FOSC

Fiber Optic System Technology

Fiber Optic Splice Closures (FOSC-400)

This document provides assistance with the selection of FOSC-400 closures. It includes the following sections:

Please consult your local sales engineer for applications not included in this document.

Fiber Optic Splice Closure (FOSC-400)

1. PRODUCT DESCRIPTION

The FOSC 400 products are butt-type closures used in the outside plant network when mass splice storage is the main requirement.
They are available in three different sizes and are typically used as track joints.

The FOSC-400 closures are made of a thermoplastic material.
- The base and dome are sealed with a clamp and an O-ring system.
- The base has one oval entry port for looped (uncut) cable and, depending on the closure size, 2, 4 or 5 round ports for single cable exit.
- The cable seals are manufactured from heat-shrinkable material.

Depending on the closure size, the splice storage and organizer trays can accommodate from 8 to 72 splices.
All splicing trays are hinged at one end so that any fiber can be accessed without:
- disturbing fiber on other trays,
- kinking buffer tubes, or
- introducing losses.

All cable termination and sealing functions are provided with the closures.
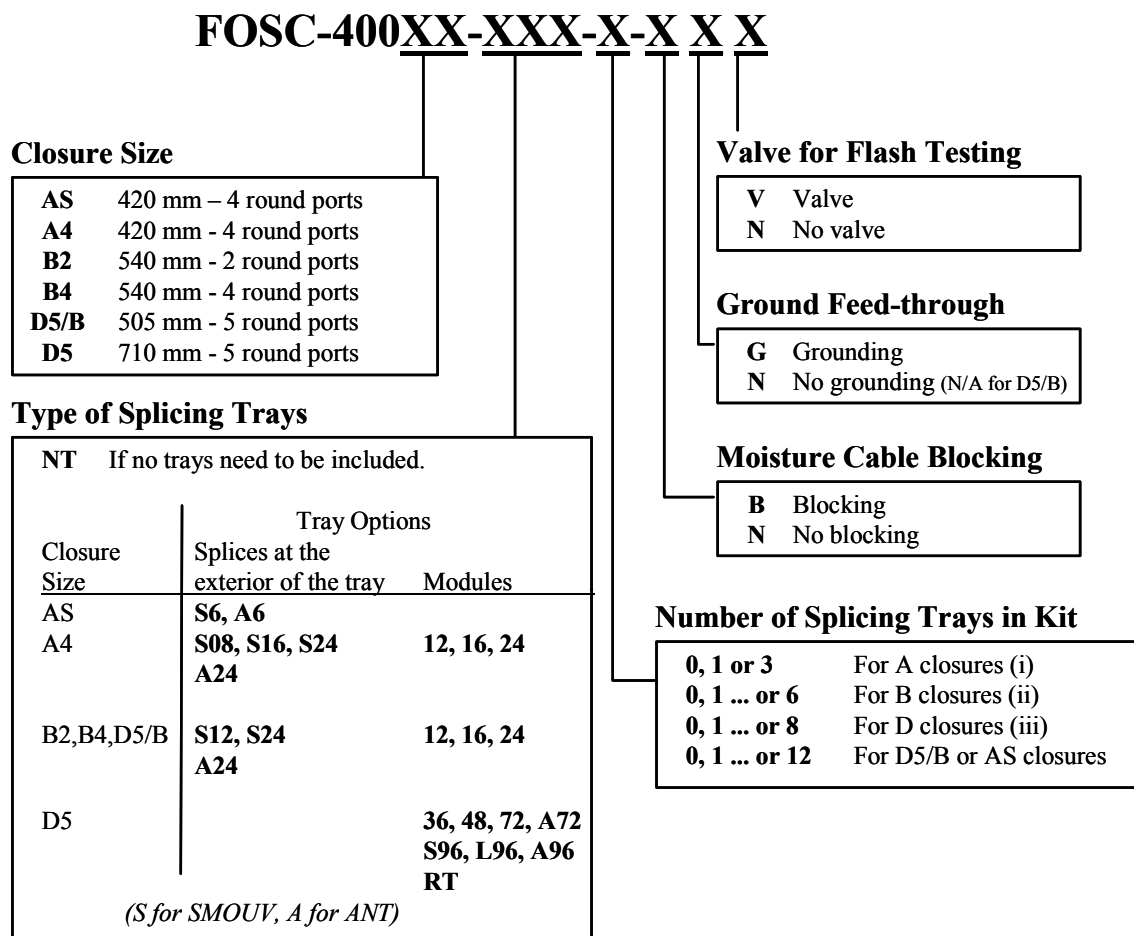Uncut loose buffer tube storage is provided in optional storage baskets.

