Ordering Guide of the 1U Front Patching Shelf (FOMS-FPS)

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

1 Product description

The FOMS Front Patching/Splicing Shelf, FOMS-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.
FOMS-FPS has a capacity of 48 patching points with SFF connectors, 24 with standard connectors.
This shelf can be used with Tyco Electronics racks as well as with other 19” or metric (ETSI) racks.
Multiple configurations are possible:

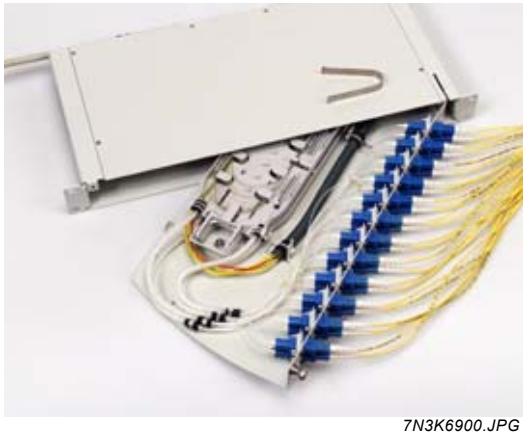
- Patching only
- Splicing and patching of either loose tube cable, intra-facility cable (IFC) or ribbon cable

A plastic transparent cover with an identification system is separately available.

All shelves consist of a metal chassis with pivoting bottom plate.
The connectors on the front panel will be positioned left or right angled to reduce the risk of eye damage when working with active fiber. It also allows easy jumper routing to the sides in for example an equipment rack.
Connector adapters can be delivered in the kit.
The ‘splicing and patching’ shelf includes a tray tower with 2 FOSC-A splicing trays behind the patch panel. The splicing trays will include splice holders and a plastic transparent cover.
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 bottom plate and in the splicing trays.

7N3K4548.JPG

Patching-only



7N3K6900.JPG

Splicing and Patching

2 Ordering information

2.1 FOMS front patching/splicing shelf

Refer to Section 3 for full product descriptions.

FOMS-FPS-X-X X XX-XX

Chassis type

O	19" – 44 mm high

Shelf type

P	Patching only (jumpers, break-out cable)
S	Splicing and patching (loose tube cable, ribbon, IFC)

Tray type/pigtails

Secondary coated pigtails included	Splice protector holder	Jumpers leave right front	Jumpers leave left front
Not applicable (patching only)		**N**	**M**
No	SMOUV (*)	**E**	**G**
no	ANT (*)	**F**	**H**
yes	SMOUV (*)	**I**	**K**
yes	ANT (*)	**J**	**L**

(*) splice protectors not included in the kit.

Number of adapters with retainer (if applicable also pigtails) in kit

48	(for LC only)
24	
16*	(see limitations page 8)
12	
0	

Type of adapter (if applicable also of pigtail)

Connector type	Single mode UPC	Single mode APC	Multimode UPC	Multimode APC
None	**NN**			
SC	**S1**	**S2**	**S5D**	**S5E***
FC	**F1**	**F2**	**F5D**	**F5E***
E2000		**E8****	**E5D**	**E5E***
DIN	**D0**			
ST			**T5D**	**T5E***
LC	**L1**			
MT-RJ male			**RYD**	**RYE***
MT-RJ female			**RZD**	**RZE***

Notes

* *In case of adapters only (no pigtails incl.), use S5**D**, F5**D**, E5**D**, T5**D**, RY**D** or RZ**D**)*

** *If E2000 pigtails are included: connector = E2000 – centered ferrule tuning method – 0.1 dB insertion loss*

7N3K6899.JPG

Standard kit content

- Metal shelf assembly including bend controls for guiding the patchcords in the shelf
- Connector adapters and retainers as described in the name string. Empty positions have been filled up with blind retainers (except for shelves without adapters)
- Secondary coated pigtails when selected (not pre-installed)
- In the 'patch only' version a trumpet for guiding the patchcords as they enter and exit the shelf
- In the splicing and patching version:
  - Bracket holding 2 FOSC splicing trays including splice holders (SMOUV or ANT)
  - Tie wraps and foam to enter with loose tubes or intra-facility subunits on the splicing tray
  - Cable termination kit, including strength member fixation and a piece of flextube
- Metal spring for patchcord guiding (and to keep the cover (optional) in place)
- Field installable mounting brackets (including screws, cage nuts and installation tool)
- Installation Instructions

