

# FTTX End to End Solutions

Better Technology through Innovation

**MADE TO CONNECT**



# Introduction



HellermannTyton is an established and innovative global leader in the provision of fibre network infrastructure solutions, delivering a broad range of quality, high performance connectivity for both residential and commercial use.

HellermannTyton provides a complete end to end range of Fibre to the X (FTTX) solutions, delivering fibre from the Point of Presence (PoP) to the building and through to the customer termination point. FTTX is an umbrella term that includes FTTH (fibre to the home), FTTB (fibre to the building) and FTTM (fibre to the mast) or 5G.

HellermannTyton has designed a range of outlets, distribution boxes, customer connection points and connectorised wall boxes that, combined with their selection of fibre splice closures, help deliver a full fibre network and the creation of Gigabit cities.

The sealed fibre splice closures from HellermannTyton are designed to protect the internal fibre management systems from adverse environmental conditions whilst allowing ready access for effective cable installation and maintenance. The modular integrated routing (IR) system provides a scalable and quick to install product that can be found in a wide selection of HellermannTyton solutions.

With the addition of gabocom to the HellermannTyton family, the FTTX offering now includes a wide range of quality engineered microduct solutions to deliver fibre to the property and inside. The gabocom microduct is supplied in a number of formats with a wide range of tools, connectors and other accessories. The gabocom system is designed for blown fibre installations for faster fibre connectivity.



FM 34289

EMS 504454





## Delivering fibre to the ...

FTTX is the blanket term used to describe fibre deployed in a number of different applications or scenarios. Fibre optic connectivity can be found in almost every sector and the demand for fibre is growing at pace. HellermannTyton offer an extensive range of fibre solutions, including closures, wall boxes, street cabinets and fibre distribution boxes, all designed to perform in a wide range of FTTX applications...



### Motorway

The Highways Agency operates a dedicated network that connects thousands of roadside devices to a network of traffic control centres across the country. Largely made up of fibre optic cables that run along the length of the motorways, the network links more than 14,000 message signs, emergency telephones, CCTV cameras and traffic monitoring systems to the control centres.

Fibre optic closures are used to distribute the fibre connections between the control centres and the motorway monitoring and communications equipment.



### Wind/Solar Farm

Wind turbines and solar panels are widely used in the renewable energy market. Wind turbines use a wide range of sensors that monitor wind speed, direction, and temperature. This information is recorded and sent back to a control station where the positioning of the turbine can be managed. Similarly, solar panel sensors also report back a range of information including solar strength, solar energy consumed and amount of electricity generated.



### Metropolitan and Gigabit Cities

In built up town and city locations where multiple fibres are required to service residential and business properties, HellermannTyton offer a number of aerial, burial, wall box and street cabinet solutions to meet these demands.



### Home - Rural

Rural Fibre to the Home delivery has seen rapid growth over recent years. Across the UK, there are thousands of homes and businesses in remote rural locations that cannot be connected by the mainstream service providers. Independent service providers have been formed to deliver fibre broadband to these rural locations by working closely with the local communities and land owners.



### Fibre to the Mast and 5G

Fibre to the Mast enables high capacity and flexible LTE and 5G deployment to meet the rapidly growing high bandwidth demands of today's mobile networks. Fibre to the Mast can also be a cost-effective solution to the rural broadband challenge, providing an efficient way of delivering fast internet access to locations with low population density.



### Railway

Fibre within Rail networks has become an integral component for signalling and monitoring hardware. High performing fibre is essential for rail signalling, providing a safe and efficient service for passengers. Fibre is also used to relay data from sensors that monitor the condition and performance of the physical rail tracks.

