

## POLYCAB INSTRUMENTATION CABLES CONFORMING TO BS EN 50288-7



The high growth of automation in process industry, especially process control across large user sites like oil refining and petrochemical plants, the steel industry, power stations etc. necessitates the reliable transmission of electrical signals, process data and control information.

Today, in a continuous process plants like refinery, fertilizer, cement, steel, etc. Various parameters like temperature, pressure flow, level etc are converted in to electrical signals which are fed to the control room. In control room these signals are analyzed and suitable commands are sent to the field to take corrective action. The control room has become the brain of the plant and instrumentation cables are the arteries.

Polycab's instrumentation cables are preferred choice by the majority of indian industry, leading EPC contractors, and electrical consultants.

The shielded and screened type of instrumentation cables designed and manufactured by POLYCAB, reduces the external noise pick up in the circuit, there by reduces the interference. These cables are also offered with GI armour wire for protected application.

POLYCAB is a leading manufacturer of a instrumentation cable having wide product range conforming to **BS EN 50288, UL 2250 (Certified) & BS 7629 (LPCB Approved)** and other different national and international specifications as well as customised specification which conforms to extreme fire properties under temperature rating from 60 deg to 105 deg.

Presently Polycab

**Caution:** Instrumentation cables are not designed for use with power supplies and should not be connected to then mains power.

**Conductor:** High conductivity annealed plain/tinned stranded copper conductor produced in-house from state-of-the art machine.

**Insulation:** In-house developed PVC/XLPE insulation compound having high insulation properties.

**Individual screen:** Shielding type for twisted pair/triad, Aluminium-Mylar tape with tinned copper drain wire. Drain wire will continuous contact with aluminum side of the tape. Shielding with ATC braiding can also be provided to meet the specific requirements.

**Pair/triad Identification:** Identification of pair/triad by number printing or by numbered polyster tape over each pair/triad. Also identification is available with different color coding.

**Collective screen:** Aluminium-Mylar tape along with tinned copper drain wire to be applied over the pair/triad assembly. Drain wire will continuous contact with aluminum side of the tape. Shielding with ATC braiding can also be provided to meet specific requirements.

**Inner Sheath:** In-house developed thermoplastic compound having low emission of smoke and corrosive gases when exposed to fire and also ensures circular shape of cable.

**Armour:** Galvanised Steel Round/stripe wire Armoured to give mechanical protection.

**Outer Sheath:** In-house developed thermoplastic compound having low emission of smoke and corrosive gases when exposed to fire.

Intrumentation Core 300V Ovr BS-50288



Intrumentation Core 500V Ovr BS-50288



Intrumentation Pair 300V Ind Ovr BS-50288



Intrumentation Pair 300V Ovr BS-50288



Intrumentation Pair 500V Ind Ovr BS-50288



Intrumentation Pair 500V Ovr BS-50288



Intrumentation Triad 300V Ind Ovr BS-50288



Intrumentation Triad 300V Ovr BS-50288



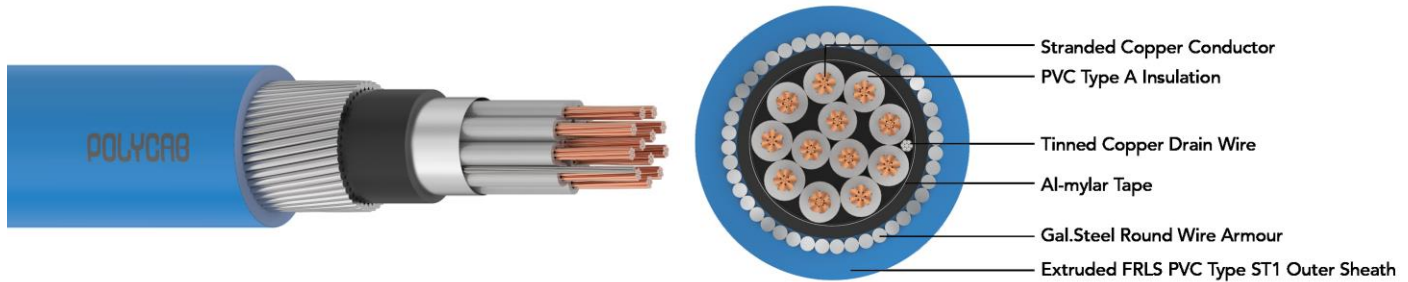
Intrumentation Triad 500V Ind Ovr BS-50288



Intrumentation Triad 500V Ovr BS-50288



**Instrumentation cable PVC/PE Insulated Overall shielded 300V**



**Application**

POLYCAB INSTRU 300 MC, insulated with PVC/PE, Overall, al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 300 MC cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

**Voltage Rating**

300 V

**Bending Radius**

12 x Overall diameter

**Operation Temperature**

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

**Standard and References**

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

**Construction**

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium /Polyester tape) with drain wire of tinned Cu/Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

**Compliance**

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.

**Core Identification**

White/Grey core with number printing.

**Outer sheath colour:** Black/Blue

**Note:** As per the application/identification requirement, other colour also available on request.



**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

**Weight & Dimension Data**

**300 VOLTS, MULTI CORE, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED OVERALL SHIELDED, ARMoured AND UNARMoured INSTRUMENTATION CABLES AS PER EN 50288-7.**

Area of conductor	No. of cores	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer sheath	Nominal Overall diameter	Approx. weight -PE insulation	Approx. weight -PVC insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight-PE insulation	Approx. weight -PVC insulation
Sqmm		mm	mm	mm	mm	mm	kg/Km	kg/Km	mm	mm	kg/Km	kg/Km
0.5	2	0.26	0.8	0.9	1.3	9.6	180	180	0.8	5.2	38	40
0.5	3	0.26	0.8	0.9	1.3	9.9	195	195	0.8	5.5	45	47
0.5	4	0.26	0.8	0.9	1.3	10.3	210	215	0.8	5.9	53	57
0.5	5	0.26	0.9	0.9	1.3	11.0	235	240	0.9	6.6	63	67
0.5	6	0.26	0.9	0.9	1.3	11.5	260	265	0.9	7.1	73	78
0.5	7	0.26	0.9	0.9	1.3	11.5	260	270	0.9	7.1	76	82
0.5	8	0.26	0.9	0.9	1.3	12.3	285	295	0.9	7.9	85	92
0.5	10	0.26	0.9	0.9	1.4	13.4	330	340	0.9	8.8	100	110
0.5	12	0.26	0.9	0.9	1.4	13.7	345	355	0.9	9.1	115	125
0.5	16	0.26	1.0	0.9	1.4	14.8	410	425	1.0	10.2	150	165
0.5	18	0.26	1.0	0.9	1.4	15.3	435	450	1.0	10.7	165	180
0.5	19	0.26	1.0	0.9	1.4	15.3	440	455	1.0	10.7	170	185
0.5	20	0.26	1.0	0.9	1.4	15.9	465	485	1.0	11.3	185	200
0.5	24	0.26	1.0	0.9	1.4	17.0	510	540	1.0	12.4	205	230
0.5	30	0.26	1.1	0.9	1.5	18.1	590	620	1.1	13.3	255	280
0.5	37	0.26	1.1	0.9	1.5	19.1	660	690	1.1	14.3	300	335
0.75	2	0.26	0.8	0.9	1.3	10.1	195	200	0.8	5.7	46	48
0.75	3	0.26	0.8	0.9	1.3	10.4	210	215	0.8	6	55	58
0.75	4	0.26	0.9	0.9	1.3	11.1	240	245	0.9	6.7	69	73
0.75	5	0.26	0.9	0.9	1.3	11.6	265	270	0.9	7.2	79	84
0.75	6	0.26	0.9	0.9	1.3	12.2	290	295	0.9	7.8	92	98
0.75	7	0.26	0.9	0.9	1.3	12.2	290	300	0.9	7.8	96	105
0.75	8	0.26	0.9	0.9	1.4	13.2	330	340	0.9	8.6	110	115
0.75	10	0.26	1.0	0.9	1.4	14.5	390	400	1.0	9.9	135	145
0.75	12	0.26	1.0	0.9	1.4	14.8	410	420	1.0	10.2	155	165
0.75	16	0.26	1.0	0.9	1.4	15.8	475	490	1.0	11.2	195	215
0.75	18	0.26	1.0	0.9	1.4	16.4	510	530	1.0	11.8	220	235
0.75	19	0.26	1.0	0.9	1.4	16.4	510	530	1.0	11.8	220	245
0.75	20	0.26	1.0	0.9	1.4	17.0	550	570	1.0	12.4	240	265
0.75	24	0.26	1.1	0.9	1.5	18.7	630	650	1.1	13.9	280	305

**OUR ACCREDITATION**



Instrumentation cable PVC/PE Insulated Overall shielded 300V

Area of conductor	No. of cores	Min.thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer sheath	Nominal Overall diameter	Approx. weight-PE insulation	Approx. weight-PVC insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight-PE insulation	Approx. weight-PVC insulation
Sqmm		mm	mm	mm	mm	mm	kg/Km	kg/Km	mm	mm	kg/Km	kg/Km
0.75	30	0.26	1.1	0.9	1.5	19.5	700	730	1.1	14.7	340	370
0.75	37	0.26	1.1	0.9	1.5	20.6	800	840	1.1	15.8	405	445
1	2	0.26	0.8	0.9	1.3	10.4	210	215	0.8	6	53	56
1	3	0.26	0.9	0.9	1.3	10.9	240	245	0.9	6.5	68	71
1	4	0.26	0.9	0.9	1.3	11.5	270	275	0.9	7.1	82	87
1	5	0.26	0.9	0.9	1.3	12.1	290	295	0.9	7.7	94	100
1	6	0.26	0.9	0.9	1.3	12.7	320	330	0.9	8.3	110	120
1	7	0.26	0.9	0.9	1.3	12.7	325	335	0.9	8.3	115	125
1	8	0.26	0.9	0.9	1.4	13.8	370	380	0.9	9.2	130	140
1	10	0.26	1	0.9	1.4	15.2	435	445	1	10.6	165	175
1	12	0.26	1	0.9	1.4	15.5	465	480	1	10.9	190	205
1	16	0.26	1	0.9	1.4	16.7	540	560	1	12.1	240	260
1	18	0.26	1	0.9	1.4	17.3	580	610	1	12.7	270	290
1	19	0.26	1	0.9	1.4	17.3	590	610	1	12.7	275	300
1	20	0.26	1.1	0.9	1.5	18.4	650	670	1.1	13.6	305	330
1	24	0.26	1.1	0.9	1.5	19.8	720	750	1.1	15	350	380
1	30	0.26	1.1	0.9	1.5	20.6	810	850	1.1	15.8	420	455
1	37	0.26	1.2	0.9	1.5	22.1	940	980	1.2	17.3	510	560
1.5	2	0.35	0.9	0.9	1.3	11.6	260	265	0.9	7.2	74	78
1.5	3	0.35	0.9	0.9	1.3	12	285	290	0.9	7.6	92	97
1.5	4	0.35	0.9	0.9	1.4	12.9	330	335	0.9	8.3	115	120
1.5	5	0.35	0.9	0.9	1.4	13.6	360	370	0.9	9	130	140
1.5	6	0.35	1	0.9	1.4	14.6	415	425	1	10	160	170
1.5	7	0.35	1	0.9	1.4	14.6	420	435	1	10	170	180
1.5	8	0.35	1	0.9	1.4	15.8	470	485	1	11.2	190	205
1.5	10	0.35	1.1	0.9	1.5	17.6	560	580	1.1	12.8	235	255
1.5	12	0.35	1.1	0.9	1.5	18	600	630	1.1	13.2	275	295
1.5	16	0.35	1.1	0.9	1.5	19.4	710	740	1.1	14.6	350	380
1.5	18	0.35	1.1	0.9	1.5	20.2	780	810	1.1	15.4	395	425
1.5	19	0.35	1.1	0.9	1.5	20.2	790	820	1.1	114	400	438
1.5	20	0.35	1.2	0.9	1.5	21.2	850	890	1.2	16.4	445	480
1.5	24	0.35	1.2	1.25	1.6	23.9	1090	1140	1.2	18.2	510	550

OUR ACCREDITATION



**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

Area of conductor	No. of cores	Min.thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nomin al thickness of inner sheath	Diamet er of G.I.arm our wire	Nomin al thickness of outer sheath	Nomin al Overall diameter	Approx . weight- PE insulati on	Approx . weight -PVC insulati on	Nomin al thickness of outer sheath	Nomin al overall diameter	Approx . weight- PE insulati on	Approx . weight -PVC insulati on
Sqmm		mm	Mm	mm	mm	mm	kg/Km	kg/Km	mm	mm	kg/Km	kg/Km
1.5	30	0.35	1.3	1.25	1.6	25.1	1250	1300	1.3	19.4	630	680
1.5	37	0.35	1.3	1.25	1.7	26.9	1430	1500	1.3	21	750	820

For Cables of sizes or cores not listed above the product data is available on request  
Dimensions & Weights are representative figures and may vary

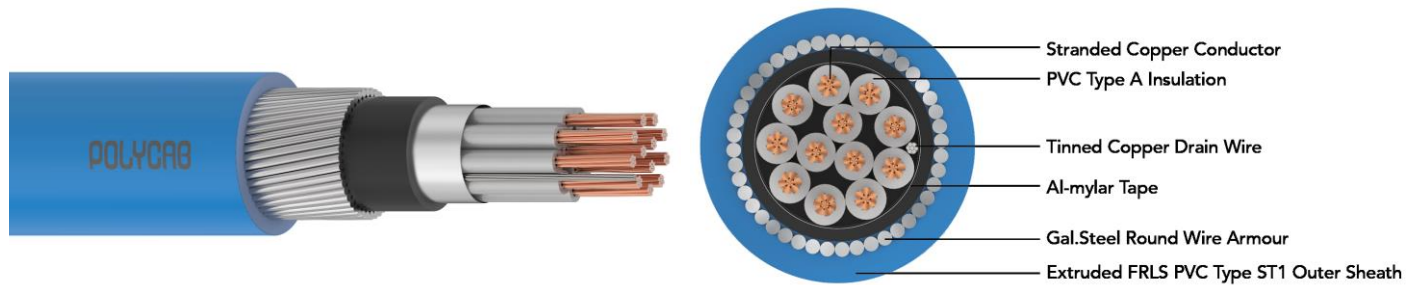
**Electrical Parameter**

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 500V**



**Application**

POLYCAB INSTRU 500 MC, insulated with PVC/PE, Overall, al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 500 MC cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

**Voltage Rating**

500 V

**Bending Radius**

12 x Overall diameter

**Operation Temperature**

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

**Standard and References**

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

**Construction**

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium /Polyester tape) with drain wire of tinned Cu/Tinned copper braiding
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

**Compliance**

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



**Core Identification**

White/Grey core with number printing.