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FOSC 400 family (FOSC 400 AS inset)

2. ORDERING INFORMATION

2.1 CLOSURE ALTERNATIVES

The FOSC-400 closure is available in 3 different sizes.
Different configurations are possible, depending upon the application.
Section 3 gives full product descriptions.

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FOSC-400XX-XXX-X-X X X

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Closure Size

AS	420 mm – 4 round ports
A4	420 mm - 4 round ports
B2	540 mm - 2 round ports
B4	540 mm - 4 round ports
D5/B	505 mm - 5 round ports
D5	710 mm - 5 round ports

Valve for Flash Testing

V	Valve
N	No valve

Ground Feed-through

G	Grounding
N	No grounding (N/A for D5/B)

Moisture Cable Blocking

B	Blocking
N	No blocking

Type of Splicing Trays

NT	If no trays need to be included.

	Tray Options	
Closure Size	Splices at the exterior of the tray	Modules
AS A4	S6, A6 S08, S16, S24 A24	12, 16, 24
B2,B4,D5/B	S12, S24 A24	12, 16, 24
D5		36, 48, 72, A72 S96, L96, A96 RT

(S for SMOUV, A for ANT)

Number of Splicing Trays in Kit

0, 1 or 3	For A closures (i)
0, 1 ... or 6	For B closures (ii)
0, 1 ... or 8	For D closures (iii)
0, 1 ... or 12	For D5/B or AS closures

i. An "A" closure can initially be fitted with 3 trays, unless splice holder modules are used when only 2 can be fitted.
ii. A "B" closure can initially be fitted with 6 trays, however, retrofitting a standard "B" closure (delivered with 4 trays or fewer) with a 5th and 6th tray is not possible.
    If 5 or 6 trays are required, a storage basket cannot be used.
iii. If 7 or 8 trays are required, a storage basket cannot be used.

Standard kit content:

– Dome
– Clamp
– O-ring
– Base including a tray tower to hold the splicing trays
– FOSC trays (quantity according to the ordering description)
– Transportation tubes with tie wraps (part of tray kit)
– 1 oval port seal kit including:
    o cleaning tissues
    o aluminum tape
    o abrasive strips
– Shield continuity wires for closure sizes B and D (not shown on the picture below)
– Loose tube storage sleeve for closure size A (not shown on the picture below)
– 1 or 2 bags with silica gel (75 grams each)
– Installation instructions

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FOSC-400A4 kit content

2.2 ACCESSORIES

2.2.1 Cable Accessories

Product Name	Qty/Pk	Product Description
FOSC-A-CSEAL-1NT	1 pc	A-size closure: tubular cable sealing kit for 1 cable in any round port
FOSC-A-CSEAL-2NT	1 pc	A-size closure: tubular cable sealing kit for 2 cables in the oval port
FOSC-B/D-CSEAL-1NT	1 pc	B or D-size: tubular cable sealing kit for 1 cable in any round port
FOSC-B/D-CSEAL-2NT	1 pc	B or D-size: tubular cable sealing kit for 2 cables in the oval port
FOSC-CSEAL-1NW-S6073	1 pc	Wraparound cable seal sleeve for use on any round port (repair or re-entry).
FOSC-CSEAL-2NW-S6073	1 pc	Wraparound cable seal sleeve for use on the oval port (repair or re-entry).
FOSC-FUNNEL-5+1-KIT	1 pc	Kit to split a central or slotted core cable into a loose tube construction (1 in, 5 out)
FOSC-FUNNEL-10+1-KIT	1 pc	Kit to split a central or slotted core cable into a loose tube construction (1 in, 10 out)

