H07Z1-K Tinned Copper

DESIGN

Conductor
Electrolytic annealed tinned copper conductor, flexible class 5 according to IEC 60228.

Insulation
Polyolefin insulation, halogen free and low smoke under fire conditions, type TI7 according to EN 50363-7.

APPLICATIONS

Flexible cable for fixed and protected installation. Suitable for transport and distribution of electric power where is required low smoke and halogen free fumes under fire conditions. Specially recommended for public places installations.

CHARACTERISTICS

Electrical Performance	450/750 V
CPR	B2ca-s1a,d1,a1, according to EN 50575
Thermal Performance	Minimum service temperature: -20°C
	Maximum conductor temperature: 70°C (EN 50525-3-31)
	Maximum short-circuit temperature: 160°C (max. 5s.)
Fire Performance	Flame non-propagation: EN 60332-1 and IEC 60332-1
	Fire non-propagation: EN 50399
Halogen free	According to EN 60754 / IEC 60754
	HCl content < 0.5%
	pH > 4,3, conductivity < 10 µS/mm
Smoke density	According to EN 61034 / IEC 61034
	Light transmittance > 60%
UV resistance	According to EN 50618
Mechanical Performance	Minimum beding radius: 5 x cable diameter
Chemical Performance	Chemical performance: Acceptable
Water performance	Water resistance: AD3 Sprays.
Standards	Designed, manufactured and tested according to EN 50525-3-31 and UNE 211002.
Approvals	BUREAU VERITAS, AENOR

** The product and information presented in this document are for calculation only and subject to technical progress. Outer diameters are approximately **

CURRENT-CARRYING CAPACITIES

Current carrying capacities during normal operation.

Table below shows the maximum current-carrying capacities and voltage drop for each cable.

Current-carrying capacities, in amperes, are calculated according to IEC 60364-5-52 and for the following conditions:

- Air installation: two or three loaded conductors installed in a conduit on a wall, and ambient temperature of 30 °C.

For conditions other than this apply the adequate correction factors.

Voltage drop, in volts per ampere and km, is the maximum that may occur. It is calculated for the maximum conductor temperature, single-phase circuit and for cos φ= 1.

Section	Current (A)		Voltage drop
(mm^2)	2 cond	3 cond	(V/A-km)
1x4	32	28	11.9
1x6	41	36	7.92

SHORT-CIRCUIT CURRENT-CARRYING CAPACITIES

The maximum short-circuit current that a cable can withstand depend on the time of reaction of the protection elements installed in the line.

The maximum current-carrying capacity in a short-circuitaccident, for a specific type of cable, is the result of multiplying the cross section of the cable for the values shown in table below. These values are taken from IEC 949.

Time (s)	0.1	0.2	0.3	0.5	1	1.5	2	2.5	3
A/mm^2	364	257	210	163	115	94	81	73	66

CORRECTION FACTORS

The current-carrying capacities must be multiplied with the adequate correction factor when the installation conditions differs from the current-carrying capacities during normal operation.Correction factors for air temperature other than 30 °C.

Air T. (°C)	20	25	30	35	40	45	50	55	60
Factor	1.12	1.06	1	0.94	0.87	0.79	0.71	0.61	0.50

Dimensions

Section (mm^2)	Diameter (mm)	Weight (kg/km)
1x4	4.1	45
1x6	4.7	65