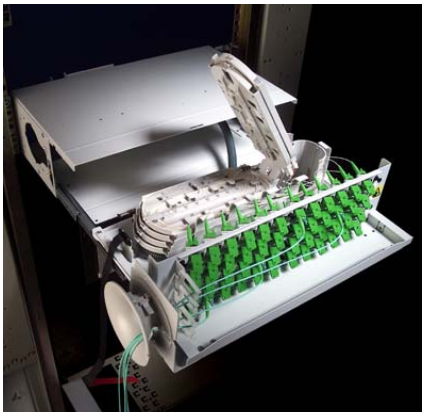
Ordering Guide of the Front Patching/Splicing Shelf (FIST-FPS)



This document provides assistance with the selection of the front patching/splicing shelf for use in ODF applications. It includes the following sections:

1 Product description

The Front Patching/Splicing Shelf, FIST-FPS is a shelf assembly for the fiber management system that provides the function of cable splicing and patchcord patching and connecting in a rack environment.
FIST-FPS has a capacity of 48 patching points.
This shelf can be used with Tyco racks as well as with other 19” or metric (ETSI) racks.
Multiple configurations are possible:

- Patching only
- Splicing and patching of either loose tube cable or intra-facility cable (IFC)

The shelf is delivered with a plastic transparent cover that is provided with an identification system.
All shelves consist of a metal chassis with drawer.
A metal front patch frame with 4 rows of 12 connector positions is mounted on the drawer. The connectors will be positioned left or right angled to reduce the risk of eye damage when working with active fiber.
Connector adapters can be pre-installed in the patch panel.
The ‘splicing and patching’ shelf includes a tray tower with 6 FOSC-A splicing trays behind the patch panel. The splicing trays will include splice holders and a plastic transparent cover.
SMOUV splice protectors are delivered in the kit when applicable.
Pigtails to be routed from the splicing tray towards the back side of the patch panel can be included in the ‘splicing and patching’ version of the shelves.
Positive fiber management of the pigtails and fibers is guaranteed by bend controls on the drawer and in the splicing trays.

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Patching only

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Splicing & patching

2 Ordering information

2.1 Front patching/splicing shelf

Refer to Section 3 for full product descriptions.

FIST-FPS-X-X X X- 48

Chassis type

M	Metric
I	19”

Shelf type

P	Patching only
S	Splicing and patching (loose tube cable or non pre-conn. IFC) Overlength storage and patching (pre-connectorized IFC)

Tray type/pigtails

Secondary coated pigtails included	Splice protector	Jumpers leave shelf RIGHT FRONT	Jumpers leave shelf LEFT FRONT
Not applicable (patching only)		**N**	**M**
no	SMOUV (*)	**E**	**G**
no	ANT (**)	**F**	**H**
yes	SMOUV (*)	**I**	**K**
yes	ANT (**)	**J**	**L**

Type of adapter with retainer (if applicable also pigtails included in the kit)

N	None
A	SC/UPC
B	SC/APC
C	FC/UPC
D	FC/APC
F	E2000 HRL***
K	DIN/PC
O	SC/PC-FC/PC
Q	ST/PC (single mode)

Notes
* *Heat-shrinkable splice protectors (type SMOUV-1120-02 ,45 mm long) supplied with the kit.*
** *ANT splice protectors not included in the kit.*
*** *If E2000 pigtails are included:*
connector = E2000 – centered ferrule tuning method – 0.1 dB insertion loss

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Standard kit content

- Metal shelf assembly including bend controls for guiding the patchcords in the shelf
- Plastic cover with identification cards
- 4 patch modules to hold 12 connectors each
- Pre-mounted connector adapters and retainers
- Secondary coated pigtails when selected (not pre-installed)
- Two trumpets for guiding the patchcords as they enter and exit the shelf
- For the splicing and patching version only:
  - Bracket holding 6 FOSC splicing trays including splice holders (SMOUV or ANT)
  - SMOUV splice protectors (when applicable)
  - A fixation kit for loose tube or intra-facility cable (IFC) (tie wraps and foam)
- Field installable mounting brackets (including screws and cage nuts)
- Installation Instructions

