

PRODUCTPROFILE

Catalogue number: 080A05800M4

Partnumber: 752946

Fiber optic MTP patchcord
Connector side A: MTP12 female MM
Connector side B: MTP12 female MM
50/125µmOM4, 3.0mm, violet
Polarity: 1 to 12 Method B
Cable I-F(ZN)H12G50/125µm,OM4



Related documents:

DS_FASER OM4BI_OE

Fiber Data Sheet

DS_I-FZNH_L_OE

Cable Data Sheet

DS_MTPNX12_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

Dieses Dokument ist urheberrechtlich geschützt • This document is protected by copyright • Rosenberger OSI GmbH & Co. OHG

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⁾

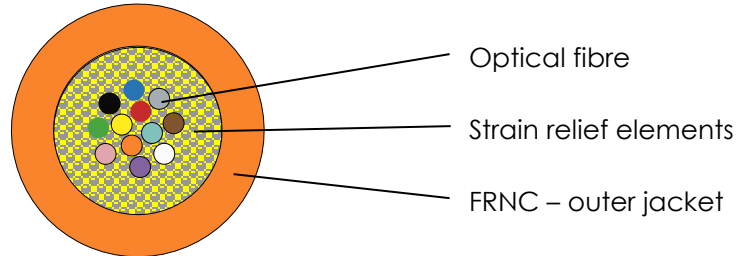
Fibre Channel:

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.

| Draft | Date | Approved | Date | Rev. | Engineering change number | Name | Date |
|-------------|----------|----------|----------|------|---------------------------|-------------|----------|
| H. Jungbäck | 26-10-15 | P. Maier | 26-10-15 | 004 | without | H. Jungbäck | 26-10-15 |



Standards

- IEC 60794-2
- EN 50575:2014 +A1:2016 Number of Declaration of Performance:
 - 24 fibers B2ca CDEAL0000098-V1
 - 8, 12, 16 fibers not tested

Structure

- Cable:**
- Up to 24 optical fibers within the cable jacket filled with Aramid strain relief elements
 - Fiber color code 1 to 12: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink
 - Fiber color code 13 to 24: red, green, blue, yellow, white, grey, brown, violet, turquoise, transparent, orange, pink, all with black ring-marking

- 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 see geometrical properties
 - Inkjet marking black acc. to separate drawing

Geometrical properties

| Number of fibers | Outer diameter [mm] | Jacket wall thickness [mm] | Weight [kg/km] | Fire load [MJ/m] |
|------------------|---------------------|----------------------------|----------------|------------------|
| 8 | 2,0 | 0,25 | 3,8 | 0,05 |
| 8 | 3.0 | 0.55 | 8 | 0.14 |
| 12 | 3.0 | 0.55 | 8 | 0.14 |
| 16 | 3.0 | 0.55 | 8 | 0.14 |
| 24 | 3.7 | 0.60 | 12 | 0.21 |

Dieses Dokument ist urheberrechtlich geschützt • This document is protected by copyright • Rosenberger OSI GmbH & Co. OHG

Mechanical properties

- Min. bending radius fixed (static) acc. IEC 60794-1-2 E11A
15 x outside diameter
- Min. bending radius during installation (dynamic) with additional tensile strain acc. IEC 60794-1-2 E6
20 x outside diameter
- Max. tensile force acc. IEC 60794-1-21 E1 long term = 300 N
- Max. crush resistance acc. IEC 60794-1-21 E3 long term = 200 N/dm

Thermal properties

- Transport and storage - 25°C to + 70°C
- Installation - 5°C to + 50°C
- In use acc. IEC 60794-1-2 F1 - 10°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
- Fire Class according EN 13501-6: 24 fibers B2_{CA}/s1a/d1/a1, 8, 12, 16 fibers not tested

Transmission characteristics

See fiber data sheets

Applications

Indoor cable particularly appropriate for short MTP®/MPO Patchcords and Harnesses

