



# Caledonian

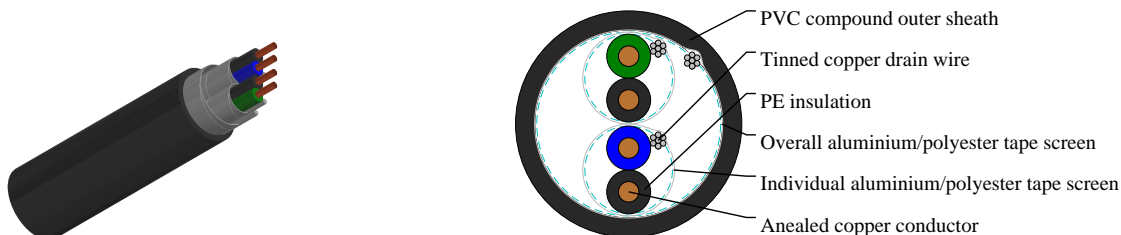
## PAS 5308 Instrumentation Cables

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### PAS 5308 Part 1 / Type 1 (Unarmoured Cables)

PE-IS-OS-PVC Solid Conductor 2P1



### APPLICATIONS

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.

### CABLE CONSTRUCTION

Conductor: Annealed copper, solid (Class 1) to BS EN 60228

Insulation: Thermoplastic PE to BS EN 50290-2-23:2002, grade L/MD or a cross-linked PE to BS EN 50290-2-29

Pairing: 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

Individual screen: Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm<sup>2</sup>

Binder tape: Non-hygroscopic binder tape of minimum thickness 0.023 mm

Collective screen: 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>

Outer sheath: extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51

### COLOUR CODE

Insulation: See technical information

Outer Sheath: Generally black

### PHYSICAL AND THERMAL PROPERTIES

Temperature range:

above 0°C (fixed installation)

-15°C to +65°C (during operation)

### Electrical Properties

Conductor Area Size: 1 mm<sup>2</sup>

Conductor Stranding (No. x mm): 1 x 1.13

Conductor resistance (max): 18.4 ohm/km



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Insulation resistance(min):

Individual conductor:5 Gohm/km

Individual screen:1 Mohm/km

Capacitance unbalance at 1kHz(pair to pair screen):250 pF/250m

Max. Mutual Capacitance @ 1kHz for Non OS or OS cables(except 1 pair and 2 pairs):75 pF/m

Max. Mutual Capacitance @ 1kHz IS/OS cables (include 1 pair and 2 pairs):115 pF/m

Max. L/R Ratio for adjacent cores(Inductance/Resistance):25  $\mu$ H/ohm

Test voltage:2000 V

Rated voltage:300/500 V

### DIMENSION AND PARAMETERS

No. of Pairs	Nominal Cross-sectional Area	No. and Dia. of Wires	Nominal Insulation Thickness	Nominal Sheath Thickness	Nom. Overall Diameter
	mm <sup>2</sup>	no./mm	mm	mm	mm
2	1	1/1.13	0.6	0.9	10.3