



BS 5308-1 Type 2 SWA armoured cable

BS 5308 Part 1 Type 2

Armoured Instrumentation Cable

British Standard PE/XLPE-insulated SWA armoured refinery instrumentation cable



BS 5308 Part 1 Type 2

Galvanised SWA · LCL Option

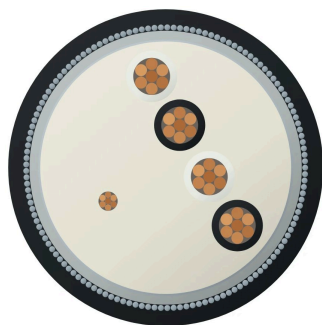
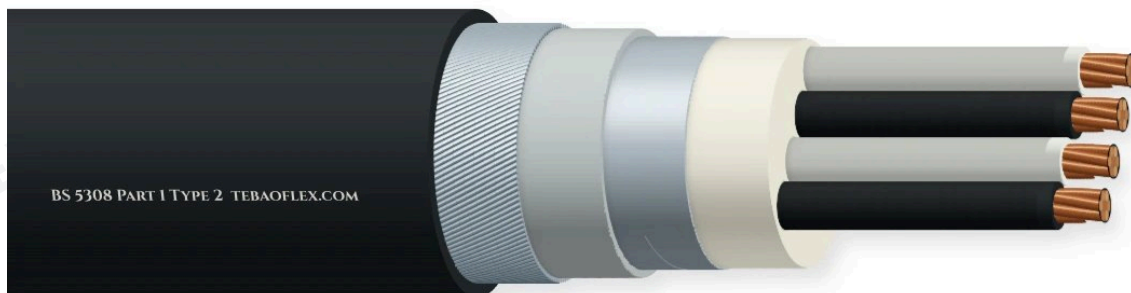
300/500 V · CAM / ICAM

Application

Heavy-duty 300/500 V armoured instrumentation cable built to BS 5308 Part 1 Type 2 with PE or XLPE insulation, CAM or ICAM Al/PET screen, extruded bedding (optional Lead Alloy E or Al-PE moisture barrier), galvanised SWA and PVC or LSZH sheath.

Typical uses: Crude Oil Refineries & Tank Farms, LNG, Gas Processing & Pipeline Terminals, Petrochemical & Aromatics Complexes, Fertiliser & Desalination Plants, Zone 1 / Zone 2 Hazardous Process Areas

Construction



Cross-section, not to scale

- | | | |
|---|--|---|
| 1 | Plain annealed copper conductors | Exact BS 5308-1 conductor stranding classes |
| 2 | Polyethylene (PE) or XLPE insulation | |
| 3 | CAM or ICAM Al/PET electrostatic screen | 100 % electrostatic interference rejection |
| 4 | Extruded PE/PVC bedding (& optional LCL barrier) | |
| 5 | Galvanised steel wire armour (SWA) | |
| 6 | Flame-retardant PVC or LSZH outer sheath | |

Technical data

Typical values

Rated voltage U ₀ /U	300/500 V	Test voltage	1000 V AC (core/screen) · 2000 V AC (core/core)
Insulation resistance	≥ 5000 MΩ·km at +20 °C	Max. mutual capacitance (at 1 kHz)	≤ 75–85 pF/m (CAM) · ≤ 115 pF/m (ICAM)
Max. L/R ratio	≤ 25 μH/Ω (0.5–1.0 mm ²) · ≤ 40 μH/Ω (1.5 mm ²)	Operating temperature (PE / PVC)	–40 °C to +70 °C (fixed)
Operating temperature (XLPE / LSZH)	–40 °C to +90 °C (fixed)	Installation temperature	0 °C to +50 °C
Armour wire diameter	0.90 / 1.25 / 1.60 / 2.00 mm galvanised steel (BS EN 10257-1)	Min. bending radius	10 × OD (SWA) · 12 × OD (Lead-sheathed Type 2)
Flame retardance	BS EN 60332-1-2 & BS EN 60332-3-24 (Cat C)	Hydrocarbon barrier option	Lead Alloy E (BS EN 50307) or Al-PE/PA moisture barrier
Direct burial	Full mechanical protection in trenches and ducts	Standards	BS 5308-1 / PAS 5308-1 Type 2

