Caledonian

Instrumentation cables to PAS 5308

www.caledonian-cables.co.uk
www.caledonian-cables.com

Addison

Company Profile

Caledonian. established in 1978.offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. . Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard. ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison. produces a wide range of cables for communication. power and electronics in its primary plants in UK. Italy and Spain. To stay in front. we continually keep expanding our manufacturing capabilities in more low cost region such as Romania. Taiwan. Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible. scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing. logistic services. and vertically integrated with our E commerce technologies. to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality. excellent service level. competitive pricing and a unique and innovative spirit. With our latest technologies. we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning. we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized. country and industry-specific solutions. Caledonian & Addison has established an extensive network of design. manufacturing. and logistics facilities in the world’s major markets to serve the growing outsourcing needs of both multinational and regional customers.

Our Certificate

ISO 9001
REGISTERED FIRM

Registration Certificate

This document certifies that the administration systems of

Caledonian Cables Limited / Addison Technology Limited

Marchants Industrial Centre, Mill Lane, Laughton, Lewes, Sussex, BN8 6AJ, United Kingdom

have been assessed and approved by QAS International to the following management systems, standards and guidelines:

ISO 9001 : 2008

With the permitted exclusion of clauses 7.3 Design and Development

The approved administration systems apply to the following:

The manufacture and supply of electrical cables and ancillary power equipment to customers internationally.

Original Approval	6th September 1997
Current Certificate	7th February 2013
Certificate Expiry	7th February 2014
Certificate Number	A6211

On behalf of QAS International

www.qas-international.com

This certificate remains valid while the holder maintains their quality administration systems in accordance with the standards and guidelines stated above, which will be audited annually by QAS International. The holder is entitled to display the above registration mark for the duration of this certificate. This certificate must be returned to QAS International on reasonable request.

Issuing Office: QAS International, 20A Oxford Street, Malmesbury, Wiltshire, SN16 9AX

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Technical Reference

PAS 5308 Part 1

PAS 5308 Part 1 / Type 1 (unarmoured cables)

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

PAS 5308 Part 1 / Type 2 (armoured cables)

PAS 5308 Cable Part 1 Type 2 PE-OS-SWA-PVC
PAS 5308 Cable Part 1 Type 2 PE-IS-OS-SWA-PVC

PAS 5308 Part 1 / Type 3 (lead sheath cables)

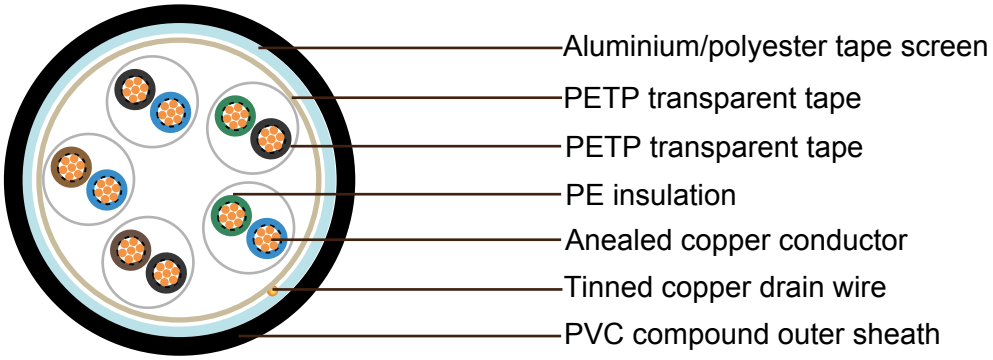
PAS 5308 Cable Part 1 Type 3 PE-OS-Lead-SWA-PVC
PAS 5308 Cable Part 1 Type 3 PE-IS-OS-Lead-SWA-PVC

PAS 5308 Cable Part 1 Type 1 PE-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.

Construction



Conductor	Annealed copper, sizes: 0.5mm² mulitistranded(Class 5), 0.5 mm² and 1.0 mm² solid(Class 1), 1.5mm² or 2.5 multistranded(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
Colour code	See technical information
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
Outer sheath	extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1.0	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1		1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		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	mm²	mm	mm	mm
solid conductor 0.5mm²					
1	1/0.8	0.5	0.5	0.8	5.3
2	1/0.8	0.5	0.5	0.8	6.1
5	1/0.8	0.5	0.5	1.1	10.6
10	1/0.8	0.5	0.5	1.2	14
15	1/0.8	0.5	0.5	1.2	16.1

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	mm²	mm	mm	mm
20	1/0.8	0.5	0.5	1.3	18.4
30	1/0.8	0.5	0.5	1.3	22
50	1/0.8	0.5	0.5	1.5	27.9
stranded conductor 0.5 mm²					
1	16/0.2	0.5	0.6	0.8	6
2	16/0.2	0.5	0.6	0.8	6.9
5	16/0.2	0.5	0.6	1.1	12.1
10	16/0.2	0.5	0.6	1.2	16.2
15	16/0.2	0.5	0.6	1.3	18.8
20	16/0.2	0.5	0.6	1.3	21.3
30	16/0.2	0.5	0.6	1.5	25.9
50	16/0.2	0.5	0.6	1.7	32.9
solid conductor 1.0 mm²					
1	1/1.13	1	0.6	0.8	6.4
2	1/1.13	1	0.6	0.8	7.4
5	1/1.13	1	0.6	1.1	13.2
10	1/1.13	1	0.6	1.2	17.4
15	1/1.13	1	0.6	1.3	20.3
20	1/1.13	1	0.6	1.5	23.4
30	1/1.13	1	0.6	1.5	28
50	1/1.13	1	0.6	2	36.3
stranded conductor 1.5 mm²					
1	7/0.53	1.5	0.6	0.8	7.3
2	7/0.53	1.5	0.6	0.9	8.7
5	7/0.53	1.5	0.6	1.2	15.4
10	7/0.53	1.5	0.6	1.3	20.6
15	7/0.53	1.5	0.6	1.5	24.2
20	7/0.53	1.5	0.6	1.5	27.5
30	7/0.53	1.5	0.6	1.7	33.3
50	7/0.53	1.5	0.6	2	42.6

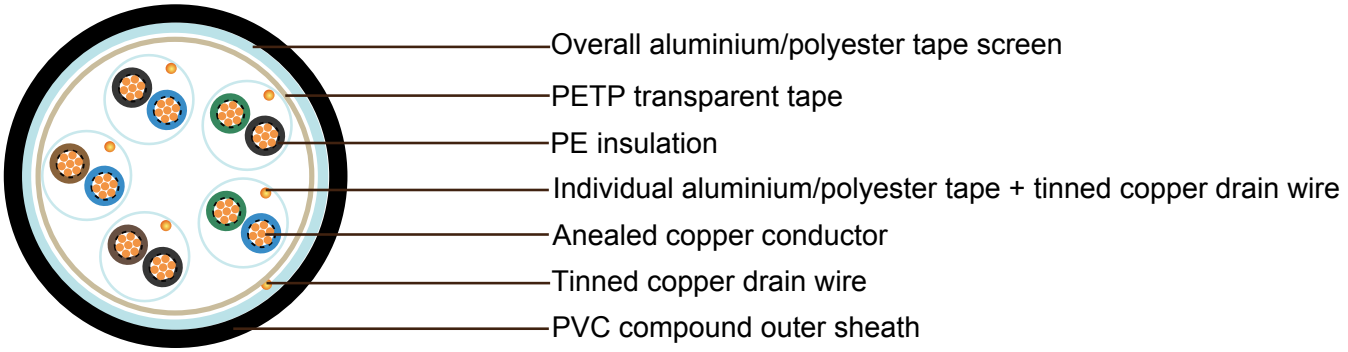
Number of Pairs	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm²	mm	mm	mm
stranded conductor 2.5 mm²					
1	7/0.67	2.5	0.6	0.8	8.1
2	7/0.67	2.5	0.6	0.9	9.7
5	7/0.67	2.5	0.6	1.2	17.2
10	7/0.67	2.5	0.6	1.4	24.1
15	7/0.67	2.5	0.6	1.6	28.2
20	7/0.67	2.5	0.6	1.7	31.8
30	7/0.67	2.5	0.6	1.9	37.9
50	7/0.67	2.5	0.6	2.3	48.9

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



Conductor	Annealed copper, sizes: 0.5mm² mulitistranded(Class 5), 0.5 mm² and 1.0 mm² solid(Class 1), 1.5mm² or 2.5 multistranded(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
Colour code	See technical information
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
Outer sheath	extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		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	mm²	mm	mm	mm
solid conductor 0.5mm²					
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	mm²	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
stranded conductor 0.5 mm²					
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
solid conductor 1.0 mm²					
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
stranded conductor 1.5 mm²					
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
stranded conductor 2.5 mm²					
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

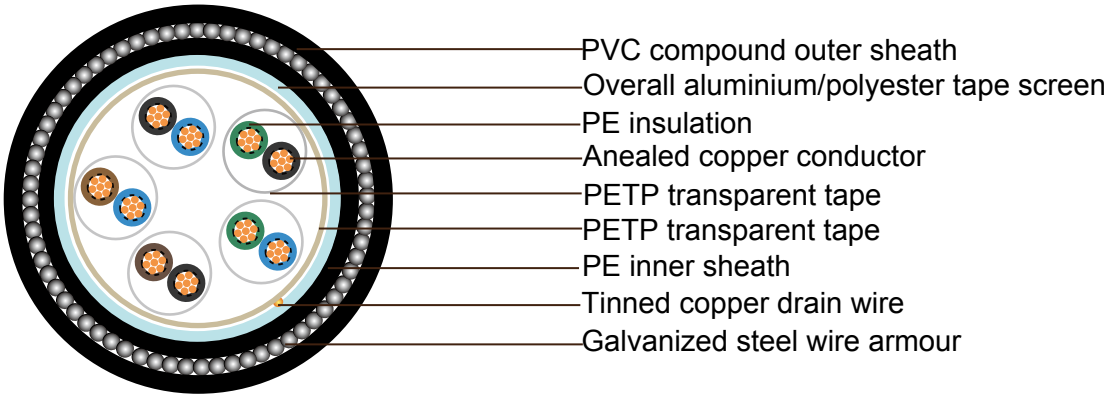
Number of Pairs	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm²	mm	mm	mm
20	7/0.67	2.5	0.6	1.8	34.3
30	7/0.67	2.5	0.6	2	40.8
50	7/0.67	2.5	0.6	2.4	52.6

PAS 5308 Cable Part 1 Type 2 PE-OS-SWA-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 armoured version are well adapted to underground use in industrial applications where chemical and mechanical protections are needed (refinery areas, chemical plant...).

