BS 5308 Part 2 Type 1 PVC/IS/OS/PVC Individually & Collectively Screened Instrument Cable

Technical Datasheet

Part No: P2T1IOS

Description: The ENGELEC BS 5308 Part 2 Type 1 un-armoured individually & collectively (overall) screened instrument cables are generally use for indoor installation and suitable for wet and damp areas. Generally used within industrial process manufacturing plants for communication, data and voice transmission signals and services, Also used for the interconnection of electrical equipment and instruments, typically in chemical or petrochemical industry.

LEAD FREE RoHS COMPLIANT

CE

UV & WEATHER RESISTANT

Construction

Conductor	Annealed or tinned copper, sizes: 0.5mm², 0.75mm² and 1.5mm² to BS 6360
Insulation	PVC (polyvinyl chloride), type TI1 to BS 6746
Pairing	Two insulated conductors uniformly twisted together with a lay not exceeding 100mm
Colour code	See technical information
Individual screen	Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm²
Binder tape	PETP transparent tape
Collective screen	Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²
Outer sheath	PVC Sheath, type TM 1 or type 6 to BS 6746
Sheath colour	Black or blue

Mechanical and Electrical Properties

* **Operating temperature** : -20˚C up to + 70˚C(fixed installation) ; -10˚C to +50˚C(flexed operation).
* **Minimum bending radius** : 6 x overall diameter.

Conductor Area Size		mm2	0.5	0.75	1.0	1.5
Conductor resistance max		ohm/km	39.7	26.5	18.4	12.3
Insulation resistance min		Mohm/km	25	25	25	25
Max. Mutual Capacitance: pair or adjacent cores		pF/m	250	250	250	250
Capacitance between any core or screen max.		pF/m	400	400	400	400
Max. L/R Ratio for adjacent cores(Inductance/Resistance)		µH/ohm	25	25	35	40
Test voltage	**Core to core**	V	1000	1000	1000	1000
	Core to screen	V	1000	1000	1000	1000
Rated voltage max		V	300/500	300/500	300/500	300/500

Standards

RoHS Compliance :	Yes	UV Resistance :	Good, ISO 4892-3†
CE Compliant :	Yes (2014/35/EU)	Weather Resistance :	Good, ISO 4892-3†
Manufactured in accordance to :	BS 5308, BS 6746, IEC 60331-1	CPR Classification	F_{CA} (EN50575:2014+A1:2016)

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Dimension Parameter

Engelec Cable Part Number	No.of Pairs	Nominal Conductor C.S.A.	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Nominal Dia. of Cable	Approx. Weight
		mm2	mm	mm	mm	kg/km
P2T1IOS02P05X	2	0.5	0.6	1.1	11.2	170
P2T1IOS05P05X	5	0.5	0.6	1.2	14.6	270
P2T1IOS10P05X	10	0.5	0.6	1.3	19.4	520
P2T1IOS15P05X	15	0.5	0.6	15	22.7	650
P2T1IOS20P05X	20	0.5	0.6	1.5	25.9	860
P2T1IOS30P05X	30	0.5	0.6	1.7	31.2	1130
P2T1IOS50P05X	50	0.5	0.6	2.2	40.1	1880
P2T1IOS02P75X	2	0.75	0.6	1.1	12.2	200
P2T1IOS05P75X	5	0.75	0.6	1.2	15.8	355
P2T1IOS10P75X	10	0.75	0.6	1.3	21.1	560
P2T1IOS15P75X	15	0.75	0.6	1.5	24.9	770
P2T1IOS20P75X	20	0.75	0.6	1.7	28.6	990
P2T1IOS30P75X	30	0.75	0.6	2	34.7	1380
P2T1IOS50P75X	50	0.75	0.6	2.2	43.9	2225
P2T1IOS02P15X	2	1.5	0.6	1.2	13.6	265
P2T1IOS05P15X	5	1.5	0.6	1.3	147.8	490
P2T1IOS10P15X	10	1.5	0.6	1.5	24.1	820
P2T1IOS15P15X	15	1.5	0.6	1.7	28.2	1110
P2T1IOS20P15X	20	1.5	0.6	1.7	31.9	1470
P2T1IOS30P15X	30	1.5	0.6	2	38.8	2070
P2T1IOS50P15X	50	1.5	0.6	2.2	49.1	3340

Remark: ‘ X ’ is ‘1’,’ 2’ or ’5’, means IEC60228 conductor class, customized for class 1 or class 2 or class 5.

Conductor Option

Conductor Area Size	mm2	0.5	0.75	1.0	1.5
Conductor Class 1	No. x mm	1/0.8	1/0.98	1/1.13	1/1.38
Conductor Class 2	No. x mm	7/0.3	7/0.37	7/0.43	7/0.50

Pair Identify

- Number marking : Pair color black and white, printed since from number ‘1’, ‘2’, ’3’, ’4’ .....
- Color marking :

Pair Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Wire A																									
Wire B																									

* Information and images on this datasheet are intended for guidance only and products may vary due to technical improvements and commercial factor