

PRODUCTPROFILE

Catalogue number: 092A00100M4

Partnumber: 777952

Fiber optic duplex patchcord
Connector side A: MDC Senior MM
Connector side B: MDC Senior MM
50/125µmOM4, 1.6mm, violet
Polarity: crossed A to B
Cable I-F(ZN)H2G50/125µmOM4BI



Related documents:

DS_FASER OM4BI_OE

Fiber Data Sheet

DS_I-FZNH16_2X250_L_OE

Kabeldatenblatt

DS_MDC_SENIOR_STECKER_OE

Steckerdatenblatt



Standards

Graded index fiber 50/125µm according to
 -ISO/IEC 11801 und EN 50173-1 OM4
 -IEC 60793-2-10 type A1a.3
 -ITU G.651.1
 -TIA/EIA 492AAAD

Structure

Silica fiber with two layer acrylate primary coating

Geometrical properties

Core diameter	50 µm +/- 2.5 µm
Cladding diameter	125 µm +/- 1 µm
Core non-concentricity	< 5 %
Cladding non-circularity	< 1 %
Core-Cladding concentricity	< 1.5 µm
Primary coating diameter	242 µm +/- 5 µm
Coating-Cladding concentricity	< 12 µm

Mechanical properties

Break strength SCREEN-Test 1 % strain for 1 s @100 kpsi

Thermal properties

Operating temperature range -60 to +85°C

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Optical fiber OM4
bend insensitive

059A0381OM4BI

Transmission characteristics

Attenuation:

@ 850 nm max. 2.3 dB/km
@ 1300 nm max. 0.6 dB/km

Macrobending, induced attenuation:

100 turns, 37.5 mm \leq 0.05 dB @ 850 nm
100 turns, 37.5 mm \leq 0.15 dB @ 1300 nm
2 turns, 15 mm \leq 0.1 dB @ 850 nm
2 turns, 15 mm \leq 0.3 dB @ 1300 nm
2 turns, 7.5 mm \leq 0.2 dB @ 850 nm
2 turns, 7.5 mm \leq 0.5 dB @ 1300 nm

Bandwidth (Overfilled launch):

@ 850 nm min. 3500 MHz x km
@ 1300 nm min. 500 MHz x km

Effective modal Bandwidth-length-product (EMB):

@ 850 nm min. 4700 MHz x km

Numerical aperture: 0.200 +/- 0.015

Effective group index of refraction:

@ 850 nm 1.480
@ 1300 nm 1.479

Backscatter attenuation @ 1ns pulse width:

@ 850 nm -68 dB
@ 1300 nm -76 dB

Maximum possible transmission channels lengths:

Ethernet:

1 GBE 100GBASE-SX: min. 1100 m @ max. 3.56 dB channel attenuation ¹⁾
10 GBE 10GBASE-SR: min. 550 m @ max. 2.60 dB channel attenuation ¹⁾
40 GBE 40GBASE-SR4: min. 170 m @ max. 1.50 dB channel attenuation ¹⁾
100 GBE 100GBASE-SR10: min. 170 m @ max. 1.50 dB channel attenuation ¹⁾

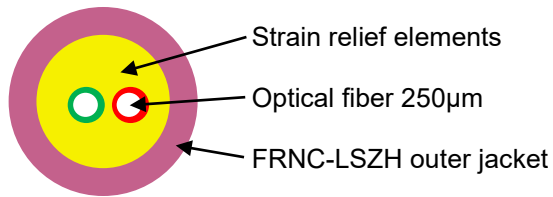
Fibre Channel:

8 GFC (800-SN): min. 245 m @ max. 1.76 dB channel attenuation ¹⁾
16 GFC (1600-SN): min. 165 m @ max. 1.51 dB channel attenuation ¹⁾

¹⁾ Inclusive max. 1.0 dB for connections (connectors and splices)

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

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H. Jungbäck	26-10-15	P. Maier	26-10-15	004	without	H. Jungbäck	26-10-15



Standards

-IEC 60794-2

Structure

Cable:

- 2 optical fibers 250µm within the cable jacket filled with Aramid strain relief elements
- fiber color code: One fiber red, the other fiber at singlemode yellow, at 50µm multimode green

Outer jacket:

-FRNC-LSZH flame-retardant and halogen-free material

-Standard jacket colors:

- Singlemode: yellow
- Multimode OM2: orange or green
- Multimode OM3: aqua (turquoise)
- Multimode OM4: violet
- Multimode OM5: fibrous green

-Wall thickness 0.3 mm

-Inkjet marking black acc. to separate drawing

Geometrical properties

Number of fibers	Outer diameter [mm]	Weight [kg/km]	Fire load [MJ/m]
2	1.6	2.9	0.07

Mechanical properties

- Min. bending radius fixed (static):
 - with G.657.A1 singlemode fiber 10 mm
 - with bend-insensitive OM3, OM4 and OM5 fiber 7.5 mm
- Min. bending radius during installation (dynamic):
 - with G.657.A1 singlemode fiber 30 mm
 - with bend-insensitive OM3, OM4 and OM5 fiber 25 mm
- Max. tensile force short term = 200 N
- Max. crush resistance long term = 150 N/dm
- Kink resistance: Equivalent loop diameter = 7.8 mm

Thermal properties

- Transport and storage - 25°C to + 70°C
- Installation - 5°C to + 50°C
- In use - 5°C to + 70°C

Chemical properties

- No resistance to oil, petrol, acid, leach and water

Fire performance

- Flame-retardant acc. to IEC 60332-1-2 and IEC 60332-3-22 Cat. A
- Smoke density acc. to IEC 61034
- Halogen-free acc. to IEC 60754-1
- Acidity of the combustion gases acc. to IEC 60754-2