2.2 Accessories

Name	Qty/Pk	Description
FIST-FPS-CT-S-2	1 pc	Side cable termination kit for FIST-FPS (for max. 2 cables)
FIST-FPS-CT-B-2	1 pc	Back cable termination kit for FIST-FPS (for max. 2 cables)
FIST-GS-FLEX-12-50-S5027	50 m	Flexible tubing (internal ∅ 12 mm)
FIST-MB2-M	1 pc	Adaptation bracket ETSI-19”
FIST-MB2-M-AS	1 pc	Adaptation bracket ETSI-19” (asymmetrical mounting)

2.3 Tools

Name	Qty/Pk	Description
FACC-CAGE-NUT-TOOL	1 pc	Cage nut installation tool
FACC-ALLEN-KEY-5-350	1 pc	Allen key, ∅ 5 mm, length 350 mm for back mounting of shelves in rack

3 Product guide

3.1 Shelf description

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Chassis and drawer

The FIST-FPS chassis are ready to be fitted inside an optical rack using mounting brackets, screws and cage nuts.
The chassis width is according to the 19” or ETSI standard.
All chassis are painted (color RAL 7035).

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Cover

The shelf contains a hingeable transparent plastic cover with one central latch. Cards are provided at the inside of the cover for a clear identification.

GSS2OG22.JPG

Mounting brackets

The subrack has field-mountable brackets to accommodate for:

- mounting specifically for Raychem’s FIST racks
- backmounting
- mounting behind the front trumpet

Note: front mounting and mounting with brackets 240 mm from the back of the shelf are impossible because of the position of the outlet trumpet.

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Front patch panel

On the drawer of the shelf, a front patch panel is mounted. It consists of a metal frame, holding 4 pieces of 12-connector-adapter-modules. The patching module plane is right or left angle oriented to reduce the risk of eye damage when working with active fiber. This also avoids the outgoing jumper from making strong bends when leaving the shelf.

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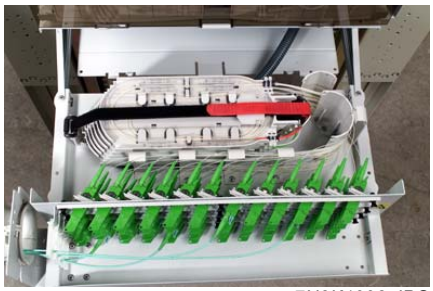
Patching-only configuration*

Patchcords enter the shelf via a trumpet on the right or left shelf side and are guided via bend controls towards the back of the patch panel.
Patchcords connected at the front of the patch panel leave via the trumpet on the left side of the shelf.
Connector adapters are pre-installed.



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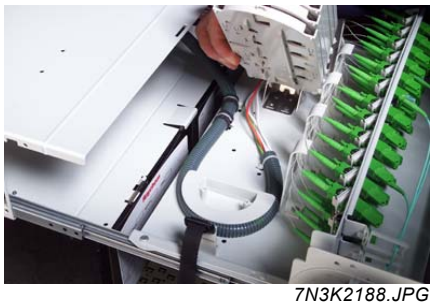

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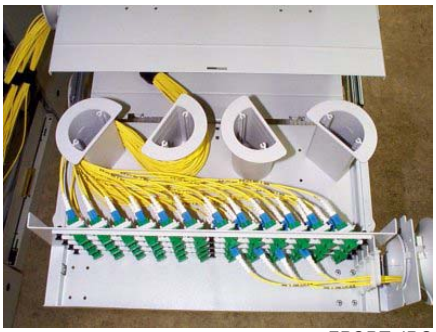

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Splicing and patching configuration*

Loose tube cable or intra-facility cable (IFC) enters via the right side of the shelf and is guided towards the splicing trays.

In case of loose tube cable and non-preconnectorized IFC, fibers are to be spliced to secondary coated pigtails in the splicing trays and then guided towards the backside of the patch panel.

