

# Data sheet

## MC GC1000 plus23 Cat.7 S/FTP 4P LSHF 500 m, class E<sub>ca</sub>

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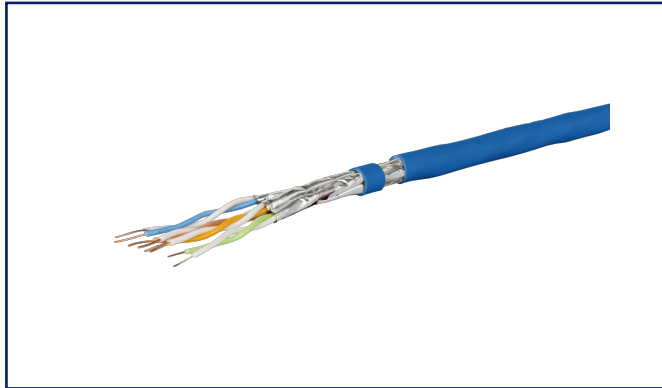
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EAN 4250184175247

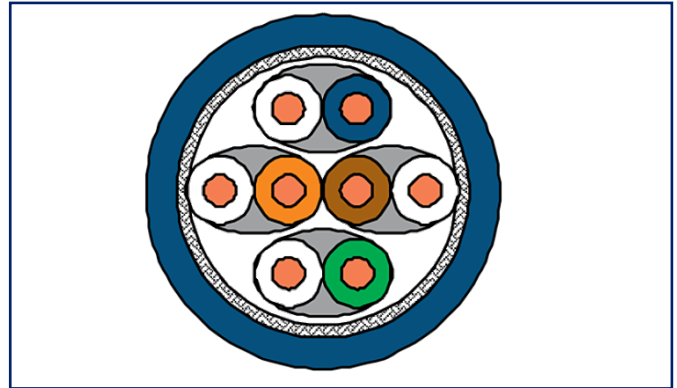
2025/07/09

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### 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: 7.20 - 7.30 mm
- color of the cable jacket: blue
- coupling attenuation: 80 dB
- applicable standards: EN 50173-1, ISO/IEC 11801-1, EN 50288-4-1 and IEC 61156-5
- cable jacket: LSHF (LSOH)
- flame-retardant to IEC 60332-1, IEC 60754-2, IEC 61034 and EN 50399
- fire behaviour: Class E<sub>ca</sub> (classification acc. to EN 13501-6)
- delivery unit: on drum - 500 m/1640 ft



## Technical Data

### General Data

|                               |   |
|-------------------------------|---|
| Fields of application         | Primary (Campus)<br>Secondary (Riser)<br>Tertiary (Horizontal)  |
| Applications                  | IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T<br>IEEE 802.5: ISDN, TPDDI, ATM, CATV, IP Cameras, Broadband Video, SOHO-Cabling<br>Power over Ethernet (PoE) / Type 1-4 |
| Kabelaufbau                   |   |
| Cable Type                    | S/FTP   |
| Conductor material            | Copper  |
| Conductor class               | Cl.1 = solid  |
| Conductor surface             | blank   |
| Conductor diameter (mm)       | 0.57 mm   |
| Conductor diameter (inch)     | 0.022 in.   |
| AWG size                      | 23  |
| Core number                   | 8   |
| Number of twisting elements   | 4   |
| Twisting element              | Pair  |
| Twisted stranding             | Bundle  |
| Shield over twisted stranding | braid   |
| Jacket color                  | blue  |
| Außendurchmesser              |   |
| Cable sheath diameter         | 7.2 mm - 7.3 mm   |
| Cable sheath diameter         | 0.283 in. - 0.287 in.   |

### Mechanical data

|               |       |
|---------------|-------|
| Tensile force | 110 N |
|---------------|-------|

### Brandeigenschaften

|  |             |
|--|-------------|
| Flame retardant according to IEC 60332-1-2   | yes         |
| Low smoke according to EN IEC 61034-2        | yes         |
| Halogen-free according to EN IEC 60754-1     | yes         |
| Halogen-free according to EN IEC 60754-2     | yes         |
| Fire behavior according to EN 13501-6: Class | Eca         |
| Fire load                                    | 0.163 kWh/m |
| Fire load                                    | 590 MJ/km   |



## Technical Data

### Electrical characteristics

|                                       |                   |
|---------------------------------------|-------------------|
| Category                              | 7                 |
| NVP value                             | 79 %              |
| Isolation class according to EN 50174 | d                 |
| Loop resistance                       | max. 154 Ohm      |
| Transfer impedance 10 MHz             | max. 10 mOhm/m    |
| Coupling attenuation                  | 80 dB             |
| Signal propagation delay              | max. 427 ns/100 m |
| Delay skew                            | max. 12 ns/100 m  |
| Insulation resistance                 | 5000 MOhm.km      |
| Test voltage (DC, 1 min) Core/core    | 1000 V            |
| Test voltage (DC, 1 min) Core/shield  | 1000 V            |

### Anwendungseigenschaften / Umgebungsbedingungen

|   |  |
|---|--|
| Permitted type of installation in the ground                              | Installation pipe for underground installation |
| Functional integrity according to IEC 60331-23                            | no   |
| Oil-resistant according to EN IEC 60811-404                               | no   |
| Min. permissible bending radius, flexible use with forced guidance (mm)   | min. 57.6 mm                                   |
| Min. permissible bending radius, flexible use/free movement (mm)          | min. 57.6 mm                                   |
| Min. permissible bending radius, stationary use/fixed installation (mm)   | min. 28.8 mm                                   |
| Min. permissible bending radius, flexible use with forced guidance (inch) | 2.268 in.                                      |
| Min. permissible bending radius, flexible use/free movement (inch)        | 2.268 in.                                      |
| Min. permissible bending radius, stationary use/fixed installation (inch) | 1.134 in.                                      |
| Zulässige Kabelaußentemperatur bei Montage/Handling                       |  |
| Zulässige Kabelaußentemperatur bei Montage/Handling                       | 0 °C - 50 °C                                   |
| Permissible external cable temperature during installation/handling       | 32 °F - 122 °F                                 |



