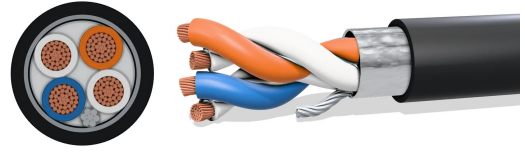


Application

BS 5308 Part 2 Type 1 with an overall screen (near-equivalent to EN 50288-7) is a PVC-insulated, unarmoured instrumentation and process-control cable for measuring, control, signal and alarm circuits.

The copper conductors are insulated with polyvinyl chloride (PVC) and stranded into pairs (or triples), which are laid up and enclosed by a single overall (collective) screen of aluminium/polyester foil in contact with a tinned copper drain wire; there are no individual pair screens. A PVC outer sheath protects the cable for fixed installation indoors and outdoors, in cable trays, ducts and trunking. In BS 5308 / PAS 5308 the Part denotes the core insulation (Part 1 = polyethylene, Part 2 = PVC) and the Type denotes the armour (Type 1 = unarmoured, Type 2 = galvanised steel-wire-armoured); the screening, either an overall (collective) screen only or individual pair screens plus an overall screen, is specified separately. Part 2 (PVC) is the general-purpose +70 °C insulation, as opposed to the PE-insulated Part 1. The overall screen protects the assembled signal pairs against electromagnetic interference; the cable is not intended for power distribution.



CONSTRUCTION

Conductor	Plain (bare) annealed copper, stranded class 5 (0.5 and 0.75 mm ²) or stranded class 2 (1.5 mm ²) acc. to IEC 60228 / BS 6360.
Insulation	Polyvinyl chloride (PVC), type T11 to BS 6746 (EN 50290-2-22 equivalent).
Pair/triple	Two (pair) or three (triple) insulated conductors uniformly twisted together.
Screen	Collective (overall) screen of aluminium/polyester foil applied metallic side down over the laid-up elements, in contact with a tinned copper drain wire (0.5 mm ²).
Sheath	Polyvinyl chloride (PVC), type TM1 or type 6 to BS 6746; black or blue (for intrinsically safe circuits).
Core identification	Collective screen: pairs colour-coded to the BS 5308 Part 2 table (pair 1 white/blue, pair 2 white/orange, pair 3 white/green and so on); two pairs as a quad in black, blue, green and brown. Triples: colour code on request.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage U₀/U	300/500 V.
Test voltage	1.0 kV (core/core and core/screen).
Standard	BS 5308 Part 2 Type 1 (withdrawn; current standard EN 50288-7); conductor acc. to IEC 60228.
Flame-retardant	Acc. to IEC 60332-1-2 (and IEC 60332-3-24).
Max. conductor temperature	+70 °C.
Permitted outer cable temperature, fixed	-40 °C to +70 °C.
Min. bending radius, fixed	6 × overall diameter.
Reaction to fire (CPR)	Eca acc. to EN 50575 / EN 13501-6; Cca on request.

DIMENSIONS & TECHNICAL DATA

Pairs × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
1 × 0.5	39.7	6	60
2 × 0.5	39.7	6.9	75
5 × 0.5	39.7	12.1	190
10 × 0.5	39.7	16.2	305
20 × 0.5	39.7	21.3	518
30 × 0.5	39.7	25.9	759
50 × 0.5	39.7	32.9	1251
1 × 0.75	26.5	6.3	69
2 × 0.75	26.5	7.3	99
5 × 0.75	26.5	13.3	242
10 × 0.75	26.5	17.7	380
20 × 0.75	26.5	23.5	684
30 × 0.75	26.5	28.5	989
50 × 0.75	26.5	36.4	1670
1 × 1.5	12.3	7.3	87
2 × 1.5	12.3	8.7	145
5 × 1.5	12.3	15.4	345
10 × 1.5	12.3	20.6	575
20 × 1.5	12.3	27.5	1075

Triples × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
1 × 0.5	39.7	6.1	69
1 × 0.75	26.5	8.3	83
1 × 1.5	12.3	8.4	115

Outer diameters, weights and conductor resistances are nominal manufacturer values for the collective-screened pair ($n \times 2 \times \text{mm}^2$) and triple ($n \times 3 \times \text{mm}^2$) constructions; all values are indicative and non-binding.