In case of preconnectorized IFC, overlength is stored in the splicing trays, offering the possibility to resplice damaged IFC to new pigtails.

Patchcords connected at the front of the patch panel leave via the trumpet on the left side of the shelf.

Connector adapters are pre-installed.

Secondary coated pigtails can be delivered in the kit.

* Note: The above mentioned configurations describe the situation where patchcords leave the shelf at the left side. Patchcords can leave the shelf at the right side as well.

Trumpet

A trumpet at the side of the shelf protects outgoing jumpers. A slit at the front side of the trumpet allows for easy reconfiguration of the jumpers to other shelves.

3.2 Shelf dimensions

	Chassis standard	
	ETSI (metric)	19”
Width (with/without mounting brackets)	531 / 494 mm	481 / 444 mm
Height HU-Height Units	125 mm (requires 5 metric HUs)	125 mm (requires 3 19" HUs)
Depth	280 mm	280 mm

Note: A HU is a “height unit”. Refer to rack documentation for more details.

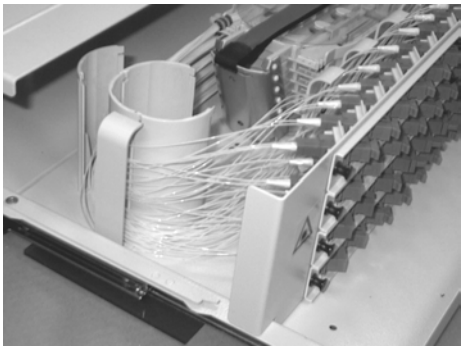
3.3 Shelf capacity

	FIST-FPS Splice & patch	Patch only
Number of FOSC A splicing trays	6	NA
FOSC A splicing tray capacity		
– 250µ to 250µ	24	NA
– 250µ to 900µ (a)	2	NA
Patch panel capacity (std. connectors / SFF connectors)	48 / 96 SFF	48 / 96 SFF
Pigtail length inside the shelf (from the splice till the back side of the patch panel)	1,5 m	NA
Patchcord length inside the shelf – from the trumpet till the back side of the patch panel (b)	NA	0.75-1.0 m
Patchcord length inside the shelf – from the trumpet till the front side of the patch panel (b)		
– 19" chassis	0.18-0.48 m	0.18-0.48 m
– ETSI chassis	0.20-0.53 m	0.20-0.53 m

(a) In case of more than 2 fibers per tray, the 900µ pigtails must be stripped to 250 µ (preferred 900µ/250µ transfer zone is showed in section 3.3.1).

(b) This patchcord length is measured for the open shelf, to allow access after installation.

3.3.1 FIST-FPS with small form factor connectors



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Patch panel capacity: 96 SFF

Splicing area capacity: 96 splices (250µ to 250 µ) (16 splices per tray)
In case of 900µ pigtails (semi-tight buffered), the 900µ buffer must be stripped to 250µ in the preferred transfer zone: see drawing underneath.

Attention: Keep in mind that 96 (900µ) pigtails at the back-side of the patch panel is an important volume. Therefore accessibility, especially to the pigtails of the bottom row, is reduced importantly.