2.2 Accessories

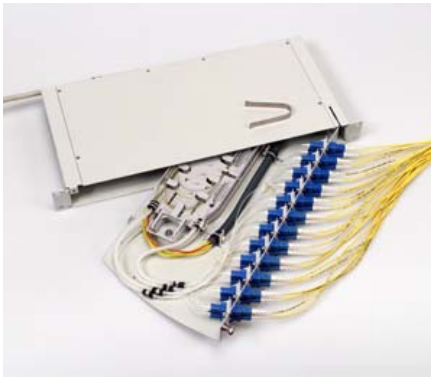
Name	Qty/Pk	Description
FOMS-FPS-O-COVER	1 pc	Protective plastic transparent cover
FIST-RET-05-50-S6080	50 pc	Blind retainers
FOMS-FPS-O-SPRING-5	5 pc	Additional spring
FOMS-FPS-O-TRUMPET	1 kit	Additional trumpet
FOMS-FPS-O-MB2-M	2 pc	ETSI mounting brackets
FIST-GS-FLEX-10-50	50 m	Flexible tubing (internal ∅ 10 mm)
FIST-TUBE-5MM-30	30 m	Tubing, ∅ 5 mm
FIST-GR-CTB100	1 kit	Cable termination kit for max. 2 loose tube ribbon cables
FIST-GR-CTB100CC	1 kit	Cable termination kit for max. 2 central core cables
FIST-GR-TD-5MM	1 pc	Tube divider 6 in/6 out

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



7N3K6900.JPG

Chassis and pivoting bottom plate
The FOMS-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” standard. Adaptation brackets to ETSI are available.
All chassis are painted (color RAL 7035).

7N3K4450.JPG

Cable fixation provision (at shelf back)
A strength member fixation and cable entrance kit are included in the standard shelf to terminate loose tube single fiber or intra-facility cable.
See the accessories list for a central core cable termination kit.

7N3K6902.JPG

Shelf roof
The roof of the shelf can easily be removed to facilitate access to the inside of the shelf before the shelf is installed in a rack.

7N3K4332.JPG

Mounting brackets
The subrack has field-mountable brackets to accommodate for:
- mounting specifically for TYCO’s FIST racks
- backmounting
- front mounting

A small tool is included to fix the brackets on the shelf.

7N3K6901.JPG

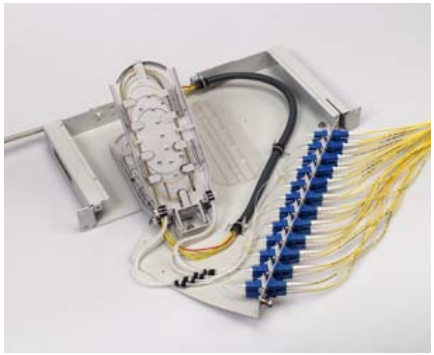
Front patch panel

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.
In case not all connector adapter positions are occupied, blind retainers in the open positions prevent access to the inside of the shelf.

7N3K4548.JPG

Patching-only configuration*

Patchcords enter the shelf via a trumpet on the left or back 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 a clip on the right side of the shelf.
Connector adapters can be included in the kit.
A Velcro tape prevents the patchcords from coming out once installed.



7N3K4453.JPG

Splicing and patching configuration*

Loose tube cable or intra-facility cable (IFC) enters via the left or back 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 a clip on the right side of the shelf.
Secondary coated pigtails can be included in the kit.
The tray tower can be pivoted slightly in case another shelf or equipment mounted on top should hinder access.
Ribbon fibers always have to be de-ribbonized when entering the tray and have to be spliced to individual pigtails.

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

7N3K6908.JPG

Inlet trumpet

A flexible trumpet at the side or back of the shelf protects incoming pigtails or jumpers.