2.2.2 Splicing Trays

Splicing trays are normally ordered as part of the closure kit. See the ordering guide of FOSC splicing trays and baskets for more information and ordering references if they need to be ordered separately.

2.2.3 Storage Baskets

See the ordering guide of FOSC splicing trays and baskets for more information.

2.2.4 Mounting Kits

Product Name	Qty/Pk	Product Description
FOSC-A/B-POLE-MOUNT	1 pc	Plastic bracket for mounting A or B closure to pole or wall
FOSC-A/B-UNI-MOUNT-A	1 pc	Metal bracket for mounting A or B closure aerially
FOSC-A/B-UNI-MOUNT-P	1 pc	Metal bracket for mounting A or B closure onto a pole
FOSC-A/B-UNI-MOUNT-R	1 pc	Metal bracket for mounting A or B closure onto a rod
FOSC-A/B-UNI-MOUNT-W	1 pc	Metal bracket for mounting A or B closure onto a wall
FOSC-400D-POLE-MOUNT	1 pc	Bracket for mounting the 400D closure on a pole or wall
FOSC-DMARC-MOBRA	1 pc	Bracket for mounting the D5/B closure on a wall

2.2.5 Miscellaneous

Product Name	Qty/Pk	Product Description
FOSC-A/B-O-RING-SEAL-KIT	1 pc	Optional re-entry/repair kit with desiccant, O-ring, and cleaning tissues
FOSC-A/B-VAULT-BAG	1 pc	Flame retardant bag to cover closure for vault applications
FOSC-A-SHIELD-CON-KIT	1 pc	6 shield continuity wires + clamp and 5 wire connection clips
FOSC-D-O-RING-SEAL-KIT	1 pc	Optional re-entry/repair kit with desiccant, O-ring, and cleaning tissues
FOSC-D-VAULT-BAG	1 pc	Flame retardant bag to cover closure for vault applications

2.2.6 Installation Kit Components

Product Name	Qty/Pk	Product Description
FISTV-E7100-1005	10x100g	Silica gel for inside the closure, to be replaced after each re-entry

2.2.7 Tools

Product Name	Qty/Pk	Product Description
FACC-HEAT-GUN-220V	1 pc	1460W, 220V hot air gun to shrink the cable seals. The kit includes a hot air gun reflector.
FACC-HEAT-GUN-110V	1 pc	1460W, 110V hot air gun to shrink the cable seals. The kit includes an hot air gun reflector
FACC-S-HOT-AIR-TORCH	1 pc	Sievert hot air gas torch kit including handle and nozzle used to shrink the cable seals when only gas is available
FOSC-WORK-STAND	1 pc	Work stand to keep all FOSC closures in horizontal position during installation.

3. PRODUCT GUIDE

3.1 CLOSURE DESCRIPTION

Dome
The dome is made from a polymer, ribbed for extra strength.

Base
The base provides the foundation for the splicing trays. A number of round ports (quantity depends on the closure size) and one oval port for cable entry/exit are provided in the base.

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Dome to Base Seal
This seal consists of a mechanical clamp and a rubber O-ring.

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FOSC Tray Tower
A mounting bracket is provided onto which the splicing trays are hinged.

