Caledonian

PAS 5308 Instrumentation Cables

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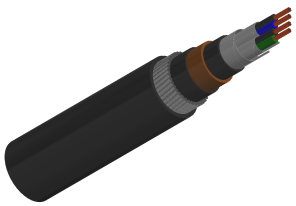
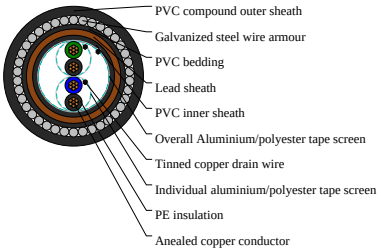
PAS 5308 Part 1 / Type 3 (Lead Sheath Cables)

PE-IS-OS-Lead-SWA-PVC Stranded Conductor 2P2.5





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. 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.

CABLE CONSTRUCTION

Conductor:Annealed copper, mulitistranded(Class 2) 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, 0.5mm²
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, 0.5mm²
Inner Sheath:Extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002,grade TM51
Lead Sheath:Lead Alloy conforming to BS EN 50307
Bedding:Extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002,grade TM51
Armour:Galvanized steel wire armour
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:2.5 mm²
Conductor Stranding(No.xmm):7x0.67
Conductor resistance(max):7.6 ohm/km
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):105 pF/m
Max. Mutual Capacitance @ 1kHz IS/OS cables (include 1 pair and 2 pairs):140 pF/m
Max. L/R Ratio for adjacent cores(Inductance/Resistance):60 μH/ohm
Test voltage:2000 V
Rated voltage:300/500 V

DIMENSION AND PARAMETERS

No. of Pairs	Nominal Cross-sectiona Area	No. and Dia. of Wires	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Dia. over Bedding	Lead Sheath Thickness	Nominal Inner Sheath Thickness	Diameter Over Inner Sheath	Diameter over Lead Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thickness	Nominal Diameter Over Armour	Nom. Overall Diameter
	mm²	no./ mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
2	2.5	7/0.67	0.6	1	17.7	1.1	1	13.5	15.7	1.6	1.7	20.9	24.3