3.2 Shelf dimensions

	19” chassis standard	
	Without cover	With cover
Width (with/without mounting brackets)	481 / 444 mm	481 / 444 mm
Height	44 mm	44 mm
HU-Height Units	(requires 1 19” HU)	(requires 1 19" HU)
Depth	215 mm	280 mm

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

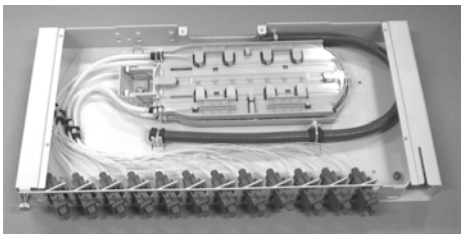
3.3 Shelf capacity

	FOMS-FPS	
	Splice & patch	Patch only
Number of FOSC A splicing trays	2	NA
FOSC A splicing tray capacity		
– 250µ to 250µ	24	NA
– 250µ to 900µ	2	NA
Patch panel capacity (std. connectors / SFF connectors) (a)	24 / 48 SFF	24 / 48 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	0.50-0.90 m
Patchcord length inside the shelf – from the trumpet till the front side of the patch panel (b)	0.06-0.40 m	0.06-0.40 m

(a) The capacity is expressed for standard connectors.
In case more than 2 fibers are stored on a splicing tray, the 900µ pigtails must be stripped to 250µ (preferred transfer zone is indicated in section 3.3.1).

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

3.3.1 FOMS-FPS with small form factor connectors

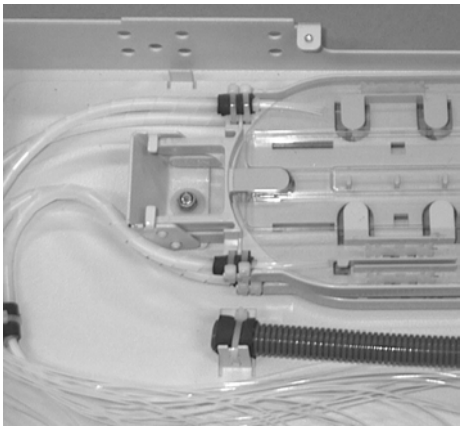


AUT18253.JPG

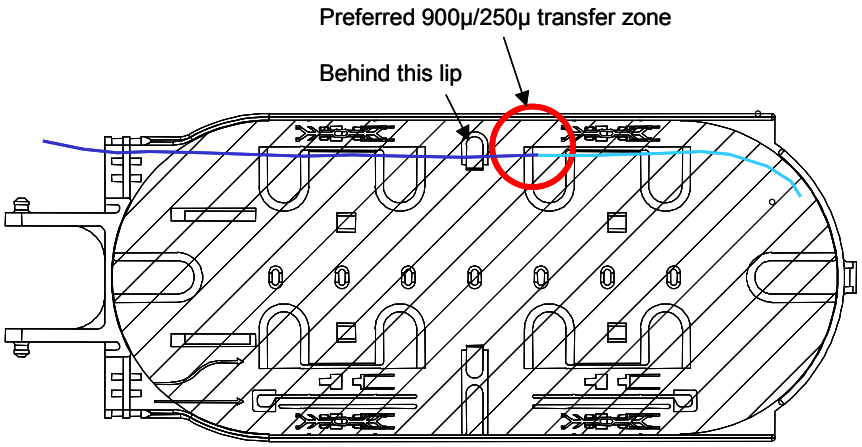
Patch panel capacity: 48 SFF

Splicing area capacity: 48 splices (250µ to 250µ) (24 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.

Restriction: When the intended capacity of the tray is 24, all fibers have to be installed on day 1. All pigtails are wrapped in a spiral tube. It is not possible to add pigtails at a later stage.