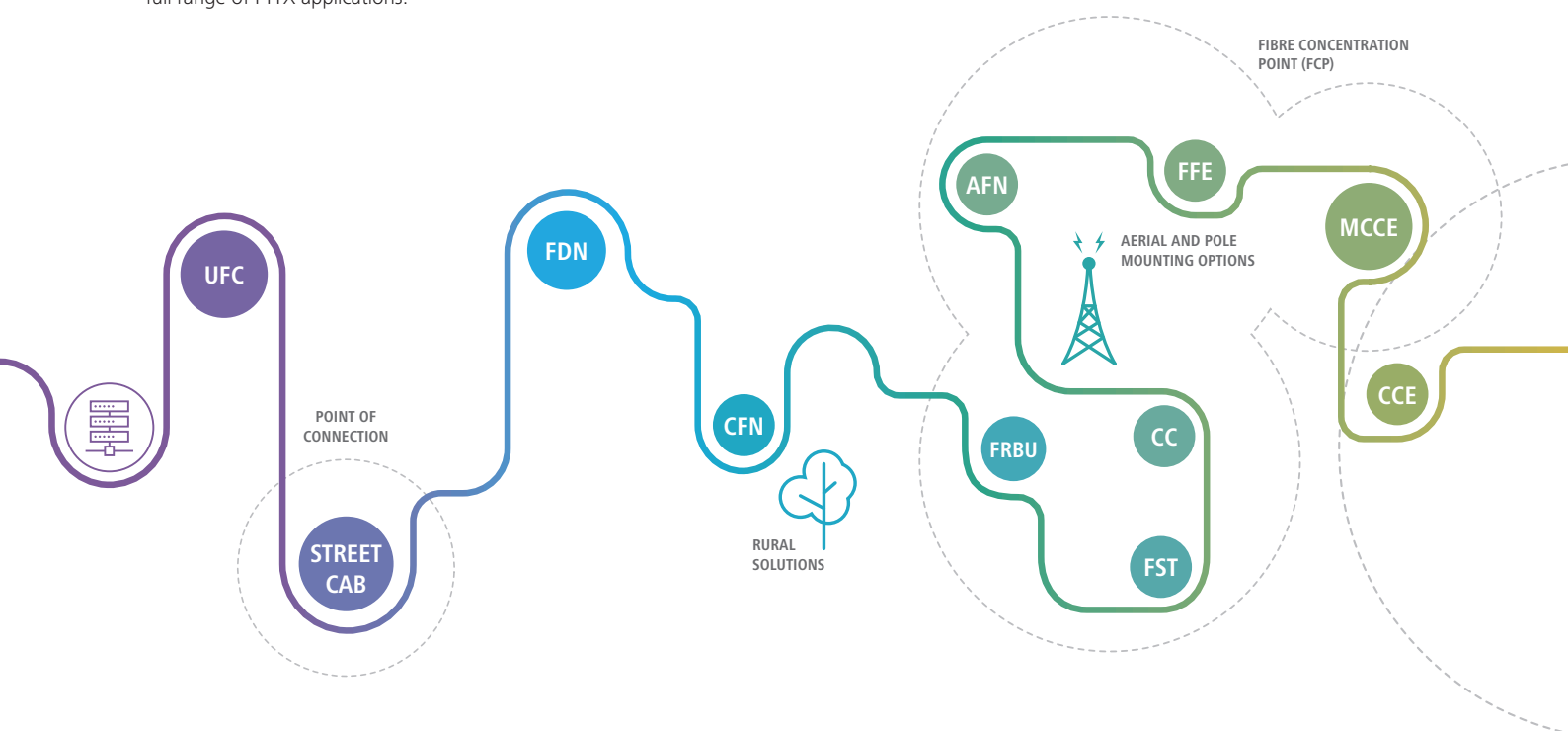
HellermannTyton fibre optic closures can be used to distribute fibre connectivity to the active equipment up and down the railway network.

# Product Deployment

Delivering fibre to an existing building can present a number of obstacles such as floor structure, building construction, aesthetics and even historical relevance.

New builds on the other hand offer a lot more flexibility as the fibre deployment and infrastructure can be factored into the building design at an early stage.

With these considerations, deployment type and product selection play a key role in finding the best fibre solution for that application and therefore the 'one solution fits all' approach is not always an option. HellermannTyton present a number of products and flexible deployment solutions across the full range of FTTX applications.



## Rural

Fibre to rural locations is often delivered over large distances to small communities. This type of fibre deployment can see anything between a single resident or an entire village connected to a fibre broadband service.