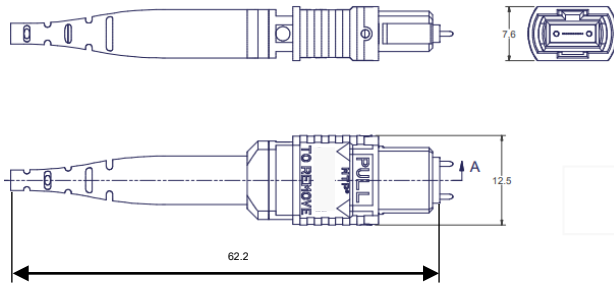
Deliveryform

On one-way drums

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.

| Draft | Date | Approved | Date | Rev. | Engineering change number | Name | Date |
|-------------|------------|----------|------------|------|---------------------------|-------------|------------|
| H. Jungbäck | 2015-11-02 | P. Maier | 2015-11-02 | 004 | without | H. Jungbäck | 2022-06-15 |

MTP® (MPO) connector n x 12 fibers



Properties and applications

- MTP® (MPO) multi-fiber connector up to 72 fibers, based on n x 12 fiber MT ferrules, with strain relief and boot for round cable
- Centric coding-key
- Multimode MTP® (MPO) are acc. to world standard PC 0° polished, Singlemode APC 8°
- Polarity and gender can be changed acc. to USCONEC AEN-1405
- 1) With MTP® PRO protection cap, debris-repellent (better than anti-static), non-outgassing, halogen-free

Standards

IEC 61754-7 and EIA/TIA 604-5

Material

- Ferrule: PPS filled with glass particles
- Body: PBT, flammability UL94-V0
- Boot: TPO, flammability UL94-V0
- Protection cap: TPO, 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

Applied USCONEC ferrule qualities:

| | Quality features | BASIC | PURE |
|---|------------------|----------|-------|
| - Singlemode SM, 9/125µm all numbers of fibers | | Standard | Elite |
| - Multimode OM2, OM3, OM4, OM5, 50/125µm up to 12 fibers | | Elite | Elite |
| - Multimode OM2, OM3, OM4, OM5, 50/125µm larger 12 fibers | | Standard | Elite |

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

| | Quality features | BASIC | PURE |
|--|------------------|-------|------|
| - Singlemode SM, 9/125µm, Standard ferrule | | 0,40 | --- |
| - Singlemode SM, 9/125µm, Elite ferrule | | 0.35 | 0.25 |
| - Multimode OM2, OM3, OM4, OM5, 50/125µm, Elite ferrule | | 0.35 | 0.25 |
| - Multimode OM2, OM3, OM4, OM5, 50/125µm, Standard ferrule | | 0.60 | --- |

Insertion Loss IL „random mated“ in application

Multimode OM2, OM3, OM4, OM5, 50/125µm, Elite ferrule [dB]:

| | |
|--------------------------|----------------|
| - 12 fibers and OCTO 4+4 | 89% lower 0.25 |
| - 24 fibers | 80% lower 0.25 |

GHMT PVP certificates
 No.: c6955X-XX
 No.: c6956X-XX



Dieses Dokument ist urheberrechtlich geschützt • This document is protected by copyright • Rosenberger OSI GmbH & Co. OHG

MTP® (MPO) connector n x 12 fibers

Optical properties

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

- Singlemode SM, 9/125µm 0.15
- Multimode OM2, OM3, OM4, OM5, 50/125µm 0.15

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

| | Quality feature | BASIC | PURE |
|-----------------------------------|-----------------|-------|------|
| - Singlemode SM, 9/125µm, APC 8° | | 55 | 70 |
| - Multimode all OM classes, PC 0° | | 30 | 30 |

Mechanical properties

- Mating cycles min. 500, IL increase < 0.2 dB
- Strain relief max. 100 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 2.0 to 4.5 mm

Colors

Connector body / boot:

- Singlemode SM, 9/125µm, APC 8° green / black
- Multimode OM2, OM3, OM4, OM5, 50/125µm black / black

Dieses Dokument ist urheberrechtlich geschützt • This document is protected by copyright • Rosenberger OSI GmbH & Co. OHG

| Draft | Date | Approved | Date | Rev. | Engineering change number | Name | Date |
|----------|------------|-------------|------------|------|---------------------------|-------------|------------|
| Y. Zhang | 2017-03-31 | H. Jungbäck | 2017-03-31 | 005 | --- | H. Jungbäck | 2022-10-07 |

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.