Construction



Conductor	Annealed copper, sizes: 0.5mm² mulitistranded(Class 5), 0.5 mm² and 1.0 mm² solid(Class 1), 1.5mm² or 2.5 multistranded(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
Colour code	See technical information
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 bedding of a PE compound conforming to BS EN 50290-2-24:2002, grade LD
Amour	Galvanized steel wire armour
Outer sheath	extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		V	300/500	300/500	300/500	300/500	300/500

Parameter

Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armor	Nominal Diameter over Armor	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm		mm	mm
solid conductor 0.5mm² (1/0.8mm)							
1	0.5	0.8	5.3	0.9	7.1	1.3	9.7
2	0.5	0.8	6.1	0.9	7.9	1.3	10.5
5	0.5	1.1	10.6	0.9	12.4	1.4	15.2
10	0.5	1.2	14	1.25	16.5	1.6	19.7
15	0.5	1.2	16.1	1.25	18.6	1.6	21.8
20	0.5	1.3	18.4	1.6	21.6	1.7	25
30	0.5	1.3	22	1.6	25.2	1.8	28.8
50	0.5	1.5	27.9	1.6	31.1	2	35.1
stranded conductor 0.5 mm² (16/0.2mm)							
1	0.6	0.8	6	0.9	7.8	1.3	10.4
2	0.6	0.8	6.9	0.9	8.7	1.3	11.3
5	0.6	1.1	12.1	0.9	13.9	1.5	16.9
10	0.6	1.2	16.2	1.25	18.7	1.6	21.9
15	0.6	1.3	18.8	1.6	22	1.7	25.4
20	0.6	1.3	21.3	1.6	24.5	1.8	28.1
30	0.6	1.5	25.9	1.6 2.0	29.1	1.9	32.9
50	0.6	1.7	32.9	2	36.9	2.1	41.1
solid conductor 1.0 mm² (1/1.13mm)							
1	0.6	0.8	6.4	0.9	8.2	1.3	10.8
2	0.6	0.8	7.4	0.9	9.2	1.4	12
5	0.6	1.1	13.2	1.25	15.7	1.5	18.7
10	0.6	1.2	17.4	1.25	19.9	1.7	23.3
15	0.6	1.3	20.3	1.6	23.5	1.8	27.1
20	0.6	1.5	23.4	1.6	26.6	1.8	30.2
30	0.6	1.5	28	1.6	31	2	35.2
50	0.6	2	36.3	2	40.3	2.2	44.7

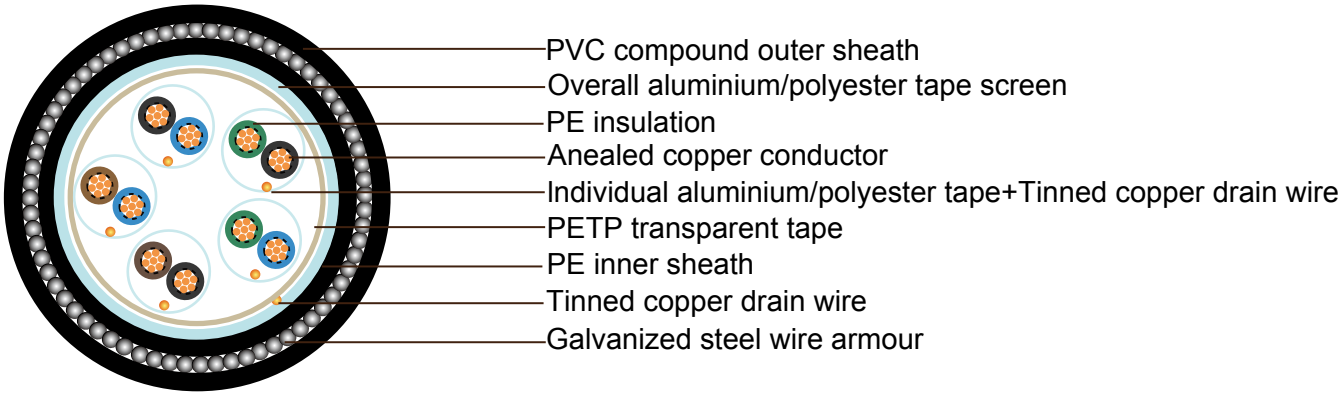
Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armor	Nominal Diameter over Armor	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm		mm	mm
stranded conductor 1.5 mm² (7/0.53mm)							
1	0.6	0.8	7.3	0.9	9.1	1.4	11.9
2	0.6	0.9	8.7	0.9	10.5	1.4	13.3
5	0.6	1.2	15.4	1.25	17.9	1.6	21.1
10	0.6	1.3	20.6	1.6	23.8	1.8	27.4
15	0.6	1.5	24.2	1.6	27.4	1.9	31.2
20	0.6	1.5	27.5	1.6	30.7	2	34.7
30	0.6	1.7	33.3	2	37.3	2.1	41.5
50	0.6	2	42.6	2.5	47.6	2.4	52.4
stranded conductor 2.5 mm² (7/0.67mm)							
1	0.6	0.8	8.1	0.9	9.9	1.4	12.7
2	0.6	0.9	9.7	0.9	11.5	1.4	14.3
5	0.6	1.2	17.2	1.25	19.7	1.7	23.1
10	0.6	1.4	24.1	1.6	27.3	1.9	31.1
15	0.6	1.6	28.2	1.6	31.4	2	35.4
20	0.6	1.7	31.8	2	35.8	2.1	40
30	0.6	1.9	37.9	2	41.9	2.3	46.5
50	0.6	2.3	48.9	2.5	53.9	2.6	59.1

PAS 5308 Cable Part 1 Type 2 PE-IS-OS-SWA-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 armoured version are well adapted to underground use in industrial applications where chemical and mechanical protections are needed (refinery areas, chemical plant...).The individual screening of each pair limits the consequence of crosstalk.

Construction



Conductor	Annealed copper, sizes: 0.5mm² mulitistranded(Class 5), 0.5 mm² and 1.0 mm² solid(Class 1), 1.5mm² or 2.5 multistranded(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
Colour code	See technical information
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 bedding of a PE compound conforming to BS EN 50290-2-24:2002, grade LD
Amour	Galvanized steel wire armour
Outer sheath	extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		V	300/500	300/500	300/500	300/500	300/500

Parameter

Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armor	Nominal Diameter over Armor	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm	mm	mm	mm
solid conductor 0.5**mm² (1/0.8mm)**							
2	0.5	0.9	8.5	0.9	10.3	1.4	13.1
5	0.5	0.9	10.9	0.9	12.7	1.5	15.7
10	0.5	1.1	15.6	1.25	18.1	1.6	21.3
15	0.5	1.2	18.1	1.6	21.3	1.7	24.7
20	0.5	1.3	20.4	1.6	23.6	1.8	27.2
30	0.5	1.4	24.2	1.6	27.4	1.9	31.2
50	0.5	1.7	31.2	2	35.2	2.1	39.4
stranded conductor 0.5 mm² (16/0.0.20mm)							
2	0.6	0.9	9.7	0.9	11.5	1.4	14.3
5	0.6	1	12.6	1.25	15.1	1.5	18.1
10	0.6	1.2	18	1.6	21.2	1.7	24.6
15	0.6	1.3	20.9	1.6	24.1	1.8	27.7
20	0.6	1.4	23.6	1.6	26.8	1.9	30.6
30	0.6	1.6	28.2	1.6	31.4	2	35.4
50	0.6	1.8	36.1	2	40.1	2.2	44.5
solid conductor 1.0**mm² (1/1.13mm)**							
2	0.6	0.9	10.3	0.9	12.1	1.4	14.9
5	0.6	1	13.5	1.25	16	1.5	19.0
10	0.6	1.2	19.4	1.6	22.6	1.7	26.0
15	0.6	1.4	22.7	1.6	25.9	1.8	29.5
20	0.6	1.5	25.7	1.6	28.9	1.9	32.7
30	0.6	1.6	30.4	2	34.4	2.1	38.6
50	0.6	1.9	39.1	2.5	44.1	2.3	48.7
stranded conductor 1.5 mm² (7/0.53mm)							
2	0.6	1	12.1	1.25	14.6	1.5	17.6
5	0.6	1.1	15.8	1.25	18.3	1.6	21.5
10	0.6	1.4	22.9	1.6	26.1	1.8	29.7
15	0.6	1.5	26.6	1.6	29.8	1.9	33.6

