	1999
ASH435GSWB	4	2	35	1.2	1.8	0.45	2	34.2	2525
ASH450GSWB	4	2	50	1.4	1.9	0.45	2.2	38.7	3159
ASH470GSWB	4	2	70	1.4	2.1	0.45	2.4	43.7	4226

*based on standard

ELAND PART NO.	CORE NO.	CONDUCTOR CLASS	NOMINAL CROSS SECTIONAL AREA mm ²	NOMINAL THICKNESS OF INSULATION mm	NOMINAL THICKNESS OF INNER SHEATH mm	NOMINAL DIAMETER OF STEEL WIRES IN BRAID mm	NOMINAL THICKNESS OF OUTER SHEATH mm	NOMINAL OVERALL DIAMETER mm	NOMINAL WEIGHT kg/km
ASH495GSWB	4	2	95	1.6	2.3	0.45	2.6	50.2	5718
ASH4120GSWB	4	2	120	1.6	2.5	0.45	2.8	54.6	6876
ASH4150GSWB	4	2	150	1.8	2.7	0.45	3	60.1	8357
ASH4185GSWB	4	2	185	2	2.9	0.45	3.2	66.3	10406
ASH4240GSWB	4	2	240	2.2	3.2	0.45	3.5	74.6	13363
ASH4300GSWB	4	2	300	2.4	3.5	0.45	3.8	82.4	16433
ASH5015GSWB	5	5	1.5	0.8	1.1	0.3	1.3	14.8	351
ASH5025GSWB	5	2	2.5	0.8	1.2	0.3	1.3	16.3	441
ASH7015GSWB	7	5	1.5	0.8	1.2	0.3	1.3	16.8	452
ASH7025GSWB	7	2	2.5	0.8	1.2	0.3	1.4	18.6	577
ASH12015GSWB	12	5	1.5	0.8	1.3	0.3	1.5	20.1	621
ASH12025GSWB	12	2	2.5	0.8	1.4	0.3	1.6	22.6	836
ASH19015GSWB	19	5	1.5	0.8	1.4	0.3	1.6	24.1	888
ASH19025GSWB	19	2	2.5	0.8	1.5	0.3	1.7	27.1	1202
ASH27015GSWB	27	5	1.5	0.8	1.6	0.3	1.8	27.5	1162
ASH27025GSWB	27	2	2.5	0.8	1.7	0.45	1.9	31.4	1714
ASH37015GSWB	37*	5	1.5	0.8	1.7	0.45	1.9	32.1	1608

*based on standard

CONDUCTORS

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	Annealed Copper Conductor
	Cu	Metal-Coated Wires ohms/km
2.5	7	7.56
4	7	4.7
6	7	3.11
10	7	1.84
16	7	1.16
25	7	0.734
35	7	0.529
50	19	0.391
70	19	0.27
95	19	0.195
120	37	0.154
150	37	0.126
185	37	0.1
240	37	0.0762
300	61	0.0607

Class 5 Flexible Copper Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA mm ²	MAXIMUM NO. 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

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	10 CORE Amps	12 CORE Amps	16 CORE Amps	19 CORE Amps	20 CORE Amps	24 CORE Amps	27 CORE Amps	30 CORE Amps	37 CORE Amps
1	18	15	13	10.5	9	8	8	7	7	7	6	6	6	5
1.5	23	20	16	12	10	9	9	8	7	7	6.5	6.5	6	6
2.5	30	26	21	16	15	13	12	11	10	10	9.5	9	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	-	-	-	-	-	-	-	-	-	-	-

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.

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.