

# Ordering Guide of the Small Fiber Termination Box (FIST-SB2-8)



This document provides assistance with the selection of boxes for use in FIST cable termination applications. It includes the following sections:

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## 1 Product description



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The FIST-SB2-8 is a wall mountable customer fiber termination box offering the functions of splicing fiber-to-fiber, splicing fiber-to-pigtail and connector patching.

The product is typically located on the customer's premises in the termination part of the access network.

The box can be mounted on a wall inside the customer's premises, outdoor above ground and in street cabinets.

The FIST-SB2-8 provides mechanical and environmental protection for both the fiber and its components and permits appropriate access while maintaining the highest standards of fiber management.

The box comprises a base and lid assembly made from a UV resistant material.

The FIST-SB2-8 can store up to 8 fusion splices in a single circuit configuration (2 splices per Single Circuit tray) or up to 24 fusion splices in a single element configuration (12 splices per Single element tray), using the FIST-MK2 organizing system.

The FIST-SB2-8 has a protection rate of IP 55.

Cables can enter the box through the top, side or bottom, through entry/exit break-out ports.

A mounting plate can accommodate the different types of sub-assemblies (FIST-SOSA2 splicing modules).

The product has provision for cable termination and sealing requirements.

Pigtails or jumpers leaving the box can be sealed using the unique FIST wraparound pigtail seals, or can be protected using the flexible tubing and accessories.

A patch panel is integrated in the base part of the box and can accommodate connector adapters with retainers for most common connector types (up to 8 connectors)

Kevlar termination units (KTU's) to provide the necessary strain relief when using pigtails with connectors outside the box can also be used

The outer cover can be provided with or without a lock.

Optionally, a cover hinge kit can be provided.

## 2 Ordering information

### 2.1 How to order this product ?

#### Order one of the application kits

Some application kits have been identified for an easy product selection and ordering. These kits contain all necessary accessories for a certain application and fiber count. The information can be found in paragraph 2.2.

#### Order the box and its accessories separately

For maximum flexibility, the box and the accessories can be ordered as separate items. The information can be found in paragraphs 2.3 and 2.4.

This is recommended when:

- the box is not completely filled up (e.g. when future extensions are planned)
- the required configuration is not covered by the standard application kits (e.g. special splice holders,....)
- when the cable configuration is not loose tube
- other quantities and types of cable seal kits are necessary
- an extension of an application kit or installed box is needed

### 2.2 Application kits

The following selection has to be made:

- Select de connector type
- Select the quantity connectors and pigtails  
(the pigtail  $\varnothing$  range for the Kevlar termination unit (KTU), is 1.6 to 3.1 mm)

#### Standard application kits include:

- The box
- The necessary FIST-SOSA2 splicing modules are pre-installed
- Patch panel is always included
- Seal kits (for cable and pigtails)
- Connector adapters and pigtails are pre-installed
- Splice protectors: The standard application kits always contain heat shrink splice protectors (SMOUV). If an ANT splice protector is required, please add an "A" behind the ordering code ( e.g. FIST-SB2-8KITXXXA)

For the detailed kit contents, please refer to Addendum 1.

Ordering code: FIST-SB2-8KITXXX

Application	Fiber count	
Splicing single fiber loose tube cable to pigtails	4 F	8 F
- KTU's	KIT001	KIT002
- SC/UPC (50 dB)	KIT003	KIT004
- SC/APC (8° 60 dB)	KIT005	KIT006
- E2000 HRL (8° 60 dB)	KIT007	KIT008
- FC/UPC (50 dB)	KIT009	KIT010
- FC/APC (8° 60 dB)	KIT011	KIT012

## 2.3 Box name string (empty box)

### FIST-SB2-8-X X

#### Outer cover locking options

- |          |   |
|----------|---|
| <b>A</b> | No lock (i.e. only 4 plastic screws)        |
| <b>B</b> | Tyco lock and key no.1                      |
| <b>C</b> | Tyco lock with specific customer key number |
| <b>D</b> | No lock but with hole for Tyco lock         |
| <b>E</b> | Customer specific lock or hole              |
- (For options C & E consult your local sales engineer)

#### Hinges for cover

- |          |  |
|----------|--|
| <b>A</b> | No cover hinges (i.e. only 4 plastic screws) |
| <b>B</b> | Cover hinges pre-installed                   |

#### Note:

If a cover is selected with a Tyco lock with a specific customer key number, the description becomes: FIST-SB2-8-XX-YY  
Where YY indicates the 2 digits of the key number for the cover.



