Product specification

1301-TZC 750 24 Uen

date.96-11-12
rev.C

Coaxial cable

Engineering data for flexible coaxial cable TZC 750 24 with characteristic impedance 75 ohm and double braid of tinned copper wire. Outer sheath of black flame retardant PVC.

Application

The document shall be applied for the selection of cables and may be used as basic data for purchasing and acceptance inspection. In case of deviation between this document and purchase order, the purchase order shall apply.

IEC 96-0 Radio-frequency cables. Guide to the design of detailed specifications.

IEC 96-1 Radio-frequency cables. General requirements and measuring methods.

1727-303 Test of Stripping Force

Contents

Field of application

Maximum 2 Mbit/s. Indoor use at temperatures between -10 and +70Cel. Installation temperature between 10 and 50 Cel. Minimum bending radius at 20 Cel 20 mm.

Design

For symbols see IEC 96-0.

Inner conductor
Solid copper wire.
Conductor diameter 0,31 +/-0,005 mm

Dielectric
Solid uncoloured polyethylene
Diameter 1,95 +/-0,1 mm

Outer conductor
Double braid of tinned, annealed copper wire.
Outer braid diameter 2,85 mm.
Wire diameter 0,10 mm
Coverage minimum 80 %.

Sheath
Non contaminating, flame retardant black PVC with oxygen index minimum_30.

Thickness nominal 0,3 mm
Overall diameter 3,55 +/-0,15 mm

Stripping force 30 +/-15 N (Spec.no.1727-303).

Electrical data

CHARACTERISTIC IMPEDANCE 75 +/-3 ohm

NOMINAL CAPACITANCE 67 pF/m

VELOCITY RATIO 0,66

DC-RESISTANCE for inner conductor nom. 228 ohm/km
max 236 ohm/km

DC-RESISTANCE for outer conductor nom. 17,5 ohm/km
max 19,5 ohm/km

NOMINAL ATTENUATION per 100 m cable:

At	1 MHz	2,3 dB
"	4 MHz	4,5 dB
"	17 MHz	9,2 dB
"	70 MHz	18,7 dB

MAXIMUM POWER RATING in air:

At	1 MHz	300 W
"	4 MHz	220 W
"	17 MHz	160 W
"	70 MHz	120 W

Maximum power rating in air is calculated for a temperature rise of 45 Cel for the inner conductor above the ambient temperature. Maximum temperature for the inner conductor is + 85 Cel.

MINIMUM CROSSTALK ATTENUATION:

At	0,01MHz	65dB
At	0,1MHz	82dB
At	0,7 to 100MHz	115dB

The crosstalk attenuation is measured with two cables with 10 meters of length each and strapped close together. At the near end the coaxial cables screens are connected and earthed. At the far end each cable's screen is connected via a resistor 75 ohms to the inner conductor respectively and to the other cable's screen. The disturbing signal is feeded on the first cable. The signal is detected via an amplifier on the second cable.
MAXIMUM ALTERNATING VOLTAGE for continuous use, peak_value_750_V at 20 Cel.
OPERATING TEMPERATURE -10 to +70 Cel.

General requirements

Irrespective of the specified requirements being fulfilled, the buyer reserves his right to test the material under its normal operation conditions before FINAL ACCEPTANCE.

Change of properties in any way in comparison with an earlier delivery (shall also apply to properties not specified), shall be advised before a new delivery.
Requirements at electrical tests

	Property	Test method according to IEC 96-1 item	Unit	Requirements
5.1	Dielectric strength of core	8	kV	min 2,2 r.m.s
5.2	Insulation resistance at 500 V DC	9	Mohm x km	min 5000
5.3	Discharge test	11	kV	min 1,0 r.m.s
5.4	Characteristic impedance at 200 MHz	14	ohm	72 - 78
5.5	Attenuation at 200 MHz	16	dB/m	max 0,32

Unit

Quantity shall be given in metre.

Marking

The coaxial cable shall be permanently marked two times per each metre with the manufacturers identification, the product number TZC_750 24 and the time code of manufacturing with a four digit-code (year,week).
Additional markings may appear.

Delivery form

If not otherwise specified on order TZC 750 24 shall be supplied on drums, marked with type number and length of the cable. Order no. and drum no. for tracing.
Supplier's notation or other data may be added.
The ends of the cable shall be sealed with tape.
The drums shall contain 500 metres. 20% of the supplied drums may contain shorter lengths. The minimum length shall not be less than 200 metres. Each drum shall only contain one length.

References

General information

IEC 28 International standard of resistance for copper.

ASTM D 2863 Minimum oxygen concentration to support candle-like combustion of plastics.

Product list

Product Number	Min. bending radius (mm)		Mass
	+20 Cel	-30 Cel	g/m
TZC 750 24	20	40	23