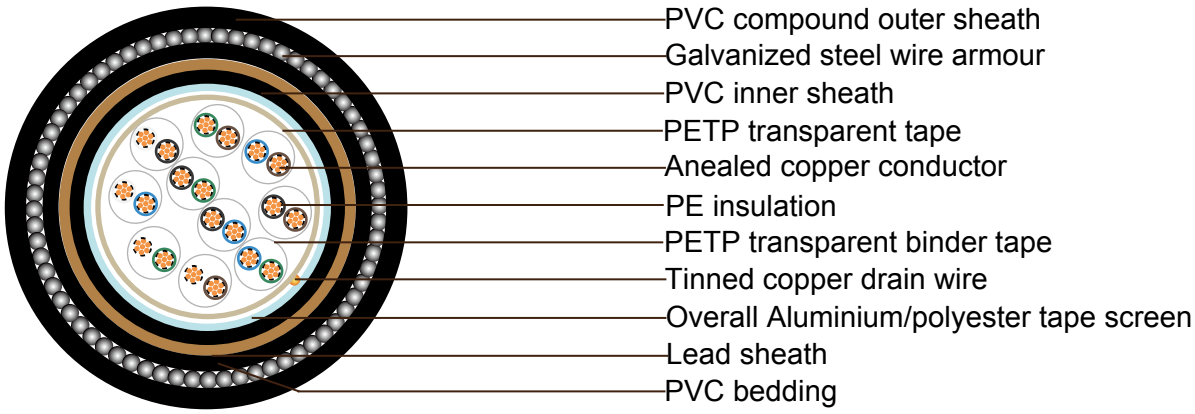
Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armor	Nominal Diameter over Armor	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm	mm	mm	mm
20	0.6	1.6	30.1	2	34.1	2.1	38.3
30	0.6	1.8	35.8	2	39.8	2.2	44.2
50	0.6	2.2	46.2	2.5	51.2	2.5	56.2
stranded conductor 2.5 mm² (7/0.67mm)							
2	0.6	1	13.5	1.25	16	1.5	19
5	0.6	1.2	17.9	1.6	21.1	1.7	24.5
10	0.6	1.5	25.9	1.6	29.1	1.9	32.9
15	0.6	1.6	30.1	2	34.1	2.1	38.3
20	0.6	1.8	34.3	2	38.3	2.2	42.7
30	0.6	2	40.8	2.5	45.8	2.4	50.6
50	0.6	2.4	52.6	2.5	57.6	2.7	63

PAS 5308 Cable Part 1 Type 3 OS-Lead SWA

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.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 copper, sizes: 0.5mm² mulitistranded(Class 5), 0.5 mm² and 1.0 mm² solid(Class 1), 1.5mm² or 2.5 multistranded(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
Colour code	See technical information
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
Amour	Galvanized steel wire armour
Outer sheath	extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		V	300/500	300/500	300/500	300/500	300/500

Parameter

NO. of Pairs	Thick-ness of Insula-tion	Thick-ness of Inner sheath	Dia-meter over Inner sheath	Thick-ness of Lead Sheath	Dia-meter over Lead Sheath	Thick-ness of Bedding	Dia-meter over Bedding	Thick-ness of Armour	Dia-meter over Armor	Thick-ness of Sheath	Dia-meter of Cable
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
solid conductor 0.5**mm² (1/0.80mm)**											
1	0.5	0.8	5.3	1.1	7.5	0.8	9.1	0.9	10.9	1.4	13.7
2	0.5	1.1	6.1	1.1	8.3	0.8	9.9	0.9	11.7	1.4	14.5
5	0.5	1.2	10.6	1.1	12.8	0.8	14.4	1.25	16.9	1.6	20.1
10	0.5	1.2	14	1.1	16.2	1	18.2	1.6	21.4	1.7	24.8
15	0.5	1.2	16.1	1.2	18.5	1	20.5	1.6	23.7	1.8	27.3
20	0.5	1.3	18.4	1.3	21	1	23	1.6	26.2	1.8	29.8
30	0.5	1.3	22	1.4	24.8	1	26.8	1.6	30	1.9	33.8
50	0.5	1.5	27.9	1.5	30.9	1.2	33.3	2	37.3	2.1	41.5
stranded conductor 0.5 mm² (16/0.20mm)											
1	0.6	0.8	6	1.1	8.2	0.8	9.8	0.9	11.6	1.4	14.4
2	0.6	0.8	6.9	1.1	9.1	0.8	10.7	0.9	12.5	1.4	15.3
5	0.6	1.1	12.1	1.1	14.3	0.8	15.9	1.25	18.4	1.6	21.6
10	0.6	1.2	16.2	1.2	18.6	1	20.6	1.6	23.8	1.8	27.4
15	0.6	1.3	18.8	1.3	21.4	1	23.4	1.6	26.6	1.8	30.2
20	0.6	1.3	21.3	1.3	23.9	1	25.9	1.6	29.1	1.9	32.9
30	0.6	1.5	25.9	1.5	28.9	1.2	31.3	2.5	35.3	2.1	39.5
50	0.6	1.7	32.9	1.7	36.3	1.4	39.1	2.5	44.1	2.3	48.7
solid conductor 1.0**mm² (1/1.13mm)**											
1	0.6	0.8	6.4	1.1	8.6	0.8	10.2	0.9	12	1.4	14.8
2	0.6	0.8	7.4	1.1	9.6	0.8	11.2	0.9	13	1.5	16
5	0.6	1.2	13.2	1.1	15.4	1	17.4	1.6	20.6	1.7	24
10	0.6	1.2	17.4	1.2	19.8	1	21.8	1.6	25	1.8	28.6
15	0.6	1.3	20.3	1.3	22.9	1	24.9	1.6	28.1	1.9	31.9
20	0.6	1.5	23.4	1.4	26.2	1.2	28.6	2	32.6	2	36.6
30	0.6	1.5	28	1.5	31	1.2	33.4	2	37.4	2.1	41.6
50	0.6	2	36.3	1.8	39.9	1.4	42.7	2.5	47.7	2.4	52.5

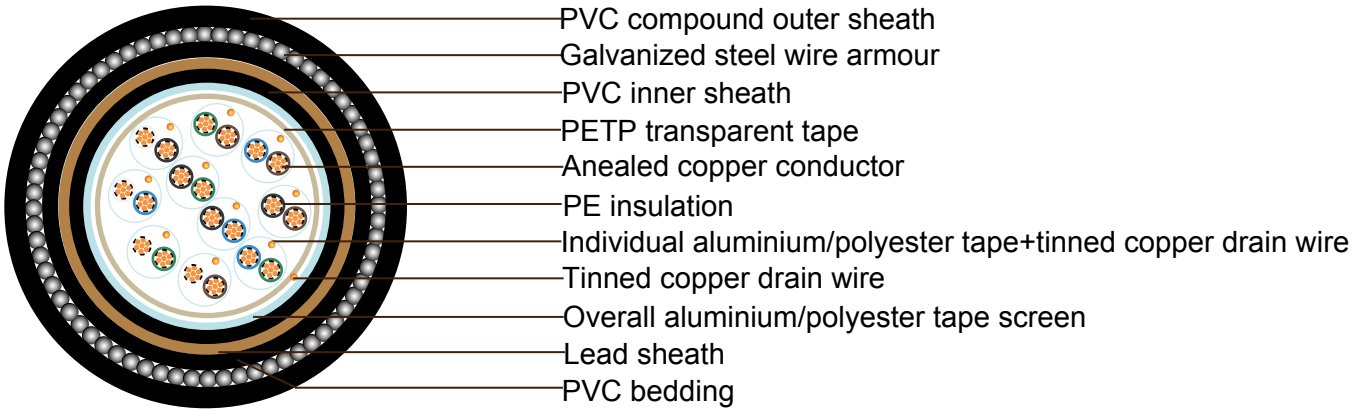
NO. of Pairs	Thick-ness of Insula-tion	Thick-ness of Inner sheath	Dia-meter over Inner sheath	Thick-ness of Lead Sheath	Dia-meter over Lead Sheath	Thick-ness of Bedding	Dia-meter over Bedding	Thick-ness of Armour	Dia-meter over Armor	Thick-ness of Sheath	Dia-meter of Cable
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
stranded conductor 1.5 mm² (7/0.53mm)											
1	0.6	0.8	7.3	1.1	9.5	0.8	11.1	0.9	12.9	1.5	15.9
2	0.6	0.9	8.7	1.1	10.9	0.8	12.5	1.25	15	1.5	18
5	0.6	1.2	15.4	1.2	17.8	1	19.8	1.6	23	1.7	26.4
10	0.6	1.3	20.6	1.3	23.2	1	25.2	1.6	28.4	1.9	32.2
15	0.6	1.5	24.2	1.4	27	1.2	29.4	2	33.4	2	37.4
20	0.6	1.5	27.5	1.5	30.5	1.2	32.9	1.6	36.9	2.1	41.1
30	0.6	1.7	33.3	1.7	36.7	1.4	39.5	2.5	44.5	2.3	49.1
50	0.6	2	42.6	2	46.6	1.6	49.8	2.5	54.8	2.6	60
stranded conductor 2.5 mm² (7/0.67mm)											
1	0.6	0.8	8.1	1.1	10.3	0.8	11.9	1.25	14.4	1.5	17.4
2	0.6	0.9	9.7	1.1	11.9	0.8	13.5	1.25	16	1.5	19
5	0.6	1.2	17.2	1.2	19.6	1	21.6	1.6	24.8	1.8	28.4
10	0.6	1.4	24.1	1.4	26.9	1.2	29.3	2	33.3	2	37.3
15	0.6	1.6	28.2	1.5	31.2	1.2	33.6	2	37.6	2.2	42
20	0.6	1.7	31.8	1.7	35.2	1.4	38	2.5	43	2.3	47.6
30	0.6	1.9	37.9	1.8	41.5	1.4	44.3	2.5	49.3	2.5	54.3
50	0.6	2.3	48.9	2.2	53.3	1.6	56.5	2.5	61.5	2.8	67.1

