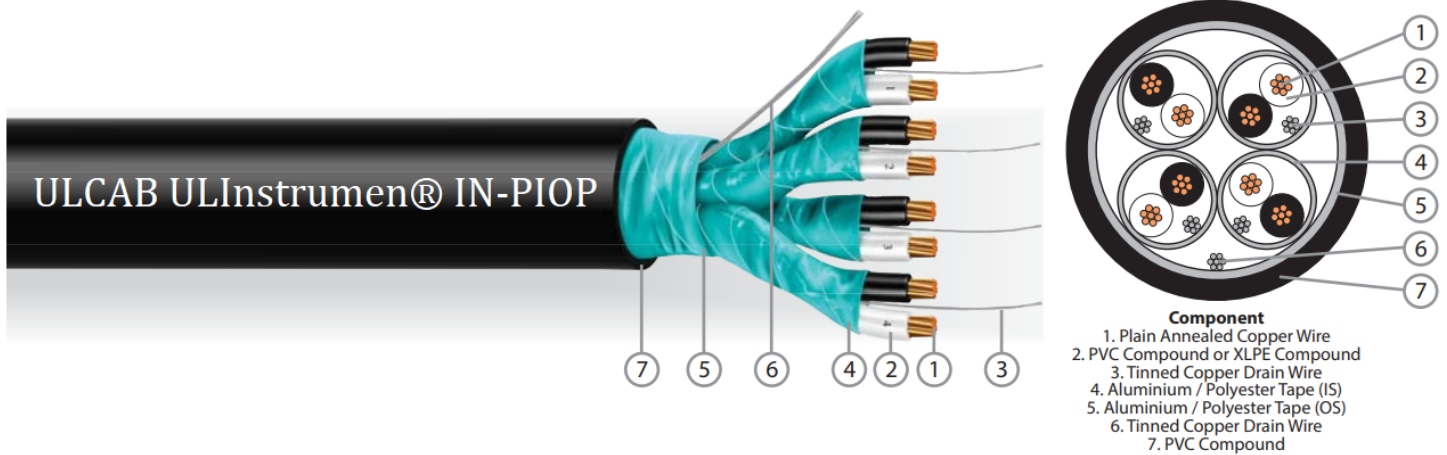


Instrumentation and connection cables

ULInstrumen® IN-PIOP

CU / PVC / IS / OS / PVC (PAIRS & TRIADS)

PVC Insulated, Individual Aluminium Foil Screened, Overall Aluminium Foil Screened, PVC Sheathed Cable, 300 / 500V, BS EN50288-7



CONSTRUCTION

Conductor:	Plain Annealed Copper, Class 2 Stranded Circular
Insulation:	Polyvinyl Chloride (PVC) Compound Type TI51
Insulation Colour:	Pair/s - Black/White with Black numberings Triad/s - Red/Black/White with Black numberings
Cores Twisted:	Cores twisted to form a pair, triad or quad
Wrap Film:	Polyester Binder Tape
Individual Screen:	Aluminium/Polyester Tape, with a Tinned Copper Drain Wire 0.5mm ² (7/0.3mm) (IS)
Lay Up:	Multi-pairs, triads or quads are assembled together in concentric layers to form the cable core
Wrap Film:	Polyester Binder Tape
Overall Screen:	Aluminium/Polyester Tape, with a Tinned Copper Drain Wire 0.5mm ² (7/0.3mm) (OS)
Outer Sheath:	Flame Retardancy Polyvinyl Chloride (PVC) Compound Type ST2 FR
Outer Sheath Colour:	Black or Blue

ELECTRICAL CHARACTERISTICS

Operating Voltage, U ₀ /U:	300/500V
Operating Temperature:	-15°C to 70°C (PVC Insulated)
Final Short Circuit Temperature:	160°C (PVC Insulated)
Test Voltage:	2kV for 1 minute

REFERENCE STANDARDS

Design Specification:	BS EN50288-7
Conductor:	IEC60228, BS EN60228
Flame Retardancy:	IEC60332-3

INSTALLATION REFERENCE

Min. Bending Radius (mm):	8 x cable overall diameter
Max. Pulling Tension (N/mm ²):	50