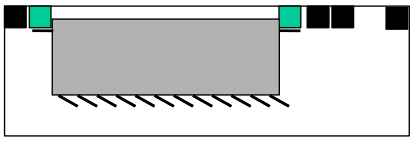
AUT18252.JPG



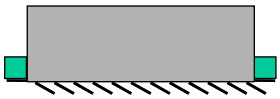
3.3.2 Shelf capacity limitations

TYPE OF SHELF SUPPORT

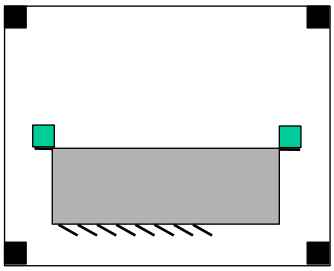
1. Raychem rack with side duct
   ETSI mounting profiles
   back mounting
   capacity: 24 std. adapters



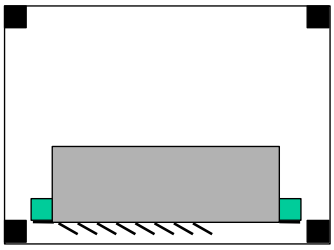
2. Open frame – no panels/doors
   just a shelf support
   front mounting
   capacity: 24 std. adapters



3. Non Raychem rack
   600 mm wide, no side duct
   back mounting
   capacity: 16 std. adapters



4. Non Raychem rack
   600 mm wide, no side duct
   front mounting
   capacity: 16 std. adapters



Legend:

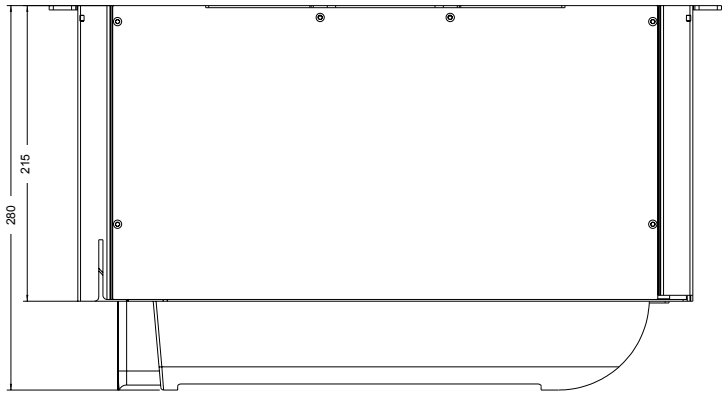
panels (side/back panel) or door

shelf support (mounting profile)

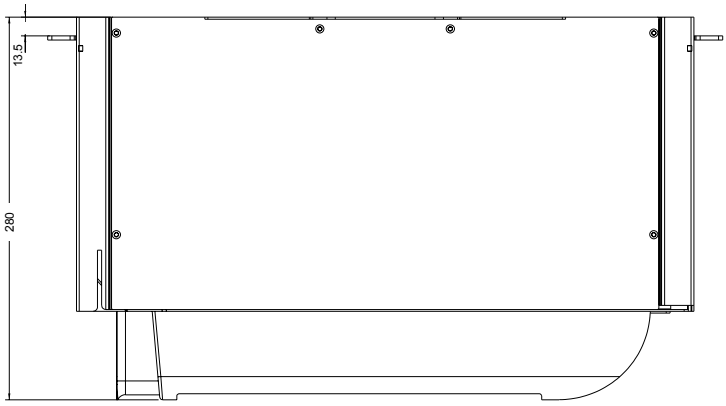
rack frame or structure

3.4 Mounting options

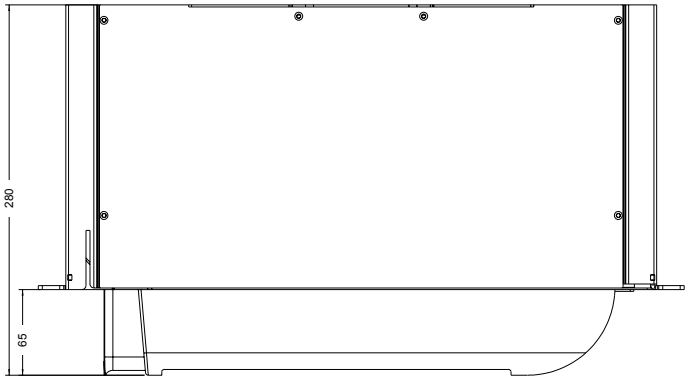
BACK mounting



in RAYCHEM rack
(13.5 mm from back)