PAS 5308 Cable Part 1 Type 3 IS-OS-Lead SWA

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. 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 copper, sizes: 0.5mm² mulitistranded(Class 5), 0.5 mm² and 1.0 mm² solid(Class 1), 1.5mm² or 2.5 multistranded(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
Colour code	See technical information
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
Amour	Galvanized steel wire armour
Outer sheath	extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		V	300/500	300/500	300/500	300/500	300/500

Parameter

NO. of Pairs	Thick-ness of Insula-tion	Thick-ness of Inner sheath	Dia-meter over Inner sheath	Thick-ness of Lead Sheath	Dia-meter over Lead Sheath	Thick-ness of Bedding	Dia-meter over Bedding	Thick-ness of Armour	Dia-meter over Armor	Thick-ness of Sheath	Dia-meter of Cable
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
solid conductor 0.5mm² (1/0.80mm)											
2	0.5	0.9	8.5	1.1	10.7	0.8	12.3	1.25	14.8	1.5	17.8
5	0.5	0.9	10.9	1.1	13.1	0.8	14.7	1.25	17.2	1.6	20.4
10	0.5	1.1	15.6	1.2	18	1	20	1.6	23.2	1.7	26.6
15	0.5	1.2	18.1	1.2	20.5	1	22.5	1.6	25.7	1.8	29.3
20	0.5	1.3	20.4	1.3	23	1	25	1.6	28.2	1.9	32
30	0.5	1.4	24.2	1.4	27	1.2	29.4	2	33.4	2	37.4
50	0.5	1.7	31.2	1.6	34.4	1.2	36.8	2	40.8	2.2	45.2
stranded conductor 0.5 mm² (16/0.20mm)											
2	0.6	0.9	9.7	1.1	11.9	0.8	13.5	1.25	16	1.5	19
5	0.6	1	12.6	1.1	14.8	0.8	16.4	1.25	18.9	1.6	22.1
10	0.6	1.2	18	1.2	20.4	1	22.4	1.6	25.6	1.8	29.2
15	0.6	1.3	20.9	1.3	23.5	1	25.5	1.6	28.7	1.9	32.5
20	0.6	1.4	23.6	1.4	26.4	1.2	28.8	2	32.8	2	36.8
30	0.6	1.6	28.2	1.5	31.2	1.2	33.6	2	37.6	2.2	42
50	0.6	1.8	36.1	1.8	39.7	1.4	42.5	2.5	47.5	2.4	52.3
solid conductor 1.0mm² (1/1.13mm)											
2	0.6	0.9	10.3	1.1	12.5	0.8	14.1	1.25	16.6	1.6	19.8
5	0.6	1	13.5	1.1	15.7	1	17.7	1.6	20.9	1.7	24.3
10	0.6	1.2	19.4	1.3	22	1	24	1.6	27.2	1.9	31.0
15	0.6	1.4	22.7	1.4	25.5	1.2	27.9	2	31.9	2.0	35.9
20	0.6	1.5	25.7	1.5	28.7	1.2	31.1	2	35.1	2.1	39.3
30	0.6	1.6	30.4	1.6	33.6	1.2	36	2	40	2.2	44.4
50	0.6	1.9	39.1	1.9	42.9	1.4	45.7	2.5	50.7	2.5	55.7

NO. of Pairs	Thick-ness of Insula-tion	Thick-ness of Inner sheath	Dia-meter over Inner sheath	Thick-ness of Lead Sheath	Dia-meter over Lead Sheath	Thick-ness of Bedding	Dia-meter over Bedding	Thick-ness of Armour	Dia-meter over Armor	Thick-ness of Sheath	Dia-meter of Cable
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
stranded conductor 1.5 mm² (7/0.53mm)											
2	0.6	1	12.1	1.1	14.3	0.8	15.9	1.25	18.4	1.6	21.6
5	0.6	1.1	15.8	1.2	18.2	1	20.2	1.6	23.4	1.8	27
10	0.6	1.4	22.9	1.4	25.7	1.2	28.1	2	32.1	2	36.1
15	0.6	1.5	26.6	1.5	29.6	1.2	32	2	36	2.1	40.2
20	0.6	1.6	30.1	1.6	33.3	1.2	35.7	2	39.7	2.2	44.1
30	0.6	1.8	35.8	1.8	39.4	1.4	42.2	2.5	47.2	2.4	52
50	0.6	2.2	46.2	2.1	50.4	1.6	53.6	2.5	58.6	2.7	64
stranded conductor 2.5 mm² (7/0.67mm)											
2	0.6	1	13.5	1.1	15.7	1	17.7	1.6	20.9	1.7	24.3
5	0.6	1.2	17.9	1.2	20.3	1	22.3	1.6	25.5	1.8	29.1
10	0.6	1.5	25.9	1.5	28.9	1.2	31.3	2	35.3	2.1	39.5
15	0.6	1.6	30.1	1.6	33.3	1.2	35.7	2	39.7	2.2	44.1
20	0.6	1.8	34.3	1.7	37.7	1.4	40.5	2.5	45.5	2.4	50.3
30	0.6	2	40.8	1.9	44.6	1.4	47.7	2.5	52.4	2.6	57.6
50	0.6	2.4	52.6	2.3	57.2	1.6	60.4	2.5	65.4	2.9	71.2

PAS 5308 Part 2

PAS 5308 Part 2 / Type 1 (unarmoured cables)

PAS 5308 Cable Part 2 Type 1 PVC-OS-PVC
PAS 5308 Cable Part 2 Type 1 PVC-IS-OS-PVC

PAS 5308 Part 2 / Type 2 (armoured cables)

PAS 5308 Cable Part 2 Type 2 PVC-OS-SWA-PVC
PAS 5308 Cable Part 2 Type 2 PVC-IS-OS-SWA-PVC

PAS 5308 Cable Part 2 Type 1 PVC-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.

Construction

Conductor	Annealed copper, sizes: 0.5mm² and 0.75mm² mulitistranded(Class 5), 1.5mm² and 2.5mm² multistranded(Class 2) to BS EN 60228
Insulation	PVC to BS EN 50290-2-21:2002, grade TI51
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
Colour code	Multicore cables: up to 40 cores yellow with black numbers, 41 - 80 cores black with yellow numbers. Multipair cables:See technical information
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
Outer sheath	Extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

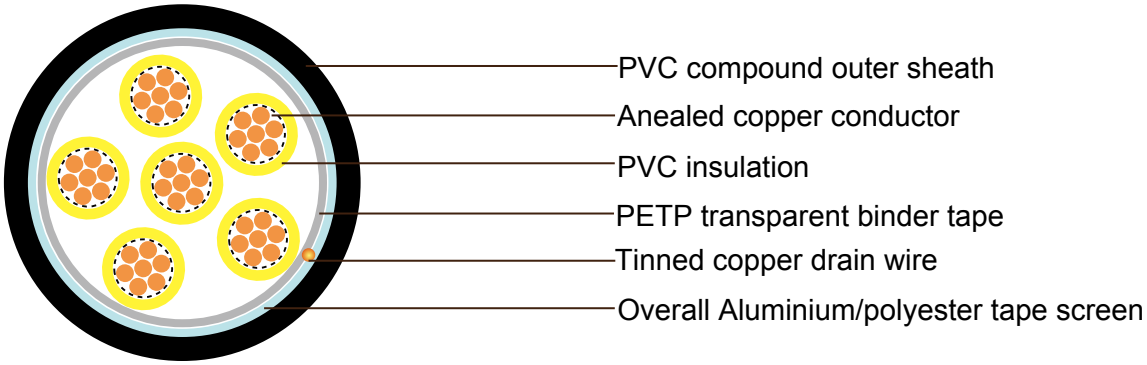
Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		V	300/500	300/500	300/500	300/500	300/500