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Cable Strength Member Fixation Point
The central strength member of each individual cable can be attached at this point.
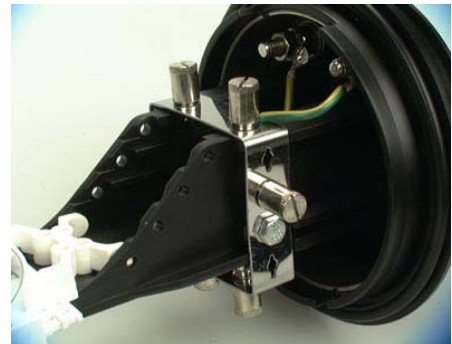
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Ground Feed Through

A sealed grounding feed-through bolt can be pre-mounted in the base to connect metallic components to an external ground.

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Flash Test Valve

This is pre-mounted in the dome if pressure access is required.
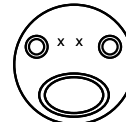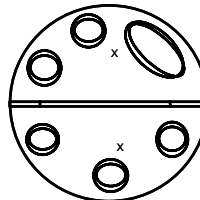

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3.2 CLOSURE DIMENSIONS
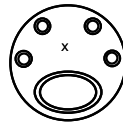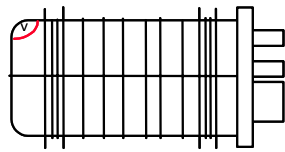
FOSC-400A
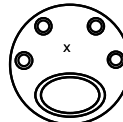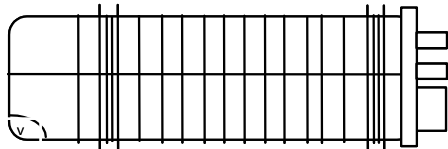
A4 - Base
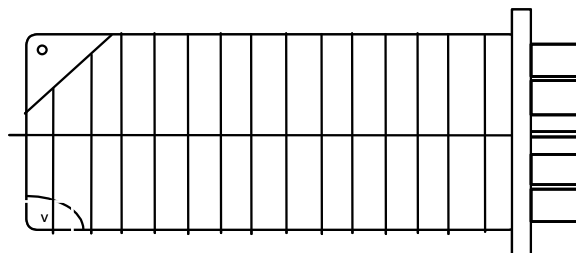
FOSC-400B

B4 - Base   **B2 - Base**
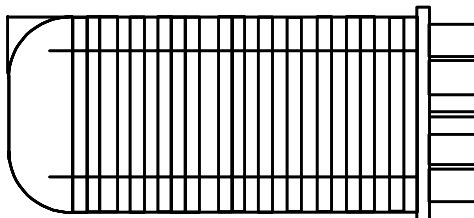
FOSC-400D5/B
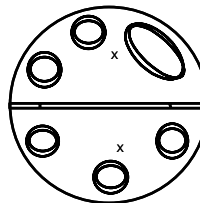
D5 - Base

FOSC-400D

D5 - Base

V = Optional flash testing capability   X = Optional grounding feed through lug(s).

Dimensions	Closure Size				
	AS/A4	**B4**	**B2**	**D5/B**	**D5**
Total closure length (mm)	420	540	540	505	710
Closure outer diameter, including clamp (mm)	205	205	205	290	290

3.3 CLOSURE CAPACITY

3.3.1 General

	Closure Size					
	AS	**A4**	**B4**	**B2**	**D5/B**	**D5**
FOSC tray capacity (*) – # FOSC trays (no storage basket) – # FOSC trays (with storage basket)	12 N.A.	2 (3)* 2	4 (6)* 4	4 (6)* 4	12 N.A.	8 6 or 4*
Splicing capacity – Single fiber – Ribbon 12	72	48 (72)	96 (144)	96 (144)	288	768 1152
Cable ports – 1 oval port for 2 cables with ∅ range each – # round ports – cable ∅ range of the round ports	10-25 mm 4 5-19 mm	10-25 mm 4 5-19 mm	10-25 mm 4 5-19 mm	10-25 mm 2 5-28 mm	10-25 mm 5 5-28 mm	10-25 mm 5 5-28 mm