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#### The basic kit contains

- The box base
- The cover
- 4 mounting bolts with seals and plugs for wall mounting
- Cable termination plate with patch panel for 8 connectors max.
- 1 Central strength member bracket
- 1 PG16 pressure gland to seal a cable with a dia. range of 6-14 mm
- Mounting plate for splicing module (FIST-SOSA2)
- Traylid + fiber guiding pin
- Tray wedge
- Installation Instruction

## 2.4 Accessories

Depending on the configuration, the following accessories are required.  
Refer to section 3 for a detailed product description.

### 2.4.1 Splicing only sub-assemblies

Select the required SOSA2 from the FIST-SOSA2 ordering guide.

### 2.4.2 Connector adapters

Select the required connector adapters from the 'Cable assemblies' ordering guide.

### 2.4.3 Pigtails

Select the required pigtails from the 'Cable assemblies' ordering guide.

### 2.4.4 Cable & pigtail seal glands

Name	Qty/Pk	Description
FIST-GB-GLD16-01	10 pc	Cable gland PG16 (cable range: 6-14 mm)
FIST-GB-GLD16-PT4	10 pc	Pigtail gland (PG16) to seal 4 pigtails (max. 4 mm)
FIST-GB-PTS6X4-PG21-01	1 pc	Pigtail gland (PG21) to seal 6 pigtails (max. 4 mm)
FIST-GB-GLD21-4X6MM	10 pc	Cable gland (PG21) to seal 4 cables (max. 6 mm)
FIST-GB-PTS24-01	1 pc	Pigtail seal (PG29) – seals up to 24 pigtails (Ø 0-3.0 mm)

### 2.4.5 Other options

Name	Qty/Pk	Description
FIST-SB/MB-STRBR-01	10 pc	Strain relief device (ENSTO) with double -D washer
FIST-GB-GLD16-17-FLEX2	10	Flex tube gland PG16 for tube Ø 17 mm
FIST-GB-GLD16-10-FLEX2	10	Flex tube gland PG16 for tube Ø 10 mm
FIST-GS-FLEX-17-50-S5027	50 m	Flexible tubing (ID 17 mm)
FIST-GS-FLEX-10-50-S5027	50 m	Flexible tubing (ID 10 mm)

## 3 Product guide

### 3.1 Box description



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#### Base and cover

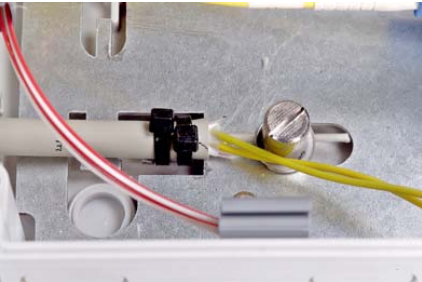
The FIST-SB2-8 consists of a base and a cover made from a UV resistant polymer. The cover is secured to the base by four plastic screws and can be provided with a lock and key. A rubber gasket seals the cover to the base. Cables can enter the box from the top, side or bottom, through break-out ports.



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#### Mounting plate

The mounting plate can accommodate the FIST-SOSA2 splicing modules. Up to max. 4 single circuit (SC) trays can be used.



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#### Cable termination

Cables can be easily terminated inside the box.



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#### Patch panel

A patch panel is integrated and can accommodate most common connector adapters



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### Fiber routing

Loose tubes and pigtails have predetermined routing.



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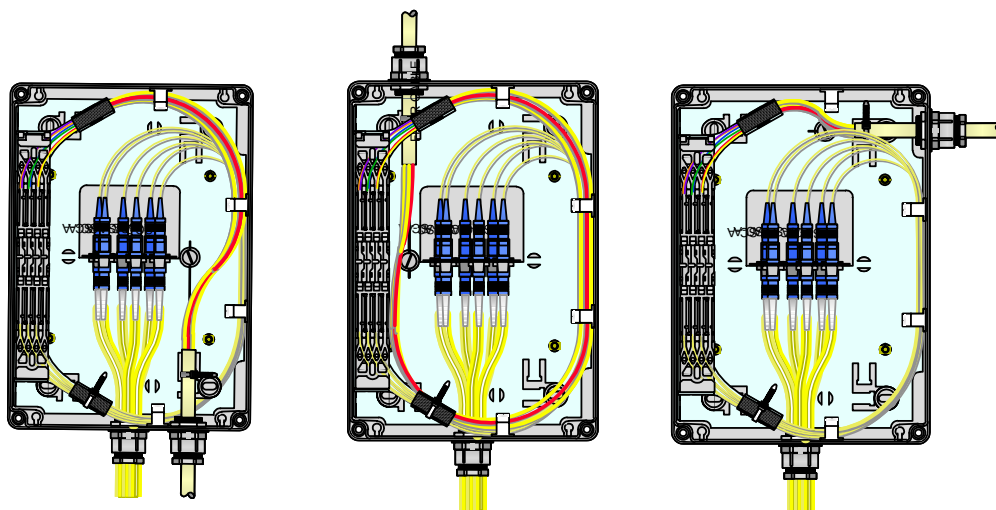
### Cable & pigtail seals

Different sizes of cable and wraparound pigtail seal are available with an IP 55 protection rate.