Parameter

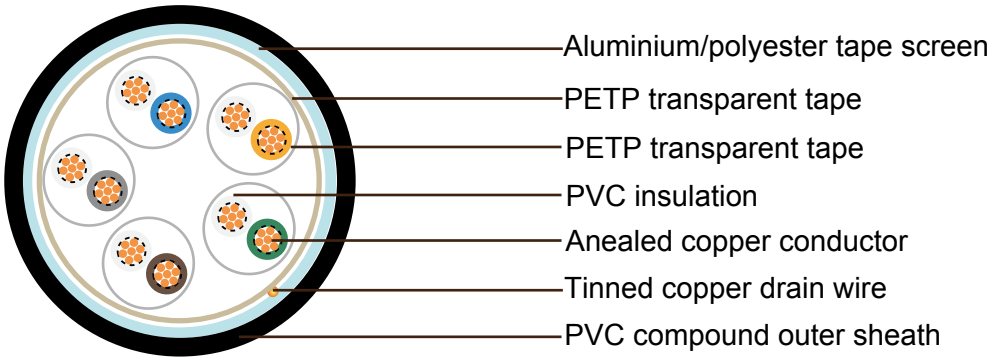
Multicore



Number of Cores	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm²	mm	mm	mm
stranded conductor 0.5 mm² (16/0.20mm)					
2	16/0.2	0.5	0.6	0.8	6

Number of Cores	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm²	mm	mm	mm
3	16/0.2	0.5	0.6	0.8	6.3
4	16/0.2	0.5	0.6	0.8	6.9
6	16/0.2	0.5	0.6	0.8	8.1
10	16/0.2	0.5	0.6	0.9	10.4
20	16/0.2	0.5	0.6	1	13.5
40	16/0.2	0.5	0.6	1.2	18.2
80	16/0.2	0.5	0.6	1.4	25.1
stranded conductor 0.75 mm² (24/0.20mm)					
2	24/0.2	0.75	0.6	0.8	6.4
3	24/0.2	0.75	0.6	0.8	6.8
4	24/0.2	0.75	0.6	0.8	7.4
6	24/0.2	0.75	0.6	0.9	8.9
10	24/0.2	0.75	0.6	1	11.5
20	24/0.2	0.75	0.6	1.1	14.8
40	24/0.2	0.75	0.6	1.3	19.9
80	24/0.2	0.75	0.6	1.5	27.5
stranded conductor 1.5 mm² (7/0.53mm)					
2	7/0.53	1.5	0.6	0.8	7.3
3	7/0.53	1.5	0.6	0.8	7.7
4	7/0.53	1.5	0.6	0.9	8.7
6	7/0.53	1.5	0.6	0.9	10.3
10	7/0.53	1.5	0.6	1	13.3
20	7/0.53	1.5	0.6	1.2	17.4
40	7/0.53	1.5	0.6	1.4	23.4
80	7/0.53	1.5	0.6	1.7	32.6
stranded conductor 2.5 mm² (7/0.67mm)					
2	7/0.67	2.5	0.6	0.8	8.1
3	7/0.67	2.5	0.6	0.9	8.8
4	7/0.67	2.5	0.6	0.9	9.7
6	7/0.67	2.5	0.6	1	11.7
10	7/0.67	2.5	0.6	1.1	15.1
20	7/0.67	2.5	0.6	1.3	19.9
40	7/0.67	2.5	0.6	1.5	26.7
80	7/0.67	2.5	0.6	1.9	37.3

Multipair



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	mm²	mm	mm	mm
stranded conductor 0.5 mm² (16/0.20mm)					
1	16/0.2	0.5	0.6	0.8	6
2	16/0.2	0.5	0.6	0.8	6.9
5	16/0.2	0.5	0.6	1	11.9
10	16/0.2	0.5	0.6	1.1	16.4
15	16/0.2	0.5	0.6	1.2	19
20	16/0.2	0.5	0.6	1.3	21.5
30	16/0.2	0.5	0.6	1.5	25.7
50	16/0.2	0.5	0.6	1.7	32.9
stranded conductor 0.75 mm² (24/0.20mm)					
1	24/0.2	0.75	0.6	0.8	6.4
2	24/0.2	0.75	0.6	0.8	7.4
5	24/0.2	0.75	0.6	1	12.8
10	24/0.2	0.75	0.6	1.2	17.9
15	24/0.2	0.75	0.6	1.3	20.9
20	24/0.2	0.75	0.6	1.4	23.6
30	24/0.2	0.75	0.6	1.5	27.9
50	24/0.2	0.75	0.6	1.8	35.9
stranded conductor 1.5 mm² (7/0.53mm)					
1	7/0.53	1.5	0.6	0.8	7.3
2	7/0.53	1.5	0.6	0.9	8.7

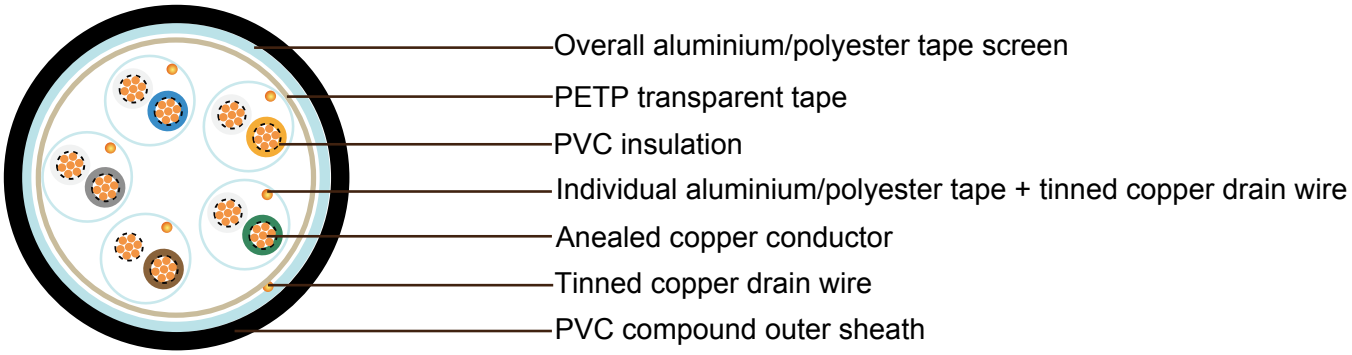
Number of Pairs	Number and Diameter of Wires	Nominal Conductor Cross-Sectional Area	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Diameter of Cable
	no./mm	mm²	mm	mm	mm
5	7/0.53	1.5	0.6	1.1	15.1
10	7/0.53	1.5	0.6	1.3	21.1
15	7/0.53	1.5	0.6	1.4	24.6
20	7/0.53	1.5	0.6	1.5	27.7
30	7/0.53	1.5	0.6	1.7	33
50	7/0.53	1.5	0.6	2.1	42.7
stranded conductor 2.5 mm² (7/0.67mm)					
1	7/0.67	2.5	0.6	0.8	8.1
2	7/0.67	2.5	0.6	0.9	9.7
5	7/0.67	2.5	0.6	1.2	17.2
10	7/0.67	2.5	0.6	1.4	24.1
15	7/0.67	2.5	0.6	1.6	28.2
20	7/0.67	2.5	0.6	1.7	31.8
30	7/0.67	2.5	0.6	1.9	37.9
50	7/0.67	2.5	0.6	2.3	48.9

PAS 5308 Cable Part 2 Type 1 PVC-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



Conductor	Annealed copper, sizes: 0.5mm² and 0.75mm² mulitistranded(Class 5), 1.5mm² and 2.5mm² multistranded(Class 2) to BS EN 60228
Insulation	PVC to BS EN 50290-2-21:2002, grade TI51
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
Colour code	See technical information
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
Outer sheath	Extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		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	**mm²**	**mm**	**mm**	**mm**
stranded conductor 0.5 mm² (16/0.20mm)					
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

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	mm²	mm	mm	mm
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
stranded conductor 0.75 mm² (24/0.20mm)					
2	24/0.2	0.75	0.6	0.9	10.4
5	24/0.2	0.75	0.6	1	13.5
10	24/0.2	0.75	0.6	1.2	19.4
15	24/0.2	0.75	0.6	1.4	22.8
20	24/0.2	0.75	0.6	1.5	25.8
30	24/0.2	0.75	0.6	1.6	30.5
50	24/0.2	0.75	0.6	1.9	39.3
stranded conductor 1.5 mm² (7/0.53mm)					
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
stranded conductor 2.5 mm² (7/0.67mm)					
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
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

PAS 5308 Cable Part 2 Type 2 PVC-OS-SWA-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 armoured version are well adapted to underground use in industrial applications where chemical and mechanical protections are needed (refinery areas, chemical plant...).