Sizes

17 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Format & stranding	SWA wire Ø	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
0.5 mm ² (16/0.20 mm) Type 2 SWA Armoured 5 sizes						
☐ BS5308-1-T2 1P×0.5 CAM SWA	1×2×0.5 mm ² (16/0.20)	0.9 mm SWA	11.2	16	245	112
☐ BS5308-1-T2 2P×0.5 CAM SWA	2×2×0.5 mm ² (16/0.20)	0.9 mm SWA	14.2	26	365	142
☐ BS5308-1-T2 5P×0.5 ICAM SWA	5×2×0.5 mm ² (16/0.20)	1.25 mm SWA	18.8	72	650	188
☐ BS5308-1-T2 10P×0.5 ICAM SWA	10×2×0.5 mm ² (16/0.20)	1.6 mm SWA	23.6	138	975	236
☐ BS5308-1-T2 20P×0.5 ICAM SWA	20×2×0.5 mm ² (16/0.20)	1.6 mm SWA	29.4	268	1,480	294
0.75 mm ² (24/0.20 mm) Type 2 SWA Armoured 4 sizes						
☐ BS5308-1-T2 1P×0.75 CAM SWA	1×2×0.75 mm ² (24/0.20)	0.9 mm SWA	11.7	21	268	117
☐ BS5308-1-T2 2P×0.75 CAM SWA	2×2×0.75 mm ² (24/0.20)	0.9 mm SWA	15.1	36	408	151
☐ BS5308-1-T2 5P×0.75 ICAM SWA	5×2×0.75 mm ² (24/0.20)	1.25 mm SWA	20.1	96	735	201
☐ BS5308-1-T2 10P×0.75 ICAM SWA	10×2×0.75 mm ² (24/0.20)	1.6 mm SWA	25.8	186	1,155	258
1.0 mm ² (1/1.13 or 32/0.20 mm) Type 2 SWA Armoured 3 sizes						
☐ BS5308-1-T2 1P×1.0 CAM SWA	1×2×1.0 mm ² (1/1.13 or 32/0.20)	0.9 mm SWA	12.1	26	290	121
☐ BS5308-1-T2 5P×1.0 ICAM SWA	5×2×1.0 mm ² (32/0.20)	1.25 mm SWA	21.2	122	815	212
☐ BS5308-1-T2 10P×1.0 ICAM SWA	10×2×1.0 mm ² (32/0.20)	1.6 mm SWA	27.2	236	1,295	272
1.5 mm ² (7/0.53 mm) Type 2 SWA Armoured 5 sizes						
☐ BS5308-1-T2 1P×1.5 CAM SWA	1×2×1.5 mm ² (7/0.53)	0.9 mm SWA	12.9	36	332	129
☐ BS5308-1-T2 2P×1.5 CAM SWA	2×2×1.5 mm ² (7/0.53)	1.25 mm SWA	17.8	65	585	178
☐ BS5308-1-T2 5P×1.5 ICAM SWA	5×2×1.5 mm ² (7/0.53)	1.6 mm SWA	23.5	172	1,025	235
☐ BS5308-1-T2 10P×1.5 ICAM SWA	10×2×1.5 mm ² (7/0.53)	1.6 mm SWA	30.2	336	1,620	302
☐ BS5308-1-T2 20P×1.5 ICAM SWA	20×2×1.5 mm ² (7/0.53)	2.0 mm SWA	39.4	662	2,740	394

– 30-pair and 50-pair Type 2 SWA cables as well as Lead-sheathed (LCL) executions are manufactured to order.

Electrical parameters by conductor class (BS 5308-1 Table 5)

5 sizes

Size & stranding	Max. DC R @ 20 °C Ω/km	Max. L/R μH/Ω	Max. C (CAM) pF/m	Max. C (ICAM) pF/m
0.5 mm ² (1/0.80 mm Cl.1)	36.8	25	75	115
0.5 mm ² (16/0.20 mm Cl.5)	39.7	25	85	115
0.75 mm ² (24/0.20 mm Cl.5)	26.5	25	85	115
1.0 mm ² (1/1.13 mm Cl.1)	18.4	25	75	115
1.5 mm ² (7/0.53 mm Cl.2)	12.3	40	85	115

– PE/XLPE insulation resistance ≥ 5000 MΩ·km at +20 °C.

Standards and approvals

✓ BS 5308-1 / PAS 5308-1 Type 2 Compliant

✓ BS EN 10257-1 Galvanised SWA

✓ BS EN 60332-1-2 & 60332-3-24

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

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Email

info@tebaoflex.com

Web

tebaoflex.com/cables/bs-5308-part-1-type-2-armoured-instrumentation-cable



Typical values for this cable type, based on BS 5308-1 Type 2 (300/500 V). Values for your order are confirmed in the quotation. Subject to change without notice.
Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.