## 3.2 Box dimensions

Outside dimensions in mm	FIST-SB2-8
Width	180
Height	255
Depth	90

### 3.3 Box configurations

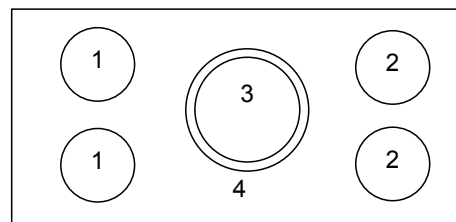


Cable entry / exit possible from top, side and bottom

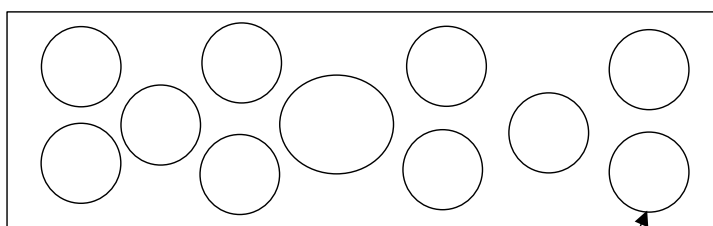
### 3.4 Cable ports

Bottom  
view

- (1) Pigtail seal exit ports for 4 pigtails each (PG 16)
- (2) Cable entry port (PG16)
- (3) Pigtail seal ports for 6 pigtails (PG 21)
- (4) PG 29 port

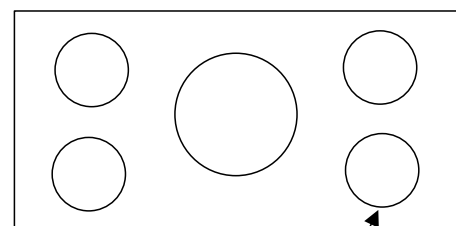


Right side  
view



Cable entry port (PG16)

Top view



Cable entry port (PG16)



### 3.5 Box capacity

#### 3.5.1 General

Product	FIST-SB2-8
Connector capacity: (all types)	up to 8
UMS profile length	4
Maximum number of SE trays	2
Maximum number of SC trays	4

#### 3.5.2 Splicing cable (x fibers per tube) to cable (x fibers per tube) -primary coated fibers

4 fibers per tube	FIST-SB2-8	
	Fibers	Trays
Single circuit splicing capacity		
– 2 primary coated fibers - SC 0tray	8	4
Single element splicing capacity		
– 4 primary coated fibers - SC tray	16	4
– 4 primary coated fibers - SE tray	8	2
8 fibers per tube	FIST-SB2-8	
	Fibers	Trays
Single circuit splicing capacity		
– 2 primary coated fibers - SC tray	8	4
Single element splicing capacity		
– 8 primary coated fibers - SE	16	2
12 fibers per tube	FIST-SB2-8	
	Fibers	Trays
Single circuit splicing capacity (a)		
– 2 primary coated fibers - SC	8	4
Single element splicing capacity		
– 12 primary coated fibers - SE	24	2

Note: Capacities indicated above are applicable for heat shrinkable, ANT and QPAK splice protectors.

#### 3.5.3 Splicing cable (x fibers per tube) to pigtails using pigtail strain relief devices (KTU) inside the box - secondary coated fibers

4 / 8 / 12 fibers per tube	FIST-SB2-8	
	Fibers	Trays
Single circuit splicing capacity		
– 2 secondary coated fibers - SC tray	8	4
Single element splicing capacity		
– 4 secondary coated fibers - SE tray	8	2

Note: If semi-tight coated pigtails are used and 4 primary coated fiber splices per SC trays are allowed, it is possible to terminate up to 16 fibers in the FIST-SB2-8 box. In this case, the transition of primary to secondary fibers is stored in the straight section of the groove plate. The pigtails leaving the box, can be sealed by using the FIST-GB-PTS24-01 which can be installed in the large PG29 break-out port of the bottom of the box.