*   *Notes:*

    –   *Tray capacity is based on 45 mm fusion splice protectors (such as SMOUV-1120-02).*

    –   *An 'A' closure can initially be fitted with 3 trays (if the tray type is not the one with splice holder modules, there the limit is 2 trays).*

    –   *A 'B' closure can initially be fitted with 6 trays. The loose tube storage capacity is very limited in this case (a few tubes can be stored in a plastic bag, consult the local sales engineer for more information). Adding to an installed standard 'B' closure a 5th and 6th tray is impossible.*

Please contact your local representative for detailed information

3.3.2 Splicing Trays

See the FOSC splicing trays ordering guide for characteristics and standard ordering information.

3.4 ACCESSORIES

3.4.1 Cable Accessories

Tubular Cable Seal Kit For Round Ports
FOSC-A-CSEAL-1NT (incl. strength member fixation)
FOSC-B/D-CSEAL-1NT
Cable seal kit to seal cables in the round ports.
The diameter range accommodated is 5-32 mm.

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Wraparound Cable Seal Kit For Round Ports
FOSC-CSEAL-1NW-S6073
A wraparound version of above sleeve is also available and is used in case of re-entry/repair.

SEA012.JPG

Tubular Cable Seal Kit For Oval Ports
FOSC-A-CSEAL-2NT (incl. strength member fixation)
FOSC-B/D-CSEAL-2NT
Cable seal kit to seal two cables in oval outlet port.
The diameter range accommodated is 10-25 mm.
This seal is used when uncut fibers are stored in an optional basket.

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Wraparound Cable Seal Kit For Oval Ports
FOSC-CSEAL-2NW-S6073
A wraparound version of above sleeve is also available and is used in case of re-entry/repair.

SEA013.JPG

Slotted Core/Central Core Termination Kit
FOSC-FUNNEL-X+1-KIT
This kit transforms a slotted or central core (OD = 8 mm) into a loose tube construction.
Two different versions are available: with five 2.8 mm or ten 1.8 mm outgoing transportation tubes.
(In the product name, X = 5 or 10)

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3.4.2 Mounting kits

Pole/Wall Mounting Kit
FOSC-A/B-POLE-MOUNT
FOSC-400D-POLE-MOUNT
Different kits are available for each closure.

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A/B Aerial Mounting Components
FOSC-A/B-UNI-MOUNT-A
These components are mounted onto the dome bracket to mount the FOSC on strands.

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A/B Pole Mounting Components
FOSC-A/B-UNI-MOUNT-P
These components are mounted onto the dome bracket to mount the FOSC on a pole.

MB007.JPG

A/B Rod Mounting Components
FOSC-A/B-UNI-MOUNT-R
These components are mounted onto the dome bracket
to mount the FOSC on a rod.

MB008.JPG

A/B Wall Mounting Components
FOSC-A/B-UNI-MOUNT-W
These components are mounted onto the dome bracket
to mount the FOSC on a wall.

MB009.JPG

D5/B Wall Mounting Components
FOSC-DMARC-MOBRA
Bracket for mounting the D5/B closure on a wall.

MOBRDM01.JPG

3.4.3 Installation Kit Components

Silica gel
FISTV-E7100-1005
Silica gel for inside the closure, to be replaced after
each re-entry.
This kit contains 10 x 100g.

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3.4.4 Tools

FACC-HEAT-GUN-220V
1460W, 220V hot air gun to shrink the cable seals.
The kit includes a hot air gun reflector.

FACC-HEAT-GUN-110V
1460W, 110V hot air gun to shrink the cable seals.
The kit includes a hot air gun reflector.

T026.JPG

FACC-S-HOT-AIR-TORCH
Sievert hot air gas torch kit including handle and nozzle
used to shrink the cable seals when only gas is
available.

T011.JPG

FOSC-WORK-STAND
This is a help tool to keep the closure in a horizontal
position while working on it.

MB004.JPG

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