The size of the deployment will determine the type of product required to deliver the fibre. A single property could benefit from a CCP whereas multiple properties could use the FFE, AFN, MCCE or a smaller fibre optic closure such as the FST or FRBU.





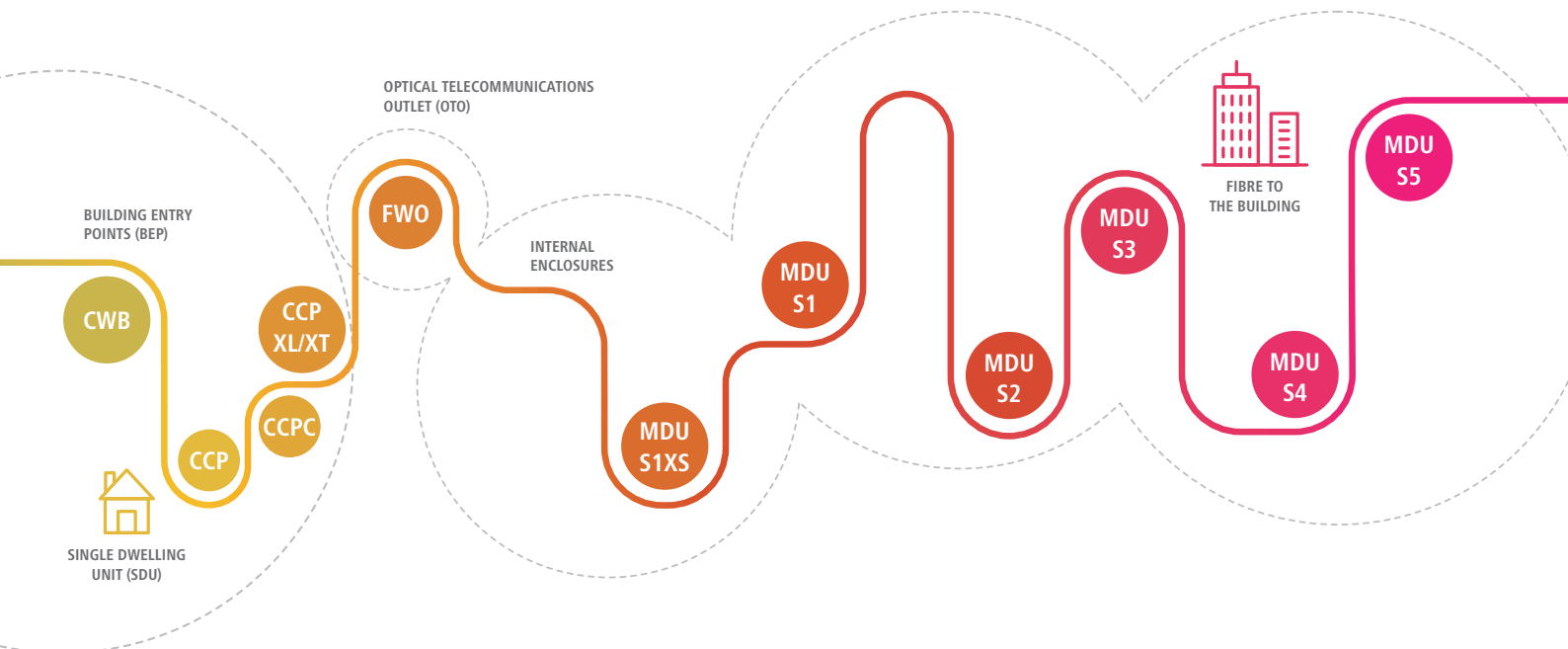
## Single Dwelling Unit (SDU)

### Underground

An SDU refers to a single house or stand-alone property. In this FTTH scenario, the building entry point will often take the form of a small unit such as the HellermannTyton Customer Connection Point (CCP) or Customer Connection Enclosure (CCE). The CCP or CCE will take a drop cable from the fibre concentration point (FCP) and distribute fibre directly into the property to an optical telecommunications outlet (OTO). The final drop to the customer premises may be underground or aerial and can often be pre-terminated.