### 3.5.4 Splicing cable (x fibers per tube) to pigtails using connectors inside the box - secondary coated fibers

4 / 8 /12 fibers per tube	FIST-SB2-8	
	Fibers	Trays
Single circuit splicing capacity		
– 2 secondary coated fibers – SC tray	8	4 (a)
Single element splicing capacity		
– 4 secondary coated fibers - SE tray	8	2 (a)

(a) : max 8 connectors in patchpanel

### 3.5.5 Splicing fibers from an incoming cable both to fibers of an outgoing cable and to pigtails

The following limitation should be taken into account

Pigtail patching capacity	FIST-SB2-8
With connector outside the box (using KTUs )	8
With connector inside the box	4

Note : With the use of special splicing module, FIST-SOSA2-1SE/2SC-**X** (X = **A** for ANT or **S** for SMOUV splice protectors), it is possible to splice 4 fibers from one cable to 4 secondary coated pigtails (in 2 SC trays) and 8 fibers to 8 fibers from another cable (in 1 SE tray).

## 3.6 Selection of accessories

### 3.6.1 Splicing sub-assemblies

For detailed information on the available splicing sub-assemblies refer to the FIST-SOSA2 ordering guide.

### 3.6.2 Pigtails and connector adapters

For detailed information on the available pigtails and connector adapters refer to the 'Cable assemblies' ordering guide.

### 3.6.3 Cable & pigtail seal glands



BOX014.JPG

#### Cable gland

##### **FIST-GB-GLD16-01**

Cable gland PG 16 (cable range: 6 - 14 mm).



FSBV2005.JPG

#### Pigtail seal gland – 4 pigtails

##### **FIST-GB-GLD16-PT4**

Pigtail gland PG16 to seal 4 pigtails with a diameter range of 0 – 4.0 mm.

#### Cable seal gland – 4 cables

##### **FIST-GB-GLD21-4X6MM**

Cable gland PG21 to seal 4 cables with a diameter range of max. 6 mm.



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#### Pigtail seal gland – 6 pigtails

##### **FIST-GB-PTS6X4-PG21-01**

Pigtail seal PG 21 to seal up to 6 single fiber pigtails with a diameter range of 0 – 4.0 mm.



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#### Pigtail seal – 24 pigtails

##### **FIST-GB-PTS24-01**

Pigtail seal PG29 to seal up to 24 single fiber pigtails with a diameter range of 0 - 3.0 mm.



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**Flextube gland**

**FIST-GB-GLD16-17-FLEX2**

Flex tube gland PG16 for tube inside diameter of 17 mm.



FSBV2068.JPG

**Flextube gland**

**FIST-GB-GLD16-10-FLEX2**

Flex tube gland PG16 for tube inside diameter of 10 mm.

**FIST-GB-GLD9-10-FLEX2**

Flex tube gland PG9 for tube inside diameter of 10 mm.

### 3.6.4 Strain relief devices



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**Strain relief device**

**FIST-SB/MB-STRBR-01**

Strain relief device (ENSTO) with double -D washer.

### 3.6.5 Flexible tubing



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**Flexible tubing**

When guiding pigtail from the FIST-SB2-8 to the equipment, the flexible tubing is used to protect the pigtail and to control the bend radius.

**FIST-GS-FLEX-17-50-S5027**

The flexible tubing has a minimum inner diameter of 17 mm and a capacity of up to 24 pigtail cords of 2.5 mm diameter.

**FIST-GS-FLEX-10-50-S5027**

The flexible tubing has a minimum inner diameter of 10 mm and a capacity of up to 8 pigtail cords of 2.5 mm diameter.

### Addendum 1: Application kit content for FIST-SB2-8

Kit content	1	2	3	4	5	6	7	8	9	10	11	12
FIST-SB2-8-AA	1	1	1	1	1	1	1	1	1	1	1	1
FIST-SOSA2-4SC-S	1	1	1	1	1	1	1	1	1	1	1	1
SMOUV-1120-02 (pc)	4	8	4	8	4	8	4	8	4	8	4	8
FIST-GB-GLD16-PT4 (pc)	1	2	1	2	1	2	1	2	1	2	1	2
FIST-GB-GLD16 (pc)	1	1	1	1	1	1	1	1	1	1	1	1
FIST-SB/MB-STRBR-01 (pc)	1	1	1	1	1	1	1	1	1	1	1	1
FSA-ADK-H1-4	1	2										
OC-ADK-S1-S1-NNCS			4	8								
OC-ADK-S2-S2-NNCS					4	8						
OC-ADK-E8-E8-NNCS							4	8				
OC-ADK-F1-F1-NNCS									4	8		
OC-ADK-F2-F2-NNCS											4	8
OCP-T-S1-25DASEN-XX			4	8								
OCP-T-S2-25DASEN-XX					4	8						
OCP-C-E8-25DASEN-XX							4	8				
OCP-T-F1-25DASEN-XX									4	8		
OCP-T-F2-25DASEN-XX											4	8