



3.0 FML Closures

3.1 FML Integrated Routing Closures

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3.1 FML Integrated Routing Closures

Introduction

The FML from HellermannTyton is a medium sized round fibre optic splice closure. Available in 3 lengths, with 12 round cable ports and 1 oval port for loop through installations, the FML can be used in FTTX and trunk applications and FTTH access networks.

The Integrated Routing (IR) FML closure has a modular fibre management system and is available in a range of lengths to suit the number of fibres and splices required. The IR system has been designed to ensure positive fibre management throughout the closure. The components ensure a 30mm bend radius can be maintained from cable entry all the way up onto the splice trays.

The smaller size of the FML closure allows it to be installed in areas where space is restricted.

The IR system offers a number of configurations and splice tray options. Supplied in packs of 12 (SC Trays) or 6 (SE Trays), the trays can be easily installed onto the IR backplane. The splice trays can accommodate a number of splice types including 3A and ANT as well as a selection of fibre optic splitters.

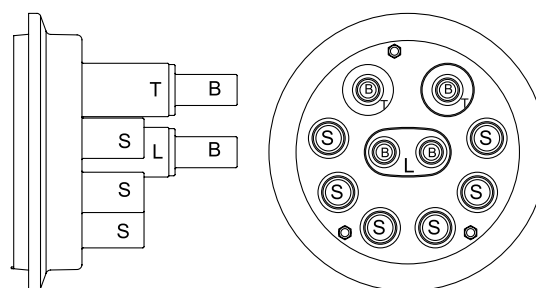
The FML IR closure has a maximum splice capacity of 720 fibres using either the SC-B tray with 3A/ANT splices or the SE tray with ANT splices.

The closure cover is environmentally sealed with a high quality clamp and 'O' ring. The cable ports can be sealed using either Cablelok mechanical seals or heatshrink sleeves. The closure can be fitted with a flash test valve and/or grounding feed through. For flash test valve and/or grounding feed through versions please contact our sales office.



Features and Benefits

- Ideal for FTTX network and trunk applications
- 12 round ports and 1 oval port (for loop through cable)
- Suitable for blown fibre/cable applications
- Accommodates up to 30 single element or 60 single circuit trays or a combination of both
- Can be configured with a fibre loop storage basket for loop through applications
- Available in 3 different lengths
- Cablelok ready
- Quick release cover clamp
- Optional pressure release valve
- For use in underground, direct burial and aerial applications
- Wall mounting brackets and stainless steel wall mounting strap kits available (see Chapter 13 - Accessories)



FML Port Base Configuration

Port	Number of Ports	Cable Range (mm)	
		Cablelok	Heatshrink
L	1	2 x 5.5 – 20.0	2 x 12.0 – 24.0
T	2	15.5 – 29.0	12.0 – 35.0
S	6	5.0 – 20.0	12.0 – 26.0
B	4	4.8 – 16.5	6.0 – 19.0

HellermannTyton Integrated Routing closures are supplied in standard configurations, with fibre management and splice trays included, ready to use. If a standard configuration is not suitable, the closures can be supplied without splice trays which can then be ordered separately.

Port seals (Cablelok and heatshrink) and accessories (e.g. mounting brackets) must be ordered separately. HellermannTyton also offer a range of additional splice options including Crimp / ANT. For further details refer to Chapter 12.

Splice Type	Cover Reference	Closure Width (mm) D1 x D2	Closure Length (mm) L	Single Element (SE) Tray		Single Circuit (SC) Tray		
				Single Tray Quantity	Max Splice Capacity	Single Tray Quantity	Max Splice Capacity	
							SC	SC-B
3A	B	220 X 275	598	18(3) ‡	216	36(3)	144	432
	BC		668	24(4)	288	48(4)	192	576
	C		748	30(5)	360	60(5)	240	720
ANT	B	220 X 275	598	18(3)	432	36(3)	144	432
	BC		668	24(4)	576	48(4)	192	576
	C		748	30(5)	720	60(5)	240	720

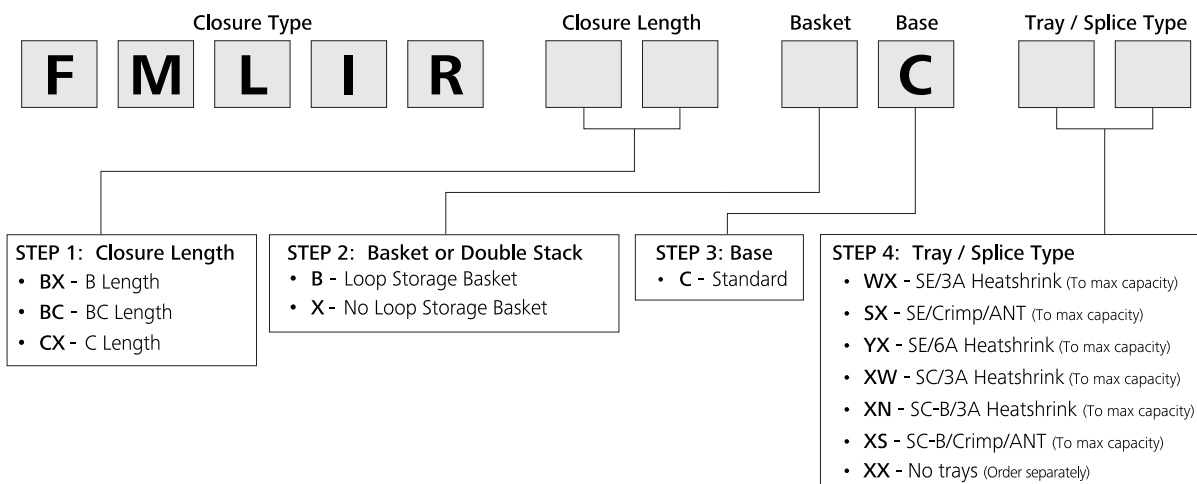
‡ (tray pack ordering multiple).