### Overhead or Pole

The aerial application is an alternative and often more cost effective method for delivering fibre to the premises. The cable meets the building at a raised level and will either be routed directly into the premises via a Facade box or back down to ground floor level and into the building entry point. The drop cable may be pre-connectorised for connection into the fibre concentration point.



## Fibre to the Building (FTTB)

FTTB, also referred to as Fibre to the Building typically describes delivery fibre to a single building or property. In this deployment, multiple businesses operate out of the building and therefore require dedicated fibres. Using either a facade box or MDU enclosure to distribute the fibre, provides an excellent solution to manage individual fibre connections.

## Multi Dwelling Units (MDU's)

The term MDU (Multi-Dwelling Unit) covers a variety of properties including high rise apartment complexes, Victorian terrace flats, converted factories and multi-use business or residential properties. An MDU can come in a range of sizes from the small MDU with 2-8 apartments or business units to the large MDU with anything from 40 apartments and above. Anything in between could typically be classed as a medium MDU.

The different sized MDU's will use different styles or methods of fibre delivery to the property, within the property and before reaching the individual customer connections.

A common MDU FTTH application will be designed with a single building entry point, a connectorised or spliced fibre distribution enclosure and drop cabling connecting the floor distribution to the fibre wall outlet at each apartment. The drop cables may be pre-terminated to the outlet or at both ends for connection into the floor distributor.

For smaller MDU's you would see a lower capacity building entry point than the large MDU, directly connected to the fibre wall outlet with no requirement for separate floor distribution. With fewer living units to service, the cabling would be a smaller fibre count cable and may be pre-terminated.

# Key Product Information

## UFC

### UFC Fibre Splice Closure

The UFC fibre splice closure is the largest fibre splice closure from HellermannTyton. With its large number of ports for larger fibre cables, the UFC is suited to all FTTX, backhaul and trunk applications.

See page 28-30

## STREET CAB

### Street Cabinets

The connectorised fibre PoC and PoP are flexible fibre management systems, designed to be configured in an extensive range of cabinets. The 48 fibre solution is expandable up to a maximum of 288 fibres, offering LC Simplex UPC / APC connector presentation in a point to point or point to multi-point design.

\*With subtle differences, the PoC or PoP is determined by their location in the fibre network.

See page 8

## FDN

### FDN Fibre Splice Closure

The FDN fibre splice closure delivers fibre to individual buildings or properties. The FDN is an oval shaped fibre closure with a high drop count making it the ideal solution for built up areas where there are multiple buildings to service.

See page 31-35

## CFN

### CFN Fibre Splice Closure

The CFN is a compact closure that can be pit or pole mounted. Its smaller oval shape allows for easier access when located in underground chambers. The high drop count provides an ideal fibre solution for built up residential areas.

See page 36

## MCCE

### MCCE

The Multi Customer Connection Enclosure (MCCE) has been designed as a Building Entry Point (BEP) to provide a fibre termination and network demarcation point external to the connected premise in a Fibre to the Home (FTTH) network. In addition to providing an external test point the enclosure can also accommodate up to 12 customer fibre connections.

See page 45

## FFE

### Fibre Facade Enclosure (FFE)

The FFE has been designed to provide a Fibre Connection Point. The closure can be building/facade or pole mounted and provides 8 or 12 SC or LC Simplex customer connection points.

See page 44

## AFN

### Aerial Fibre Node (AFN)

The AFN has been designed for deployment within the last mile of the FTTx network. This enclosure can be used within a P2P (Point to Point) or P2MP (Point to Multi Point) network with the addition of connectorised PLC splitters or pigtailed and adaptors.

See page 43

## CC

### Connectorised Fibre Splice Closure

The connectorised closure can be configured with splice trays and a selection of fibre connector options allowing for the quick connection or disconnection of circuits using pre-configured fibre pigtailed or field terminated connectors used in an SDU network.

See page 40-42

## FST

### FRBU/FST Fibre Splice Closure

The FRBU and FST fibre splice closures distribute fibre directly to individual buildings or properties. The FRBU and FST are two of HellermannTyton's smaller fibre closures that are often deployed in rural and less built up locations with fewer buildings to connect.

