

Data sheet

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MC GC1000 pro23 Cat.7 S/FTP 4P LSHF-FR, class D_{ca} s2 d1 a1

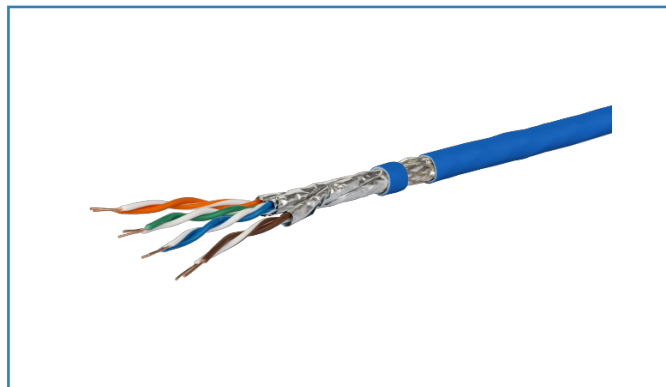
P/N

130842703414M

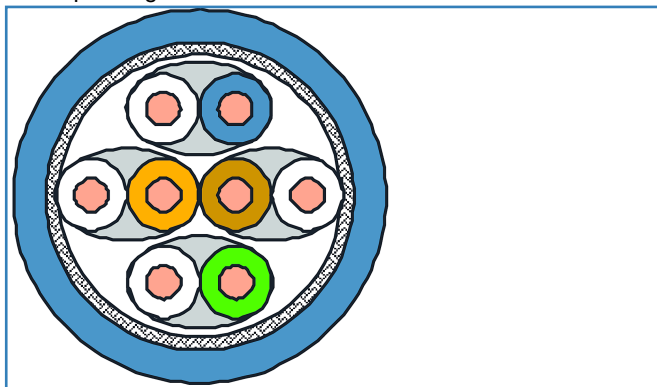
EAN 4250184175315

2017-20-11

Illustrations



Principle diagram



See enlarged drawings at the end of document



Product specification

- 10 GBit installation cable, simplex
- installation cable Cat.7 AWG 23 S/FTP with wires shielded in pairs
- 4 pairs (PiMF)
- pair shield: plastic foil with aluminum coating
- overall shield: tinned copper braid
- outer diameter 7.5 mm
- color of the cable jacket: blue
- coupling attenuation 85 dB
- applicable standards: EN 50173-1:2011-09; ISO/IEC 11801 Ed.2.2:2011-06; EN 50288-4-1 and IEC 61156-5
- cable jacket: LSHF-FR (LSOH-FR)
- flame-retardant to IEC 60332-1; IEC 60332-3-24; IEC 60754-2 and IEC 61034
- fire behaviour: Class D_{ca} s2 d1 a1 acc. to EN 50399 (classification acc. to EN 13501-6)

Shipping Units:

sold by meter	on drum
1640 ft (500 m)	on drum
3280 ft (1000 m)	on drum

Technical Data

General Data

Design	Installation cables
Shielding	shielded
Transmission technology	Copper
Cable Type	S/FTP
Number of twisting elements	4
Twisting element	Pair
Color coding fiber/ wire(s)	white, orange, white, green, white, brown, white, blue
Color	blue
Weight	75 kg/km

Transmission characteristics

Category (ISO)	7
Transmission rate up to 10 GBit	IEEE 802.3an
Transmission values (nominal)	see table

Connections/interfaces

Termination data, solid wire (min. - max.)	
Conductor cross section, solid wire	AWG 23/1
Conductor diameter, solid wire (bare copper)	0.56 mm
Conductor diameter, solid wire (bare copper)	0.022 in.
Core diameter (min. - max.)	
Core diameter (conductor with insulation)	1.38 mm
Core diameter (conductor with insulation)	0.054 in.
Cable sheath diameter (min. - max.)	
Cable sheath diameter	7.5 mm
Cable sheath diameter	0.295 in.
Copper index	38 kg/km

Electrical characteristics

Loop resistance	max. 150 Ohm/km
Transfer impedance 1 MHz	max. 5 mOhm/m
Transfer impedance 10 MHz	max. 5 mOhm/m
Transfer impedance 30 MHz	max. 10 mOhm/m
Transfer impedance 100 MHz	max. 20 mOhm/m
Characteristic impedance 1-100 MHz	100+/-5 Ohm

Technical Data

Electrical characteristics

Characteristic impedance 100-250 MHz	100+/-10 Ohm
Characteristic impedance 250-600 MHz	100+/-15 Ohm
Resistance unbalance	max. 2 %
Coupling attenuation	85 dB
Capacitance at 800 Hz	Nom. 43 nF/km
Capacitance unbalance pair to ground	max. 1500 pF/km
Nominal velocity of propagation	ca.79 %
Signal propagation delay	max. 425 ns/100 m
Delay skew	max. 9 ns/100 m
Dielectric strength conductor-conductor (primarily)	1000 V DC
Dielectric strength conductor-conductor (secondary)	1000 V DC
Dielectric strength conductor-shield	1000 V DC
Segregation classification	D

Mechanical characteristics

Tensile force	150 N
Fire load	0.163 kWh/m
Fire load	585 MJ/km
Bending radius without load	min. 30 mm
Bending radius without load	min. 1.18 in.
Bending radius with load	min. 60 mm
Bending radius with load	min. 2.36 in.