Part Number Identification

Identifying the correct part number is a simple process:

- STEP 1** Choose the appropriate closure length.
- STEP 2** Decide if a loop storage basket is required.
- STEP 3** One base option only. Selection pre-determined.
- STEP 4** Are single element (SE) or single circuit (SC) trays required? The closure will be supplied with the maximum number of trays chosen for the closure length (as shown in the catalogue). SE trays are supplied with 2 x 3A splice bridges (12 splice capacity) or 2 x ANT splice bridges (24 splice capacity). SC / SC-B trays accommodate either 4 or 12 x 3A or ANT splice protectors in moulded splice holders. If a combination of SE and SC trays is needed, or less than the maximum is required, then an unloaded closure should be ordered with separate splice trays.

For additional information on tray types, splice protectors and splice capacity please refer to Chapter 12.





FML Integrated Routing Closure

C Length with Basket

Features and Benefits

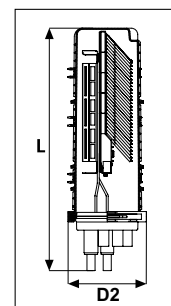
- Maximum 720 fibre splice capacity when using SC-B tray
- 12 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm minimum fibre bend radii throughout
- Fibre storage basket for loop through applications
- Bi-directional fibre routing
- Accommodates SC, SC-B and SE trays
- Maximum 12 splices per tray
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



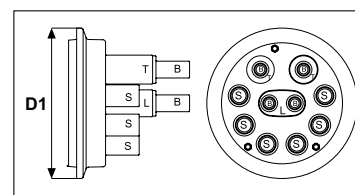
FML IR C-Length Closure with Basket



FML C-Length Closure Cover



FML IR C-Length Closure with Basket



FML Base Port Configuration

Technical Description

The FML Integrated Routing (IR) C Length closure with basket is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and the backplane is an aluminium extrusion which can accommodate up to 30 IR SE trays or 60 IR SC/SC-B trays or a combination of SE, SC and SC-B trays. The position of the mounting system allows easy access for the routing of the fibre on to the trays and the basket

provides storage space for the storage of fibre loops. The trays and fibre optic routing module are white which makes it easy to see the colour of the fibre elements as they are routed through the positive fibre management system. Fibre slot retaining blocks guide fibre elements in to the IR system, the foam pad on the retainer is partially cut through to accommodate a range of fibre counts.

All IR system cover plates are coloured blue identifying them as removable parts allowing access to the fibre, the fibre slot retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.
FMLIR-CXBCXW	220	275	748	Cablelok, Heatshrink	IR SC	60	3A	Large	857-00582
FMLIR-CXBCXN	220	275	748	Cablelok, Heatshrink	IR SC-B	60	3A	Large	857-00905
FMLIR-CXBCWX	220	275	748	Cablelok, Heatshrink	IR SE	30	3A	Large	857-00581
FMLIR-CXBCXX	220	275	748	Cablelok, Heatshrink	Not supplied	-	-	Large	857-00580

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- | | | | |
|-------------------------|--------------------------------|---------------------------|-----------------------|
| • FML IR Base | • Fibre Optic Routing Module | • Tray Lid | • Installation Guide |
| • Anchor Plates/Bracket | • Fibre Optic Storage Unit | • Tray Tool | • Marker Kit |
| • C-Length Cover (Dome) | • Fibre Optic Storage Unit Lid | • Anchor Fixing Kit (3) | - Red Marker 1 - 48 |
| • Quick Release Clamp | • Fibre Slot Entry Module | • Spiral Binding | - Green Marker 1 - 48 |
| • Sealing 'O' Ring | • Fibre Slot Retaining Block | • Isopropyl Alcohol Wipes | |
| • Fibre Storage Basket | • Reusable Cable Ties | • Desiccant | |



