



ABHAR WIRE + CABLE CO.



ISO 9002
Certificate No.
QS-1147HH



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Dutch Council for
Accreditation






Instrumentation cables

Instrumentation cables are used to transmit and receive control system, analogue and digital signals to and from sensors and equipments.

These cables mostly operate at voltage levels of 24 to 110 v and/ or at 4-20 mA current rating. Instrumentation cables should be isolated from external electrical interferences.

 manufactures a wide variety of instrumentation cables suitable for use in different types of industries, especially power generation and distribution plants and the petrochemical industries.

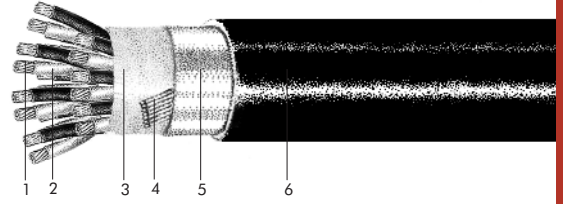
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Cu/PVC/OSCR/PVC

BS 5308-2**Description:**

Unarmoured instrumentation cable with copper conductor & PVC insulation, cores form pairs, pairs twisted in concentric layers, overall screen.



No. of Cores & Cross Section +No. of Drain Wires & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1 x 2 x 1 + 1 x 0.5 RM	0.6	0.8	7.8	65
2 x 2 x 1 + 1 x 0.5 RM	0.6	0.9	12.0	119
4 x 2 x 1 + 1 x 0.5 RM	0.6	1.1	14.3	203
6 x 2 x 1 + 1 x 0.5 RM	0.6	1.2	17.4	288
12 x 2 x 1 + 1 x 0.5 RM	0.6	1.3	22.2	504
16 x 2 x 1 + 1 x 0.5 RM	0.6	1.5	25.5	669
24 x 2 x 1 + 1 x 0.5 RM	0.6	1.7	30.8	975
37 x 2 x 1 + 1 x 0.5 RM	0.6	2.0	37.8	1474
1 x 2 x 1.5 + 1 x 0.5 RM	0.6	0.8	8.3	78
2 x 2 x 1.5 + 1 x 0.5 RM	0.6	1.1	13.3	159
4 x 2 x 1.5 + 1 x 0.5 RM	0.6	1.2	15.8	259
6 x 2 x 1.5 + 1 x 0.5 RM	0.6	1.3	19.0	369
12 x 2 x 1.5 + 1 x 0.5 RM	0.6	1.5	24.4	668
16 x 2 x 1.5 + 1 x 0.5 RM	0.6	1.5	27.6	851
24 x 2 x 1.5 + 1 x 0.5 RM	0.6	1.7	33.5	1246
37 x 2 x 1.5 + 1 x 0.5 RM	0.6	2.0	41.1	1889

1-Stranded Circular or Solid Conductor 2-PVC Insulation 3-Polyester Tape 4-Tinned Drain Wire 5-Aluminium Polyester Tape 6-PVC Sheathing

(Colour: Black, for intrinsically Safe Systems Blue).

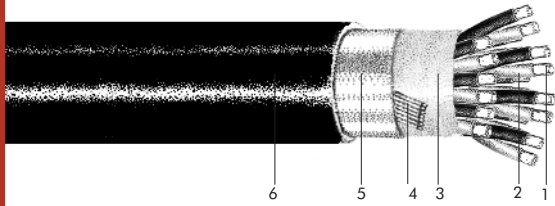
Maximum conductor temperature: 70°C

Drain wire identical to conductor cross-section is also available.