**Outer sheath colour:** Black/Blue

**Note:** As per the application/identification requirement, other colour also available on request.

**OUR ACCREDITATION**









**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

**Weight & Dimension Data**

**500 VOLTS, MULTI CORE, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED OVERALL SHIELDED, ARMoured AND UNARMoured INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of core	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall Diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
0.5	2	0.44	0.9	0.9	1.3	10.6	215	215	0.9	6.2	48	52
0.5	3	0.44	0.9	0.9	1.3	11.0	230	235	0.9	6.6	56	61
0.5	4	0.44	0.9	0.9	1.3	11.5	255	260	0.9	7.1	67	73
0.5	5	0.44	0.9	0.9	1.3	12.1	270	280	0.9	7.7	75	83
0.5	6	0.44	0.9	0.9	1.4	12.9	305	315	0.9	8.3	87	97
0.5	7	0.44	0.9	0.9	1.4	12.9	305	315	0.9	8.3	89	100
0.5	8	0.44	1.0	0.9	1.4	14.1	345	360	1.0	9.5	105	120
0.5	10	0.44	1.0	0.9	1.4	15.2	395	410	1.0	10.6	125	140
0.5	12	0.44	1.0	0.9	1.4	15.6	420	435	1.0	11.0	140	160
0.5	16	0.44	1.0	0.9	1.4	16.7	480	500	1.0	12.1	180	205
0.5	18	0.44	1.1	0.9	1.5	17.7	530	560	1.1	12.9	205	235
0.5	19	0.44	1.1	0.9	1.5	17.7	530	560	1.1	12.9	205	235
0.5	20	0.44	1.1	0.9	1.5	18.4	570	600	1.1	13.6	225	260
0.5	24	0.44	1.1	0.9	1.5	19.8	630	670	1.1	15.0	255	295
0.5	30	0.44	1.2	0.9	1.5	20.9	710	760	1.2	16.1	310	360
0.5	37	0.44	1.2	0.9	1.6	22.3	800	860	1.2	17.3	370	425
0.75	2	0.44	0.9	0.9	1.3	11.1	230	235	0.9	6.7	57	60
0.75	3	0.44	0.9	0.9	1.3	11.4	245	255	0.9	7.0	67	72
0.75	4	0.44	0.9	0.9	1.3	12.0	275	285	0.9	7.6	81	88
0.75	5	0.44	0.9	0.9	1.4	12.9	305	315	0.9	8.3	91	100
0.75	6	0.44	0.9	0.9	1.4	13.6	340	350	0.9	9.0	110	120
0.75	7	0.44	0.9	0.9	1.4	13.6	340	355	0.9	9.0	110	125
0.75	8	0.44	1.0	0.9	1.4	14.8	390	405	1.0	10.2	130	145
0.75	10	0.44	1.0	0.9	1.4	16.1	440	460	1.0	11.5	155	175
0.75	12	0.44	1.0	0.9	1.4	16.4	470	495	1.0	11.8	180	200
0.75	16	0.44	1.1	0.9	1.5	18.1	570	590	1.1	13.3	235	260
0.75	18	0.44	1.1	0.9	1.5	18.8	610	640	1.1	14.0	260	295
0.75	19	0.44	1.1	0.9	1.5	18.8	610	650	1.1	14.0	265	300
0.75	20	0.44	1.1	0.9	1.5	19.5	660	690	1.1	14.7	290	325
0.75	24	0.44	1.2	0.9	1.6	21.5	750	800	1.2	16.5	335	375
0.75	30	0.44	1.2	1.25	1.6	23.1	960	1010	1.2	17.4	400	455
0.75	37	0.44	1.3	1.25	1.6	24.7	1090	1160	1.3	19.0	485	550
1.0	2	0.44	0.9	0.9	1.3	11.4	245	250	0.9	7.0	65	69
1.0	3	0.44	0.9	0.9	1.3	11.8	265	270	0.9	7.4	78	84
1.0	4	0.44	0.9	0.9	1.3	12.5	295	JOS	0.9	8.1	94	100

**OUR ACCREDITATION**





**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

Area of conductor	No. of core	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall Diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
1.0	5	0.44	0.9	0.9	1.4	13.4	330	340	0.9	8.8	105	115
1.0	6	0.44	1.0	0.9	1.4	14.3	380	390	1.0	9.7	130	145
1.0	7	0.44	1.0	0.9	1.4	14.3	385	395	1.0	9.7	135	150
1.0	8	0.44	1.0	0.9	1.4	15.4	425	440	1.0	10.8	155	170
1.0	10	0.44	1.0	0.9	1.4	16.8	490	510	1.0	12.2	185	205
1.0	12	0.44	1.1	0.9	1.5	17.6	540	570	1.1	12.8	220	245
1.0	16	0.44	1.1	0.9	1.5	18.9	640	670	1.1	14.1	280	315
1.0	18	0.44	1.1	0.9	1.5	19.7	690	720	1.1	14.9	315	350
1.0	19	0.44	1.1	0.9	1.5	19.7	690	710	1.1	14.9	320	360
1.0	20	0.44	1.1	0.9	1.5	20.5	740	780	1.1	15.7	350	390
1.0	24	0.44	1.2	0.9	1.6	22.6	850	900	1.2	17.6	405	455
1.0	30	0.44	1.2	1.25	1.6	24.3	1080	1140	1.2	18.6	485	550
1.0	37	0.44	1.3	1.25	1.6	26.0	1230	1310	1.3	20.3	590	670
1.5	2	0.44	0.9	0.9	1.3	12.0	275	280	0.9	7.6	79	84
1.5	3	0.44	0.9	0.9	1.4	12.7	305	315	0.9	8.1	97	105
1.5	4	0.44	0.9	0.9	1.4	13.4	345	355	0.9	8.8	120	130
1.5	5	0.44	1.0	0.9	1.4	14.4	390	400	1.0	9.8	140	155
1.5	6	0.44	1.0	0.9	1.4	15.2	435	450	1.0	10.6	170	180
1.5	7	0.44	1.0	0.9	1.4	15.2	445	460	1.0	10.6	175	195
1.5	8	0.44	1.0	0.9	1.4	16.5	495	510	1.0	11.9	200	220
1.5	10	0.44	1.1	0.9	1.5	18.4	590	610	1.1	13.6	250	275
1.5	12	0.44	1.1	0.9	1.5	18.8	640	670	1.1	14.0	285	315
1.5	16	0.44	1.2	0.9	1.5	20.5	770	810	1.2	15.7	380	415
1.5	18	0.44	1.2	0.9	1.6	21.6	840	880	1.2	16.6	420	465
1.5	19	0.44	1.2	0.9	1.6	21.6	850	890	1.2	16.6	430	475
1.5	20	0.44	1.2	1.25	1.6	23.2	1040	1080	1.2	17.5	470	520
1.5	24	0.44	1.3	1.25	1.6	25.3	1170	1220	1.3	19.6	540	600
1.5	30	0.44	1.3	1.25	1.7	26.6	1320	1390	1.3	20.7	660	730
1.5	37	0.44	1.4	1.25	1.7	28.5	1520	1610	1.4	22.6	800	890
2.5	2	0.53	1.0	0.9	1.4	13.6	345	350	1.0	9.0	115	120
2.5	3	0.53	1.0	0.9	1.4	14.2	385	395	1.0	9.6	140	150
2.5	4	0.53	1.0	0.9	1.4	15.1	435	450	1.0	10.5	175	190
2.5	5	0.53	1.0	0.9	1.4	16.0	485	500	1.0	11.4	200	220
2.5	6	0.53	1.1	0.9	1.5	17.4	570	590	1.1	12.6	245	265
2.5	7	0.53	1.1	0.9	1.5	17.4	580	610	1.1	12.6	260	285
2.5	8	0.53	1.1	0.9	1.5	19.0	650	680	1.1	14.2	295	325
2.5	10	0.53	1.2	0.9	1.6	21.2	780	820	1.2	16.2	370	405
2.5	12	0.53	1.2	0.9	1.6	21.8	850	890	1.2	16.8	430	470
2.5	16	0.53	1.3	1.25	1.6	24.5	1160	1220	1.3	18.8	560	620
2.5	18	0.53	1.3	1.25	1.7	25.7	1270	1330	1.3	19.8	630	690

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

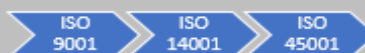
Area of conductor	No. of core	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall Diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
<b>sqmm</b>		<b>mm</b>	<b>mm</b>	<b>mm</b>	<b>mm</b>	<b>mm</b>	<b>kg/km</b>	<b>kg/km</b>	<b>mm</b>	<b>mm</b>	<b>kg/km</b>	<b>kg/km</b>
2.5	19	0.53	1.3	1.25	1.7	25.7	1290	1350	1.3	19.8	650	710
2.5	20	0.53	1.3	1.25	1.7	26.9	1380	1450	1.3	21.0	700	770
2.5	24	0.53	1.4	1.25	1.7	29.3	1570	1650	1.4	23.4	820	900
2.5	30	0.53	1.5	1.25	1.8	31.1	1810	1910	1.5	25.0	1010	1110
2.5	37	0.53	1.5	1.25	1.8	33.1	2080	2200	1.5	27.0	1210	1330

For Cables of sizes or cores not listed above the product data is available on request  
Dimensions & Weights are representative figures and may vary

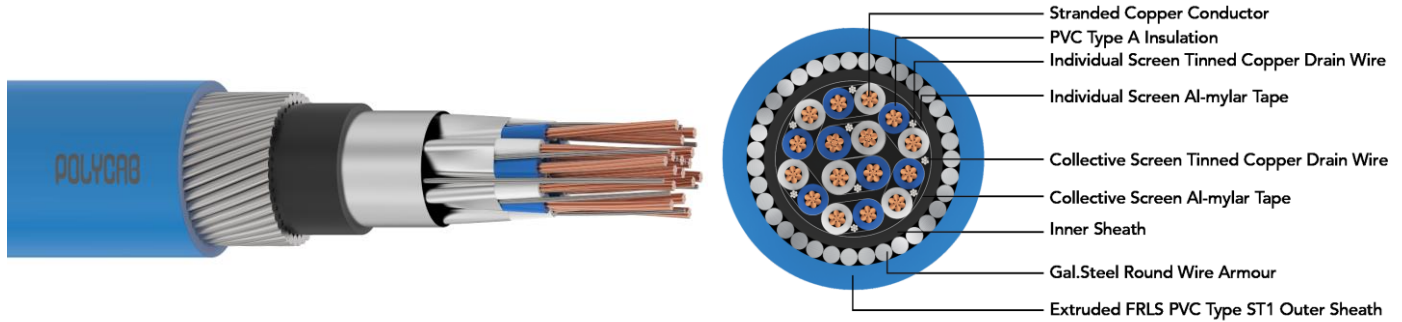
**Electrical Parameter**

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
<b>Sqmm</b>	<b>Ohm/km</b>	<b>Ohm/km</b>	<b>MΩ/Km</b>	<b>MΩ/Km</b>	<b>nf/Km</b>	<b>μH/Ω</b>
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V**