FML Integrated Routing Closure

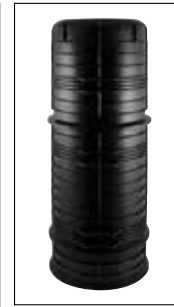
C Length

Features and Benefits

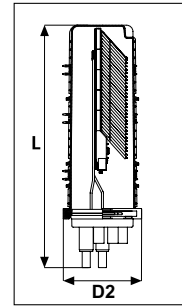
- Maximum 720 fibre splice capacity when using SC-B tray
- 12 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm minimum fibre bend radii throughout
- Bi-directional fibre routing
- Accommodates SC, SC-B and SE trays
- Maximum 12 splices per tray
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



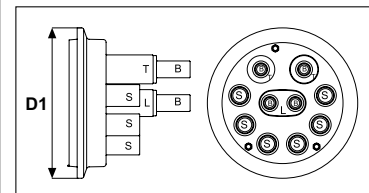
FML IR C-Length Closure



FML C-Length Closure Cover



FML IR C-Length Closure



FML Base Port Configuration

Technical Description

The FML Integrated Routing (IR) C Length closure is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 - 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink. The mounting system is manufactured from Grade 304 stainless steel and the backplane is an aluminium extrusion which can accommodate up to 30 IR SE trays or 60 IR SC/SC-B trays or a combination of SE, SC and SC-B trays. The position of the mounting system allows easy access for the routing of the fibre on to the trays. The trays and fibre

optic routing module are white which makes it easy to see the colour of the fibre elements as they are routed through the positive fibre management system. Fibre slot retaining blocks guide fibre elements in to the IR system, the foam pad on the retainer is partially cut through to accommodate a range of fibre counts.

All IR system cover plates are coloured blue identifying them as removable parts allowing access to the fibre, the fibre slot retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Article-No.
FMLIR-CXXCXW	220	275	748	Cablelok, Heatshrink	IR SC	60	3A	857-00579
FMLIR-CXXCXN	220	275	748	Cablelok, Heatshrink	IR SC-B	60	3A	857-00908
FMLIR-CXXCWX	220	275	748	Cablelok, Heatshrink	IR SE	30	3A	857-00578
FMLIR-CXXCXX	220	275	748	Cablelok, Heatshrink	Not supplied	-	-	857-00577

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- FML IR Base
- Anchor Plates/Bracket
- C-Length Cover (Dome)
- Quick Release Clamp
- Sealing 'O' Ring
- Fibre Optic Storage Unit
- Fibre Optic Storage Unit Lid
- Fibre Slot Entry Module
- Fibre Slot Retaining Block
- Reusable Cable Ties
- Tray Lid
- Tray Tool
- Anchor Fixing Kit (3)
- Spiral Binding
- Isopropyl Alcohol Wipes
- Desiccant
- Installation Guide
- Marker Kit
 - Red Marker 1 - 48
 - Green Marker 1 - 48



FML Integrated Routing Closure

BC Length with Basket

Features and Benefits

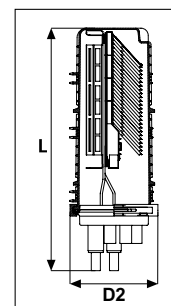
- Maximum 576 fibre splice capacity when using SC-B tray
- 12 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm minimum fibre bend radii throughout
- Fibre storage basket for loop through applications
- Bi-directional fibre routing
- Accommodates SC, SC-B and SE trays
- Maximum 12 splices per tray
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



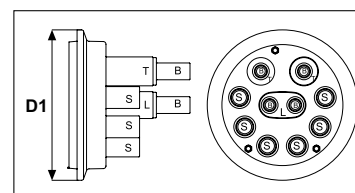
FML IR BC-Length Closure with Basket



FML BC-Length Closure Cover



FML IR BC-Length Closure with Basket



FML Base Port Configuration

Technical Description

The FML Integrated Routing (IR) BC Length closure with basket is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and the backplane is an aluminium extrusion which can accommodate up to 24 IR SE trays or 48 IR SC/SC-B trays or a combination of SE, SC and SC-B trays. The position of the mounting system allows easy access for the routing of the fibre on to the trays and the basket

provides storage space for the storage of fibre loops. The trays and fibre optic routing module are white which makes it easy to see the colour of the fibre elements as they are routed through the positive fibre management system. Fibre slot retaining blocks guide fibre elements in to the IR system, the foam pad on the retainer is partially cut through to accommodate a range of fibre counts.

All IR system cover plates are coloured blue identifying them as removable parts allowing access to the fibre, the fibre slot retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.
FMLIR-BCBCXW	220	275	668	Cablelok, Heatshrink	IR SC	48	3A	Large	857-00576
FMLIR-BCBCXN	220	275	668	Cablelok, Heatshrink	IR SC-B	48	3A	Large	857-00904
FMLIR-BCBCWX	220	275	668	Cablelok, Heatshrink	IR SE	24	3A	Large	857-00575
FMLIR-BCBCXX	220	275	668	Cablelok, Heatshrink	Not supplied	-	-	Large	857-00574