Electrical Data

Electrical Properties	Character	Unit	Values			
			0.5	0.75	1	1.5
Conductor size	nom.	mm ²	0.5	0.75	1	1.5
Conductor resistance	max.	ohm/km	36.8	26.5	18.4	12.3
Insulation resistance	min.	M ohm.km	25			
Mutual capacitance 1KHz	max.	nF/km	250			
Capacitance between any core or screen at 1 kHz	max.	nF/km	450			
L/R(ratio)	max.	μH/ohm	25	25	25	40
Test voltage U_{rms} core:core		V	1000			
U_{rms} core:screen		V	1000			
Rated voltage U_0/U	max.	V	300/500			

AC **ABHAR
CABLE**



BS 5308-1

Cu/XLPE/OSCR/PVC

Description:

Unarmoured instrumentation cable with copper conductor & XLPE insulation, cores form pairs, pairs twisted in concentric layers, overall screen.

No. of Cores & Cross Section + No. of Drain Wires & Cross Section mm ²	Insulation Thickness mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1 x 2 x 1.5 + 1 x 0.5 RE	0.6	0.8	7.8	71
2 x 2 x 1.5 + 1 x 0.5 RE	0.6	0.9	12.1	132
4 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.2	14.7	235
6 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.2	17.5	325
12 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.3	22.4	577
16 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.5	25.7	766
24 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.7	31.1	1120
37 x 2 x 1.5 + 1 x 0.5 RE	0.6	2.0	38.2	1696

1-Stranded Circular or Solid Conductor 2-XLPE Insulation 3-Polyester Tape 4-Tinned Drain Wire 5-Aluminium Polyester Tape 6-PVC Sheathing (Colour: Black, for intrinsically Safe Systems Blue).

Maximum conductor temperature: 90°C

Drain wire identical to conductor cross-section is also available.

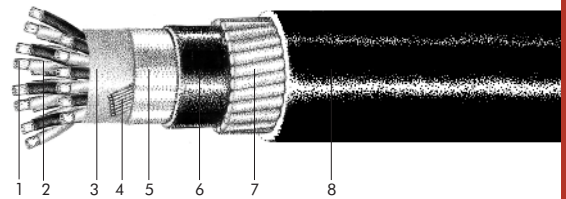
Electrical Data

Electrical Properties	Character	Unit	Values			
			0.5	0.75	1	1.5
Conductor size	nom.	mm ²	0.5	0.75	1	1.5
Conductor resistance	max.	ohm/km	36.8	26.5	18.4	12.3
Insulation resistance	min.	Mohm.km	5000			
Mutual capacitance 1KHz	max.	nF/km	75	75	75	85
Capacitance between any core or screen at 1 kHz	max.	pF/250m	250			
L/R(ratio)	max.	μH/ohm	25	25	25	40
Test voltage	U _{rms} core:core	V	1000			
	U _{rms} core:screen	V	1000			
Rated voltage	U ₀ /U	max.	300/500			



Description:

Wire armoured instrumentation cable with copper conductor & PVC insulation, cores form pairs, pairs twisted in concentric layers, overall screen.



No. of Cores & Cross Section +No. of Drain Wires & Cross Section mm ²	Insulation Thickness mm	Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1 x 2 x 1 + 1 x 0.5 RE	0.6	0.9	1.4	12.6	264
2 x 2 x 1 + 1 x 0.5 RE	0.6	0.9	1.5	16.7	416
4 x 2 x 1 + 1 x 0.5 RE	0.6	1.25	1.5	19.6	647
6 x 2 x 1 + 1 x 0.5 RE	0.6	1.25	1.6	22.8	822
12 x 2 x 1 + 1 x 0.5 RE	0.6	1.6	1.8	28.3	1348
16 x 2 x 1 + 1 x 0.5 RE	0.6	1.6	1.8	30.9	1577
24 x 2 x 1 + 1 x 0.5 RE	0.6	2.0	2.0	37.0	2333
37 x 2 x 1 + 1 x 0.5 RE	0.6	2.0	2.1	43.6	3067
1 x 2 x 1.5 + 1 x 0.5 RE	0.6	0.9	1.4	13.1	290
2 x 2 x 1.5 + 1 x 0.5 RE	0.6	0.9	1.5	17.6	457
4 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.25	1.5	20.9	739
6 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.6	1.7	24.9	1085
12 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.6	1.8	30.0	1545
16 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.6	1.9	33.5	1877
24 x 2 x 1.5 + 1 x 0.5 RE	0.6	2.0	2.1	40.1	2772
37 x 2 x 1.5 + 1 x 0.5 RE	0.6	2.0	2.2	47.4	3732