FRONT mounting



Notes:

- For easy entry and exit of cables and pigtails via the trumpets, a 100 mm free space (left or 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

7N3K6907.JPG

Cover
FOMS-FPS-O-COVER
A transparent cover with integrated trumpet and identification label offers protection of the jumpers leaving at the front of the shelf. The cover can easily be removed using the push-rivet and a metal spring.

Blind retainers
FIST-RET-05-50-S6080
Set of 50 blind retainers for empty adapter positions of the patch panel. (Included in the kit, except for shelf without adapters.)

7N3K6940.JPG

Spring
FOMS-FPS-SPRING-5
Set of 5 spare springs to be used to keep the cover in place or to guide the patchcords.
One spring is included in the shelf's standard kit content.

7N3K4448.JPG

Trumpet
FOMS-FPS-O-TRUMPET
Additional trumpet, only needed when terminating IFC cable or ribbon at the side of the rack.

7N3K4512.JPG

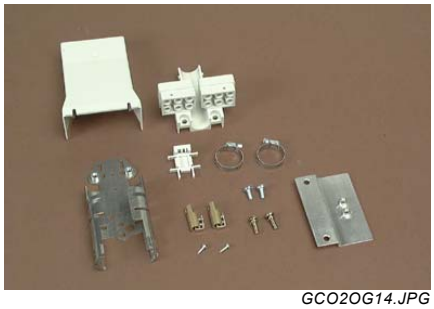
Adaptation brackets
FOMS-FPS-O-MB2-M
These brackets allow the installation of this 19" shelf in an ETSI rack.

RA11.JPG

Flexible tubing
FIST-GS-FLEX-10-50
Flexible tubing with inside diameter of 10 mm, needed when terminating a loose tube cable in a Tyco rack.

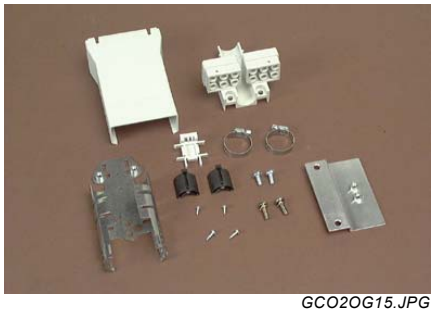
I&C003.JPG

5 mm tubing
FIST-TUBE-5MM-30
5 mm tubes are needed when terminating ribbon cable.



GCO2OG14.JPG

Cable termination ribbon loose tube cable
FIST-GR-CTB100
Cable termination kit for max. 2 ribbon loose tube cable. Can be mounted next to the shelf.
Up to 6 tubes of R12.
Strength member fixation compatible with most types of strength members (1.5-5 mm Ø).



GCO2OG15.JPG

Cable termination central core cable
FIST-GR-CTB100CC
Cable termination kit for max. 2 central core cables. Can be mounted next to the shelf.
Strength member fixation (till 2.5 mm Ø).

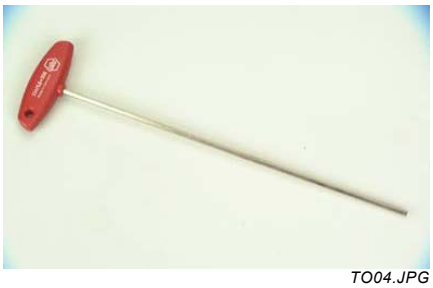
7N3K1585.JPG

Tube divider for ribbon
FIST-GR-TD-5MM
Tube divider to be placed in the side duct of a rack.
5 tubes 5mm in – 5 tubes 5 mm out can be used to spread (ribbon) fibers over several tubes.

3.6 Tools

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.

Tyco Electronics Raychem NV
Telecom Outside Plant
Diestsesteenweg 692
B-3010 Kessel-Lo, Belgium
www.tycoelectronics.com