



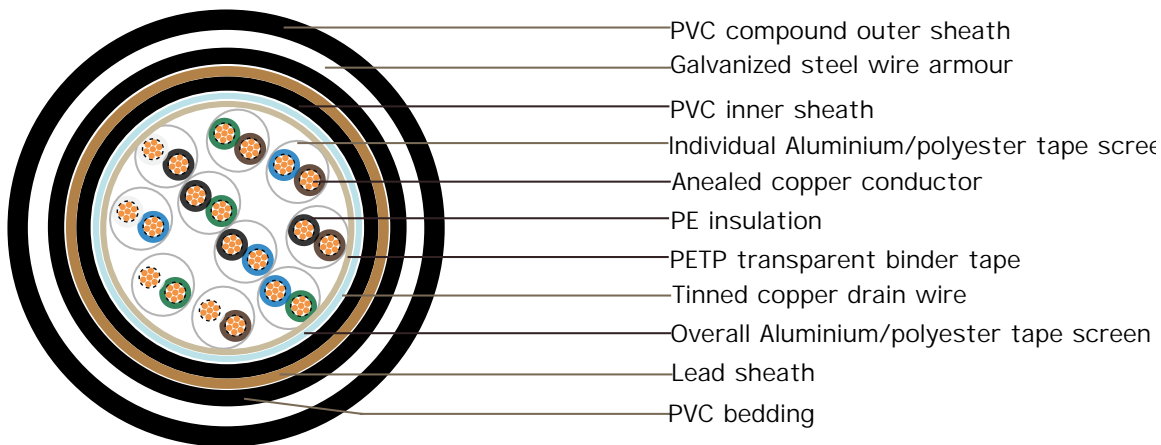
## BS5308 Cable Part 1 Type 3 PE-IS-OS-Lead-SWA-PVC/



### Application

The armoured versions (Part 1 Type 3) are generally used when the risk of mechanical damage is increased. The galvanised steel wire armour provides excellent protection. Generally used within industrial process manufacturing plants for communication, data and voice transmission signals and services, Also used for the interconnection of electrical equipment and instruments, typically in petroleum industry. They are well adapted to underground use in industrial applications, in moist areas, where chemical and mechanical protections are needed. The lead sheath brings an enhanced resistance to aromatic hydrocarbons.

### Construction



<b>Conductor</b>	Annealed or tinned copper, sizes: 0.5mm <sup>2</sup> and 0.75mm <sup>2</sup> multistranded(Class 5), 0.5 mm <sup>2</sup> , 1.0 mm <sup>2</sup> solid(Class 1), 1.5mm <sup>2</sup> or 2.5mm <sup>2</sup> , multistranded(Class 2) to BS6360
<b>Insulation</b>	PE (Polyethylene) type 03 to BS6234
<b>Pairing</b>	Two insulated conductors uniformly twisted together with a lay not exceeding 100mm
<b>Colour code</b>	See technical information
<b>Individual screen</b>	Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm <sup>2</sup>
<b>Binder tape</b>	PETP transparent tape



<b>Collective screen</b>	Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm <sup>2</sup>
<b>Inner Sheath</b>	PVC (polyvinyl chloride), type TM 1 or type 6 to BS 6746
<b>Lead Sheath</b>	Lead Alloy
<b>Bedding</b>	PVC (polyvinyl chloride), type TM 1 to BS 6746
<b>Amour</b>	Galvanized steel wire armour
<b>Outer sheath</b>	PVC Sheath, type TM 1 or type 6 to BS 6746
<b>Sheath colour</b>	Black or blue

## Mechanical and Electrical Properties

**Operating temperature:** -40°C up to + 70°C( fixed installation)  
0°C to +50°C(during operation )

**Minimum bending radius:** 15 x overall diameter

Conductor Area Size	mm <sup>2</sup>	0.5	0.5	0.75	1.0	1.5
<b>Conductor Stranding</b>	No. x mm	1 x 0.8	16 x 0.2	24 x 0.2	1 x 1.13	7 x 0.53
<b>Conductor resistance max</b>	ohm/km	36.8	39.7	26.5	18.2	12.3
<b>Insulation resistance min</b>	Gohm/km	5	5	5	5	5
<b>Capacitance unbalance at 1 kHz(pair to pair screen)</b>	pF/250m	250				
<b>Max. Mutual Capacitance @ 1 kHz for Non OS or OS cables (except one-pair and two-pairs)</b>	pF/m	115	115	115	115	120
<b>Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)</b>	pF/m	75	75	75	75	85
<b>Max. L/R Ratio for adjacent cores(Inductance/Resistance)</b>	µH/ohm	25	25	25	25	40
<b>Test voltage</b>	<b>Core to core</b>	V	1000	1000	1000	1000
	<b>Core to screen</b>	V	1000	1000	1000	1000
<b>Rated voltage max</b>	V	300/500	300/500	300/500	300/500	300/500



### Parameter

No. of Pairs	No. and Dia. of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Dia. over Bedding	Nominal Thickness of Armour	Nominal Dia. of Cable	Approx. Weight
	no./mm	mm <sup>2</sup>	mm	mm	mm	mm	kg/km
2	1/0.8	0.5	0.5	10.3	0.9	14.9	380
5	1/0.8	0.5	0.5	13.5	1.25	19	640
10	1/0.8	0.5	0.5	18.3	1.25	24.2	890
15	1/0.8	0.5	0.5	21.2	1.6	27.7	1350
20	1/0.8	0.5	0.5	23.5	1.6	30.3	1470
30	1/0.8	0.5	0.5	27.9	1.6	34.9	1870
50	1/0.8	0.5	0.5	36.1	2	44.5	3000
2	16/0.2	0.5	0.6	12	0.9	16.8	460
5	16/0.2	0.5	0.6	15.2	1.25	20.9	760
10	16/0.2	0.5	0.6	21.1	1.6	27.9	1300
15	16/0.2	0.5	0.6	24.5	1.6	31.3	1440
20	16/0.2	0.5	0.6	27.3	1.6	34.3	1870
30	16/0.2	0.5	0.6	32.3	2	40.5	2400
50	16/0.2	0.5	0.6	41.7	2.5	51.5	3930
2	1/1.13	1	0.6	12.8	0.9	17.6	515
5	1/1.13	1	0.6	16.2	1.25	21.9	950
10	1/1.13	1	0.6	22.6	1.6	29.4	1330
15	1/1.13	1	0.6	26.2	1.6	33.2	1680
20	1/1.13	1	0.6	29.8	2	37.8	2540
30	1/1.13	1	0.6	35.4	2	43.8	2900
50	1/1.13	1	0.6	44.9	2.5	54.9	4800
2	7/0.53	1.5	0.6	14.7	1.25	20.4	730
5	7/0.53	1.5	0.6	18.8	1.6	25.4	1180
10	7/0.53	1.5	0.6	26.5	1.6	33.5	1820
15	7/0.53	1.5	0.6	30.8	1.6	38.8	2350
20	7/0.53	1.5	0.6	34.4	2	42.6	3030
30	7/0.53	1.5	0.6	41	2.5	50.8	4050
50	7/0.53	1.5	0.6	52.2	2.5	62.6	5960