Construction

Conductor	Annealed copper, sizes: 0.5mm² and 0.75mm² mulitistranded(Class 5), 1.5mm² and 2.5mm² multistranded(Class 2) to BS EN 60228
Insulation	PVC to BS EN 50290-2-21:2002, grade TI51
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
Colour code	Multicore cables: up to 40 cores yellow with black numbers, 41 - 80 cores black with yellow numbers. Multipair cables:See technical information
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
Amour	Galvanized steel wire armour
Outer sheath	Extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

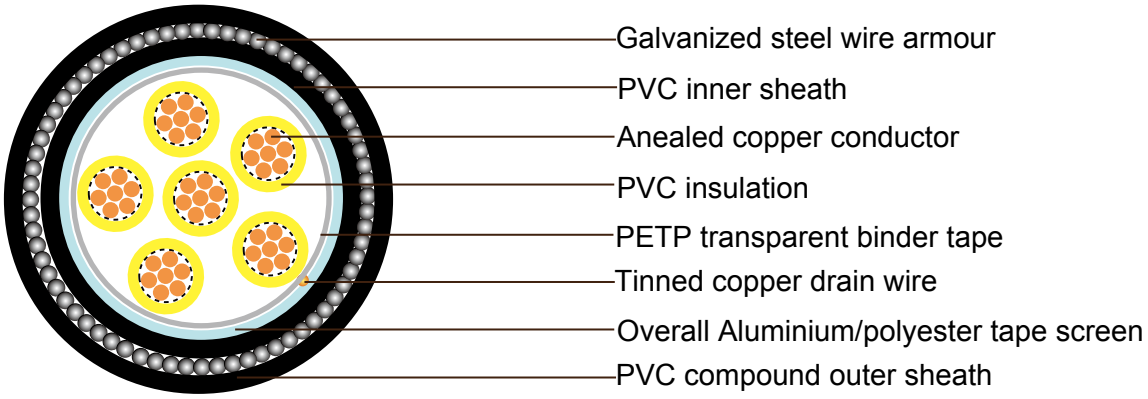
Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		V	300/500	300/500	300/500	300/500	300/500

Parameter

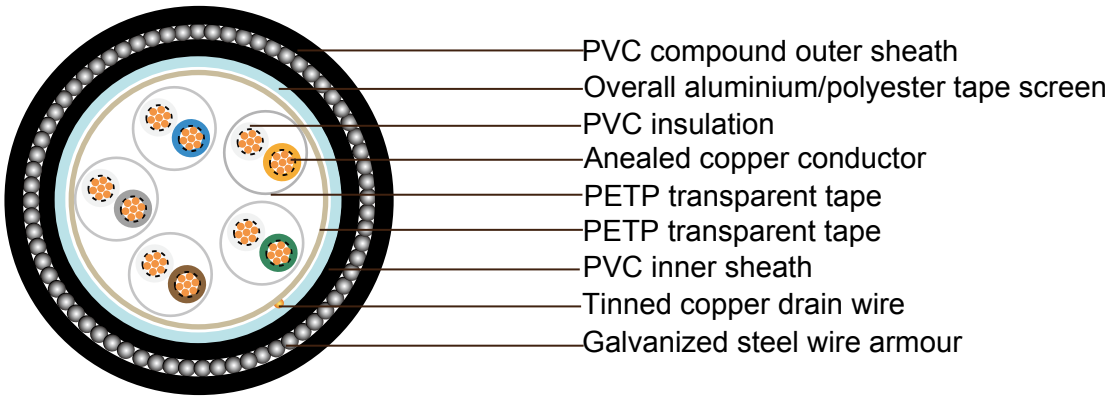
Multicore



Number of Cores	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armour	Nominal Diameter over Armour	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm		mm	mm
stranded conductor 0.5 mm² (16/0.20mm)							
2	0.6	0.8	6	0.9	7.8	1.3	10.4
3	0.6	0.8	6.3	0.9	8.1	1.3	10.7
4	0.6	0.8	6.9	0.9	8.7	1.3	11.3
6	0.6	0.8	8.1	0.9	9.9	1.4	12.7
10	0.6	0.9	10.4	1.25	12.9	1.5	15.9
20	0.6	1	13.5	1.25	16	1.5	19
40	0.6	1.2	18.2	1.6	21.4	1.7	24.8
80	0.6	1.4	25.1	2	29.1	1.9	32.9
stranded conductor 0.75 mm² (24/0.20mm)							
2	0.6	1.3	10.8	0.8	6.4	0.9	8.2
3	0.6	1.3	11.2	0.8	6.8	0.9	8.6
4	0.6	1.4	12	0.8	7.4	0.9	9.2
6	0.6	1.4	13.5	0.9	8.9	0.9	10.7
10	0.6	1.5	17	1	11.5	1.25	14
20	0.6	1.6	20.5	1.1	14.8	1.25	17.3
40	0.6	1.7	26.5	1.3	19.9	1.6	23.1
80	0.6	2	35.5	1.5	27.5	2	31.5
stranded conductor 1.5 mm² (7/0.53mm)							
2	0.6	0.8	7.3	0.9	9.1	1.4	11.9
3	0.6	0.8	7.7	0.9	9.5	1.4	12.3
4	0.6	0.9	8.7	0.9	10.5	1.4	13.3
6	0.6	0.9	10.3	1.25	12.8	1.5	15.8
10	0.6	1	13.3	1.25	15.8	1.5	18.8
20	0.6	1.2	17.4	1.6	20.6	1.7	24
40	0.6	1.4	23.4	1.6	26.6	1.8	30.2
80	0.6	1.7	32.6	2	36.6	2.1	40.8
stranded conductor 2.5 mm² (7/0.67mm)							
2	0.6	0.8	8.1	0.9	9.9	1.4	12.7
3	0.6	0.9	8.8	0.9	10.6	1.4	13.4
4	0.6	0.9	9.7	0.9	11.5	1.4	14.3

Number of Cores	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armour	Nominal Diameter over Armour	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm		mm	mm
6	0.6	1	11.7	1.25	14.2	1.5	17.2
10	0.6	1.1	15.1	1.6	18.3	1.6	21.5
20	0.6	1.3	19.9	1.6	23.1	1.7	26.5
40	0.6	1.5	26.7	2	30.7	2	34.7
80	0.6	1.9	37.3	2.5	42.3	2.3	46.9

Multipair



Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armour	Nominal Diameter over Armour	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm		mm	mm
stranded conductor 0.5 mm² (16/0.20mm)							
1	0.6	0.8	6	0.9	7.8	1.3	10.4
2	0.6	0.8	6.9	0.9	8.7	1.3	11.3
5	0.6	1	11.9	0.9	13.7	1.5	16.7
10	0.6	1.1	16.4	1.25	18.9	1.6	22.1
15	0.6	1.2	19	1.6	22.2	1.7	25.6
20	0.6	1.3	21.5	1.6	24.7	1.8	28.3
30	0.6	1.5	25.7	1.6	28.9	1.9	32.7
50	0.6	1.7	32.9	2	36.9	2.1	41.1

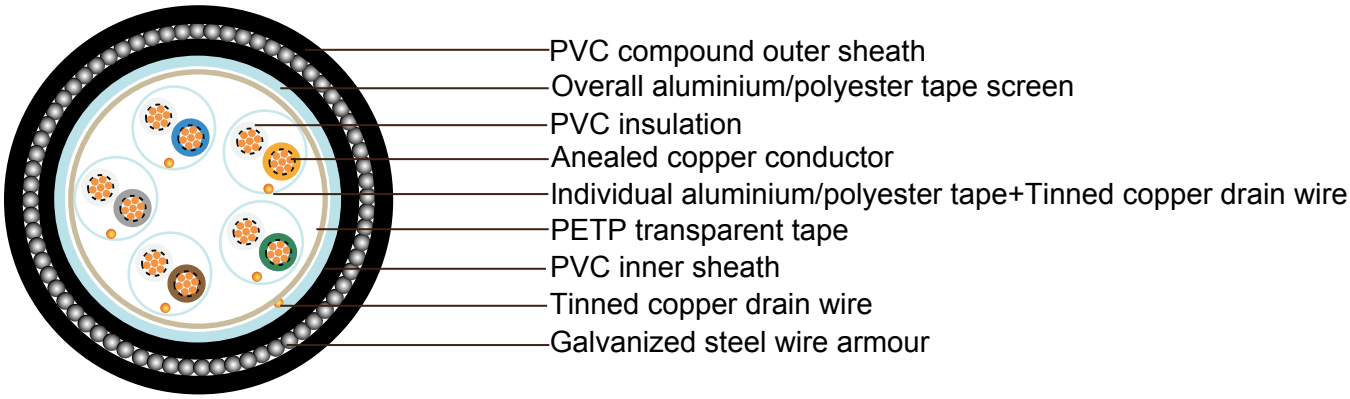
Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armour	Nominal Diameter over Armour	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm		mm	mm
stranded conductor 0.75 mm² (24/0.20mm)							
1	0.6	0.8	6.4	0.9	8.2	1.3	10.8
2	0.6	0.8	7.4	0.9	9.2	1.4	12
5	0.6	1	12.8	1.25	15.3	1.5	18.3
10	0.6	1.2	17.9	1.6	21.1	1.7	24.5
15	0.6	1.3	20.9	1.6	24.1	1.8	27.7
20	0.6	1.4	23.6	1.6	26.8	1.9	30.6
30	0.6	1.5	27.9	1.6	31.1	2	35.1
50	0.6	1.8	35.9	2	39.9	2.2	44.3
stranded conductor 1.5 mm² (7/0.53mm)							
1	0.6	0.8	7.3	0.9	9.1	1.4	11.9
2	0.6	0.9	8.7	0.9	10.5	1.4	13.3
5	0.6	1.1	15.1	1.25	17.6	1.6	20.8
10	0.6	1.3	21.1	1.6	24.3	1.8	27.9
15	0.6	1.4	24.6	1.6	27.8	1.9	31.6
20	0.6	1.5	27.7	1.6	30.9	2	34.9
30	0.6	1.7	33	2	37	2.1	41.2
50	0.6	2.1	42.7	2.5	47.7	2.4	52.5
stranded conductor 2.5 mm² (7/0.67mm)							
1	0.6	0.8	8.1	0.9	9.9	1.4	12.7
2	0.6	0.9	9.7	0.9	11.5	1.4	14.3
5	0.6	1.2	17.2	1.25	19.7	1.7	23.1
10	0.6	1.4	24.1	1.6	27.3	1.9	31.1
15	0.6	1.6	28.2	1.6	31.4	2	35.4
20	0.6	1.7	31.8	2	35.8	2.1	40
30	0.6	1.9	37.9	2	41.9	2.3	46.5
50	0.6	2.3	48.9	2.5	53.9	2.6	59.1

PAS 5308 Cable Part 2 Type 2 PVC-IS-OS-SWA-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 armoured version are well adapted to underground use in industrial applications where chemical and mechanical protections are needed (refinery areas, chemical plant...).The individual screening of each pair limits the consequence of crosstalk.

