

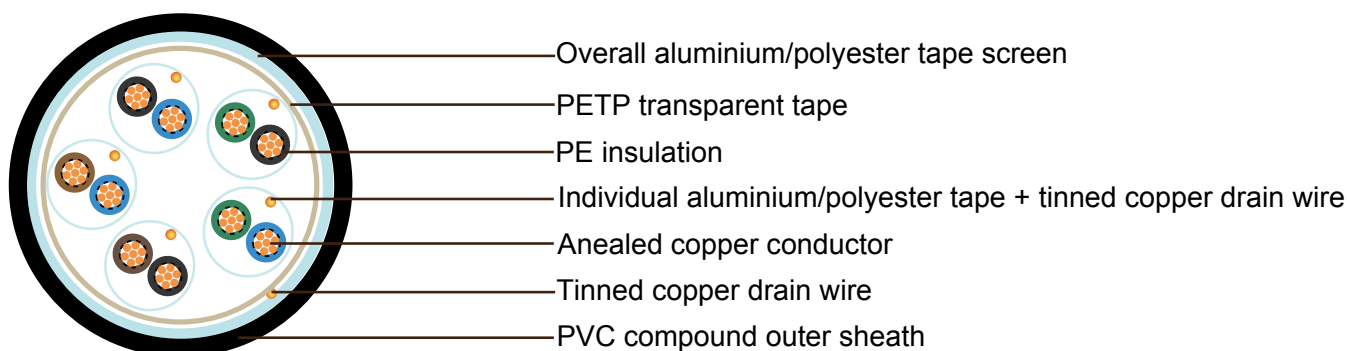


## PAS 5308 Cable Part 1 Type 1 PE-IS-OS-PVC

### Application

These cables are designed to connect electrical instrumentation and communication systems in and around process plants and similar applications. Generally used to transmit analogue or digital signals in measurement and process control where chemicals may be present. The individual screening of each pair limits the consequence of crosstalk.

### Construction



<b>Conductor</b>	Annealed copper, sizes: 0.5mm <sup>2</sup> multistranded(Class 5), 0.5 mm <sup>2</sup> and 1.0 mm <sup>2</sup> solid(Class 1), 1.5mm <sup>2</sup> or 2.5 multistranded(Class 2) to BS EN 60228
<b>Insulation</b>	thermoplastic PE to BS EN 50290-2-23:2002, grade L/MD or a cross-linked PE to BS EN 50290-2-29
<b>Pairing</b>	Two insulated conductors uniformly twisted together with a lay not exceeding 100mm, Two-pair cables without individual pair screens (quads) shall have four cores laid in quad formation round a central dummy
<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>	Non-hygroscopic binder tape of minimum thickness 0.023 mm
<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>Outer sheath</b>	extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
<b>Sheath colour</b>	Generally black



## Electrical Properties

Temperature range: above 0°C( fixed installation)

-15°C to +65°C(during operation )

<b>Conductor Area Size</b>		mm <sup>2</sup>	0.5	0.5	1	1.5	2.5
<b>Conductor Stranding</b>		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
<b>Conductor resistance max</b>		ohm/km	36.8	39.7	18.4	12.3	7.6
<b>Insulation resistance min</b>	<b>Individual conductor</b>	Gohm/km	5	5	5	5	5
	<b>individual screen</b>	Mohm/km	1	1	1	1	1
<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	75	75	75	85	105
<b>Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)</b>		pF/m	115	115	115	120	140
<b>Max. L/R Ratio for adjacent cores(Inductance/Resistance)</b>		µH/ohm	25	25	25	40	60
<b>Test voltage</b>		V	2000	2000	2000	2000	2000
<b>Rated voltage</b>		V	300/500	300/500	300/500	300/500	300/500

## Parameter

Number of Pairs	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm <sup>2</sup>	mm	mm	mm
<b>solid conductor 0.5mm<sup>2</sup></b>					
2	1/0.8	0.5	0.5	0.9	8.5
5	1/0.8	0.5	0.5	0.9	10.9
10	1/0.8	0.5	0.5	1.1	15.6
15	1/0.8	0.5	0.5	1.2	18.1
20	1/0.8	0.5	0.5	1.3	20.4



Number of Pairs	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm <sup>2</sup>	mm	mm	mm
30	1/0.8	0.5	0.5	1.4	24.2
50	1/0.8	0.5	0.5	1.7	31.2
<b>stranded conductor 0.5 mm<sup>2</sup></b>					
2	16/0.2	0.5	0.6	0.9	9.7
5	16/0.2	0.5	0.6	1	12.6
10	16/0.2	0.5	0.6	1.2	18
15	16/0.2	0.5	0.6	1.3	20.9
20	16/0.2	0.5	0.6	1.4	23.6
30	16/0.2	0.5	0.6	1.6	28.2
50	16/0.2	0.5	0.6	1.8	36.1
<b>solid conductor 1.0 mm<sup>2</sup></b>					
2	1/1.13	1	0.6	0.9	10.3
5	1/1.13	1	0.6	1	13.5
10	1/1.13	1	0.6	1.2	19.4
15	1/1.13	1	0.6	1.4	22.7
20	1/1.13	1	0.6	1.5	25.7
30	1/1.13	1	0.6	1.6	30.4
50	1/1.13	1	0.6	1.9	39.1
<b>stranded conductor 1.5 mm<sup>2</sup></b>					
2	7/0.53	1.5	0.6	1	12.1
5	7/0.53	1.5	0.6	1.1	15.8
10	7/0.53	1.5	0.6	1.4	22.9
15	7/0.53	1.5	0.6	1.5	26.6
20	7/0.53	1.5	0.6	1.6	30.1
30	7/0.53	1.5	0.6	1.8	35.8
50	7/0.53	1.5	0.6	2.2	46.2
<b>stranded conductor 2.5 mm<sup>2</sup></b>					
2	7/0.67	2.5	0.6	1	13.5
5	7/0.67	2.5	0.6	1.2	17.9
10	7/0.67	2.5	0.6	1.5	25.9
15	7/0.67	2.5	0.6	1.6	30.1



# Addison Instrumentation Cables

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Number of Pairs	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm <sup>2</sup>	mm	mm	mm
20	7/0.67	2.5	0.6	1.8	34.3
30	7/0.67	2.5	0.6	2	40.8
50	7/0.67	2.5	0.6	2.4	52.6