**Application**

POLYCAB INSTRU 300MP, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable conforming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 300MP cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

**Voltage Rating**

300 V

**Bending Radius**

12 x Overall diameter

**Operation Temperature**

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

**Standard and References**

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

**Construction**

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET (Aluminium/Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

**Compliance**

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



**Core Identification**

White & Blue for Pair

**Outer sheath colour:** Black/Blue

**Note:** As per the application/identification requirement, other colour also available on request.

**OUR ACCREDITATION**

**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V**

**Weight & Dimension Data**

**300 VOLTS, MULTI PAIR, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED INDIVIDUAL & OVERALL SHIELDED, ARMoured AND UNARMoured INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of pair	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.l. armour wire	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PVC insulation	Approx. weight - PVC insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PVC insulation	Approx. weight - PVC insulation
Sqmm		mm	mm	mm	mm	Mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
0.5	2	0.26	0.9	0.9	1.4	13.2	300	305	0.9	8.6	79	83
0.5	4	0.26	1.0	0.9	1.4	14.8	385	390	1.0	10.2	130	135
0.5	5	0.26	1.0	0.9	1.4	15.7	430	440	1.0	11.1	155	165
0.5	6	0.26	1.0	0.9	1.4	16.7	480	490	1.0	12.1	180	190
0.5	8	0.26	1.1	0.9	1.5	18.6	580	590	1.1	13.8	230	245
0.5	10	0.26	1.1	0.9	1.5	20.4	670	680	1.1	15.6	280	300
0.5	12	0.26	1.2	0.9	1.5	21.1	730	750	1.2	16.3	330	350
0.5	16	0.26	1.2	1.25	1.6	23.8	1000	1030	1.2	18.1	420	445
0.5	18	0.26	1.3	1.25	1.6	24.9	1080	1120	1.3	19.2	470	500
0.5	19	0.26	1.3	1.25	1.6	24.9	1100	1140	1.3	19.2	490	530
0.5	20	0.26	1.3	1.25	1.7	26.2	1170	1210	1.3	20.3	520	550
0.5	24	0.26	1.4	1.25	1.7	28.6	1340	1390	1.4	22.7	620	660
0.5	30	0.26	1.4	1.25	1.7	30.0	1510	1570	1.4	24.1	750	800
0.5	37	0.26	1.5	1.25	1.8	32.3	1760	1830	1.5	26.2	910	980
0.75	2	0.26	1.0	0.9	1.4	14.1	345	350	1.0	9.5	98	100
0.75	4	0.26	1.0	0.9	1.4	15.7	435	440	1.0	11.1	155	165
0.75	5	0.26	1.0	0.9	1.5	16.9	495	500	1.0	12.1	185	195
0.75	6	0.26	1.1	0.9	1.5	18.2	560	570	1.1	13.4	225	238
0.75	8	0.26	1.1	0.9	1.5	19.8	660	680	1.1	15.0	280	300
0.75	10	0.26	1.2	0.9	1.6	22.3	790	810	1.2	17.3	350	370
0.75	12	0.26	1.2	1.25	1.6	23.5	970	1000	1.2	17.8	405	430
0.75	16	0.26	1.3	1.25	1.7	25.9	1180	1210	1.3	20.0	520	560
0.75	18	0.26	1.3	1.25	1.7	27.0	1260	1300	1.3	21.1	580	620
0.75	19	0.26	1.3	1.25	1.7	27.0	1290	1330	1.3	21.1	610	650
0.75	20	0.26	1.4	1.25	1.7	28.4	1370	1410	1.4	22.5	650	690
0.75	24	0.26	1.4	1.25	1.8	31.1	1570	1630	1.4	25.0	770	820
0.75	30	0.26	1.5	1.25	1.8	32.8	1800	1870	1.5	26.7	940	1000
0.75	37	0.26	1.6	1.25	1.9	35.3	2090	2170	1.6	29.0	1140	1220
1.0	2	0.26	1.0	0.9	1.4	14.8	365	370	1.0	10.2	110	115
1.0	4	0.26	1.0	0.9	1.4	16.5	475	485	1.0	11.9	180	190
1.0	5	0.26	1.1	0.9	1.5	18.0	560	570	1.1	13.2	225	235

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V**

Area of conductor	No. of pair	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PVC insulation	Approx. weight - PVC insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight - PVC insulation
Sqmm		mm	mm	mm	mm	Mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
1.0	6	0.26	1.1	0.9	1.5	19.2	620	640	1.1	14.4	260	275
1.0	8	0.26	1.2	0.9	1.5	21.1	740	760	1.2	16.3	340	360
1.0	10	0.26	1.2	1.25	1.6	24.2	1010	1030	1.2	18.5	415	435
1.0	12	0.26	1.3	1.25	1.6	25.1	1100	1130	1.3	19.4	485	510
1.0	16	0.26	1.3	1.25	1.7	27.4	1320	1350	1.3	21.5	620	660
1.0	18	0.26	1.4	1.25	1.7	28.8	1440	1480	1.4	22.9	700	740
1.0	19	0.26	1.4	1.25	1.7	28.8	1470	1510	1.4	22.9	730	780
1.0	20	0.26	1.4	1.25	1.7	30.1	1540	1590	1.4	24.2	770	820
1.0	24	0.26	1.5	1.25	1.8	33.2	1790	1850	1.5	27.1	920	980
1.0	30	0.26	1.5	1.25	1.8	34.8	2040	2110	1.5	28.7	1120	1190
1.0	37	0.26	1.6	1.6	1.9	38.3	2590	2670	1.6	31.3	1360	1450
1.5	2	0.35	1.0	0.9	1.5	16.8	450	460	1.0	12.0	145	155
1.5	4	0.35	1.1	0.9	1.5	19.0	600	620	1.1	14.2	245	260
1.5	5	0.35	1.2	0.9	1.5	20.6	700	720	1.2	15.8	305	325
1.5	6	0.35	1.2	1.25	1.6	22.9	910	930	1.2	17.2	355	375
1.5	8	0.35	1.3	1.25	1.7	25.5	1100	1130	1.3	19.6	460	490
1.5	10	0.35	1.4	1.25	1.7	28.4	1300	1330	1.4	22.5	570	610
1.5	12	0.35	1.4	1.25	1.7	29.2	1410	1460	1.4	23.3	660	710
1.5	16	0.35	1.5	1.25	1.8	32.2	1700	1760	1.5	26.1	860	920
1.5	18	0.35	1.5	1.25	1.8	33.6	1840	1910	1.5	27.5	960	1030
1.5	19	0.35	1.5	1.25	1.8	33.6	1880	1950	1.5	27.5	1000	1070
1.5	20	0.35	1.6	1.6	1.9	36.4	2230	2300	1.6	29.4	1070	1140
1.5	24	0.35	1.7	1.6	2.0	40.0	2570	2660	1.7	32.8	1280	1370
1.5	30	0.35	1.8	1.6	2.0	42.2	2950	3060	1.8	35.0	1560	1680
1.5	37	0.35	1.9	1.6	2.1	45.5	3420	3560	1.9	38.1	1900	2040

For Cables of sizes or pairs not listed above the product data is available on request  
 Dimensions & Weights are representative figures and may vary

**OUR ACCREDITATION**

## Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V

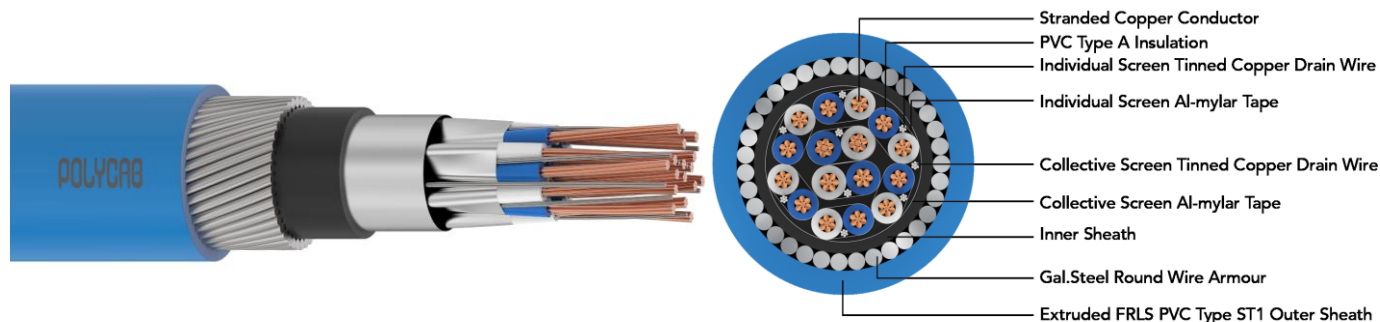
### Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40

#### OUR ACCREDITATION



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**



**Application**

POLYCAB INSTRU 500 MP, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 500 MP cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

**Voltage Rating**

500 V

**Bending Radius**

12 x Overall diameter

**Operation Temperature**

Max.: PVC 70°C,  
 HRPVC 85°C,  
 XLPE 90°C,  
 LDPE 60°C.

**Standard and References**

EN 50288-7  
 EN 50288-1  
 EN 60228  
 EN 50290-2-22/27

**Construction**

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET (Aluminium/Polyester tape) with drain wire of tinned Cu/Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

**Compliance**

- Conductor resistance - EN 60228
- Insulation resistance - EN 50288-7
- L/R Ratio - EN 50288-7
- Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



**Core Identification**

White & Blue for Pair

**Outer sheath colour:** Blue/Black

**Note:** As per the application/identification requirement, other colour also available on request.

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**

**Weight & Dimension Data**

**500 VOLTS, MULTI PAIR, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED INDIVIDUAL & OVERALL SHIELDED, ARMoured AND UNARMoured INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of pair	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
0.5	2	0.44	1.0	0.9	1.4	14.8	355	365	1.0	10.2	97	105
0.5	4	0.44	1.0	0.9	1.5	16.7	450	465	1.0	11.9	150	165
0.5	5	0.44	1.1	0.9	1.5	18.0	520	530	1.1	13.2	185	200
0.5	6	0.44	1.1	0.9	1.5	19.2	580	590	1.1	14.4	215	235
0.5	8	0.44	1.2	0.9	1.6	21.4	690	710	1.2	16.4	275	300
0.5	10	0.44	1.3	1.25	1.6	24.5	940	970	1.3	18.8	345	375
0.5	12	0.44	1.3	1.25	1.7	25.3	1030	1070	1.3	19.4	390	430
0.5	16	0.44	1.4	1.25	1.7	27.7	1200	1250	1.4	21.8	510	560
0.5	18	0.44	1.4	1.25	1.7	28.9	1300	1350	1.4	23.0	560	620
0.5	19	0.44	1.4	1.25	1.7	28.9	1320	1380	1.4	23.0	580	640
0.5	20	0.44	1.4	1.25	1.8	30.4	1410	1470	1.4	24.3	610	680
0.5	24	0.44	1.5	1.25	1.8	33.3	1610	1690	1.5	27.2	730	810
0.5	30	0.44	1.6	1.6	1.9	36.0	2030	2130	1.6	29.0	890	990
0.5	37	0.44	1.7	1.6	2.0	38.8	2330	2450	1.7	31.6	1080	1200
0.75	2	0.44	1.0	0.9	1.4	15.6	390	395	1.0	11.0	110	120
0.75	4	0.44	1.1	0.9	1.5	17.8	510	530	1.1	13.0	185	200
0.75	5	0.44	1.1	0.9	1.5	19.0	570	590	1.1	14.2	220	235
0.75	6	0.44	1.2	0.9	1.5	20.5	650	680	1.2	15.7	260	285
0.75	8	0.44	1.2	1.25	1.6	23.4	900	930	1.2	17.7	330	360
0.75	10	0.44	1.3	1.25	1.7	26.2	1060	1100	1.3	20.3	410	445
0.75	12	0.44	1.3	1.25	1.7	26.9	1150	1190	1.3	21.0	470	510
0.75	16	0.44	1.4	1.25	1.8	29.7	1370	1430	1.4	23.6	610	670
0.75	18	0.44	1.5	1.25	1.8	31.2	1500	1560	1.5	25.1	690	750
0.75	19	0.44	1.5	1.25	1.8	31.2	1520	1590	1.5	25.1	710	780
0.75	20	0.44	1.5	1.25	1.8	32.6	1610	1680	1.5	26.5	750	830
0.75	24	0.44	1.6	1.6	1.9	36.6	2060	2150	1.6	29.6	900	990
0.75	30	0.44	1.7	1.6	2.0	38.8	2360	2470	1.7	31.6	1100	1210
0.75	37	0.44	1.8	1.6	2.0	41.6	2690	2830	1.8	34.4	1330	1470
1.0	2	0.44	1.0	0.9	1.4	16.2	420	425	1.0	11.6	125	135
1.0	4	0.44	1.1	0.9	1.5	18.6	560	570	1.1	13.8	210	225
1.0	5	0.44	1.1	0.9	1.5	19.9	630	650	1.1	15.1	250	270

