



Accessories ▶ Measuring Tools ▶
Fiber Diameter Converter (FDC)
from 62.5/125 µm to 50/125 µm



Fiber Diameter Converters (FDCs) are special multimode patch cords which enable, for instance, transmission elements with a 62.5 µm fibre pigtail output to be used without reflection with 50 µm fibre-optical networks.

FDCs are therefore used in particular when a new future-proof backbone network has to be set up with an OM3 fibre, but for cost reasons the old system technology with 62.5 µm pigtail outputs is still to be used at the start.

Primary requirements like

- Telcordia GR-1209-CORE (Performance)
- Telcordia GR-1221-CORE (Reliability)

Dimensions (base size)

Enclosure length	50 mm
Enclosure diameter	min. 2,8, typ. 2,9 max. 3 mm
Fibre type	GI50/125 // GI62/125)
Pigtail design	250 µm
Patch cord length (standard)	2000 mm

Options

- Other pigtail and enclosure designs

Port designation

Port	Colour code	Port number
62.5/125	red	1
50/125	colourless	2

Product identification

Each FDC bears a serial number (to be read from the 62.5 µm side to the 50 µm side).

Qualification and measurement values

The measurement report includes the following information:

- Insertion loss 62.5/125 → 50/125 @ 1300 nm
- Insertion loss 50/125 → 62.5/125 @ 1300 nm
- Serial number
- Colour code of the ports

Connectors

FDCs can be delivered with different connectors on request.



Optical parameters

Parameter	min.	typ.	max.	unit
Wavelength 1 (λ_1)	780	820	860	nm
Wavelength 2 (λ_2)	1260	1300	1340	nm
Insertion Loss 62.5/125 → 50/125 ^(1,2)			0,2	dB
Insertion Loss 50/125 → 62.5/125 ^(1,2)			0,1	dB
Return Loss 62.5/125 → 50/125 ^(2,3)		40		dB
Return Loss 50/125 → 62.5/125 ^(2,3)		40		dB
Temperature range (operation and storage) ⁽⁴⁾	-40		+85	°C

⁽¹⁾ Measurement according to 61300-3-4, Item 5.4.3, insertion loss technique (A), 70% excitation

⁽²⁾ without connectors

⁽³⁾ Measurement according to IEC 61300-3-6, Item 4.5, method 2 (OTDR)

⁽⁴⁾ For primary coated fibres, Temperature range depending on cable/pigtail design