## Technical Data

### Anwendungseigenschaften / Umgebungsbedingungen

Zulässige Kabelaußentemperatur nach Montage ohne Erschütterung

|   |                |
|---|----------------|
| Permissible external cable temperature after installation without vibration | -20 °C - 60 °C |
| Permissible external cable temperature after installation without vibration | -4 °F - 140 °F |
| UV-resistance   | no             |

### Materials and material properties

|                               |                       |
|-------------------------------|-----------------------|
| Material - core insulation    | Foam-Skin Polyethylen |
| Material - protective jacket  | LSHF                  |
| Material - Pair shield        | plastic film          |
| Material - Pair shield finish | Al (Aluminium)        |
| Material - Main shield        | Cu (copper) braid     |
| Material - Main shield finish | Sn                    |

### Geltende Normen

|   |                                 |
|---|---------------------------------|
| General requirements  | ISO/IEC 11801<br>DIN EN 50173-1 |
| PoE   | IEEE 802.3af                    |
| PoE plus  | IEEE 802.3at                    |
| UPoE  | yes                             |
| 4PPoE   | IEEE 802.3bt                    |
| Multi-core metallic data & control cables for analog & digital transmission | DIN EN 50288-4-1<br>IEC 61156-5 |

### Classifications

|           |          |
|-----------|----------|
| ETIM 8.0  | EC003249 |
| ETIM 9.0  | EC003249 |
| ETIM 10.0 | EC003249 |

### Packing details

|                   |                  |
|-------------------|------------------|
| Type of packaging | 500 meter / drum |
| GTIN13            | 4250184175247    |

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### Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way. At METZ CONNECT's request, the Customer shall submit and make available meaningful evidence (e.g. test and laboratory protocols, certifications, etc.).



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## Accessories

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

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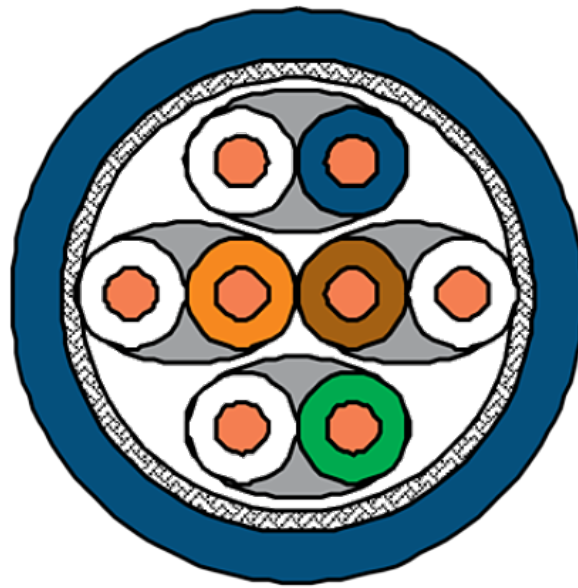
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## Illustrations

Principle diagram



Elektrische Daten

Cat.7 Übertragungseigenschaften bei 20°C (Nominal)

| F (MHz) | Attenuation (dB/100m) | NEXT (dB) | PS-NEXT (dB) | ACR (dB/100m) | PS-ACR (dB/100m) | ACRF (dB/100m) | PS-ACRF (dB/100m) | Return loss (dB) |
|---------|-----------------------|-----------|--------------|---------------|------------------|----------------|-------------------|------------------|
| 1       | 1,8                   | 100       | 97           | 98            | 95               | 105            | 102               | -                |
| 4       | 3,3                   | 100       | 97           | 97            | 94               | 105            | 102               | 27               |
| 10      | 5,2                   | 100       | 97           | 95            | 92               | 97             | 94                | 30               |
| 16      | 6,6                   | 100       | 97           | 93            | 90               | 93             | 90                | 30               |
| 20      | 7,4                   | 100       | 97           | 93            | 90               | 91             | 88                | 30               |
| 31,2    | 9,3                   | 100       | 97           | 91            | 88               | 87             | 84                | 30               |
| 62,5    | 13,4                  | 100       | 97           | 87            | 84               | 81             | 78                | 30               |
| 100     | 17,2                  | 100       | 97           | 83            | 80               | 77             | 74                | 30               |
| 125     | 19,4                  | 95        | 92           | 76            | 73               | 75             | 72                | 26               |
| 155,5   | 21,8                  | 94        | 91           | 72            | 69               | 73             | 70                | 26               |
| 175     | 23,3                  | 93        | 90           | 70            | 67               | 72             | 69                | 25               |
| 200     | 25,1                  | 92        | 89           | 67            | 64               | 71             | 68                | 25               |
| 250     | 28,4                  | 90        | 87           | 62            | 59               | 69             | 66                | 24               |
| 300     | 31,4                  | 89        | 86           | 58            | 55               | 67             | 64                | 24               |
| 450     | 39,5                  | 87        | 84           | 48            | 45               | 64             | 61                | 23               |
| 600     | 46,6                  | 85        | 82           | 38            | 35               | 61             | 58                | 22               |
| 750     | 53,2                  | 83        | 80           | 30            | 27               | 59             | 56                | 21               |
| 900     | 59,2                  | 82        | 79           | 23            | 20               | 58             | 55                | 20               |
| 1000    | 63,1                  | 81        | 78           | 18            | 15               | 57             | 54                | 20               |