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**

Area of conductor	No. of pair	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
1.0	6	0.44	1.2	0.9	1.6	21.7	720	750	1.2	16.7	300	325
1.0	8	0.44	1.3	1.25	1.6	24.7	1000	1030	1.3	19.0	390	420
1.0	10	0.44	1.3	1.25	1.7	27.5	1170	1210	1.3	21.6	475	510
1.0	12	0.44	1.4	1.25	1.7	28.4	1280	1330	1.4	22.5	560	610
1.0	16	0.44	1.5	1.25	1.8	31.4	1540	1610	1.5	25.3	720	790
1.0	18	0.44	1.5	1.25	1.8	32.8	1660	1740	1.5	26.7	800	870
1.0	19	0.44	1.5	1.25	1.8	32.8	1700	1770	1.5	26.7	830	910
1.0	20	0.44	1.6	1.25	1.9	34.7	1820	1900	1.6	28.4	890	970
1.0	24	0.44	1.7	1.6	2.0	38.9	2330	2430	1.7	31.7	1070	1160
1.0	30	0.44	1.7	1.6	2.0	40.9	2620	2740	1.7	33.7	1280	1400
1.0	37	0.44	1.8	1.6	2.1	44.0	3030	3180	1.8	36.6	1560	1710
1.5	2	0.44	1.1	0.9	1.5	17.7	485	490	1.1	12.9	160	170
1.5	4	0.44	1.2	0.9	1.5	20.1	650	660	1.2	15.3	265	285
1.5	5	0.44	1.2	0.9	1.6	21.7	740	760	1.2	16.7	320	345
1.5	6	0.44	1.3	1.25	1.6	24.2	980	1010	1.3	18.5	380	410
1.5	8	0.44	1.3	1.25	1.7	26.7	1150	1190	1.3	20.8	485	520
1.5	10	0.44	1.4	1.25	1.8	30.0	1380	1430	1.4	23.9	600	650
1.5	12	0.44	1.5	1.25	1.8	31.0	1520	1570	1.5	24.9	710	770
1.5	16	0.44	1.6	1.25	1.9	34.3	1830	1910	1.6	28.0	920	990
1.5	18	0.44	1.6	1.6	1.9	36.5	2180	2270	1.6	29.5	1020	1100
1.5	19	0.44	1.6	1.6	1.9	36.5	2230	2310	1.6	29.5	1070	1150
1.5	20	0.44	1.7	1.6	2.0	38.6	2380	2480	1.7	31.4	1140	1230
1.5	24	0.44	1.8	1.6	2.1	42.5	2760	2880	1.8	35.1	1360	1470
1.5	30	0.44	1.9	1.6	2.1	44.9	3160	3300	1.9	37.5	1660	1800
1.5	37	0.44	2.0	2.0	2.2	49.2	3970	4140	2.0	40.8	2020	2190
2.5	2	0.53	1.2	0.9	1.5	20.0	600	610	1.2	15.2	220	235
2.5	4	0.53	1.3	1.25	1.6	23.8	960	980	1.3	18.1	375	400
2.5	5	0.53	1.3	1.25	1.7	25.8	1090	1120	1.3	19.9	450	485
2.5	6	0.53	1.4	1.25	1.7	27.8	1250	1290	1.4	21.9	540	580
2.5	8	0.53	1.5	1.25	1.8	31.1	1510	1560	1.5	25.0	700	750
2.5	10	0.53	1.6	1.6	1.9	35.5	2000	2070	1.6	28.6	870	940
2.5	12	0.53	1.6	1.6	1.9	36.7	2170	2250	1.6	29.7	1010	1090
2.5	16	0.53	1.8	1.6	2.0	40.7	2660	2770	1.8	33.5	1320	1430
2.5	18	0.53	1.8	1.6	2.1	42.8	2890	3010	1.8	35.4	1470	1590
2.5	19	0.53	1.8	1.6	2.1	42.8	2960	3090	1.8	35.4	1540	1660
2.5	20	0.53	1.9	1.6	2.1	45.0	3130	3270	1.9	37.6	1640	1770

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**

Area of conductor	No. of pair	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
2.5	24	0.53	2.0	2.0	2.3	50.7	4000	4160	2.0	42.1	1960	2120
2.5	30	0.53	2.1	2.0	2.3	53.4	4540	4740	2.1	44.8	2390	2590
2.5	37	0.53	2.3	2.0	2.4	57.8	5310	5560	2.3	49.0	2930	3180

For Cables of sizes or pair not listed above the product data is available on request  
Dimensions & Weights are representative figures and may vary

**Electrical Parameter**

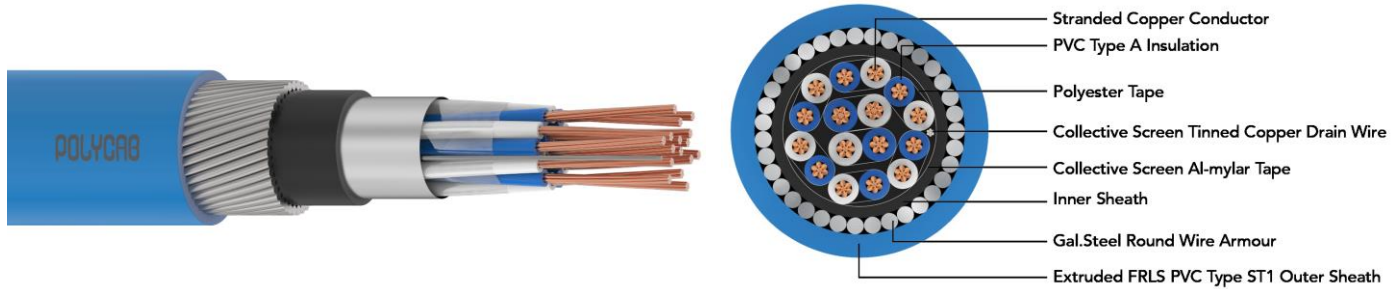
Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**



# POLYCAB INSTRU 300 SINGLE & MP

## Instrumentation cable PVC/PE Insulated Overall shielded 300V



### Application

POLYCAB INSTRU 300 SINGLE & MP, Stranded copper conductor, PVC/PE insulated, Overall, al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 300 SINGLE & MP cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

### Voltage Rating

300 V

### Bending Radius

12 x Overall diameter

### Operation Temperature

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

### Standard and References

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

### Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium /Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

### Compliance

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



### Core Identification

White & Blue for Pair

**Outer sheath colour:** Black/Blue

**Note:** As per the application/identification requirement, other colour also available on request.



**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

**Weight & Dimension Data**

**300 VOLTS, SINGLE & MULTI PAIR, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED OVERALL SHIELDED, ARMOURED AND UNARMOURED INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of pair	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diameter of G.l. armour wire	Nominal diameter over armour	Nominal overall diameter	Approx. weight-PE insulation	Approx. weight-PVC insulation	Nominal thickness of outer sheath	Nominal overall diameter	weight-PE insulation	Approx. weight-PVC insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
0.5	1	0.26	0.8	0.9	6.99	9.6	175	180	0.8	5.2	35	37
0.5	2	0.26	0.9	0.9	9.37	12.0	255	260	0.9	7.6	60	64
0.5	4	0.26	0.9	0.9	10.54	13.4	315	320	0.9	8.8	89	97
0.5	5	0.26	1.0	0.9	11.52	14.4	355	365	1.0	9.8	110	120
0.5	6	0.26	1.0	0.9	12.35	15.2	395	405	1.0	10.6	125	135
0.5	8	0.26	1.0	0.9	13.61	16.5	450	465	1.0	11.9	155	170
0.5	10	0.26	1.1	0.9	15.34	18.4	530	550	1.1	13.6	195	215
0.5	12	0.26	1.1	0.9	15.79	18.8	580	600	1.1	14.0	220	245
0.5	16	0.26	1.1	0.9	17.29	20.3	660	690	1.1	15.5	280	305
0.5	18	0.26	1.1	0.9	18.13	21.2	710	740	1.1	16.4	305	340
0.5	19	0.26	1.1	0.9	18.13	21.2	720	760	1.1	16.4	320	355
0.5	20	0.26	1.2	0.9	19.25	22.5	790	820	1.2	17.5	345	380
0.5	24	0.26	1.2	1.25	21.82	25.1	1020	1060	1.2	19.4	405	445
0.5	30	0.26	1.3	1.25	23.16	26.4	1150	1200	1.3	20.7	490	550
0.5	37	0.26	1.3	1.25	24.81	28.3	1310	1380	1.3	22.4	590	650
0.75	1	0.26	0.8	0.9	7.41	10.1	190	195	0.8	5.7	42	44
0.75	2	0.26	0.9	0.9	10.05	12.9	290	295	0.9	8.3	73	78
0.75	4	0.26	1.0	0.9	11.57	14.4	365	375	1.0	9.8	120	125
0.75	5	0.26	1.0	0.9	12.45	15.3	410	420	1.0	10.7	140	150
0.75	6	0.26	1.0	0.9	13.39	16.2	455	465	1.0	11.6	160	175
0.75	8	0.26	1.1	0.9	15.0	18.0	540	560	1.1	13.2	210	225
0.75	10	0.26	1.1	0.9	16.72	19.8	620	650	1.1	15	255	275
0.75	12	0.26	1.1	0.9	17.22	20.3	680	700	1.1	15.5	290	315
0.75	16	0.26	1.2	0.9	19.11	22.4	810	850	1.2	17.4	375	410
0.75	18	0.26	1.2	1.25	20.75	24.0	1000	1040	1.2	18.3	415	455
0.75	19	0.26	1.2	1.25	20.75	24.0	1020	1060	1.2	18.3	435	475
0.75	20	0.26	1.2	1.25	21.79	25.0	1070	1110	1.2	19.3	455	500
0.75	24	0.26	1.3	1.25	24.01	27.5	1240	1290	1.3	21.6	550	600
0.75	30	0.26	1.4	1.25	25.57	29.0	1410	1470	1.4	23.1	670	730
0.75	37	0.26	1.4	1.25	27.42	30.9	1600	1680	1.4	25	800	880
1.0	1	0.26	0.8	0.9	7.77	10.4	205	210	0.8	6.0	49	51
1.0	2	0.26	0.9	0.9	10.65	13.5	315	320	0.9	8.9	86	91

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

Area of conductor	No. of pair	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal diameter over armour	Nominal overall diameter	Approx. weight-PE insulation	Approx. weight-PVC insulation	Nominal thickness of outer sheath	Nominal overall diameter	weight-PE insulation	Approx. weight-PVC insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
1.0	4	0.26	1.0	0.9	12.28	15.1	405	415	1.0	10.5	145	150
1.0	5	0.26	1.0	0.9	13.24	16.1	455	465	1.0	11.5	170	180
1.0	6	0.26	1.0	0.9	14.27	17.1	510	520	1.0	12.5	195	210
1.0	8	0.26	1.1	0.9	16.02	19.1	610	630	1.1	14.3	255	275
1.0	10	0.26	1.1	0.9	17.90	20.9	710	740	1.1	16.1	310	335
1.0	12	0.26	1.2	0.9	18.65	21.7	780	810	1.2	16.9	365	395
1.0	16	0.26	1.2	1.25	21.20	24.4	1060	1100	1.2	18.7	465	510
1.0	18	0.26	1.2	1.25	22.23	25.5	1140	1190	1.2	19.8	520	560
1.0	19	0.26	1.2	1.25	22.23	25.5	1170	1210	1.2	19.8	540	590
1.0	20	0.26	1.3	1.25	23.6	26.8	1250	1290	1.3	21.1	580	630
1.0	24	0.26	1.3	1.25	25.9	29.3	1430	1490	1.3	23.4	680	740
1.0	30	0.26	1.4	1.25	27.5	30.9	1630	1700	1.4	25.0	840	910
1.0	37	0.26	1.5	1.25	29.7	33.3	1900	1990	1.5	27.2	1020	1110
1.5	1	0.35	0.9	0.9	8.97	11.6	255	260	0.9	7.2	67	71
1.5	2	0.35	1.0	0.9	12.49	15.3	390	400	1.0	10.7	120	130
1.5	4	0.35	1.1	0.9	14.47	17.5	530	540	1.1	12.7	205	220
1.5	5	0.35	1.1	0.9	15.66	18.7	590	610	1.1	13.9	245	260
1.5	6	0.35	1.1	0.9	16.93	20.0	660	680	1.1	15.2	285	305
1.5	8	0.35	1.2	0.9	19.04	22.3	810	830	1.2	17.3	370	400
1.5	10	0.35	1.3	1.25	22.28	25.5	1090	1120	1.3	19.8	460	495
1.5	12	0.35	1.3	1.25	22.96	26.4	1200	1240	1.3	20.5	530	580
1.5	16	0.35	1.4	1.25	25.45	28.9	1430	1490	1.4	23.0	690	750
1.5	18	0.35	1.4	1.25	26.70	30.20	1540	1610	1.4	24.3	770	830
1.5	19	0.35	1.4	1.25	26.70	30.20	1580	1650	1.4	24.3	800	870
1.5	20	0.35	1.5	1.25	28.30	32.0	1690	1770	1.5	25.9	850	930
1.5	24	0.35	1.5	1.25	31.2	34.8	1930	2020	1.5	28.7	1010	1100
1.5	30	0.35	1.6	1.6	33.8	37.7	2440	2550	1.6	30.7	1240	1350
1.5	37	0.35	1.7	1.6	36.5	40.6	2820	2960	1.7	33.4	1510	1640