Construction



Conductor	Annealed copper, sizes: 0.5mm² and 0.75mm² mulitistranded(Class 5), 1.5mm² and 2.5mm² multistranded(Class 2) to BS EN 60228
Insulation	PVC to BS EN 50290-2-21:2002, grade TI51
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
Colour code	See technical information
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
Amour	Galvanized steel wire armour
Outer sheath	Extruded sheath of a PVC compound conforming to BS EN 50290-2-22:2002, grade TM51
Sheath colour	Generally black

Electrical Properties

Temperature range: above 0˚C(fixed installation)

-15˚C to +65˚C(during operation)

Conductor Area Size		mm²	0.5	0.5	1	1.5	2.5
Conductor Stranding		No. x mm	1 x 0.8	16 x 0.2	1 x 1.13	7 x 0.53	7 x 0.67
Conductor resistance max		ohm/km	36.8	39.7	18.4	12.3	7.6
Insulation resistance min	**Individual conductor**	Gohm/km	5	5	5	5	5
	individual screen	Mohm/km	1	1	1	1	1
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	75	75	75	85	105
Max. Mutual Capacitance @ 1 kHz IS/OS cables (include 1 pair and 2 pair)		pF/m	115	115	115	120	140
Max. L/R Ratio for adjacent cores(Inductance/ Resistance)		µH/ohm	25	25	25	40	60
Test voltage		V	2000	2000	2000	2000	2000
Rated voltage		V	300/500	300/500	300/500	300/500	300/500

Parameter

Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armour	Nominal Diameter over Armour	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm	mm	mm	mm
stranded conductor 0.5 mm² (16/0.20mm)							
2	0.6	0.9	9.7	0.9	11.5	1.4	14.3
5	0.6	1	12.8	1.25	15.1	1.5	18.1
10	0.6	1.2	18	1.6	21.2	1.7	24.6
15	0.6	1.3	20.9	1.6	24.1	1.8	27.7
20	0.6	1.4	23.6	1.6	26.8	1.9	30.6
30	0.6	1.6	28.2	1.6	31.4	2	35.4
50	0.6	1.8	36.1	2	40.1	2.2	44.5
stranded conductor 0.75 mm² (24/0.20mm)							
2	0.6	0.9	10.4	0.9	12.2	1.4	15
5	0.6	1	13.5	1.25	16	1.5	19
10	0.6	1.2	19.4	1.6	22.6	1.7	26
15	0.6	1.4	22.8	1.6	26	1.8	29.6
20	0.6	1.5	25.8	1.6	29	1.9	32.8
30	0.6	1.6	30.5	2	34.5	2.1	38.7
50	0.6	1.9	39.3	2.5	44.3	2.3	48.9
stranded conductor 1.5 mm² (7/0.53mm)							
2	0.6	1	12.1	1.25	14.6	1.5	17.6
5	0.6	1.1	15.8	1.25	18.3	1.6	21.5
10	0.6	1.4	22.9	1.6	26.1	1.8	29.7
15	0.6	1.5	26.6	1.6	29.8	1.9	33.6
20	0.6	1.6	30.1	2	34.1	2.1	38.3
30	0.6	1.8	35.8	2	39.8	2.2	44.2
50	0.6	2.2	46.2	2.5	51.2	2.5	56.2
stranded conductor 2.5 mm² (7/0.67mm)							
2	0.6	1	13.5	1.25	16	1.5	19
5	0.6	1.2	17.9	1.6	21.1	1.7	24.5
10	0.6	1.5	25.9	1.6	29.1	1.9	32.9
15	0.6	1.6	30.1	2	34.1	2.1	38.3

Number of Pairs	Nominal Thickness of Insulation	Nominal Thickness of bedding	Nominal Diameter over Bedding	Nominal Thickness of Armour	Nominal Diameter over Armour	Nominal Thickness of Sheath	Nominal Diameter of Cable
	mm	mm	mm	mm	mm	mm	mm
20	0.6	1.8	34.3	2	38.3	2.2	42.7
30	0.6	2	40.8	2.5	45.8	2.4	50.6
50	0.6	2.4	52.6	2.5	57.6	2.7	63

Technical Information

PAS5308 Part 1

PAS5308 Cable Part 1 Color Code
PAS5308 Cable Part 1 Ordering Code

PA5308 Part 2

PAS5308 Cable Part 2 Color Code
PAS5308 Cable Part 2 Ordering Code

PAS 5308 Part 1 Colour code

PAS 5308 Part 1 Colour Identification

Pair No.	a-wire	b-wire	Pair No.	a-wire	b-wire
1	Black	Blue	26	White	Yellow
2	Black	Green	27	Red	Yellow
3	Blue	Green	28	Orange	Yellow
4	Black	Brown	29	Black	Grey
5	Blue	Brown	30	Blue	Grey
6	Green	Brown	31	Green	Grey
7	Black	White	32	Brown	Grey
8	Blue	White	33	White	Grey
9	Green	White	34	Red	Grey
10	Brown	White	35	Orange	Grey
11	Black	Red	36	Yellow	Grey
12	Blue	Red	37	Black	Violet
13	Green	Red	38	Blue	Violet
14	Brown	Red	39	Green	Violet
15	White	Red	40	Brown	Violet
16	Black	Orange	41	White	Violet
17	Blue	Orange	42	Red	Violet
18	Green	Orange	43	Orange	Violet
19	Brown	Orange	44	Yellow	Violet
20	White	Orange	45	Grey	Violet
21	Red	Orange	46	Black	Turquoise
22	Black	Yellow	47	Blue	Turquoise
23	Blue	Yellow	48	Green	Turquoise
24	Green	Yellow	49	Brown	Turquoise
25	Brown	Yellow	50	White	Turquoise

Single Quad (2 pair) without individual screens are colour coded in clockwise order of rotation: Black, Blue, Green and Brown

They can also be coded as following:

a) Unscreened pairs

They can also be identified by means of a polyester tape over black and white pairs or, on agreement between the customer and manufacturer, one black and one blue core. Each core shall also be dentified through marking by inscription of a number on the core's insulation in accordance with BS EN 50334. Both cores in a pair shall be marked with the same number.

b) Individually screened pairs

They can also be identified by means of a polyester tape over black and blue pairs or, on agreement between the customer and manufacturer,one black and one white core. Each pair shall be covered in a numbered polyester film. The numbering shall be such that each pair is distinguishable from any other pairs in the cable. The distance between each number shall not be greater than 50 mm.

PAS 5308 Part 1- PE Insulated

VDE Reference Code

PVC Sheath Version:

RE-2Y(St)Y (Overall Screen)

RE-2Y(St)Y PiMF(Individual Screen+Overall Screen)

RE-2Y(St)Y-SWA-Y(Overall Screen+Steel Wire Amour)

RE-2Y(St)Y PiMF-SWA-Y(Individual Screen+Overall Screen+Steel Wire Amour)

Ordering Code

CCA -BC-DEFGH-IJ-K-LM

A- Cable Series

FSN=FIRESCREEN

B- Screen Type

US=Unscreen; OS=Overall Screen

IS=Individual Pair Screen;

IOS=Individual Pair Screen and Overall Screen;

FRUS=Fire Resistant Unscreen;

FROS=Fire Resistant Overall Screen;

FRIS=Fire Resistant Individual Pair Screen;

FRIOS=Fire Resistant Individual Pair Screen+Overall Screen

C- Rated Voltage

115=115/300V; 300=300/500V; 450=450/750V; 600=600/1000V

D- Insulation

2X= XLPE; Y= PVC; 2Y= PE;

H= LSHF; O2Y= Foam PE

E- Screening

ST=Aluminum / Polyester Tape

PIMF=Pair Shield with Aluminum/Polyester Tape

PIC= Pair Shield with Copper Braid

F- Inner Sheath/ Bedding

Y= PVC; 2Y= PE; H= LSHF

G- Armouring

SWA=steel wire armour; STA=steel tape armour; SWB=steel wire braid;

DSTA= double steel tape armour

H- Sheath

Y= PVC; Yu= FR-PVC;

Yv=Reinforced PVC; 2Y= PE;

H=LSHF

I- No.of cores/Pairs/Triads/Quads

2C=2cores; 3C=3cores; 4C=4cores

J- Cross Section Area/Wire Gauge

1.5S=1.5mm^2; 2.5=2.5mm^2

1.91S(39/0.21)=1.91 mm2 (39/0.21mm)

24A(7)=24 AWG(7Strand)

24A(16/0.2)=24 AWG(16/0.2mm)

K- Standard(option)

530811=PAS5308-1 Type1; 530812=PAS5308-1 Type2; 530813=PAS5308-1 Type3;

530821=PAS5308-2 Type1; 530822=PAS5308-2 Type2;

L- Fire Propagation Level(option)

1=IEC60332-1; 3C=IEC60332-3C; 3A=IEC60332-3A

M- Fire Resistant Level(option)

331=IEC 60331; 6387CWZ=BS 6387 CWZ

Ordering Options:

