

Application

The Z1HOZ1MZ1(AS) is an instrumentation and control (I&C) cable, suitable for applications with a high risk of electromagnetic interference and where halogen-free and flame-retardant properties are required. This cable is recommended for industrial installations with a risk of mechanical aggression, such as service stations, petrochemical plants, flammable product warehouses and production plants in general.

- Technical designation Z1HOZ1MZ1(AS): rigid copper conductor, class 2.
- Technical designation Z1HOZ1MZ1-K(AS): flexible copper conductor, class 5.
- Suitable for industrial use and potentially explosive atmospheres (ATEX area).



CONSTRUCTION

Conductor	Rigid (class 2) or flexible (class 5) electrolytic copper conductor according to UNE-EN 60228 / IEC 60228.
Insulation	Thermoplastic polyolefin according to EN 50288-7.
Screen (individual/overall)	Aluminum/mylar.
Inner sheath	Thermoplastic polyolefin according to EN 50288-7.
Armour	Crown galvanized steel wire.
Sheath	Thermoplastic polyolefin according to EN 50288-7.

ELECTRICAL & THERMAL PROPERTIES

Nominal voltage	300/500 V.
Test voltage	2,000 V.ac.
Max. conductor temperature	70°C in normal operation.
Max. short-circuit temperature	160°C (max. 5 s).

FIRE PERFORMANCE

Flame propagation	Non-propagating according to EN 60332-1-2 / IEC 60332-1-2.
Fire propagation	Non-propagating according to EN 60332-3-24 / IEC 60332-3-24.
Halogen content	Halogen-free, according to EN 60754-1 / EN 60754-2 / IEC 60754-1 / IEC 60754-2.
Smoke emission	Low, according to EN 61034-2 / IEC 61034-2.
Reaction to fire (CPR)	Cca-s1b, d1, a1.

OTHER PROPERTIES

UV resistance	1 cycle according to UNE 211605.
Water absorption	Resistant to water absorption.
Cold resistance	High cold resistance.
Impact & rodent resistance	Resistant to impact and rodents.
Electromagnetic protection	Yes, via screen.
Available on request	Hydrocarbon/oil resistance (UIC-895 OR), UV resistance > 5 cycles (UNE 211605), UV resistance according to UNE-EN 50289-4-17:2016, rated voltage 450/750 V.

STANDARDS & APPROVALS

Standard	UNE-EN 50288-7.
Directives	Low Voltage Directive (LVD) 2014/35/EU.
Approvals	RoHS / CE / suitable for ATEX areas.
CPR	Cca-s1b, d1, a1.

DIMENSIONS & TECHNICAL DATA

CPR classification for all sections below: Cca-s1b, d1, a1.

Rigid copper conductor - 300/500 V

Section	Resistance at 20°C (Ohm/km)	Class	External diameter (mm)	Weight (kg/m)
2X2X0.5	36	2	14.4	0.34
6X2X0.5	36	2	20.0	0.72
12X3X0.5	36	2	24.8	1.07
6x2x1	18.1	2	20.3	0.75
12x2x1	18.1	2	25.6	1.15
16x2x1	18.1	2	28.4	1.38
24x2x1	18.1	2	33.6	1.88
2X2X1.5	12.1	2	16.4	0.48
6X3X1.5	12.1	2	23.7	1.04
12X3X1.5	12.1	2	30.0	1.65

Rigid copper conductor - 450/750 V

Section	Resistance at 20°C (Ohm/km)	Class	External diameter (mm)	Weight (kg/m)
2X2X0.5	36	2	13.77	0.37
6X3X0.5	36	2	20.24	0.75
8X3X0.5	36	2	21.95	0.98
2X2X1.5	12.1	2	16.21	0.51
6X3X1.5	12.1	2	24.94	1.26
8X3X1.5	12.1	2	26.45	1.44

Flexible copper conductor - 300/500 V

Section	Resistance at 20°C (Ohm/km)	Class	External diameter (mm)	Weight (kg/m)
2X2X1.5	13.3	5	16.2	0.485
3X2X1.5	13.3	5	16.9	0.52
4X2X1.5	13.3	5	18.1	0.62
5X2X1.5	13.3	5	19.4	0.75
6X2X1.5	13.3	5	22.2	0.97
10X2X1.5	13.3	5	26.3	1.31
12X2X1.5	13.3	5	29	1.53
20X2X1.5	13.3	5	36	2.89
24X2X1.5	13.3	5	38.5	3.62
2X3X1.5	13.3	5	17.2	0.55
6X3X1.5	13.3	5	25	1.21
10X3X1.5	13.3	5	29.5	1.63
12X3X1.5	13.3	5	32.7	2.06
20X3X1.5	13.3	5	39.9	2.93

Flexible copper conductor - 450/750 V

Section	Resistance at 20°C (Ohm/km)	Class	External diameter (mm)	Weight (kg/m)
6X2X1.5	13.3	5	22.2	0.97
12X2X1.5	13.3	5	28.9	1.56

* The stated outer diameters are approximate, always within production tolerance.