

Application

BS 6883 0.6/1 kV is a flame-retardant, halogen-free elastomeric power and control cable for fixed wiring on ships and on mobile and fixed offshore units, designed to BS 6883 (corresponding to IEC 60092-353). The tinned copper conductors are insulated with halogen-free EPR and protected by a halogen-free, flame-retardant, heat- and oil-resistant (HOFR / SW4) elastomeric outer sheath. The cable is intended for power distribution, lighting and control circuits below 1 kV in shipboard and offshore fixed installations, including areas exposed to oil and heat. An armoured version with tinned-copper, bronze or galvanised-steel wire braid (or steel wire armour) over a halogen-free bedding is available where mechanical protection is required.



CONSTRUCTION

Conductor	Tinned annealed stranded circular copper, class 2 acc. to IEC 60228 (class 5 flexible for the smallest sizes / on request).
Insulation	Halogen-free EPR compound (HF-EPR / EPR GP4 acc. to BS 7655-1.2).
Bedding	Halogen-free thermosetting elastomeric compound under the armour (armoured version only).
Armour	Optional: braid of tinned copper, tinned bronze or galvanised steel wires, or steel wire armour; single-core armoured types use a tinned bronze braid.
Outer sheath	Halogen-free, flame-retardant, heat- and oil-resistant elastomeric compound SW4 (HOFR) acc. to BS 7655-2.6; reduced-halogen SW2 on request. Black.
Core identification	Cores coloured or numbered acc. to BS 6883 / IEC 60092-359; multicore cables use white cores with black numbers.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage U₀/U	0.6/1 kV (max. operating voltage 1.2 kV).
Test voltage	3.5 kV AC (routine test acc. to BS 6883).
Standard	BS 6883 (corresponding to IEC 60092-353); conductors acc. to IEC 60228.
Flame-retardant	Acc. to IEC 60332-1-2 and IEC 60332-3-22 Cat. A.
Halogen-free	Acc. to IEC 60754-1; low smoke density acc. to IEC 61034-1/-2.
Mud-resistant	SW4 sheath is heat- and oil-resistant (HOFR) acc. to BS 6883; offshore mud-resistant grade to UKOOA on request.
Max. conductor temperature	+90 °C.
Permitted outer cable temperature, fixed	-40 °C to +90 °C.
Min. bending radius, fixed	6 × outer diameter (4 × outer diameter for the smaller sizes).
Reaction to fire (CPR)	Outside the scope of EN 50575 (shipboard / offshore cable, classified under IEC 60092 and marine type approval, not for permanent installation in construction works).

DIMENSIONS & TECHNICAL DATA

Cores × mm ²	Cond. R @20°C (Ω/km)	Overall dia. (mm)	Weight (kg/km)
2 × 1	18.2	8.2	100
3 × 1	18.2	8.9	110
4 × 1	18.2	9.6	140
2 × 1.5	12.2	8.9	120
3 × 1.5	12.2	9.4	140
4 × 1.5	12.2	10.2	170
5 × 1.5	12.2	11.2	190
7 × 1.5	12.2	12.4	240
12 × 1.5	12.2	16.2	390
19 × 1.5	12.2	19.1	580
27 × 1.5	12.2	23.2	830
37 × 1.5	12.2	26	1090
2 × 2.5	7.56	9.7	150
3 × 2.5	7.56	10.3	180
4 × 2.5	7.56	11.3	220
5 × 2.5	7.56	12.5	260
7 × 2.5	7.56	13.6	320
12 × 2.5	7.56	18.1	530
2 × 4	4.7	11.9	230
3 × 4	4.7	12.6	270
4 × 4	4.7	13.8	330
2 × 6	3.11	13	290
3 × 6	3.11	13.8	360
4 × 6	3.11	15.3	450
2 × 10	1.84	15	400
3 × 10	1.84	16	490
4 × 10	1.84	17.7	620
2 × 16	1.16	17.3	570
3 × 16	1.16	18.4	730
4 × 16	1.16	20.6	940
2 × 25	0.734	21.7	870
3 × 25	0.734	23.3	1120
4 × 25	0.734	25.8	1510
2 × 35	0.529	23.7	1120
3 × 35	0.529	25.4	1450
4 × 35	0.529	28.2	1880
2 × 50	0.391	27.1	1530
3 × 50	0.391	29.1	1980
4 × 50	0.391	32.4	2540
2 × 70	0.27	31.2	2090
3 × 70	0.27	33.5	2730
4 × 70	0.27	37.1	3490
2 × 95	0.195	35.8	2870
3 × 95	0.195	38.4	3740
4 × 95	0.195	42.8	4800

Cores × mm ²	Cond. R @20°C (Ω/km)	Overall dia. (mm)	Weight (kg/km)
2 × 120	0.154	39.4	3520
3 × 120	0.154	42.5	4610
4 × 120	0.154	47.3	5940
3 × 150	0.126	47	5590
4 × 150	0.126	52.4	7210
3 × 185	0.1	52.4	7030
4 × 185	0.1	58.3	9070
3 × 240	0.0762	59.1	9120
4 × 240	0.0762	66.2	11780
3 × 300	0.0607	65.9	10860

Outer diameters are nominal (mean of the manufacturer's min./max. band) and weights and conductor resistance are the nominal values of the leading reference source for the unarmoured class-2 tinned construction; all values are indicative and non-binding.