**For Cables of sizes or pairs not listed above the product data is available on request  
Dimensions & Weights are representative figures and may vary**

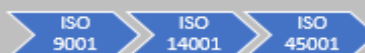
**OUR ACCREDITATION**

**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

**Electrical Parameter**

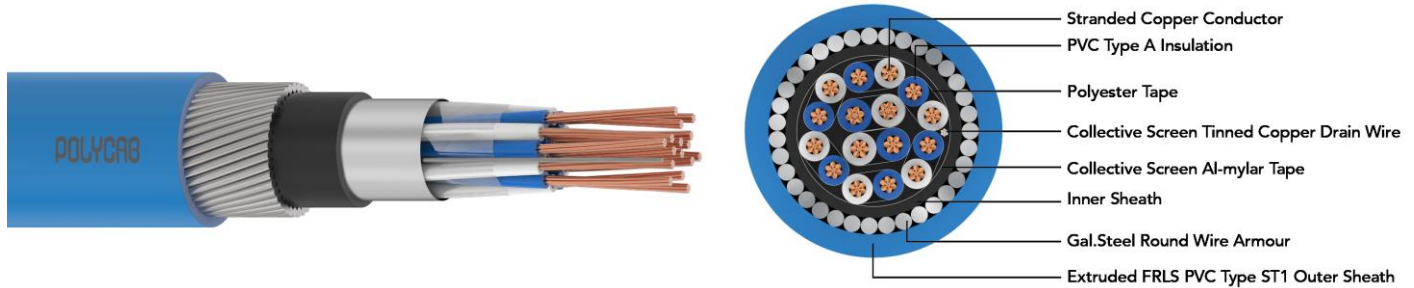
Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**





## Instrumentation cable PVC/PE Insulated Overall shielded 500V



### Application

POLYCAB INSTRU 500 SINGLE & MP, Stranded copper conductor, PVC/PE insulated, Overall, al-myler shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 500 SINGLE & MP cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

### Voltage Rating

500 V

### Operation Temperature

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

### Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET(Aluminium /Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

### Core Identification

White & Blue for Pair

**Outer sheath colour:** Blue/Black

**Note:** As per the application/identification requirement, other colour also available on request.

### Bending Radius

12 x Overall diameter

### Standard and References

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

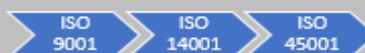
### Compliance

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



### OUR ACCREDITATION



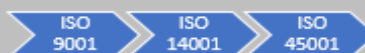
**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

**Weight & Dimension Data**

**500 VOLTS, SINGLE & MULTI PAIR, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED OVERALL SHIELDED, ARMOURED AND UNARMOURED INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of pair	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
0.5	1	0.44	0.9	0.9	1.3	10.6	210	210	0.9	6.2	44	47
0.5	2	0.44	0.9	0.9	1.4	13.5	300	310	0.9	8.9	71	77
0.5	4	0.44	1.0	0.9	1.4	15.2	380	390	1.0	10.6	110	125
0.5	5	0.44	1.0	0.9	1.4	16.1	415	430	1.0	11.5	130	145
0.5	6	0.44	1.1	0.9	1.5	17.6	480	500	1.1	12.8	155	175
0.5	8	0.44	1.1	0.9	1.5	19.1	550	570	1.1	14.3	195	220
0.5	10	0.44	1.2	0.9	1.5	21.2	650	680	1.2	16.4	240	270
0.5	12	0.44	1.2	0.9	1.6	22.0	700	740	1.2	17.0	275	310
0.5	16	0.44	1.2	1.25	1.6	24.5	940	990	1.2	18.8	340	390
0.5	18	0.44	1.3	1.25	1.6	25.8	1020	1080	1.3	20.1	385	445
0.5	19	0.44	1.3	1.25	1.6	25.8	1040	1100	1.3	20.1	400	460
0.5	20	0.44	1.3	1.25	1.7	27.1	1100	1170	1.3	21.2	420	485
0.5	24	0.44	1.4	1.25	1.7	29.6	1260	1330	1.4	23.7	510	580
0.5	30	0.44	1.4	1.25	1.8	31.2	1410	1510	1.4	25.1	600	700
0.5	37	0.44	1.5	1.25	1.8	33.4	1610	1730	1.5	27.3	730	850
0.75	1	0.44	0.9	0.9	1.3	11.1	225	225	0.9	6.7	51	55
0.75	2	0.44	1.0	0.9	1.4	14.4	335	345	1.0	9.8	89	97
0.75	4	0.44	1.0	0.9	1.4	16.0	420	435	1.0	11.4	135	150
0.75	5	0.44	1.1	0.9	1.5	17.5	490	510	1.1	12.7	170	185
0.75	6	0.44	1.1	0.9	1.5	18.6	540	560	1.1	13.8	195	215
0.75	8	0.44	1.2	0.9	1.5	20.5	640	670	1.2	15.7	250	280
0.75	10	0.44	1.2	1.25	1.6	23.5	870	910	1.2	17.8	305	340
0.75	12	0.44	1.2	1.25	1.6	24.1	930	970	1.2	18.4	345	390
0.75	16	0.44	1.3	1.25	1.7	26.5	1110	1170	1.3	20.6	445	500
0.75	18	0.44	1.3	1.25	1.7	27.7	1190	1250	1.3	21.8	495	560
0.75	19	0.44	1.3	1.25	1.7	27.7	1210	1280	1.3	21.8	510	580
0.75	20	0.44	1.4	1.25	1.7	29.1	1290	1360	1.4	23.2	550	620
0.75	24	0.44	1.5	1.25	1.8	32.1	1500	1590	1.5	26.0	660	750
0.75	30	0.44	1.5	1.25	1.8	33.6	1670	1780	1.5	27.5	790	900
0.75	37	0.44	1.6	1.6	1.9	37.0	2140	2270	1.6	30.0	960	1090
1.0	1	0.44	0.9	0.9	1.3	11.4	240	240	0.9	7.0	58	62

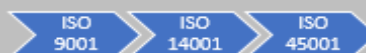
**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

Area of conductor	No. of pair	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
1.0	2	0.44	1.0	0.9	1.4	15.0	365	375	1.0	10.4	105	110
1.0	4	0.44	1.0	0.9	1.4	16.7	460	480	1.0	12.1	160	180
1.0	5	0.44	1.1	0.9	1.5	18.3	540	560	1.1	13.5	200	220
1.0	6	0.44	1.1	0.9	1.5	19.5	590	620	1.1	14.7	230	255
1.0	8	0.44	1.2	0.9	1.5	21.5	710	740	1.2	16.7	300	330
1.0	10	0.44	1.2	1.25	1.6	24.7	970	1010	1.2	19.0	365	405
1.0	12	0.44	1.3	1.25	1.6	25.5	1050	1100	1.3	19.8	425	475
1.0	16	0.44	1.3	1.25	1.7	27.9	1250	1310	1.3	22.0	540	610
1.0	18	0.44	1.4	1.25	1.7	29.4	1360	1430	1.4	23.5	610	680
1.0	19	0.44	1.4	1.25	1.7	29.4	1390	1460	1.4	23.5	640	710
1.0	20	0.44	1.4	1.25	1.8	30.9	1480	1560	1.4	24.8	670	750
1.0	24	0.44	1.5	1.25	1.8	33.8	1700	1790	1.5	27.7	800	900
1.0	30	0.44	1.6	1.25	1.9	35.9	1950	2070	1.6	29.6	980	1100
1.0	37	0.44	1.6	1.6	1.9	39.0	2420	2570	1.6	32.0	1170	1320
1.5	1	0.44	0.9	0.9	1.3	12.0	265	270	0.9	7.6	71	76
1.5	2	0.44	1.0	0.9	1.4	16.0	415	420	1.0	11.4	130	135
1.5	4	0.44	1.1	0.9	1.5	18.3	550	570	1.1	13.5	215	235
1.5	5	0.44	1.1	0.9	1.5	19.6	630	650	1.1	14.8	255	280
1.5	6	0.44	1.2	0.9	1.5	21.2	710	740	1.2	16.4	305	335
1.5	8	0.44	1.2	1.25	1.6	24.1	970	1010	1.2	18.4	390	425
1.5	10	0.44	1.3	1.25	1.7	27.0	1170	1210	1.3	21.1	485	530
1.5	12	0.44	1.3	1.25	1.7	27.8	1270	1320	1.3	21.9	560	620
1.5	16	0.44	1.4	1.25	1.8	30.6	1520	1600	1.4	24.5	730	800
1.5	18	0.44	1.5	1.25	1.8	32.2	1660	1740	1.5	26.1	820	900
1.5	19	0.44	1.5	1.25	1.8	32.2	1690	1780	1.5	26.1	850	940
1.5	20	0.44	1.5	1.25	1.8	33.7	1790	1890	1.5	27.6	900	990
1.5	24	0.44	1.6	1.6	1.9	37.9	2280	2400	1.6	30.9	1080	1190
1.5	30	0.44	1.7	1.6	2.0	40.2	2630	2770	1.7	33.0	1320	1460
1.5	37	0.44	1.8	1.6	2.0	43.1	3010	3180	1.8	35.9	1600	1770
2.5	1	0.53	1.0	0.9	1.4	13.6	330	340	1.0	9.0	100	105
2.5	2	0.53	1.1	0.9	1.5	18.4	520	540	1.1	13.6	185	200
2.5	4	0.53	1.2	0.9	1.6	21.1	730	750	1.2	16.1	315	340
2.5	5	0.53	1.2	1.25	1.6	23.4	950	980	1.2	17.7	380	415
2.5	6	0.53	1.3	1.25	1.7	25.5	1090	1130	1.3	19.6	455	495
2.5	8	0.53	1.4	1.25	1.7	28.2	1300	1350	1.4	22.3	590	640

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

Area of conductor	No. of pair	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
2.5	10	0.53	1.5	1.25	1.8	31.6	1560	1620	1.5	25.5	730	800
2.5	12	0.53	1.5	1.25	1.8	32.5	1700	1780	1.5	26.4	850	930
2.5	16	0.53	1.6	1.6	1.9	36.6	2270	2370	1.6	29.6	1100	1210
2.5	18	0.53	1.7	1.6	2.0	38.7	2490	2610	1.7	31.5	1240	1360
2.5	19	0.53	1.7	1.6	2.0	38.7	2540	2670	1.7	31.5	1300	1420
2.5	20	0.53	1.7	1.6	2.0	40.6	2680	2820	1.7	33.4	1370	1500
2.5	24	0.53	1.9	1.6	2.1	44.9	3150	3310	1.9	37.5	1650	1810
2.5	30	0.53	1.9	1.6	2.2	47.4	3610	3810	1.9	39.8	2000	2200
2.5	37	0.53	2.1	2.0	2.3	52.1	4570	4810	2.1	43.5	2460	2700

For Cables of sizes or pair not listed above the product data is available on request  
Dimensions & Weights are representative figures and may vary

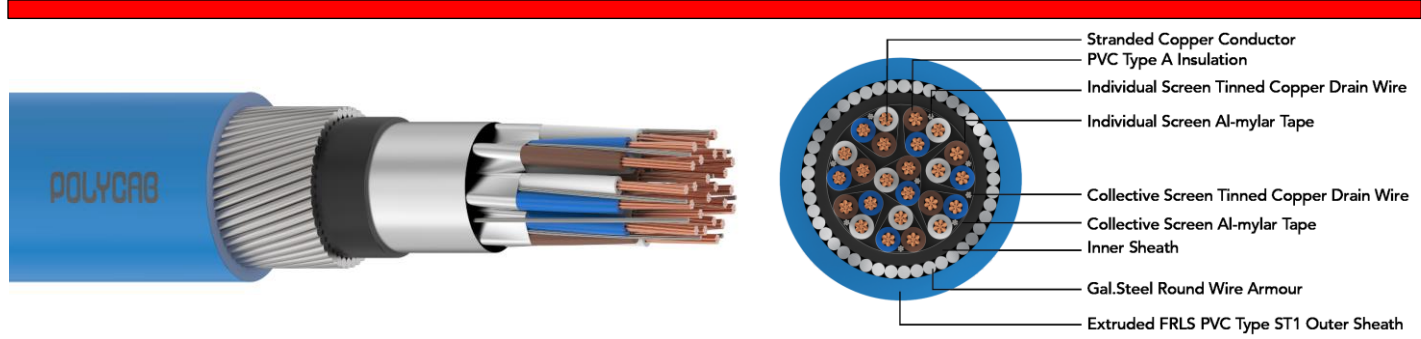
**Electrical Parameter**

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V**



**Application**

POLYCAB INSTRU 300 MT, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 300 MT cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

**Voltage Rating**

300 V

**Operation Temperature**

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

**Construction**

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET(Aluminium/Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

**Core Identification**

White, Blue & Brown for Triad

**Outer sheath colour:** Blue/Black

**Note:** As per the application/identification requirement, other colour also available on request.

**Bending Radius**

12 x Overall diameter

**Standard and References**

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

**Compliance**

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE, FRLS & LSZH on request.



