

## Data sheet

### MC GC1000 plus23 Cat.7 S/FTP 2x4P LSHF, class E<sub>ca</sub>

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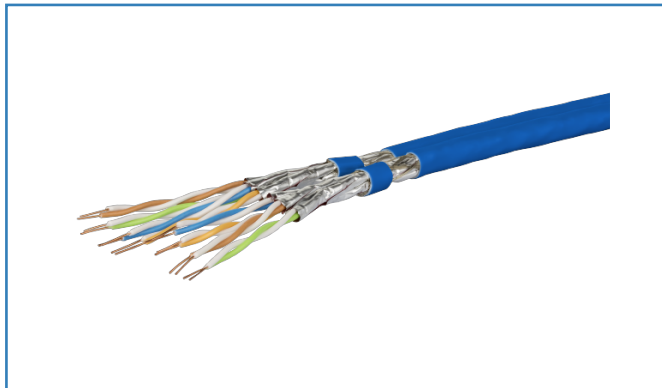
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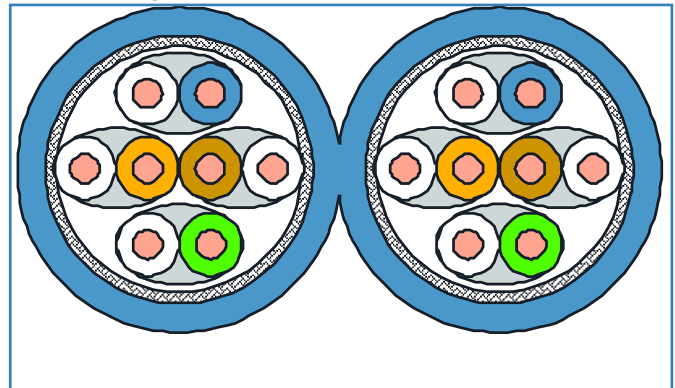
EAN 4250184175285

2017-20-11

## Illustrations



Principle diagram



See enlarged drawings at the end of document



## Product specification

- 10 GBit installation cable, duplex
- installation cable Cat.7 AWG 23 S/FTP with wires shielded in pairs
- 2 x 4 pairs (PiMF)
- pair shield: plastic foil with aluminum coating
- overall shield: tinned copper braid
- outer diameter 7.2/15.0 mm
- color of the cable jacket: blue
- coupling attenuation 80 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 (LSOH)
- flame-retardant to IEC 60332-1; IEC 60754-2 and IEC 61034
- fire behaviour: Class E<sub>ca</sub> (classification acc. to EN 13501-6)

### Shipping Units:

sold by meter	on drum
1640 ft (500 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	109.20 kg/km

#### Transmission characteristics

Category (ISO)	7
PoE	IEEE 802.3af
PoE plus	IEEE 802.3at
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)	1.35 mm
Core diameter (conductor with insulation)	0.053 in.
Cable sheath diameter (min. - max.)	
Cable sheath diameter	7.2 / 15.0 mm
Cable sheath diameter	0.276 in.
Copper index	52 kg/km



### Technical Data

#### Electrical characteristics

Loop resistance	max. 165 Ohm/km
Transfer impedance 1 MHz	max. 12 mOhm/m
Transfer impedance 10 MHz	max. 10 mOhm/m
Transfer impedance 30 MHz	max. 30 mOhm/m
Characteristic impedance 1-100 MHz	100+/-5 Ohm
Characteristic impedance 100-250 MHz	100+/-10 Ohm
Characteristic impedance 250-600 MHz	100+/-15 Ohm
Resistance unbalance	max. 2 %
Coupling attenuation	80 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. 427 ns/100 m
Delay skew	max. 12 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	220 N
Fire load	0.345 kWh/m
Fire load	1190 MJ/km
Bending radius without load	min. 40 mm
Bending radius without load	min. 1.57 in.
Bending radius with load	min. 80 mm
Bending radius with load	min. 3.15 in.