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- | | | | |
|---|--|--|--|
| <ul style="list-style-type: none"> • FML IR Base • Anchor Plates/Bracket • BC-Length Cover (Dome) • Quick Release Clamp • Sealing 'O' Ring • Fibre Storage Basket | <ul style="list-style-type: none"> • Fibre Optic Routing Module • Fibre Optic Storage Unit • Fibre Optic Storage Unit Lid • Fibre Slot Entry Module • Fibre Slot Retaining Block • Reusable Cable Ties | <ul style="list-style-type: none"> • Tray Lid • Tray Tool • Anchor Fixing Kit (3) • Spiral Binding • Isopropyl Alcohol Wipes • Desiccant | <ul style="list-style-type: none"> • Installation Guide • Marker Kit <ul style="list-style-type: none"> - Red Marker 1 - 25 - Green Marker 1 - 25 |
|---|--|--|--|



FML Integrated Routing Closure

BC Length

Features and Benefits

- Maximum 576 fibre splice capacity when using SC-B tray
- 12 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm minimum fibre bend radii throughout
- Bi-directional fibre routing
- Accommodates SC, SC-B and SE trays
- Maximum 12 splices per tray
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



FML BC-Length Closure Cover

FML IR BC-Length Closure

FML IR BC-Length Closure

FML Base Port Configuration

Technical Description

The FML Integrated Routing (IR) BC Length closure is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and the backplane is an aluminium extrusion which can accommodate up to 24 IR SE trays or 48 IR SC/SC-B trays or a combination of SE, SC and SC-B trays. The position of the mounting system allows easy access for the routing of the fibre on to the trays. The trays and fibre

optic routing module are white which makes it easy to see the colour of the fibre elements as they are routed through the positive fibre management system. Fibre slot retaining blocks guide fibre elements in to the IR system, the foam pad on the retainer is partially cut through to accommodate a range of fibre counts.

All IR system cover plates are coloured blue identifying them as removable parts allowing access to the fibre, the fibre slot retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Article-No.
FMLIR-BCXCXW	220	275	668	Cablelok, Heatshrink	IR SC	48	3A	857-00573
FMLIR-BCXCXN	220	275	668	Cablelok, Heatshrink	IR SC-B	48	3A	857-00907
FMLIR-BCXCWX	220	275	668	Cablelok, Heatshrink	IR SE	24	3A	857-00572
FMLIR-BCXCXX	220	275	668	Cablelok, Heatshrink	Not supplied	-	-	857-00571

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- | | | | |
|---|--|--|--|
| <ul style="list-style-type: none"> • FML IR Base • Anchor Plates/Bracket • BC-Length Cover (Dome) • Quick Release Clamp • Sealing 'O' Ring • Fibre Optic Routing Module | <ul style="list-style-type: none"> • Fibre Optic Storage Unit • Fibre Optic Storage Unit Lid • Fibre Slot Entry Module • Fibre Slot Retaining Block • Reusable Cable Ties • Tray Lid | <ul style="list-style-type: none"> • Tray Tool • Anchor Fixing Kit (3) • Spiral Binding • Isopropyl Alcohol Wipes • Desiccant • Installation Guide | <ul style="list-style-type: none"> • Marker Kit <ul style="list-style-type: none"> - Red Marker 1 - 25 - Green Marker 1 - 25 |
|---|--|--|--|



FML Integrated Routing Closure

B Length with Basket

Features and Benefits

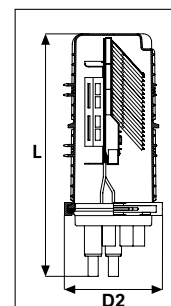
- Maximum 432 fibre splice capacity when using SC-B tray
- 12 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm minimum fibre bend radii throughout
- Fibre storage basket for loop through applications
- Bi-directional fibre routing
- Accommodates SC, SC-B and SE trays
- Maximum 12 splices per tray
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



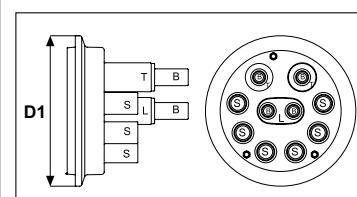
FML IR B-Length Closure with Basket



FML B-Length Closure Cover



FML IR B-Length Closure with Basket



FML Base Port Configuration

Technical Description

The FML Integrated Routing (IR) B Length closure with basket is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and the backplane is an aluminium extrusion which can accommodate up to 18 IR SE trays or 36 IR SC/SC-B trays or a combination of SE, SC and SC-B trays. The position of the mounting system allows easy access for the routing of the fibre on to the trays and the basket

provides storage space for the storage of fibre loops. The trays and fibre optic routing module are white which makes it easy to see the colour of the fibre elements as they are routed through the positive fibre management system. Fibre slot retaining blocks guide fibre elements into the IR system, the foam pad on the retainer is partially cut through to accommodate a range of fibre counts.