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	No. of Pairs	Nominal Conductor Area (mm ²)	No. and Diameter of Wires (no./mm)	Radial Thickness of Insulation (mm)	IN-XIOP		IN-PIOP	
					Cable Overall Diameter (mm)	Approximate Weight (kg/km)	Cable Overall Diameter (mm)	Approximate Weight (kg/km)
SINGLE & MULTI-PAIRS	1P	0.5	7 / 0.3	0.6	7.1	58	7.1	62
	2P		7 / 0.3	0.6	11.3	121	11.3	128
	3P		7 / 0.3	0.6	11.9	151	11.9	161
	4P		7 / 0.3	0.6	13.0	184	13.0	197
	5P		7 / 0.3	0.6	14.4	225	14.4	241
	6P		7 / 0.3	0.6	15.6	259	15.6	279
	8P		7 / 0.3	0.6	17.7	333	17.7	360
	10P		7 / 0.3	0.6	20.2	411	20.2	445
	12P		7 / 0.3	0.6	20.9	469	20.9	509
	16P		7 / 0.3	0.6	23.1	591	23.1	645
	20P		7 / 0.3	0.6	26.0	729	26.0	795
	24P		7 / 0.3	0.6	29.0	870	29.0	951
	36P		7 / 0.3	0.6	33.5	1254	33.5	1375
SINGLE & MULTI-PAIRS	1P	0.75	7 / 0.37	0.6	7.5	66	7.5	70
	2P		7 / 0.37	0.6	12.0	137	12.0	145
	3P		7 / 0.37	0.6	12.7	174	12.7	185
	4P		7 / 0.37	0.6	14.1	221	14.1	236
	5P		7 / 0.37	0.6	15.4	261	15.4	280
	6P		7 / 0.37	0.6	17.0	311	17.0	333
	8P		7 / 0.37	0.6	19.0	390	19.0	420
	10P		7 / 0.37	0.6	21.7	483	21.7	520
	12P		7 / 0.37	0.6	22.4	553	22.4	598
	16P		7 / 0.37	0.6	25.1	713	25.1	773
	20P		7 / 0.37	0.6	28.2	879	28.2	953
	24P		7 / 0.37	0.6	31.4	1049	31.4	1139
	36P		7 / 0.37	0.6	36.4	1514	36.4	1648
SINGLE & MULTI-PAIRS	1P	1.0	7 / 0.43	0.6	7.9	74	7.9	78
	2P		7 / 0.43	0.6	12.6	153	12.6	161
	3P		7 / 0.43	0.6	13.6	203	13.6	215
	4P		7 / 0.43	0.6	14.9	250	14.9	266
	5P		7 / 0.43	0.6	16.2	296	16.3	317
	6P		7 / 0.43	0.6	17.9	353	17.9	378
	8P		7 / 0.43	0.6	20.3	456	20.3	488
	10P		7 / 0.43	0.6	23.0	552	23.0	592
	12P		7 / 0.43	0.6	24.0	647	24.0	695
	16P		7 / 0.43	0.6	26.6	820	26.6	885
	20P		7 / 0.43	0.6	29.9	1013	29.9	1093
	24P		7 / 0.43	0.6	33.5	1226	33.5	1324
	36P		7 / 0.43	0.6	38.6	1751	38.6	1896

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SINGLE & MULTI-PAIRS	1P	1.5	7 / 0.53	0.6	8.5	89	8.5	93
	2P		7 / 0.53	0.6	13.9	190	13.9	199
	3P		7 / 0.53	0.6	14.8	245	14.8	259
	4P		7 / 0.53	0.6	16.2	304	16.2	323
	5P		7 / 0.53	0.6	17.9	373	17.9	396
	6P		7 / 0.53	0.6	19.5	434	19.5	462
	8P		7 / 0.53	0.6	22.1	562	22.1	599
	10P		7 / 0.53	0.6	25.3	696	25.3	742
	12P		7 / 0.53	0.6	26.4	817	26.4	872
	16P		7 / 0.53	0.6	29.3	1041	29.3	1114
	20P		7 / 0.53	0.6	33.1	1302	33.1	1393
	24P		7 / 0.53	0.6	36.9	1553	36.9	1663
	36P		7 / 0.53	0.6	42.7	2248	42.7	2413
SINGLE & MULTI-PAIRS	1P	2.5	7 / 0.67	0.7	9.7	117	9.7	124
	2P		7 / 0.67	0.7	16.3	258	16.3	272
	3P		7 / 0.67	0.7	17.4	339	17.4	359
	4P		7 / 0.67	0.7	19.0	423	19.0	450
	5P		7 / 0.67	0.7	21.1	519	21.1	553
	6P		7 / 0.67	0.7	23.2	618	23.2	659
	8P		7 / 0.67	0.7	26.3	800	26.4	855
	10P		7 / 0.67	0.7	30.1	990	30.1	1059
	12P		7 / 0.67	0.7	31.2	1146	31.2	1228
	16P		7 / 0.67	0.7	34.9	1486	34.9	1595
	20P		7 / 0.67	0.7	39.4	1855	39.4	1990
	24P		7 / 0.67	0.7	43.9	2212	43.9	2376
	36P		7 / 0.67	0.7	50.8	3207	50.8	3452

* Other pairs, triads and quads configurations are available upon request.

* Class 5 conductors are available upon request.

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No. of Pairs	Nominal Conductor Area (mm ²)	No. and Diameter of Wires (no./mm)	Radial Thickness of Insulation (mm)	IN-XIOP		IN-PIOP	
				Cable Overall Diameter (mm)	Approximate Weight (kg/km)	Cable Overall Diameter (mm)	Approximate Weight (kg/km)
1T	0.5	7 / 0.3	0.6	7.5	68	7.5	74
6T		7 / 0.3	0.6	16.5	317	16.5	356
16T		7 / 0.3	0.6	24.4	730	24.4	835
24T		7 / 0.3	0.6	30.6	1076	30.6	1233
1T	0.75	7 / 0.37	0.6	7.9	79	7.9	86
6T		7 / 0.37	0.6	17.7	377	17.7	421
16T		7 / 0.37	0.6	26.5	899	26.5	1014
24T		7 / 0.37	0.6	33.1	1324	33.1	1497
1T	1.0	7 / 0.43	0.6	8.3	89	8.3	97
6T		7 / 0.43	0.6	18.7	437	18.7	483
16T		7 / 0.43	0.6	28.1	1052	28.1	1176
24T		7 / 0.43	0.6	35.4	1673	35.4	1756
1T	1.5	7 / 0.53	0.6	8.9	109	8.9	118
6T		7 / 0.53	0.6	20.6	561	20.6	614
16T		7 / 0.53	0.6	31.1	1378	31.1	1517
24T		7 / 0.53	0.6	39.0	2031	39.0	2240
1T	2.5	7 / 0.67	0.7	10.5	155	10.5	167
6T		7 / 0.67	0.7	24.5	813	24.5	888
16T		7 / 0.67	0.7	37.0	2002	37.0	2201
24T		7 / 0.67	0.7	46.5	2977	46.5	3275

SINGLE & MULTI-TRIADS

* Other pairs, triads and quads configurations are available upon request.

* Class 5 conductors are available upon request.