#### Materials and material properties

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

### Technical Data

#### Materials and material properties

Material - Main shield finish	Sn (tin)
Flame retardancy	yes

#### 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
Temperature - Installation °C	0 - 50 °C
Temperature - Installation °F	32 - 122 °F

#### Approvals

RoHS	compliant
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#### 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	fire behaviour: Class E <sub>ca</sub> (classification acc. to EN 13501-6)
Test for vertical flame propagation for a single insulated wire or cable	IEC 60332-1
Measurement of smoke density of cables burning	IEC 61034
Determination of acidity (by measuring the pH value) and conductivity	IEC 60754-2

#### Classifications

ETIM 5.0	EC000830
ETIM 6.0	EC000830



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## Technical Data

### 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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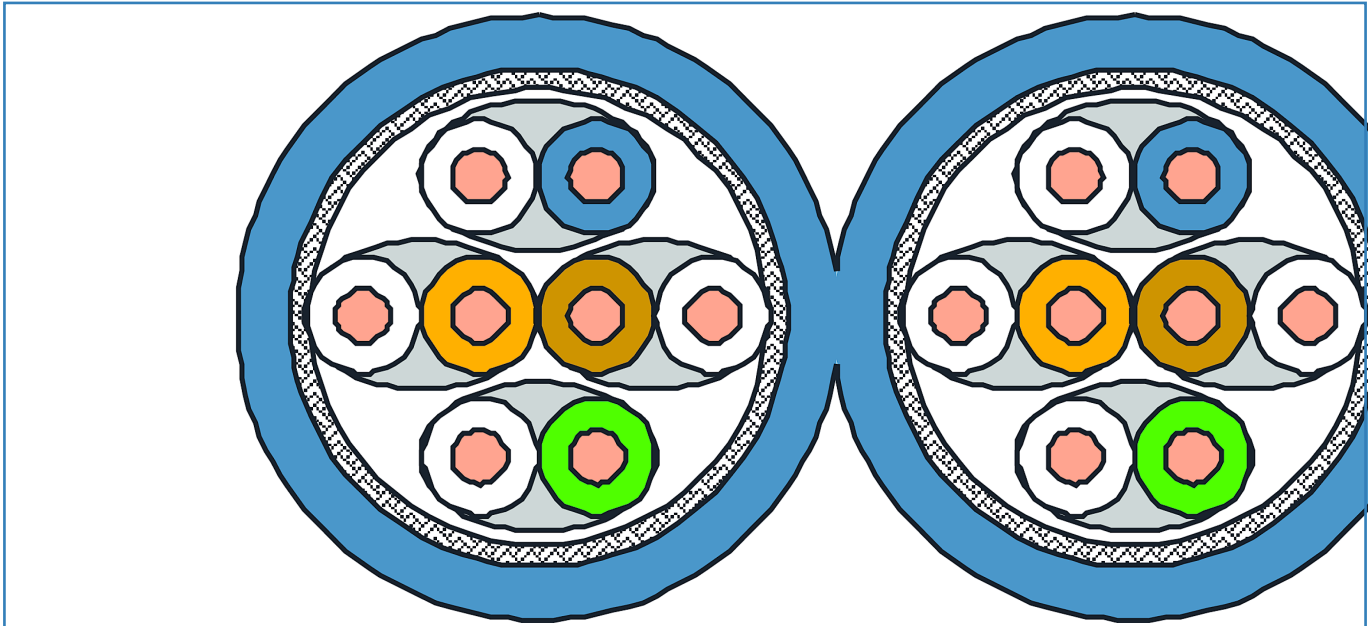
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## Illustrations

Principle diagram



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### Transmission values (nominal)

as per Cat. 7 (at 20°C)

FREQ MHz	Attenuation (dB/100 m)	NEXT dB	PS-NEXT dB	ACR (dB/100 m)	PS-ACR (dB/100 m)	ELFEXT (dB/100 m)	PS-ELFEXT (dB/100 m)	Return loss dB
1.0	1.8	100	97	98	95	105	102	-
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