1) Conductor:Bare or Tinned Copper

2) Conductor Size: BS 6360/EN 60228

Size	Class 1	Class 2	Class 5	Class 6
0.5mm^2	1/0.8mm	7/0.3mm	16/0.2mm	28/0.15mm
0.75mm^2		7/0.37mm	24/0.2mm	42/0.15mm
1.0mm^2	1/1.13mm	7/0.44mm	32/0.2mm	56/0.15mm
1.5mm^2		7/0.53mm	30/0.25mm	84/0.15mm
2.5mm^2		7/0.67mm	50/0.25mm	140/0.15mm

3)Conductor Resistance: BS 6360/EN 60228

Nominal cross-section area	Plain copper conductor wires (Ohm/km)		Tinned copper conductor wires (Ohm/km)	
mm^2	class 1 and 2	Class 5 and 6	class 1 and 2	Class 5 and 6
0.5mm^2	36	39	36.7	40.1
0.75mm^2	24.5	26	24.8	26.7
1.0mm^2	18.1	19.5	18.2	20
1.5mm^2	12.1	13.3	12.2	13.7
2.5mm^2	7.41	7.98	7.56	8.21

3) Insulation: PE/XLPE/LSF/LSOH

4) Screening: Aluminum Tape/Copper Braid

5) Cabling: Multicore/Multipair/Multitriple

6) Bedding/Sheath Material: PE /PVC/LSF/LSOH

7) Armouring: Steel Tape Amour/Steel Wire Amour

8) Fire Performance:

IEC 60332-1(for Flame Retardant PVC Sheath)

IEC 60332-3C(for Flame Retardant PVC/LSOH Sheath)

IEC 61034 Part 1&Part 2 (LSOH Sheath)

IEC 60754 Part 1&Part 2 (5%-15%LSF Sheath & 0.5%LSOH Sheath)

Oxygen Index(32%-40% depending on different LSOH compound)

Temperature Index(250˚C-300˚C,depending on different LSOH compound)

IEC 60331 (for Fire Resistant Type)

PAS 5308 Part 2 Colour code

PAS 5308 Part 2 Colour Identification

Pair No.	a-wire	b-wire	Pair No.	a-wire	b-wire
1	White	Blue	26	Red Blue	Blue
2	White	Orange	27	Red Blue	Orange
3	White	Green	28	Red Blue	Green
4	White	Brown	29	Red Blue	Brown
5	White	Grey	30	Red Blue	Grey
6	Red	Blue	31	Blue Black	Blue
7	Red	Orange	32	Blue Black	Orange
8	Red	Green	33	Blue Black	Green
9	Red	Brown	34	Blue Black	Brown
10	Red	Grey	35	Blue Black	Grey
11	Black	Blue	36	Yellow Blue	Blue
12	Black	Orange	37	Yellow Blue	Orange
13	Black	Green	38	Yellow Blue	Green
14	Black	Brown	39	Yellow Blue	Brown
15	Black	Grey	40	Yellow Blue	Grey
16	Yellow	Blue	41	White Orange	Blue
17	Yellow	Orange	42	White Orange	Orange
18	Yellow	Green	43	White Orange	Green
19	Yellow	Brown	44	White Orange	Brown
20	Yellow	Grey	45	White Orange	Grey
21	White Blue	Blue	46	Orange Red	Blue
22	White Blue	Orange	47	Orange Red	Orange
23	White Blue	Green	48	Orange Red	Green
24	White Blue	Brown	49	Orange Red	Brown
25	White Blue	Grey	50	Orange Red	Grey

*For bi- coloured cores the first colour is the base colour

Single Quad (2 pair) without individual screens are colour coded in clockwise order of rotation: Black, Blue, Green and Brown

They can also be coded as following:

a) Unscreened pairs

They can also be identified by each pair in the cable having one black and one blue core. Each core shall also be identified through marking by inscription of a number on the core's insulation in accordance with BS EN 50334. Both cores in a pair shall be marked with the same number.

b) Individually screened pairs

They can also be identified by each pair in the cable having one black and one blue core.Each pair shall be covered in a numbered polyester film. The numbering shall be such that each pair is distinguishable from any other pairs in the cable. The distance between each number shall not be greater than 50 mm.

For multicore cables

Up to 40 cores

All cores shall be yellow and numbered 1 to 40 with both printed numbers and written word, in black, e.g. core 10 would be yellow and identified by number "10, TEN" in black.

41 to 80 cores

All cores shall be black and numbered 1 to 40 with both printed numbers and written word, in a contrasting colour, e.g. core 50 would be coloured black and identified by number "10, TEN" in yellow or white.

PAS 5308 Part 2- PVC Insulated

VDE Reference Code

PVC SheathType:

RE-Y(St)Y (Overall Screen)

RE-Y(St)Y PiMF(Individual Screen+Overall Screen)

RE-Y(St)Y-SWA(Overall Screen+Steel Wire Amour)

RE-Y(St)Y PiMF-SWA(Individual Screen+Overall Screen+Steel Wire Amour)

Ordering Code

CCA-BC-DEFGH-IJ-K-LM

A- Cable Series

FSN=FIRESCREEN

B- ScreenType

US=Unscreen; OS=Overall Screen; IS=Individual Pair Screen;

IOS=Individual Pair Screen+Overall Screen; FRUS=Fire Resistant Unscreen;

FROS=Fire Resistant Overall Screen; FRIS=Fire Resistant Individual Pair Screen;

FRIOS=Fire Resistant Individual Pair Screen+Overall Screen

C- Rated Voltage

115=115/300V; 300=300/500V;

450=450/750V; 600=600/1000V

D- Insulation

2X=XLPE; Y=PVC; 2Y=PE;

H=LSOH; O2Y=Foam PE

E- Screening

ST=Aluminum/Polyester Tape

PIMF=Pair Shielded with Aluminum/Polyester Tape

PIC=Pair Shielded with Copper Screen

F- Sheath

Y=PVC; 2Y=PE; H=LSOH

G- Armouring

SWA=Steel Wire Armour;STA= Steel Tape Armour; SWB= Steel Wire Braid Armour;

DSTA= Double Steel Tape Armour

H- Sheath

Y= PVC; Yu= FR-PVC;

Yv=Reinforced PVC; 2Y= PE;

H=LSHF

I- No.of cores/Pairs/Triads/Quads

2C=2cores; 3C=3cores; 4C=4cores

J- Cross Section Area/Wire Gauge

1.5S=1.5mm^2;2.5=2.5mm^2

1.91S(39/0.21)=1.91 mm^2 (39/0.21mm)

24A(7)=24 AWG(7Strand)

24A(16/0.2)=24 AWG(16/0.2mm)

K- Standard(option)

530811=PAS5308-1 Type1; 530812=PAS5308-1 Type2;

530821=PAS5308-2 Type1; 530822=PAS5308-2 Type2;

L- Fire Propagation Level(option)

1=IEC60332-1; 3C=IEC 60332-3C; 3A=IEC60332-3A

M- Fire Resistant Level(option)

331=IEC 60331; 6387CWZ=BS 6387 CWZ

Ordering Options:

1) Conductor:Bare or Tinned Copper

2) Conductor Size: BS 6360/EN 60228

Size	Class 1	Class 2	Class 5	Class 6
0.5mm^2	1/0.8mm	7/0.3mm	16/0.2mm	28/0.15mm
0.75mm^2		7/0.37mm	24/0.2mm	42/0.15mm
1.0mm^2	1/1.13mm	7/0.44mm	32/0.2mm	56/0.15mm
1.5mm^2		7/0.53mm	30/0.25mm	84/0.15mm
2.5mm^2		7/0.67mm	50/0.25mm	140/0.15mm

3)Conductor Resistance: BS 6360/EN 60228

Nominal cross-section area	Plain copper conductor wires (Ohm/km)		Tinned copper conductor wires (Ohm/km)	
mm^2	class 1 and 2	Class 5 and 6	class 1 and 2	Class 5 and 6
0.5mm^2	36	39	36.7	40.1
0.75mm^2	24.5	26	24.8	26.7
1.0mm^2	18.1	19.5	18.2	20
1.5mm^2	12.1	13.3	12.2	13.7
2.5mm^2	7.41	7.98	7.56	8.21

4)Insulation: PVC/XLPE/LSF/LSOH

5)Screening: Aluminum Tape/Copper Braid

6)Cabling: Multicore/Multipair/Multitriple

7)Bedding/Sheath Material: PVC/LSF/LSOH(PVC/LSF/LSHF)

8)Armouring: Steel Tape Amour/Steel Wire Amour

9)Fire Performance:

IEC 60332-1 (for Flame Retardant PVC)

IEC 60332-3C (for Flame Retardant PVC/LSOH Sheath)

IEC 61034 Part 1&Part 2 (for LSOH Sheath)

IEC 60754 Part 1&Part 2 (5%-15%LSF Sheath & 0.5%LSOH Sheath)

Oxygen Index (32%-40% depending on different LSOH compound)

Temperature Index (250˚C-300˚C,depending on different LSOH compound)

IEC 60331 (for Fire Resistant Type)

Caledonian Cables Ltd

Merchant Ind. Centre
Mill-Lane, Laughton, Lewes, Sussex, BN8 6AJ
England
United Kingdom
Tel: 44- 207- 4195087
Fax: 44- 207- 8319489
Email: *sales@caledonian-cables.com*
sales@caledonian-cables.co.uk
sales@addison-cables.com