**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V**

**Weight & Dimension Data**

**300 VOLTS, MULTI TRIAD, STR. COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED INDIVIDUAL & OVERALL SHIELDED, ARMoured AND UNARMoured INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of triad	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall Diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
0.5	2	0.26	1.0	0.9	1.4	14.3	345	350	1.0	9.7	100	105
0.5	4	0.26	1.0	0.9	1.4	15.8	445	455	1.0	11.2	160	170
0.5	5	0.16	1.0	0.9	1.4	16.9	495	510	1.0	12.3	190	205
0.5	6	0.16	1.1	0.9	1.5	18.4	570	580	1.1	13.6	230	245
0.5	8	0.26	1.1	0.9	1.5	20.1	670	690	1.1	15.3	290	310
0.5	10	0.26	1.2	0.9	1.6	22.5	800	830	1.2	17.5	360	390
0.5	12	0.26	1.2	1.25	1.6	23.8	1000	1030	1.2	18.1	415	450
0.5	14	0.26	1.3	1.25	1.6	24.9	1090	1130	1.3	19.2	480	520
0.5	16	0.26	1.3	1.25	1.7	26.2	1190	1240	1.3	20.3	540	580
0.5	19	0.26	1.3	1.25	1.7	27.3	1320	1370	1.3	21.4	620	680
0.5	20	0.26	1.4	1.25	1.7	28.8	1400	1460	1.4	22.9	670	720
0.5	24	0.26	1.4	1.25	1.8	31.4	1610	1680	1.4	25.3	790	850
0.5	30	0.26	1.5	1.25	1.8	33.2	1830	1920	1.5	27.1	960	1050
0.5	37	0.26	1.6	1.25	1.9	35.8	2130	2130	1.6	29.5	1170	1280
0.75	2	0.26	1.0	0.9	1.4	15.1	385	390	1.0	10.5	110	US
0.75	4	0.26	1.0	0.9	1.5	17.1	510	520	1.0	12.3	195	210
0.75	5	0.26	1.1	0.9	1.5	18.4	580	600	1.1	13.6	245	260
0.75	6	0.26	1.1	0.9	1.5	19.7	650	670	1.1	14.9	185	305
0.75	8	0.26	1.2	0.9	1.6	22.0	800	820	1.2	17.0	370	395
0.75	10	0.26	1.3	1.25	1.6	25.1	1080	1120	1.3	19.4	460	490
0.75	12	0.26	1.3	1.25	1.7	26.0	1180	1220	1.3	20.1	510	570
0.75	14	0.26	1.3	1.25	1.7	27.0	1290	1330	1.3	21.1	610	6'10
0.75	16	0.26	1.4	1.25	1.7	28.4	1410	1460	1.4	22.5	690	740
0.75	19	0.26	1.4	1.25	1.7	29.7	1560	1620	1.4	23.8	800	860
0.75	20	0.26	1.4	1.25	1.8	31.3	1650	1720	1.4	25.2	840	910
0.75	24	0.26	1.5	1.25	1.8	34.2	1920	2000	1.5	28.1	1010	1090
0.75	30	0.26	1.6	1.6	1.9	37.0	2420	2520	1.6	30.0	1240	1J30
0.75	37	0.26	1.7	1.6	2.0	39.9	2800	2920	1.7	32.7	1510	1630
1.0	2	0.26	1.0	0.9	1.4	15.8	425	430	1.0	11.2	140	150
1.0	4	0.26	1.1	0.9	1.5	18.1	580	590	1.1	13.3	240	255
1.0	5	0.26	1.1	0.9	1.5	19.4	650	670	1.1	14.6	290	305

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V**

Area of conductor	No. of triad	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall Diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
1.0	6	0.26	1.2	0.9	1.5	21.0	750	770	1.2	16.2	345	365
1.0	8	0.26	1.2	1.25	1.6	23.9	1020	1050	1.2	18.2	440	470
1.0	10	0.26	1.3	1.25	1.7	26.8	1230	1260	1.3	20.9	550	590
1.0	12	0.26	1.3	1.25	1.7	27.5	1330	1370	1.3	21.6	640	680
1.0	14	0.26	1.4	1.25	1.7	28.8	1470	1520	1.4	22.9	740	790
1.0	16	0.26	1.4	1.25	1.7	30.1	1600	1660	1.4	24.2	830	890
1.0	19	0.26	1.5	1.25	1.8	31.9	1810	1880	1.5	25.8	980	1050
1.0	20	0.26	1.5	1.25	1.8	33.4	1910	1980	1.5	27.3	1030	1100
1.0	24	0.26	1.6	1.6	1.9	37.5	2440	2520	1.6	30.5	1230	1320
1.0	30	0.26	1.7	1.6	2.0	39.7	2800	2910	1.7	32.5	1510	1620
1.0	37	0.26	1.7	1.6	2.0	42.4	3210	3340	1.7	35.2	1830	1960
1.5	2	0.35	1.1	0.9	1.5	18.3	530	540	1.1	13.5	195	205
1.5	4	0.35	1.2	0.9	1.5	20.8	730	740	1.2	16.0	330	355
1.5	5	0.35	1.2	1.25	1.6	23.2	970	1000	1.2	17.5	400	430
1.5	6	0.35	1.3	1.25	1.6	25.1	1090	1120	1.3	19.4	480	510
1.5	8	0.35	1.4	1.25	1.7	28.0	1330	1380	1.4	22.1	620	670
1.5	10	0.35	1.5	1.25	1.8	31.4	1600	1650	1.5	25.3	780	830
1.5	12	0.35	1.5	1.25	1.8	32.3	1750	1820	1.5	26.2	900	970
1.5	14	0.35	1.5	1.25	1.8	33.7	1920	2000	1.5	27.6	1030	1110
1.5	16	0.35	1.6	1.6	1.9	36.4	2330	2420	1.6	29.4	1170	1260
1.5	19	0.35	1.6	1.6	1.9	38.0	1590	1690	1.6	31.0	1360	1470
1.5	20	0.35	1.7	1.6	2.0	40.3	2770	2880	1.7	33.1	1450	1560
1.5	24	0.35	1.8	1.6	2.1	44.4	3210	3340	1.8	37.0	1740	1870
1.5	30	0.35	1.9	1.6	2.1	46.8	3700	3860	1.9	39.4	2130	2300
1.5	37	0.35	2.0	2.0	2.1	51.3	4650	4850	2.0	41.9	2590	2800

For Cables of sizes or triad not listed above the product data is available on request  
 Dimensions & Weights are representative figures and may vary

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V**

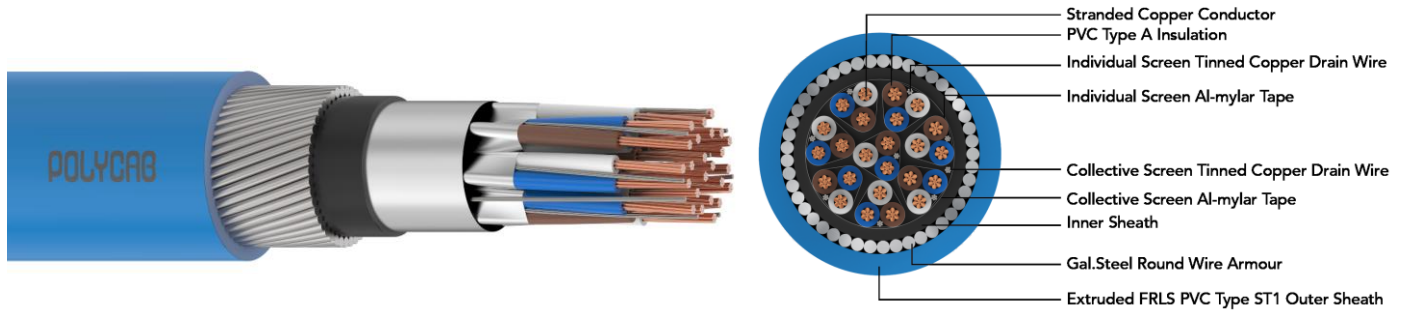
**Electrical Parameter**

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**



**Application**

POLYCAB INSTRU 500 MT, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 500 MT cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

**Voltage Rating**

500 V

**Operation Temperature**

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

**Construction**

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET(Aluminium/Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

**Bending Radius**

12 x Overall diameter

**Standard and References**

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

**Compliance**

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



**Core Identification**

White, Blue & Brown for Triad

**Outer sheath colour:** Blue

**Note:** As per the application/identification requirement, other colour also available on request.

**OUR ACCREDITATION**







**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**

**Weight & Dimension Data**

**500 VOLTS, MULTI TRIAD, STR. COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED INDIVIDUAL & OVERALL SHIELDED, ARMoured AND UNARMoured INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of triad	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
0.5	2	0.44	1.0	0.9	1.4	15.9	400	410	1.0	11.3	115	125
0.5	4	0.44	1.1	0.9	1.5	18.2	530	550	1.1	13.4	195	210
0.5	5	0.44	1.1	0.9	1.5	19.5	590	620	1.1	14.7	230	255
0.5	6	0.44	1.2	0.9	1.6	21.2	690	720	1.2	16.2	275	305
0.5	8	0.44	1.3	1.25	1.6	24.2	950	990	1.3	18.5	355	395
0.5	10	0.44	1.3	1.25	1.7	26.9	1110	1160	1.3	21.0	430	480
0.5	12	0.44	1.4	1.25	1.7	27.8	1210	1270	1.4	21.9	510	560
0.5	14	0.44	1.4	1.25	1.7	28.9	1310	1380	1.4	23.0	570	640
0.5	16	0.44	1.4	1.25	1.8	30.5	1440	1510	1.4	24.4	640	720
0.5	19	0.44	1.5	1.25	1.8	32.0	1590	1680	1.5	25.9	750	840
0.5	20	0.44	1.5	1.25	1.8	33.5	1680	1770	1.5	27.4	790	890
0.5	24	0.44	1.6	1.6	1.9	37.6	2160	2270	1.6	30.6	950	1070
0.5	30	0.44	1.7	1.6	2.0	39.9	2450	2600	1.7	32.7	1160	1300
0.5	37	0.44	1.8	1.6	2.1	43.0	2830	3010	1.8	35.6	1410	1580
0.75	2	0.44	1.1	0.9	1.5	17.2	460	470	1.1	12.4	145	155
0.75	4	0.44	1.1	0.9	1.5	19.2	590	620	1.1	14.4	230	255
0.75	5	0.44	1.2	0.9	1.6	21.0	690	720	1.2	16.0	285	315
0.75	6	0.44	1.2	1.25	1.6	23.2	900	930	1.2	17.5	335	365
0.75	8	0.44	1.3	1.25	1.7	25.8	1080	1130	1.3	19.9	430	475
0.75	10	0.44	1.4	1.25	1.7	28.8	1270	1330	1.4	22.9	540	590
0.75	12	0.44	1.4	1.25	1.8	29.8	1390	1450	1.4	23.7	620	680
0.75	14	0.44	1.5	1.25	1.8	31.2	1530	1600	1.5	25.1	720	790
0.75	16	0.44	1.5	1.25	1.8	32.6	1660	1740	1.5	26.5	800	890
0.75	19	0.44	1.6	1.25	1.9	34.5	1870	1970	1.6	28.2	940	1040
0.75	20	0.44	1.6	1.6	1.9	36.9	2170	2280	1.6	29.9	990	1100
0.75	24	0.44	1.7	1.6	2.0	40.6	2500	2630	1.7	33.4	1190	1320
0.75	30	0.44	1.8	1.6	2.1	43.0	2880	3040	1.8	35.6	1450	1610
0.75	37	0.44	1.9	1.6	2.1	46.1	3300	3500	1.9	38.7	1760	1960
1.0	2	0.44	1.1	0.9	1.5	17.9	495	510	1.1	13.1	165	175
1.0	4	0.44	1.1	0.9	1.5	20.1	650	670	1.1	15.3	270	295
1.0	5	0.44	1.2	0.9	1.6	22.0	760	790	1.2	17.0	335	365