1-Stranded Circular or Solid Conductor 2-PVC Insulation 3-Polyester Tape 4-Tinned Drain Wire 5-Aluminium Polyester Tape 6-Extruded Bedding PVC

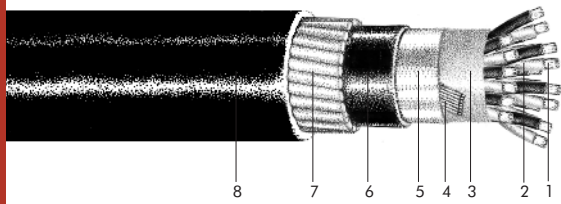
7-Galvanized Steel Wire Armour 8-PVC Sheathing (Colour: Black, for intrinsically Safe Systems Blue).

Maximum conductor temperature: 70°C

Drain wire identical to conductor cross-section is also available.

Electrical Data

Electrical Properties	Character	Unit	Values			
			0.5	0.75	1	1.5
Conductor size	nom.	mm ²	0.5	0.75	1	1.5
Conductor resistance	max.	ohm/km	36.8	26.5	18.4	12.3
Insulation resistance	min.	M ohm.km	25			
Mutual capacitance 1KHz	max.	nF/km	250			
Capacitance between any core or screen at 1 kHz	max.	pF/km	450			
L/R(ratio)	max.	μH/ohm	25	25	25	40
Test voltage U _{rms} core:core		V	1000			
U _{rms} core:screen		V	1000			
Rated voltage U ₀ /U	max.	V	300/500			



BS 5308-1

Cu/XLPE/OSCR/Bd/SWA/PVC

Description:

Wire armoured instrumentation cable with copper conductor & XLPE insulation, cores form pairs, pairs twisted in concentric layers, overall screen.

No. of Cores & Cross Section +No. of Drain Wires & Cross Section mm ²	Insulation Thickness mm	Armour Diameter mm	Sheath Thickness mm	Cable Diameter Approx. mm	Total Weight Approx. kg/km
1 x 2 x 1.5 + 1 x 0.5 RE	0.6	0.9	1.4	13.1	288
2 x 2 x 1.5 + 1 x 0.5 RE	0.6	0.9	1.5	17.6	453
4 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.25	1.5	20.9	730
6 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.6	1.7	24.9	1071
12 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.6	1.8	30.0	1515
16 x 2 x 1.5 + 1 x 0.5 RE	0.6	1.6	1.9	33.5	1836
24 x 2 x 1.5 + 1 x 0.5 RE	0.6	2.0	2.1	40.1	2710
37 x 2 x 1.5 + 1 x 0.5 RE	0.6	2.0	2.2	47.4	3635

1-Stranded Circular or Solid Conductor 2-XLPE Insulation 3-Polyester Tape 4-Tinned Drain Wire 5-Aluminium Polyester Tape 6-Extruded Bedding PVC

7-Galvanized Steel Wire Armour 8-PVC Sheathing (Colour: Black, for intrinsically Safe Systems Blue).

Maximum conductor temperature: 90°C

Drain wire identical to conductor cross-section is also available.

Electrical Data

Electrical Properties	Character	Unit	Values			
			0.5	0.75	1	1.5
Conductor size	nom.	mm ²	0.5	0.75	1	1.5
Conductor resistance	max.	ohm/km	36.8	26.5	18.4	12.3
Insulation resistance	min.	M ohm.km	5000			
Mutual capacitance 1KHz	max.	nF/km	75	75	75	85
Capacitance between any core or screen at 1 kHz	max.	pF/250m	250			
L/R(ratio)	max.	µH/ohm	25	25	25	40
Test voltage	U _{rms} core:core	V	1000			
	U _{rms} core:screen	V	1000			
Rated voltage	U ₀ /U	max.	300/500			