All IR system cover plates are coloured blue identifying them as removable parts allowing access to the fibre, the fibre slot retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.
FMLIR-BXBCXW	220	275	598	Cablelok, Heatshrink	IR SC	36	3A	Medium	857-00570
FMLIR-BXBCXN	220	275	598	Cablelok, Heatshrink	IR SC-B	36	3A	Medium	857-00903
FMLIR-BXBCWX	220	275	598	Cablelok, Heatshrink	IR SE	18	3A	Medium	857-00569
FMLIR-BXBCXX	220	275	598	Cablelok, Heatshrink	Not supplied	-	-	Medium	857-00568

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- | | | | |
|-------------------------|--------------------------------|---------------------------|-----------------------|
| • FML IR Base | • Fibre Optic Routing Module | • Tray Lid | • Installation Guide |
| • Anchor Plates/Bracket | • Fibre Optic Storage Unit | • Tray Tool | • Marker Kit |
| • B-Length Cover (Dome) | • Fibre Optic Storage Unit Lid | • Anchor Fixing Kit (3) | - Red Marker 1 - 25 |
| • Quick Release Clamp | • Fibre Slot Entry Module | • Spiral Binding | - Green Marker 1 - 25 |
| • Sealing 'O' Ring | • Fibre Slot Retaining Block | • Isopropyl Alcohol Wipes | |
| • Fibre Storage Basket | • Reusable Cable Ties | • Desiccant | |



FML Integrated Routing Closure

B Length

Features and Benefits

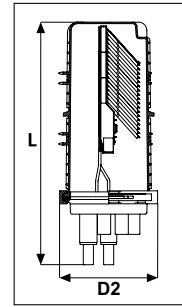
- Maximum 432 fibre splice capacity when using SC-B tray
- 12 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm minimum fibre bend radii throughout
- Bi-directional fibre routing
- Accommodates SC, SC-B and SE trays
- Maximum 12 splices per tray
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



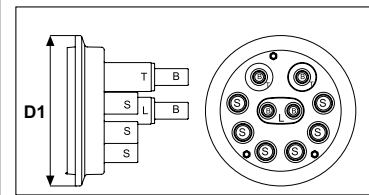
FML IR B-Length Closure



FML B-Length Closure Cover



FML IR B-Length Closure



FML Base Port Configuration

Technical Description

The FML Integrated Routing (IR) B Length closure is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and the backplane is an aluminium extrusion which can accommodate up to 18 IR SE trays or 36 IR SC/SC-B trays or a combination of SE, SC and SC-B trays. The position of the mounting system allows easy access for the routing of the fibre on to the trays. The trays and fibre

optic routing module are white which makes it easy to see the colour of the fibre elements as they are routed through the positive fibre management system. Fibre slot retaining blocks guide fibre elements in to the IR system, the foam pad on the retainer is partially cut through to accommodate a range of fibre counts.

All IR system cover plates are coloured blue identifying them as removable parts allowing access to the fibre, the fibre slot retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Article-No.
FMLIR-BXXCXW	220	275	598	Cablelok, Heatshrink	IR SC	36	3A	857-00567
FMLIR-BXXCXN	220	275	598	Cablelok, Heatshrink	IR SC-B	36	3A	857-00906
FMLIR-BXXCWX	220	275	598	Cablelok, Heatshrink	IR SE	18	3A	857-00566
FMLIR-BXXCXX	220	275	598	Cablelok, Heatshrink	Not supplied	-	-	857-00565

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- FML IR Base
- Anchor Plates/Bracket
- B-Length Cover (Dome)
- Quick Release Clamp
- Sealing 'O' Ring
- Fibre Optic Routing Module
- Fibre Optic Storage Unit
- Fibre Optic Storage Unit Lid
- Fibre Slot Entry Module
- Fibre Slot Retaining Block
- Reusable Cable Ties
- Tray Lid
- Tray Tool
- Anchor Fixing Kit (3)
- Spiral Binding
- Isopropyl Alcohol Wipes
- Desiccant
- Installation Guide
- Marker Kit
 - Red Marker 1 - 25
 - Green Marker 1 - 25

3.2 FML Tubed Closures

Introduction

The FML from HellermannTyton is a medium sized round fibre optic splice closure. Available in 3 lengths, with 12 round cable ports and 1 oval port for loop through installations, the FML can be used in FTTH and trunk applications and FTTH access networks. The standard Tubed FML closure from HellermannTyton is available with a number of splice tray options. The tubed FML closure can also be supplied with fibre storage baskets.

The tubed solution routes fibres from the entry point of the closure in transportation tubing directly onto the splice trays. The transportation tubing helps maintain bend radius whilst adding good protection to the individual fibres.

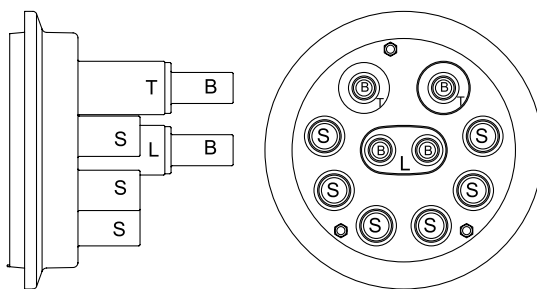
The tubed FML offers a number of configurations and splice tray options. The splice trays can accommodate a number of splice types including 3A and ANT as well as a selection of fibre optic splitters.