Materials and material properties

Material - Conductor	Cu (copper)
Material - Conductor Insulation	Foam-Skin Polyethylen
Material - Cable jacket	LSHF-FR (LSOH-FR)
Material - Pair shield	plastic film
Material - Pair shield finish	Al (Aluminium)
Material - Main shield	Cu (copper) braid
Material - Main shield finish	Sn (tin)
Flame retardancy	yes



Technical Data

Environmental conditions

Temperature (min. - max.)

Temperature - Storage °C -20 - 60 °C

Temperature - Storage °F -4 - 140 °F

Temperature - Operating °C -20 - 60 °C

Temperature - Operating °F -4 - 140 °F

Certifications

GHMT Component



GHMT component - Validity period

22.02.2019

Approvals

RoHS

compliant

The product meets the following standards

Generic cabling systems

General requirements ISO/IEC 11801 Ed.2.2:2011-06 | DIN EN 50173-1:2011-09

Multi-element metallic cables used in analogue and digital communication and control

DIN EN 50288-4-1

Common test methods for cables under fire conditions

Fire behaviour - class



Klasse D_{ca} s2 d1 a1 nach EN 50399
(Klassifizierung nach EN 13501-6)

Test for vertical flame propagation for a single insulated wire or cable

IEC 60332-1

Test for vertical flame spread of vertically-mounted bunched wires or cables

IEC 60332-3-24

Measurement of smoke density of cables burning

IEC 61034

Determination of acidity (by measuring the pH value) and conductivity

IEC 60754-2



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Technical Data**Classifications**

ETIM 5.0	EC000830
ETIM 6.0	EC000830

Packing details

Type of packaging	meter / drum
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Accessories

P/N	Designation
140302-01-E	Jokari dismantle tool



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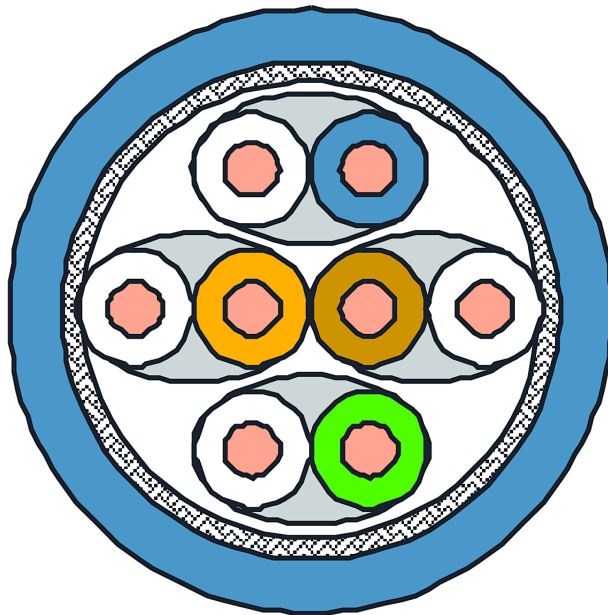
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Transmission values (nominal)

as per Cat. 7 (at 20°C)

FREQ (MHz)	Attenuation (dB/100m)	NEXT (dB)	PS-NEXT (dB)	ACR (dB/100m)	PS-ACR (dB/100m)	ELFEXT (dB/100 m)	PS-ELFEXT (dB/100 m)	Return loss (dB)
1.0	1.8	104	101	102	99	105	105	-
4.0	3.4	100	97	97	94	105	102	27
10.0	5.4	100	97	95	92	97	94	30
16.0	6.8	100	97	93	90	93	90	30
20.0	7.7	100	97	92	89	91	88	30
31.2	9.6	100	97	90	87	87	84	30
62.5	13.7	100	97	86	83	81	78	30
100.0	17.4	100	97	83	80	77	74	30
125.0	19.5	95	92	75	72	75	72	26
155.5	21.9	94	91	72	69	73	70	26
175.0	23.3	93	90	70	67	72	69	25
200.0	25.0	92	89	67	64	71	68	25
250.0	28.1	90	87	62	59	69	66	24
300.0	30.9	89	86	58	55	67	64	24
450.0	38.3	87	84	48	45	64	61	23
600.0	44.8	85	82	40	37	61	58	22
750.0	52.0	83	80	31	28	59	56	21
900.0	59.4	82	79	23	20	58	55	20
1000.0	63.1	80	77	17	14	57	54	20

