



BS5308 Cable Part 1

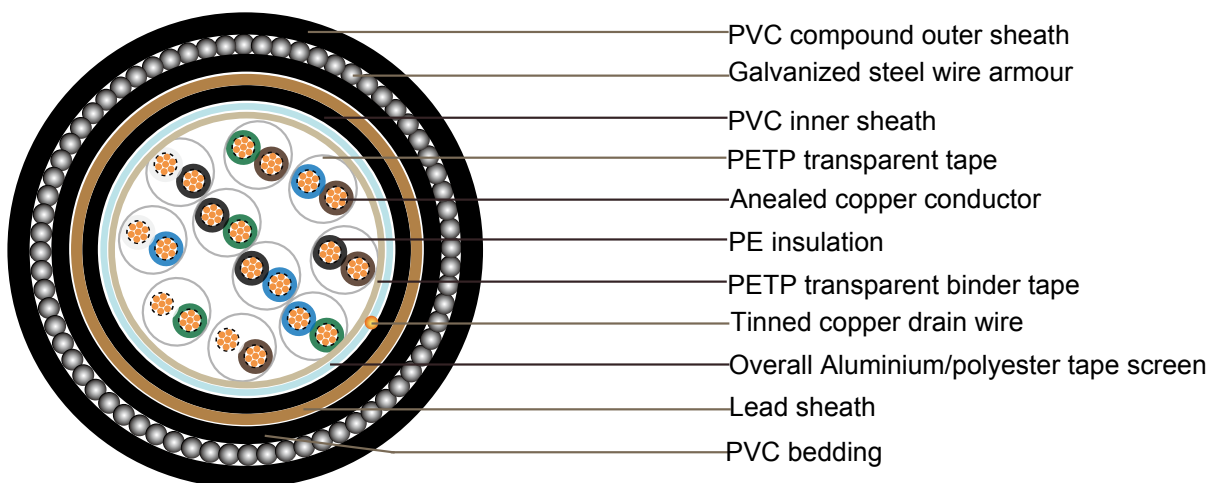
Type 3 PE-OS-Lead-SWA-PVC/

RE-2Y(St)Y MY SWA Y

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



Conductor	Annealed or tinned copper, sizes: 0.5mm ² and 0.75mm ² multistranded(Class 5), 0.5 mm ² , 1.0 mm ² solid(Class 1), 1.5mm ² or 2.5mm ² , multistranded(Class 2) to BS6360
Insulation	PE (Polyethylene) type 03 to BS6234
Pairing	Two insulated conductors uniformly twisted together with a lay not exceeding 100mm
Colour code	See technical information
Binder tape	PETP transparent tape



Collective screen	Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm ²
Inner Sheath	PVC (polyvinyl chloride), type TM 1 or type 6 to BS 6746
Lead Sheath	Lead Alloy
Bedding	PVC (polyvinyl chloride), TM 1 to BS 6746
Amour	Galvanized steel wire armour
Outer sheath	PVC Sheath, type TM 1 or type 6 to BS 6746
Sheath colour	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 ²	0.5	0.5	0.75	1.0	1.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	24 x 0.2	1 x 1.13	7 x 0.53
Conductor resistance max		ohm/km	36.8	39.7	26.5	18.2	12.3
Insulation resistance min		Gohm/km	5	5	5	5	5
Capacitance unbalance at 1 kHz(pair to pair screen)		pF/250m	250				
Max. Mutual Capacitance @ 1 kHz for Non OS or OS cables (except one-pair and two-pairs)		pF/m	115	115	115	115	120
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	75	75	75	75	85
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	25	40
Test voltage	Core to core	V	1000	1000	1000	1000	1000
	Core to screen	V	1000	1000	1000	1000	1000
Rated voltage max		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 ²	mm	mm	mm	mm	kg/km
1	1/0.80	0.5	0.5	6.3	0.9	10.7	200
2	1/0.80	0.5	0.5	7.1	0.9	11.5	260
5	1/0.80	0.5	0.5	11.6	0.9	16.2	460
10	1/0.80	0.5	0.5	15	1.25	20.7	790
15	1/0.80	0.5	0.5	17.1	1.25	22.8	1100
20	1/0.80	0.5	0.5	19.4	1.6	26	1280
30	1/0.80	0.5	0.5	23	1.6	29.8	1520
50	1/0.80	0.5	0.5	28.9	1.6	26.1	2100
1	16/0.20	0.5	0.6	7	0.9	11.4	250
2	16/0.20	0.5	0.6	7.9	0.9	12.3	300
5	16/0.20	0.5	0.6	13.1	0.9	17.9	560
10	16/0.20	0.5	0.6	17.2	1.25	22.9	970
15	16/0.20	0.5	0.6	19.8	1.6	26.4	1240
20	16/0.20	0.5	0.6	22.3	1.6	29.1	1640
30	16/0.20	0.5	0.6	26.9	1.6	33.9	1770
50	16/0.20	0.5	0.6	33.9	2	42.1	2770
1	1/1.13	1	0.6	7.4	0.9	11.8	290
2	1/1.13	1	0.6	8.4	0.9	13	345
5	1/1.13	1	0.6	14.2	1.25	19.7	790
10	1/1.13	1	0.6	17.4	1.25	24.3	1310
15	1/1.13	1	0.6	21.3	1.6	28.1	1740
20	1/1.13	1	0.6	24.4	1.6	31.2	2040
30	1/1.13	1	0.6	29	1.6	36.2	2180
50	1/1.13	1	0.6	37.3	2	45.7	3500
1	7/0.53	1.5	0.6	8.3	0.9	12.9	320
2	7/0.53	1.5	0.6	9.7	0.9	14.3	420
5	7/0.53	1.5	0.6	16.4	1.25	22.1	940
10	7/0.53	1.5	0.6	21.6	1.6	28.4	1500
15	7/0.53	1.5	0.6	25.2	1.6	32.2	1970
20	7/0.53	1.5	0.6	28.5	2	36.5	2400
30	7/0.53	1.5	0.6	34.3	2	42.5	3170
50	7/0.53	1.5	0.6	43.6	2.5	53.4	5020