

EN 50288-7 (500 V)



CABLE STRUCTURE

Conductor	Electrolytic, stranded, annealed plain copper wires to IEC 60228 Class 2 (Class 1 or Class 5 and / or tinned on request)
Insulation	Mica tape + XLPE compound to EN50290-2-29 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
Inner Sheath	LSZH compound to EN50290-2-27
Armour	Round galvanised steel wires EN 10257-1
Outer Sheath	Halogen free flame retardant LSZH compound to EN50290-2-27 Orange or Red for circuit integrity Blue for intrinsically safe cable Black for UV resistant and/or non-intrinsically safe cable

STANDARDS & MAIN CHARACTERISTICS

Rated Voltage	500 V a.c.
AC Test Voltage	2000 V x 1 min. (core:core / core: screen)
Working Temperature	-40°C / + 90°C (during operation) - 5 °C / + 50°C (during installation)
Min Bending Radius (Fixed)	10 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
Fire Resistance	IEC 60331 / 21, IEC 60331 / 1-2
Halogen Content	IEC 60754 / 1-2
Smoke Emission	IEC 61034 / 1-2

Available Features on Request

- 300 V version
- Hydrocarbon resistant
- Oil resistant
- UV resistant
- Hv type reinforced sheath
- Anti termit / anti rodent
- Multi core / Multi triple / Multi quad

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. Recommended for use where circuit integrity is required in case of fire.

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	25,0	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

PHYSICAL CHARACTERISTICS

Cross Sections (mm ²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x0,5	11,7	256
2x2x0,5	15,0	363
4x2x0,5	16,6	443
5x2x0,5	17,9	502
6x2x0,5	19,1	555
8x2x0,5	21,8	768
10x2x0,5	23,9	880
12x2x0,5	24,6	942
16x2x0,5	26,9	1090
20x2x0,5	29,6	1267
24x2x0,5	33,1	1634
1x2x0,75	12,1	270
2x2x0,75	15,6	390
4x2x0,75	17,6	497
5x2x0,75	18,8	555
6x2x0,75	20,8	724
8x2x0,75	22,9	854
10x2x0,75	25,5	992
12x2x0,75	26,1	1064
16x2x0,75	28,4	1235
20x2x0,75	32,0	1625
24x2x0,75	35,5	1884
1x2x1	12,3	283
2x2x1	16,0	415
4x2x1	18,0	525
5x2x1	19,3	590
6x2x1	21,0	824
8x2x1	21,5	787
10x2x1	23,5	906
12x2x1	26,1	1063
16x2x1	29,4	1350
20x2x1	33,1	1757
24x2x1	36,7	2054

Cross Sections (mm ²)	Nominal Overall Diameter (mm)	Approximate Weight (kg/km)
1x2x1,3	12,8	300
2x2x1,3	16,8	450
4x2x1,3	19,0	580
5x2x1,3	21,3	782
6x2x1,3	22,7	863
8x2x1,3	25,1	1021
10x2x1,3	27,8	1184
12x2x1,3	28,5	1280
16x2x1,3	32,0	1714
20x2x1,3	35,7	2036
24x2x1,3	39,1	2320
1x2x1,5	12,9	305
2x2x1,5	16,9	457
4x2x1,5	19,2	602
5x2x1,5	21,5	812
6x2x1,5	23,0	898
8x2x1,5	25,4	1063
10x2x1,5	28,1	1234
12x2x1,5	29,1	1352
16x2x1,5	32,6	1792
20x2x1,5	36,1	2114
24x2x1,5	39,6	2429
1x2x2,5	14,5	376
2x2x2,5	19,4	578
4x2x2,5	22,9	907
5x2x2,5	24,6	1027
6x2x2,5	26,6	1160
8x2x2,5	29,5	1388
10x2x2,5	33,8	1830
12x2x2,5	35,1	2038
16x2x2,5	38,6	2421
20x2x2,5	43,4	3143
24x2x2,5	48,3	3683