Transmission characteristics

- See fiber data sheets

Applications

- Indoor cable particularly appropriate for short MDC Patchcords

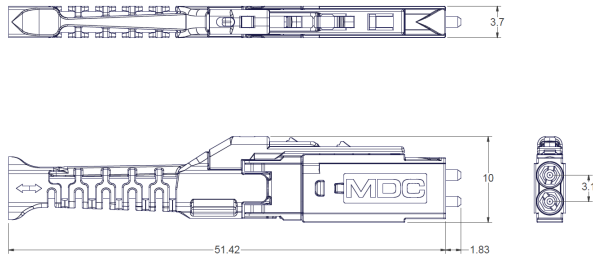
Deliveryform

- On one-way drums

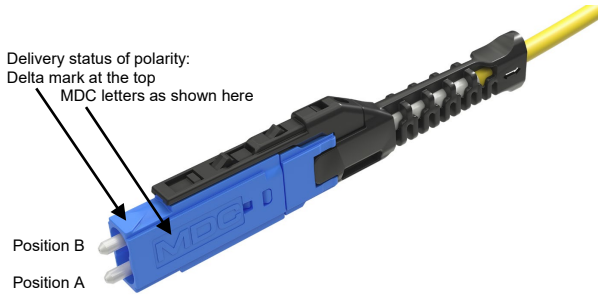
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H. Jungbäck	2022-10-12	R. Mees	2022-10-12	001	without		

MDC Senior connector



Delivery status of polarity:
Delta mark at the top
MDC letters as shown here



Properties and applications

- MDC (Miniature Duplex Connector) of category Very-Small-Form-Faktor (VSFF) connector, Senior type
- Even of its miniature design the connector has a rugged housing with central strain relief and push-pull-boot, with which the connector can be plugged and un-plugged
- A/B polarity easy and secure, toolless changeable
- To attach transceivers with MDC interface and for MEGA-HIGH-DENSITY (MHD) infrastructure cabling

Standards

IEC 61754-37

Material

- Ferrule: Zirconia ceramic, Ø 1.25 mm
- Body: PEI, flammability UL94-V0
- Push-Pull-Boot: PP, flammability UL94-V0
- Protection cap: PC, flammability UL94-V0

Optical properties

The quality feature of the connector at your product is identified by the part number:

- BASIC: Part numbers like XXXAXXXX
- PURE: Part numbers with "P" at their end, XXXAXXXXP

Details about PURE see Produktinfo_Qualitätsmerkmal-PURE_od

Insertion Loss IL acc. to IEC61300-3-4, Method B, against reference, maximum [dB]:

	Quality feature	BASIC	PURE
- Singlemode SM, 9/125µm		0.30	0.20
- Multimode OM1, 62.5/125µm		0.30	---
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm		0.15	0.15

Insertion Loss IL „random mated“ acc. to IEC61300-3-34, Method 2, [dB]:

Quality feature	BASIC	mean value	maximum
- Singlemode SM, 9/125µm		0.13	0.50
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm		0.03	0.27

Insertion Loss IL quality feature PURE "random mated" application limit value, maximum [dB]:

- Singlemode SM, 9/125µm	97%	0.25
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm	100%	0.40

MDC Senior connector

Optical properties

Return Loss RL acc. to IEC61300-3-6, Method 1, against reference, minimum [dB]:

	Quality feature	BASIC	PURE
- Singlemode SM, 9/125µm, PC 0°		45	45
- Singlemode SM, 9/125µm, UPC 0°		55	55
- Singlemode SM, 9/125µm, APC 8°		65	70
- Multimode all classes		35	40

Mechanical properties

- Mating cycles min. 500, IL increase < 0.2 dB
- Strain relief max. 70 N, dependent on cable type

Thermal properties

- Operation temperature range -40°C to +85°C, dependent on cable type
- Storage temperature range -40°C to +85°C

Cable diameters

Round cable types Ø 1.2 to 2.0 mm

Colors

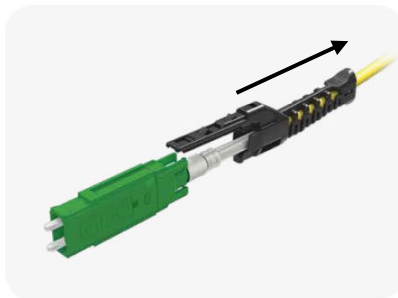
Connector body / boot:

- Singlemode SM, 9/125µm, PC and UPC 0° blue / black
- Singlemode SM, 9/125µm, APC 8° green / black
- Multimode OM4, 50/125µm violet / black

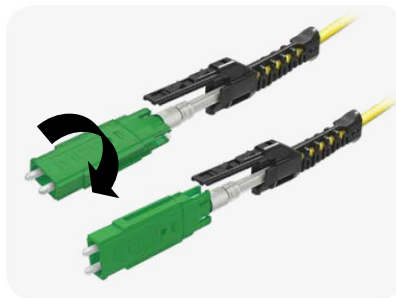
Polarity change

Source USCONEC Ltd. www.usconec.com

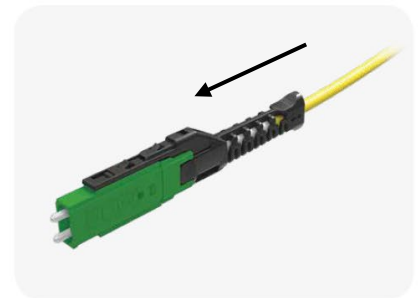
Pull of the push-pull-boot



rotate 180°



push on the push-pull-boot



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H. Jungbäck	2021-02-02	A. Burggraf	2021-02-02	003	----	H. Jungbäck	2022-10-07

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