



PE Insulation, Collective Screen, PVC Sheath Instrumentation Cable

Application

These cables used for connecting instruments and control systems for analogue or digital signal transmission for indoor and outdoor applications. These cables shall not be connected directly to mains electricity supply or other low impedance sources, since they are not designed to be used for power supply.

Construction

CONDUCTOR :Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)

INSULATION :PE-Polyethylene compound to EN50290-2-23 Black / White twisted pairs with numbered cores

BINDER TAPE :Polyester foil on overall cable core formed by stranded pairs.

COLLECTIVE SCREEN :Aluminum/polyester foil with a tinned copper drain wire in direct contact with the metallic side of the foil

OUTER SHEATH :Flame retardant PVC compound to EN50290-2-22 Blue for intrinsically safe cable Black for UV resistant and/or non-intrinsically safe cable Other colours on request

Electrical Properties

RATED VOLTAGE :500 V a.c.

AC TEST VOLTAGE :2000 V x 1 min. (core:core / core: screen)

WORKING TEMPERATURE : -30°C / + 70°C (during operation) – 5 °C / + 50°C (during installation)

MIN BENDING RADIUS (FIXED) :7,5 x D

CONSTRUCTION :EN 50288-7

MATERIAL TYPES & TESTS :EN 50290-2 series

ELECTRICAL & MECHANICAL TESTS :EN 50289 series

FLAME RETARDANT :IEC 60332 / 1-2, IEC 60332 / 3-24 Cat C

Electrical Characteristics

Conductor size (Class 2)	nom.	mm ²	0.5	0.75	1	1.3	1.5	2.5
Conductor resistance	max.	Ω/km	36.7	25	18.5	14.2	12.3	7.6
Insulation resistance	min.	MΩxkm	5000					
Mutual Capacitance	max.	nF/km	150					
Inductance	max.	mH/km	1					
L/R ratio	max.	μH/Ω	25	25	25	40	40	60
(*) At 20 °C								

Parameter

Cross Sections (mm ²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	6	44
2x2x0,5	8.8	76
4x2x0,5	10.3	115
5x2x0,5	11.2	134
6x2x0,5	12.1	153
8x2x0,5	13.7	196

10x2x0,5	15.6	241
12x2x0,5	16.1	272
16x2x0,5	17.8	338
20x2x0,5	20	416
24x2x0,5	22.2	495
1x2x0,75	6.7	54
2x2x0,75	10	98
4x2x0,75	11.5	146
5x2x0,75	12.7	177
6x2x0,75	13.8	204
8x2x0,75	15.6	261
10x2x0,75	17.6	313
12x2x0,75	18.4	365
16x2x0,75	20.3	456
20x2x0,75	22.8	562
24x2x0,75	25.4	671
1x2x1	6.9	59
2x2x1	10.3	108
4x2x1	11.9	165
5x2x1	13.1	201
6x2x1	14.3	233
8x2x1	16.2	300
10x2x1	18.4	370
12x2x1	19	420
16x2x1	21.3	540
20x2x1	23.9	665
24x2x1	26.6	793
1x2x1,3	7.5	72
2x2x1,3	10.9	126
4x2x1,3	12.9	204
5x2x1,3	14	242
6x2x1,3	15.4	288
8x2x1,3	17.3	362
10x2x1,3	19.7	448
12x2x1,3	20.4	514
16x2x1,3	22.8	664
20x2x1,3	25.6	820
24x2x1,3	28.5	977
1x2x1,5	7.7	76
2x2x1,5	11.3	135
4x2x1,5	13.3	220
5x2x1,5	14.5	262
6x2x1,5	15.9	312
8x2x1,5	18.1	403

10x2x1,5	20.4	488
12x2x1,5	21.3	571
16x2x1,5	23.8	736
20x2x1,5	26.7	908
24x2x1,5	29.7	1083
1x2x2,5	8.9	103
2x2x2,5	13.4	193
4x2x2,5	15.9	324
5x2x2,5	17.3	387
6x2x2,5	19.1	461
8x2x2,5	21.7	597
10x2x2,5	24.7	738
12x2x2,5	25.6	853
16x2x2,5	28.6	1105
20x2x2,5	32.3	1380
24x2x2,5	36	1646