The tubed FML closure has a maximum splice capacity of 864 fibres using either the Hellipse SMF SE-B tray with 3A splices or the Hellipse NZDF SE-B tray with ANT splices.

The closure cover is environmentally sealed with a high quality clamp and 'O' ring. The cable ports can be sealed using either Cablelok mechanical seals or heatshrink sleeves. The closure can be fitted with a flash test valve and/or grounding feed through. For flash test valve and/or grounding feed through versions please contact our sales office.

Features and Benefits

- Ideal for FTTH network and trunk applications
- 12 round ports and 1 oval port (for loop through cable)
- Suitable for blown fibre/cable applications
- Accommodates up to 36 NZDF SE-B or SMF SE-B, 12 Hellapon Medium or 2 Hellamass Large trays
- Available in 3 different lengths
- Cablelok compatible for all port sizes
- Quick release cover clamp
- Flash test release valve and feed-through options
- For use in underground, direct burial and aerial applications
- Wall mounting brackets and stainless steel wall mounting strap kits available (see Chapter 13 - Accessories)



FML Port Base Configuration

Port	Number of Ports	Cable Range (mm)	
		Cablelok	Heatshrink
L	1	2 x 5.5 – 20.0	2 x 12.0 – 24.0
T	2	15.5 – 29.0	12.0 – 35.0
S	6	5.0 – 20.0	12.0 – 26.0
B	4	4.8 – 16.5	6.0 – 19.0

HellermannTyton closures with a tubed fibre management system are supplied in standard configurations, with fibre management and splice trays included, ready to use.

Port seals (Cablelok and heatshrink) and accessories (e.g. mounting brackets) must be ordered separately. HellermannTyton also offer a range of additional splice options including Crimp / ANT. For further details refer to Chapter 12.

Splice Type	Cover Reference	Closure Width (mm) D1 x D2	Closure Length (mm) L	Hellipse NZDF SE-B Tray		Hellipse SMF SE-B Tray		Hellapon Medium Tray		Hellamass Large Tray	
				Single Tray Quantity	Max Splice Capacity	Single Tray Quantity	Max Splice Capacity	Single Tray Quantity	Max Splice Capacity	Single Tray Quantity	Max Splice Capacity
3A	A	220 X 275	400	6(1) ‡	72	6(1)	144*	-	-	-	-
	B		598	24(4)	288	24(4)	576*	12(12)	288**	-	-
	C		748	36(6)	432	36(6)	864*	-	-	2(2)	288
ANT	A	220 X 275	400	6(1)	144	-	-	-	-	-	-
	B		598	24(4)	576	-	-	12(12)	288**	-	-
	C		748	36(6)	864	-	-	-	-	2(2)	576

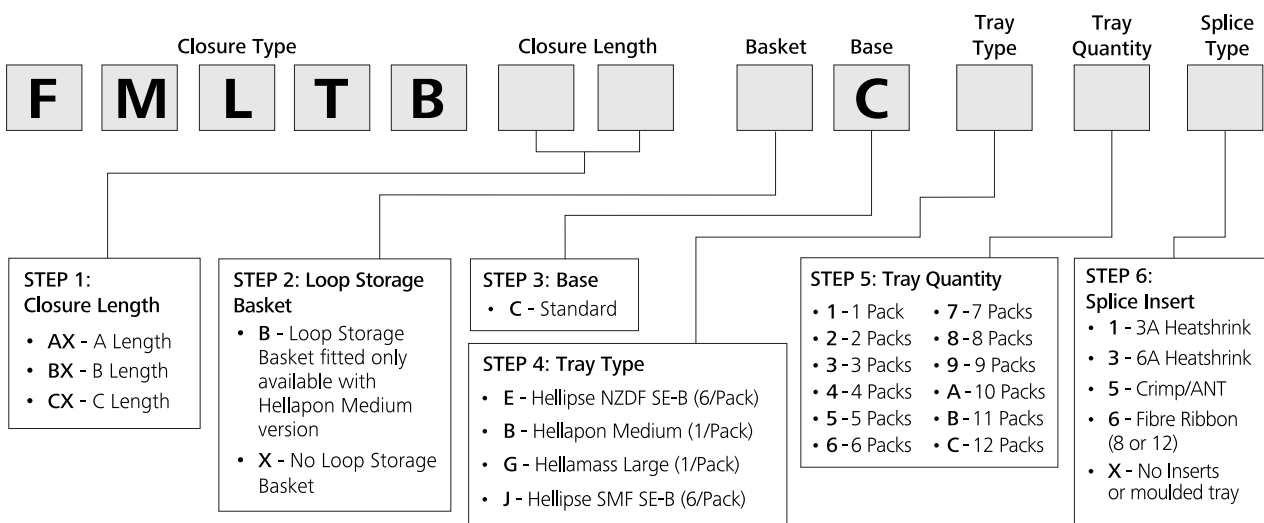
*Based on maximum splice protector length of 45mm. ** Hellapon Medium Style C splices achieved when double stacking on a tray. ‡ (tray pack ordering multiple).