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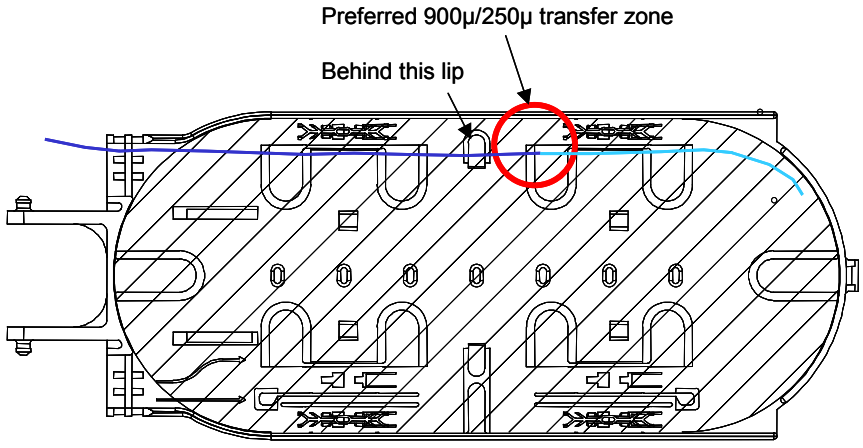
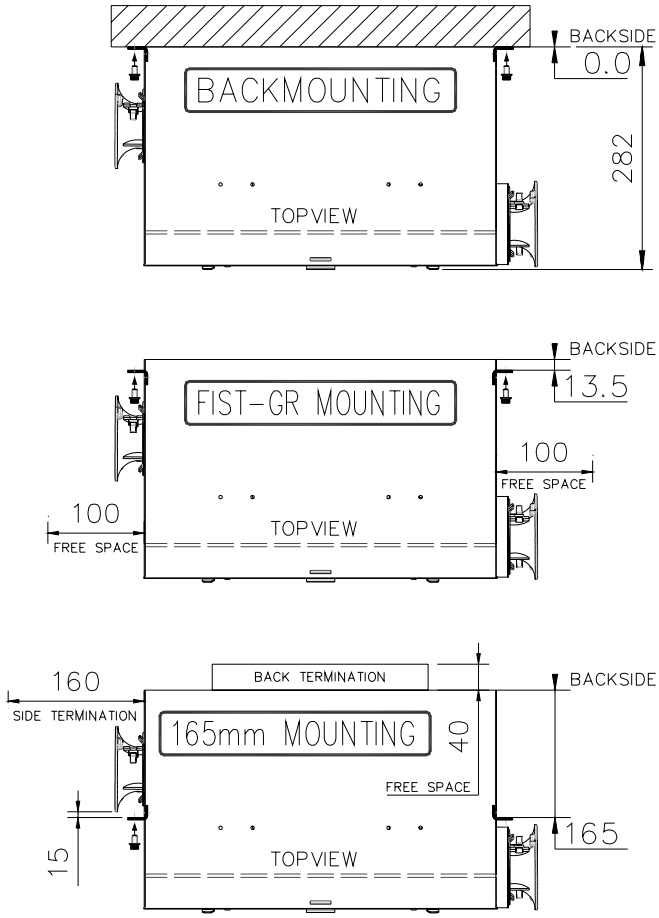


3.4 Mounting bracket position



Different mounting positions:

- BACK mounting
- FIST-GR mounting (13.5 mm from back)
- FRONT mounting (165 mm from back)

Notes:

- For easy entry and exit of cables and pigtails via the trumpets, a 100 mm free space (left and right of the shelf) is recommended.
- For back termination of cables a 40 mm free space (at the back of the shelf) is recommended.
- For side termination of cables a 160 mm free space (aside the shelf) is recommended.

3.5 Accessories description

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Side cable termination kit
FIST-FPS-CT-S-2
Kit to terminate max. 2 cables at the side of the shelf.

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Back cable termination kit
FIST-FPS-CT-B-2
Kit to terminate max. 2 cables at the back of the shelf.

RA11.JPG

Small flexible tubing
FIST-GS-FLEX-12-50-S5027
Flexible tubing with inside diameter of 12 mm.

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ETSI-19” adaptation mounting brackets
FIST-MB2-M
Adaptation bracket ETSI-19”

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Asymmetrical ETSI-19” adaptation mounting brackets
FIST-MB2-M-AS
Adaptation bracket ETSI-19”, to be used when asymmetrical mounting is preferred. A modified trumpet is provided in the kit in case a trumpet has to be mounted at the ‘narrow’ side.

3.6 Tools description

TO23.JPG

Cage nut tool
FACC-CAGE-NUT-TOOL
Tool to install cage nuts in the rack.

TO04.JPG

Long Allen key
FACC-ALLEN-KEY-5-350
Allen key, diameter 5 mm, length 350 mm for back-mounting of shelves in rack.

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