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**

Area of conductor	No. of triad	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
1.0	6	0.44	1.2	1.25	1.6	24.3	990	1020	1.2	18.6	390	425
1.0	8	0.44	1.3	1.25	1.7	27.1	1190	1240	1.3	21.2	510	560
1.0	10	0.44	1.4	1.25	1.8	30.4	1420	1480	1.4	24.3	630	690
1.0	12	0.44	1.5	1.25	1.8	31.5	1560	1640	1.5	25.4	740	810
1.0	14	0.44	1.5	1.25	1.8	32.8	1710	1790	1.5	26.7	840	930
1.0	16	0.44	1.5	1.25	1.8	34.4	1860	1950	1.5	28.3	950	1050
1.0	19	0.44	1.6	1.6	1.9	37.1	2300	2410	1.6	30.1	1110	1230
1.0	20	0.44	1.7	1.6	2.0	39.2	2460	2580	1.7	32.0	1190	1310
1.0	24	0.44	1.8	1.6	2.0	43.0	2830	2970	1.8	35.8	1420	1570
1.0	30	0.44	1.9	1.6	2.1	45.6	3260	3440	1.9	38.2	1740	1920
1.0	37	0.44	2.0	2.0	2.2	49.9	4100	4320	2.0	41.5	2110	2340
1.5	2	0.44	1.1	0.9	1.5	19.1	560	570	1.1	14.3	205	215
1.5	4	0.44	1.2	1.25	1.6	22.7	890	920	1.2	17.0	350	375
1.5	5	0.44	1.3	1.25	1.6	24.6	1030	1060	1.3	18.9	430	465
1.5	6	0.44	1.3	1.25	1.7	26.5	1170	1210	1.3	20.6	500	550
1.5	8	0.44	1.4	1.25	1.8	29.6	1420	1480	1.4	23.5	660	710
1.5	10	0.44	1.5	1.25	1.8	33.1	1680	1750	1.5	27.0	820	890
1.5	12	0.44	1.6	1.25	1.9	34.4	1880	1970	1.6	28.1	960	1040
1.5	14	0.44	1.6	1.6	1.9	36.6	2260	2350	1.6	29.6	1100	1190
1.5	16	0.44	1.7	1.6	2.0	38.7	2500	2610	1.7	31.5	1250	1360
1.5	19	0.44	1.7	1.6	2.0	40.5	2760	2900	1.7	33.3	1450	1580
1.5	20	0.44	1.8	1.6	2.1	42.9	2970	3110	1.8	35.5	1540	1680
1.5	24	0.44	1.9	1.6	2.2	47.2	3450	3620	1.9	39.6	1850	2010
1.5	30	0.44	2.0	2.0	2.2	50.7	4280	4490	2.0	42.3	2260	2470
1.5	37	0.44	2.1	2.0	2.3	54.6	4960	5220	2.1	46.0	2750	3010
2.5	2	0.53	1.2	1.25	1.6	22.7	830	850	1.2	17.0	285	305
2.5	4	0.53	1.3	1.25	1.7	26.1	1150	1190	1.3	20.2	500	540
2.5	5	0.53	1.4	1.25	1.7	28.3	1340	1390	1.4	22.4	620	670
2.5	6	0.53	1.5	1.25	1.8	30.8	1540	1600	1.5	24.7	740	800
2.5	8	0.53	1.6	1.6	1.9	35.2	2070	2150	1.6	28.2	960	1040
2.5	10	0.53	1.7	1.6	2.0	39.5	2480	2580	1.7	32.3	1190	1290
2.5	12	0.53	1.8	1.6	2.0	40.8	2740	2860	1.8	33.6	1400	1520
2.5	14	0.53	1.8	1.6	2.1	42.8	3030	3170	1.8	35.4	1600	1740
2.5	16	0.53	1.9	1.6	2.1	45.1	3320	3480	1.9	37.7	1820	1980
2.5	19	0.53	2.0	2.0	2.2	48.5	4050	4240	2.0	40.1	2140	2330

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V**

Area of conductor	No. of triad	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
2.5	20	0.53	2.1	2.0	2.3	51.2	4350	4550	2.1	42.6	2280	2480
2.5	24	0.53	2.2	2.0	2.4	56.4	5030	5270	2.2	47.6	2720	2960
2.5	30	0.53	2.3	2.5	2.5	60.8	6300	6600	2.3	50.8	3330	3630
3	37.00	0.5	2.5	2.5	2.6	66	7340	7710.0	2.5	55	4080	4450

For Cables of sizes or triad not listed above the product data is available on request  
Dimensions & Weights are representative figures and may vary

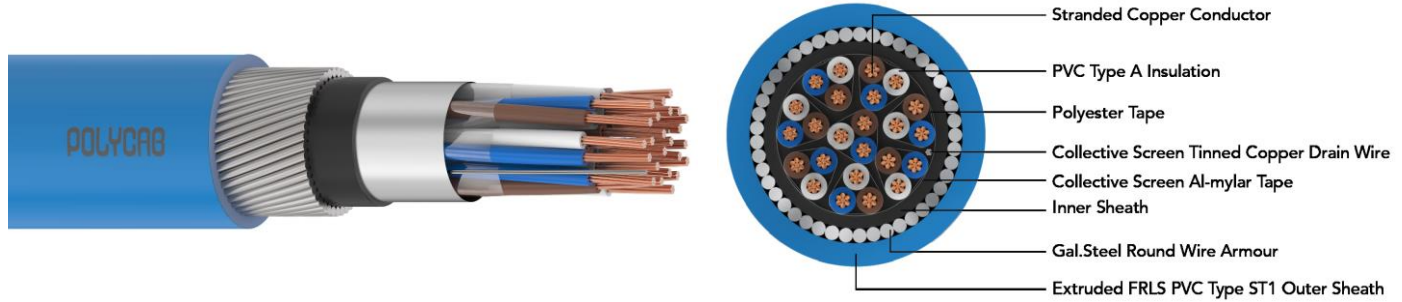
**Electrical Parameter**

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**



## Instrumentation cable PVC/PE Insulated Overall shielded 300V



### Application

POLYCAB INSTRU 300 SINGLE & MT, Stranded copper conductor, PVC/PE insulated, Overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 300 SINGLE & MT cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

### Voltage Rating

300 V

### Bending Radius

12 x Overall diameter

### Operation Temperature

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

### Standard and References

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

### Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium /Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

### Compliance

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



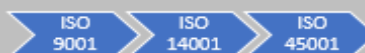
### Core Identification

White, Blue & Brown for Triad

**Outer sheath colour:** Blue/Black

**Note:** As per the application/identification requirement, other colour also available on request.

### OUR ACCREDITATION



**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

**Weight & Dimension Data**

**300 VOLTS, SINGLE & MULTI TRIAD, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED OVERALL SHIELDED, ARMOURED AND UNARMOURED INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of triad	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall Diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
0.5	1	0.26	0.8	0.9	1.3	9.9	190	195	0.8	5.5	42	45
0.5	2	0.26	0.9	0.9	1.3	12.8	285	290	0.9	8.4	76	81
0.5	4	0.26	1.0	0.9	1.4	14.5	375	385	1.0	9.9	120	135
0.5	5	0.26	1.0	0.9	1.4	15.4	415	430	1.0	10.8	145	160
0.5	6	0.26	1.0	0.9	1.4	16.4	460	475	1.0	11.8	170	185
0.5	8	0.26	1.1	0.9	1.5	18.2	560	580	1.1	13.4	220	140
0.5	10	0.26	1.1	0.9	1.5	19.9	640	670	1.1	15.1	265	190
0.5	12	0.26	1.1	0.9	1.5	20.4	690	720	1.1	15.6	300	335
0.5	14	0.26	1.1	0.9	1.5	21.2	750	790	1.1	16.4	345	380
0.5	16	0.26	1.2	0.9	1.6	22.6	840	880	1.2	17.6	390	435
0.5	19	0.26	1.2	0.9	1.6	23.5	920	970	1.2	18.5	450	500
0.5	20	0.26	1.2	1.25	1.6	25.3	1100	1160	1.2	19.6	475	530
0.5	24	0.26	1.3	1.25	1.7	27.8	1280	1340	1.3	21.9	570	640
0.5	30	0.26	1.3	1.25	1.7	29.1	1430	1510	1.3	23.2	690	770
0.5	37	0.26	1.4	1.25	1.7	31.2	1640	1750	1.4	25.3	840	940
0.75	1	0.26	0.8	0.9	1.3	10.4	210	210	0.8	6.0	52	55
0.75	2	0.26	0.9	0.9	1.4	13.8	330	340	0.9	9.2	95	100
0.75	4	0.26	1.0	0.9	1.4	15.5	430	440	1.0	10.9	160	170
0.75	5	0.26	1.0	0.9	1.4	16.5	480	500	1.0	11.9	190	205
0.75	6	0.26	1.1	0.9	1.5	18.0	560	580	1.1	13.2	225	245
0.75	8	0.26	1.1	0.9	1.5	19.6	660	680	1.1	14.8	285	310
0.75	10	0.26	1.2	0.9	1.5	21.7	770	810	1.2	16.9	355	390
0.75	12	0.26	1.2	0.9	1.6	22.5	850	890	1.2	17.5	410	450
0.75	14	0.26	1.2	1.25	1.6	24.1	1050	1100	1.2	18.4	470	510
0.75	16	0.26	1.2	1.25	1.6	25.1	1150	1200	1.2	19.4	530	580
0.75	19	0.26	1.3	1.25	1.6	26.4	1270	1330	1.3	20.7	620	680
0.75	20	0.26	1.3	1.25	1.7	27.8	1360	1420	1.3	21.9	650	720
0.75	24	0.26	1.4	1.25	1.7	30.4	1560	1640	1.4	24.5	780	860
0.75	30	0.26	1.4	1.25	1.8	32.0	1780	1880	1.4	25.9	950	1040
0.75	37	0.26	1.5	1.25	1.8	34.3	2060	2180	1.5	28.2	1150	1270

**OUR ACCREDITATION**





**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

Area of conductor	No. of triad	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall Diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	kg/km	kg/km	mm	mm	kg/km	kg/km
1.0	1	0.26	0.9	0.9	1.3	10.9	235	240	0.9	6.5	64	68
1.0	2	0.26	1.0	0.9	1.4	14.6	370	380	1.0	10.0	120	125
1.0	4	0.26	1.0	0.9	1.4	16.3	485	500	1.0	11.7	195	205
1.0	5	0.26	1.0	0.9	1.5	17.6	560	570	1.0	12.8	230	250
1.0	6	0.26	1.1	0.9	1.5	18.9	630	650	1.1	14.1	280	300
1.0	8	0.26	1.1	0.9	1.5	20.7	750	780	1.1	15.9	355	385
1.0	10	0.26	1.2	0.9	1.6	23.2	900	940	1.2	18.2	440	480
1.0	12	0.26	1.2	1.25	1.6	24.6	1110	1150	1.2	18.9	510	560
1.0	14	0.26	1.3	1.25	1.6	25.7	1230	1280	1.3	20.0	590	640
1.0	16	0.26	1.3	1.25	1.7	27.1	1350	1410	1.3	21.2	670	730
1.0	19	0.26	1.3	1.25	1.7	28.2	1500	1560	1.3	22.3	780	840
1.0	20	0.26	1.4	1.25	1.7	29.7	1590	1660	1.4	23.8	830	900
1.0	24	0.26	1.4	1.25	1.8	32.5	1830	1920	1.4	26.4	980	1070
1.0	30	0.26	1.5	1.25	1.8	34.3	2110	2220	1.5	28.2	1200	1310
1.0	37	0.26	1.6	1.25	1.9	37.0	2470	2600	1.6	30.7	1470	1600
1.5	1	0.35	0.9	0.9	1.3	12.0	280	285	0.9	7.6	86	91
1.5	2	0.35	1.0	0.9	1.4	16.5	455	465	1.0	11.9	160	170
1.5	4	0.35	1.1	0.9	1.5	18.9	630	650	1.1	14.1	280	300
1.5	5	0.35	1.1	0.9	1.5	20.3	720	750	1.1	15.5	335	365
1.5	6	0.35	1.1	0.9	1.6	22.1	840	870	1.1	17.1	400	435
1.5	8	0.35	1.3	1.25	1.6	25.2	1150	1190	1.3	19.5	520	570
1.5	10	0.35	1.3	1.25	1.7	28.1	1350	1410	1.3	22.2	640	700
1.5	12	0.35	1.4	1.25	1.7	29.1	1500	1560	1.4	23.2	760	820
1.5	14	0.35	1.4	1.25	1.7	30.3	1640	1720	1.4	24.4	870	940
1.5	16	0.35	1.5	1.25	1.8	32.1	1830	1910	1.5	26.0	990	1080
1.5	19	0.35	1.5	1.25	1.8	33.5	2030	2140	1.5	27.4	1150	1250
1.5	20	0.35	1.5	1.25	1.8	35.1	2140	2250	1.5	29.0	1210	1320
1.5	24	0.35	1.7	1.6	2.0	39.8	2760	2890	1.7	32.6	1470	1600
1.5	30	0.35	1.7	1.6	2.0	41.8	3140	3310	1.7	34.6	1780	1950
1.5	37	0.35	1.8	1.6	2.1	45.1	3670	3880	1.8	37.7	2170	2380