Part Number Identification

Identifying the correct part number is a simple process:

- STEP 1** Choose the appropriate closure length.
- STEP 2** Decide if a loop storage basket is required - loop basket is only available with Hellapon Medium option.
- STEP 3** One base option only. Selection pre-determined.
- STEP 4** Select tray type. Hellipse NZDF SE-B - 12 x 3A splices, Hellipse SMF SE-B - 24 x 3A splices, Hellapon Medium** - 24 x 3A splices, Hellamass Large - 144 x 3A splices.
- STEP 5** Select tray quantity. Closures shown in the catalogue are supplied with the maximum number of trays chosen for the closure length.
- STEP 6** Select splice insert type.

For additional information on tray types, splice protectors and splice capacity please refer to Chapter 12.



FML Tubed



FML Tubed Closure

C Length Closure

Features and Benefits

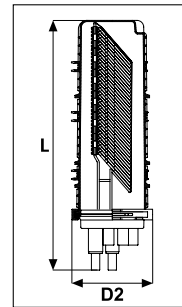
- Maximum 864 fibre splice capacity when using SMF SE-B tray
- 12 round ports and 1 oval port
- Pre-tubed to trays to allow for easy insertion of fibre
- Accommodates Hellipse NZDF SE-B, SMF-SE-B and Hellamass large trays
- Maximum 144 splices per tray (Hellamass Large)
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test valve and/or grounding feed-through



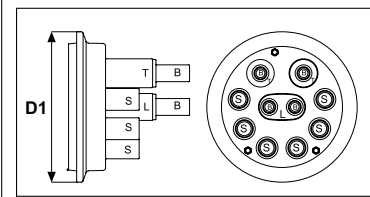
FML C-Length Closure



FML C-Length Closure Cover



FML C-Length Closure



FML Base Port Configuration

Technical Description

The FML C Length closure is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and there is a separate mounting system for each tray type. The mounting systems for each tray type can accommodate a maximum of 36 Hellipse NZDF SE-B, SMF SE-B or 2 Hellamass Large trays giving a

maximum of 864 fibre splices based on 24 splices per tray (when using Hellipse SMF SE-B trays).

The tubed closure and the position of the mounting system allows for ease of access and traceability of the fibre on to the trays. The trays are white which makes it easy to see the colour of the fibre elements as they are routed through the fibre management system and on to the trays.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Article-No.
FMLTB-CXXCG21	220	275	748	Cablelok, Heatshrink	Hellamas Large	2	3A	857-00679
FMLTB-CXXCE61	220	275	748	Cablelok, Heatshrink	Hellipse NZDF SE-B	36	3A	857-00682
FMLTB-CXXCJ6X	220	275	748	Cablelok, Heatshrink	Hellipse SMF SE-B	36	3A	857-00684
FMLTB-CXXCXXX	220	275	748	Cablelok, Heatshrink	Not supplied	-	-	857-00680

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- FML Base
- Anchor Plates/Bracket
- C-Length Cover (Dome)
- Quick Release Clamp
- Sealing 'O' Ring
- Tray Support Frame
- Anchor Fixing Kit (3)
- Tray Tool
- Hook and Loop Tray Securing Straps
- Transportation Tubing
- Tubefix – Tubing to Tray Securing Blocks
- Hook and Loop Management Ties
- Marker Kit (NZDF SE-B/SMF SE-B)
- Red Marker 1 - 48
- Green Marker 1 – 48
- Marker Kit (Hellamass Large)
- Red Marker 1 - 25
- Green Marker 1 – 25
- Isopropyl Alcohol Wipes
- Desiccant
- Installation Guide



FML Tubed Closure

B Length Closure

Features and Benefits

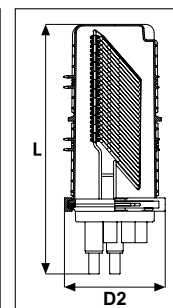
- Maximum 576 fibre splice capacity when using SMF SE-B tray
- 12 round ports and 1 oval port
- Pre-tubed to trays to allow for easy insertion of fibre
- Accommodates Hellipse NZDF SE-B, SMF SE-B and Hellapon Medium trays
- Maximum 24 splices per tray without double stacking (Hellipse SMF SE-B)
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test valve and/or grounding feed-through



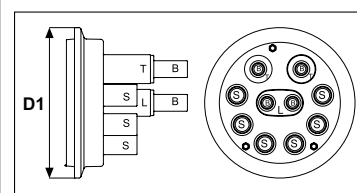
FML B-Length Closure



FML B-Length Closure Cover



FML B-Length Closure



FML Base Port Configuration

Technical Description

The FML B Length closure is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and there is a separate mounting system for each tray type. The mounting systems for each tray type can accommodate a maximum of 24 Hellipse NZDF SE-B, SMF SE-B or 12 Hellapon Medium trays giving a maximum of 576 fibre splices based on 24 splices per tray (when using

Hellipse SMF SE-B trays). The Hellapon Medium closure is supplied with a fibre storage basket which provides storage space for the storage of fibre loops.