**For Cables of sizes or triad not listed above the product data is available on request  
Dimensions & Weights are representative figures and may vary**

**OUR ACCREDITATION**





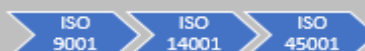


**Instrumentation cable PVC/PE Insulated Overall shielded 300V**

**Electrical Parameter**

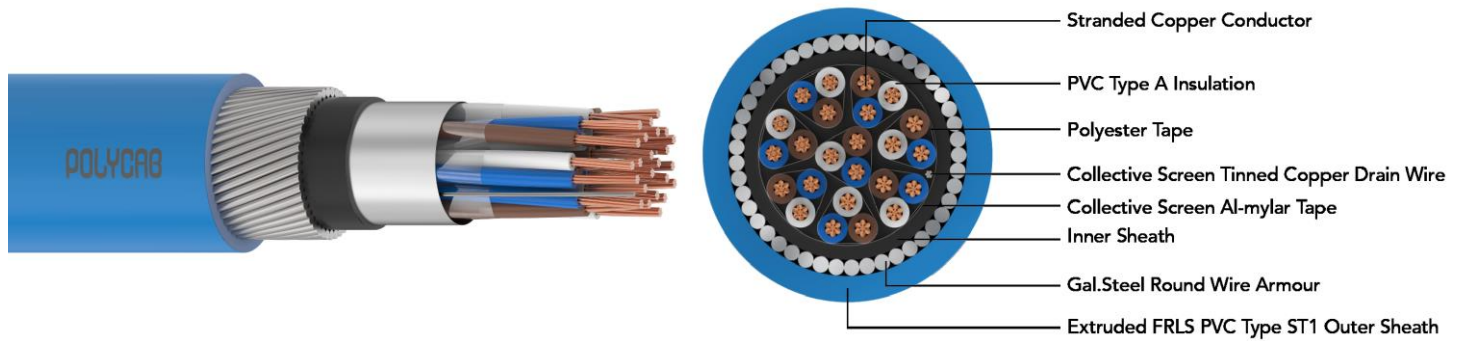
Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

**OUR ACCREDITATION**



## POLYCAB INSTRU 500 SINGLE & MT

### Instrumentation cable PVC/PE Insulated Overall shielded 500V



#### Application

POLYCAB INSTRU 500 SINGLE & MT, Stranded copper conductor, PVC/PE insulated, Overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable conforming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. POLYCAB INSTRU 500 SINGLE & MT cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

#### Voltage Rating

500 V

#### Bending Radius

12 x Overall diameter

#### Operation Temperature

Max.: PVC 70°C,  
HRPVC 85°C,  
XLPE 90°C,  
LDPE 60°C.

#### Standard and References

EN 50288-7  
EN 50288-1  
EN 60228  
EN 50290-2-22/27

#### Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium /Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

#### Compliance

Conductor resistance - EN 60228  
Insulation resistance - EN 50288-7  
L/R Ratio - EN 50288-7  
Mutual capacitance - EN 50288-7

**Note:** Outer sheath also available with PE & FRLS on request.



#### Core Identification

White, Blue & Brown for Triad

**Outer sheath colour:** Blue/Black

**Note:** As per the application/identification requirement, other colour also available on request.

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**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

**Weight & Dimension Data**

**500 VOLTS, SINGLE & MULTI TRIAD, STR.COPPER, PVC/PE INSULATED, ALUMINIUM MYLAR TAPED OVERALL SHIELDED, ARMOURED AND UNARMOURED INSTRUMENTATION CABLES AS PER EN 50288-7**

Area of conductor	No. of triad	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diame ter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Appro x. weight - PE insulation	Appro x. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Appro x. weight - PE insulation	Appro x. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
0.5	1	0.44	0.9	0.9	1.3	11.0	225	230	0.9	6.6	52	57
0.5	2	0.44	1.0	0.9	1.4	14.7	350	360	1.0	10.1	94	105
0.5	4	0.44	1.0	0.9	1.4	16.3	440	455	1.0	11.7	145	165
0.5	5	0.44	1.1	0.9	1.5	17.8	510	530	1.1	13.0	180	205
0.5	6	0.44	1.1	0.9	1.5	19.0	560	590	1.1	14.2	205	235
0.5	8	0.44	1.2	0.9	1.5	21.0	670	710	1.2	16.2	270	305
0.5	10	0.44	1.2	1.25	1.6	24.0	910	960	1.2	18.3	325	370
0.5	12	0.44	1.3	1.25	1.6	24.9	990	1050	1.3	19.2	380	435
0.5	14	0.44	1.3	1.25	1.7	26.1	1080	1150	1.3	20.2	430	495
0.5	16	0.44	1.3	1.25	1.7	27.2	1160	1240	1.3	21.3	480	560
0.5	19	0.44	1.4	1.25	1.7	28.6	1290	1380	1.4	22.7	560	650
0.5	20	0.44	1.4	1.25	1.7	29.9	1360	1450	1.4	24.0	590	690
0.5	24	0.44	1.5	1.25	1.8	32.9	1580	1690	1.5	26.8	710	820
0.5	30	0.44	1.5	1.25	1.8	34.5	1760	1900	1.5	28.4	850	990
0.5	37	0.44	1.6	1.6	1.9	37.9	2240	2420	1.6	30.9	1030	1210
0.75	1	0.44	0.9	0.9	1.3	11.4	245	250	0.9	7.0	63	68
0.75	2	0.44	1.0	0.9	1.4	15.5	385	395	1.0	10.9	115	125
0.75	4	0.44	1.1	0.9	1.5	17.7	510	530	1.1	12.9	190	210
0.75	5	0.44	1.1	0.9	1.5	18.9	580	610	1.1	14.1	225	250
0.75	6	0.44	1.1	0.9	1.5	20.2	650	680	1.1	15.4	260	295
0.75	8	0.44	1.2	1.25	1.6	23.2	910	950	1.2	17.5	340	385
0.75	10	0.44	1.3	1.25	1.7	26.0	1070	1130	1.3	20.1	425	475
0.75	12	0.44	1.3	1.25	1.7	26.7	1150	1220	1.3	20.8	485	550
0.75	14	0.44	1.3	1.25	1.7	27.8	1260	1340	1.3	21.9	550	630
0.75	16	0.44	1.4	1.25	1.7	29.2	1380	1470	1.4	23.3	630	720
0.75	19	0.44	1.4	1.25	1.8	30.7	1520	1630	1.4	24.6	730	830
0.75	20	0.44	1.5	1.25	1.8	32.3	1630	1740	1.5	26.2	780	890
0.75	24	0.44	1.6	1.25	1.9	35.6	1890	2020	1.6	29.3	930	1060
0.75	30	0.44	1.6	1.6	1.9	38.1	2350	2510	1.6	31.1	1120	1290
0.75	37	0.44	1.7	1.6	2.0	41.0	2700	2900	1.7	33.8	1370	1570

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

Area of conductor	No. of triad	Min. thickness of insulation	ARMoured CABLES						UNARMoured CABLES			
			Nominal thickness of inner sheath	Diameter of G.I. armour wire	Nominal thickness of outer Sheath	Nominal Overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation	Nominal thickness of outer sheath	Nominal overall diameter	Approx. weight - PE insulation	Approx. weight of PVC Insulation
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
1.0	1	0.44	0.9	0.9	1.3	11.8	260	265	0.9	7.4	72	78
1.0	2	0.44	1.0	0.9	1.4	16.1	420	430	1.0	11.5	135	145
1.0	4	0.44	1.1	0.9	1.5	18.5	570	600	1.1	13.7	225	250
1.0	5	0.44	1.1	0.9	1.5	19.8	640	670	1.1	15.0	270	300
1.0	6	0.44	1.2	0.9	1.5	21.4	730	770	1.2	16.6	325	360
1.0	8	0.44	1.2	1.25	1.6	24.4	1010	1060	1.2	18.7	410	460
1.0	10	0.44	1.3	1.25	1.7	27.3	1210	1270	1.3	21.4	510	570
1.0	12	0.44	1.3	1.25	1.7	28.1	1300	1370	1.3	22.2	590	660
1.0	14	0.44	1.4	1.25	1.7	29.5	1440	1520	1.4	23.6	690	770
1.0	16	0.44	1.4	1.25	1.8	31.0	1580	1670	1.4	24.9	770	870
1.0	19	0.44	1.5	1.25	1.8	32.6	1760	1870	1.5	26.5	910	1020
1.0	20	0.44	1.5	1.25	1.8	34.1	1850	1970	1.5	28.0	950	1070
1.0	24	0.44	1.6	1.6	1.9	38.4	2370	2510	1.6	31.4	1140	1290
1.0	30	0.44	1.7	1.6	2.0	40.7	2730	2910	1.7	33.5	1400	1580
1.0	37	0.44	1.8	1.6	2.0	43.6	3130	3310	1.8	36.4	1700	1920
1.5	1	0.44	0.9	0.9	1.4	12.7	300	305	0.9	8.1	90	97
1.5	2	0.44	1.1	0.9	1.5	17.7	500	510	1.1	12.9	175	190
1.5	4	0.44	1.1	0.9	1.5	19.9	670	700	1.1	15.1	295	320
1.5	5	0.44	1.2	0.9	1.6	21.7	780	820	1.2	16.7	360	395
1.5	6	0.44	1.2	1.25	1.6	24.0	1010	1050	1.2	18.3	425	465
1.5	8	0.44	1.3	1.25	1.7	26.7	1220	1280	1.3	20.8	550	610
1.5	10	0.44	1.4	1.25	1.7	29.8	1450	1520	1.4	23.9	690	760
1.5	12	0.44	1.4	1.25	1.8	30.8	1610	1690	1.4	24.7	800	880
1.5	14	0.44	1.5	1.25	1.8	32.3	1780	1870	1.5	26.2	920	1020
1.5	16	0.44	1.5	1.25	1.8	33.8	1940	2050	1.5	27.7	1040	1150
1.5	19	0.44	1.6	1.6	1.9	36.5	2380	2520	1.6	29.5	1220	1360
1.5	20	0.44	1.6	1.6	1.9	38.2	2520	2660	1.6	31.2	1290	1430
1.5	24	0.44	1.8	1.6	2.0	42.3	2940	3110	1.8	35.1	1560	1730
1.5	30	0.44	1.8	1.6	2.1	44.7	3390	3600	1.8	37.3	1890	2100
1.5	37	0.44	1.9	1.6	2.2	48.1	3940	4200	1.9	40.5	2310	2560
2.5	1	0.53	1.0	0.9	1.4	14.2	375	385	1.0	9.6	130	140
2.5	2	0.53	1.2	0.9	1.5	20.1	630	650	1.2	15.3	255	275
2.5	4	0.53	1.2	1.25	1.6	23.7	1020	1060	1.2	18.0	435	475
2.5	5	0.53	1.5	1.25	1.7	25.9	1190	1240	1.5	20.0	540	590

**OUR ACCREDITATION**



**Instrumentation cable PVC/PE Insulated Overall shielded 500V**

Area of conductor	No. of triad	Min. thickness of insulation	ARMOURED CABLES						UNARMOURED CABLES			
			Nominal thickness of inner sheath	Diame ter of G.I. armou r wire	Nomin al thickn ess of outer Sheat h	Nomi nal Overa ll diame ter	Appro x. weight - PE insulat ion	Appro x. weight of PVC Insulat ion	Nomin al thickn ess of outer sheat h	Nomi nal overal l diame ter	Appro x. weight - PE insulat ion	Appro x. weight of PVC Insulat ion
Sqmm		mm	mm	mm	mm	mm	Kg/Km	Kg/Km	mm	mm	Kg/Km	Kg/Km
2.5	6	0.53	1.4	1.25	1.7	28.0	1350	1410	1.4	22.1	640	700
2.5	8	0.53	1.5	1.25	1.8	31.2	1610	1730	1.5	25.1	840	920
2.5	10	0.53	1.6	1.6	1.9	35.8	2180	2280	1.6	28.8	1040	1140
2.5	12	0.53	1.6	1.6	1.9	36.8	2400	2520	1.6	29.8	1220	1340
2.5	14	0.53	1.7	1.6	2.0	38.8	2670	2810	1.7	31.6	1410	1550
2.5	16	0.53	1.7	1.6	2.0	40.7	2920	3080	1.7	33.5	1590	1750
2.5	19	0.53	1.8	1.6	2.1	43.0	3290	3480	1.8	35.6	1870	2060
2.5	20	0.53	1.9	1.6	2.1	45.3	3500	3700	1.9	37.9	1990	2190
2.5	24	0.53	2.0	2.0	2.3	50.9	4420	4660	2.0	42.3	2370	2610
2.5	30	0.53	2.1	2.0	2.3	53.7	5090	5390	2.1	45.1	2910	3210
2.5	37	0.53	2.2	2.0	2.4	57.9	5930	6300	2.2	49.1	3550	3920

For Cables of sizes or triad not listed above the product data is available on request  
 Dimensions & Weights are representative figures and may vary

**Electrical Parameter**

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

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