The tubed closure and the position of the mounting system allows for ease of access and traceability of the fibre on to the trays. The trays are white which makes it easy to see the colour of the fibre elements as they are routed through the fibre management system and on to the trays.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.
FMLTB-BXBCBCX	220	275	598	Cablelok, Heatshrink	Hellapon Medium	12	3A	Medium	857-00678
FMLTB-BXXCE41	220	275	598	Cablelok, Heatshrink	Hellipse NZDF SE-B	24	3A	-	857-00674
FMLTB-BXXCJ4X	220	275	598	Cablelok, Heatshrink	Hellipse SMF SE-B	24	3A	-	857-00677
FMLTB-BXXCXXX	220	275	598	Cablelok, Heatshrink	Not supplied	-	-	-	857-00671

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176

Content of Set/Kit

- | | | | |
|--|---|--|--|
| <ul style="list-style-type: none"> • FML Base • Anchor Plates/Bracket • B-Length Cover (Dome) • Quick Release Clamp • Sealing 'O' Ring • Fibre Storage Basket (Hellapon Medium Tray option only) | <ul style="list-style-type: none"> • Tray Support Frame • Anchor Fixing Kit (3) • Tray Tool • Hook and Loop Tray Securing Straps • Transportation Tubing • Tubefix – Tubing to Tray | <ul style="list-style-type: none"> • Securing Blocks • Hook and Loop Management Ties • Isopropyl Alcohol Wipes • Desiccant • Installation Guide • Marker Kit (NZDF | <ul style="list-style-type: none"> SE-B/SMF SE-B) <ul style="list-style-type: none"> - Red Marker 1 - 48 - Green Marker 1 - 48 • Marker Kit (Hellapon Medium) <ul style="list-style-type: none"> - Red Marker 1 - 25 - Green Marker 1 - 25 |
|--|---|--|--|

FML Tubed



FML Tubed Closure

A Length

Features and Benefits

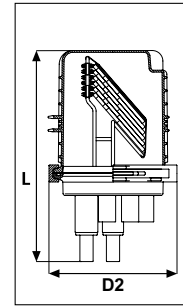
- Maximum 144 fibre splice capacity when using SMF SE-B trays
- 12 round ports and 1 oval port
- Pre-tubed to trays to allow for easy insertion of fibre
- Accommodates Hellipse NZDF SE-B and SMF SE-B trays
- Maximum 24 splices per tray without double stacking (Hellipse SMF SE-B)
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test valve and/or grounding feed-through



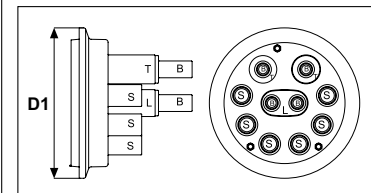
FML A-Length Closure



FML A-Length Closure Cover



FML A-Length Closure



FML Base Port Configuration

Technical Description

The FML A Length closure is supplied with a Polypropylene base. The base configuration of 12 round ports and 1 oval port covers a cable diameter range of 4.8 – 29.0mm when using Cablelok mechanical seals and 6.0 – 35.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and can accommodate a maximum of 6 Hellipse NZDF SE-B or SMF SE-B trays giving a maximum of 144 fibre splices based on 24 fibres per tray

(when using Hellipse SMF SE-B trays).

The tubed closure and the position of the mounting system allows for ease of access and traceability of the fibre on to the trays. The trays are white which makes it easy to see the colour of the fibre elements as they are routed through the fibre management system and on to the trays.

TYPE	Width D1 (mm)	Width D2 (mm)	Length L (mm)	Base Type	Tray Type	Tray Quantity	Splice Protector Type	Article-No.
FMLTB-AXXCE11	220	275	400	Cablelok, Heatshrink	Hellipse NZDF SE-B	6	3A	857-00669
FMLTB-AXXCJ1X	220	275	400	Cablelok, Heatshrink	Hellipse SMF SE-B	6	3A	857-00670
FMLTB-AXXCXXX	220	275	400	Cablelok, Heatshrink	Not supplied	-	-	857-00668

Products listed are for standard configurations, other configurations and splice insert types are available - see Page 176 104

Content of Set/Kit

- | | | | |
|---|---|--|--|
| <ul style="list-style-type: none"> • FML Base • Anchor Plates/Bracket • A-Length Cover (Dome) • Quick Release Clamp • Sealing 'O' Ring • Tray Support Frame | <ul style="list-style-type: none"> • Anchor Fixing Kit (3) • Tray Tool • Hook and Loop Tray Securing Straps • Transportation Tubing • Tubefix – Tubing to Tray | <ul style="list-style-type: none"> • Securing Blocks • Hook and Loop Management Ties • Isopropyl Alcohol Wipes • Desiccant • Installation Guide | <ul style="list-style-type: none"> • Marker Kit <ul style="list-style-type: none"> - Red Marker 1 - 12 - Green Marker 1 - 12 |
|---|---|--|--|