See page 37-39

## FRBU

## CWB

### Customer Wall Box (CWB)

The Customer Wall Box (CWB) has been designed as a Building Entry Point (BEP) to provide a fibre termination and demarcation point external to the connected premise in a Fibre to the Home (FTTH) network.

See page 46

## CCE

### Customer Connection Enclosure (CCE)

The Customer Connection Enclosure (CCE) has been designed to be used as an external building entry point. The CCE can be wall/facade mounted or put in to a buried chamber (located at the property boundary) or an external building entry point and network test point.

See page 47

## CCP

### Customer Connection Point (CCP)

The CCP closure has been designed to be used as an external building entry point. The closure can be wall/facade mounted or put in to a buried chamber (located at the property boundary) or an external building entry point and network test point.

See page 48

## CCPC

### Customer Connection Point with Cassette (CCPC)

The CCPC with fibre splice tray and fibre management cassette is used as a BEP to provide a fibre termination and network demarcation point external to the connected premise in a Fibre to the Home (FTTH) network. It also presents a network test point outside of the customer location.

See page 49

## CCP XL/XT

### Customer Connection Point XL/XT (CCP XL/XT)

The CCP XL/XT has been designed to be used as an external building entry point. The enclosure can be wall/facade mounted or placed in to a buried chamber (located at the property boundary or just outside the point of access) providing an external building entry point and network test point.

See page 50-51

## MDU Series

### MDU Series Enclosures

Designed for deployment within the last mile of the FTTx network. The MDU enclosures can be used within Point to Point (P2P) or Point to Multi Point (P2MP) networks with the addition of PLC splitters, connectorised or bare end, pigtails and adaptors.

## MDU S5

### MDU S5

96 LC or 48 SC drops.

See page 57

## MDU S4

### MDU S4

48 LC or 24 SC drops.

See page 56

## MDU S3

### MDU S3

48 LC or 24 SC drops.

See page 55

## MDU S2

### MDU S2

24 LC or SC drops.

See page 54

## MDU S1

### MDU S1

8 or 12, LC or SC drops.

See page 53

## MDU S1XS

### MDU S1XS

12 LC or SC drops.

See page 52

## FWO

### Fibre Wall Outlet (FWO)

The wall mounted fibre optic outlet allows a fibre optic cable to be connected directly into the end user apartment.

See page 60-61

### Fibre Broadband Extension Kit

The Fibre Broadband Extension Kit solution has been designed to provide the property owner flexibility with positioning of the broadband router while simultaneously offering quick and easy installation for the fibre engineer or property developer.

See page 62



# Street Cabinets

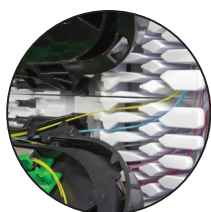
Street cabinets from HellermannTyton are supplied in both a Stainless steel and polycarbonate version. Both styles of street cabinet accommodate a specially designed backboard that takes a modular approach to fibre management.

The street cabinet backboard has been designed with a grid style mounting system giving the installer maximum flexibility with the components used.

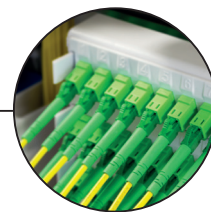
The grid design provides a series of mounting points that accept the wide range of component options available from HellermannTyton. This approach gives the installer or network designer a flexible, bespoke solution to build their cabinet exactly how they need it.

Regardless of whether you are designing a point to point or point to multi-point fibre network, the components can support either deployment method.

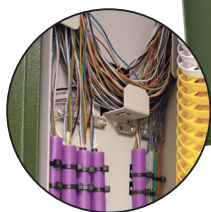
**Speak to HellermannTyton to see what Street Cabinet configuration is the best option for you.**



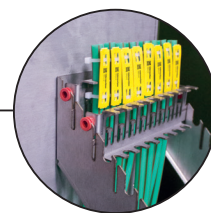
IR Fibre Management



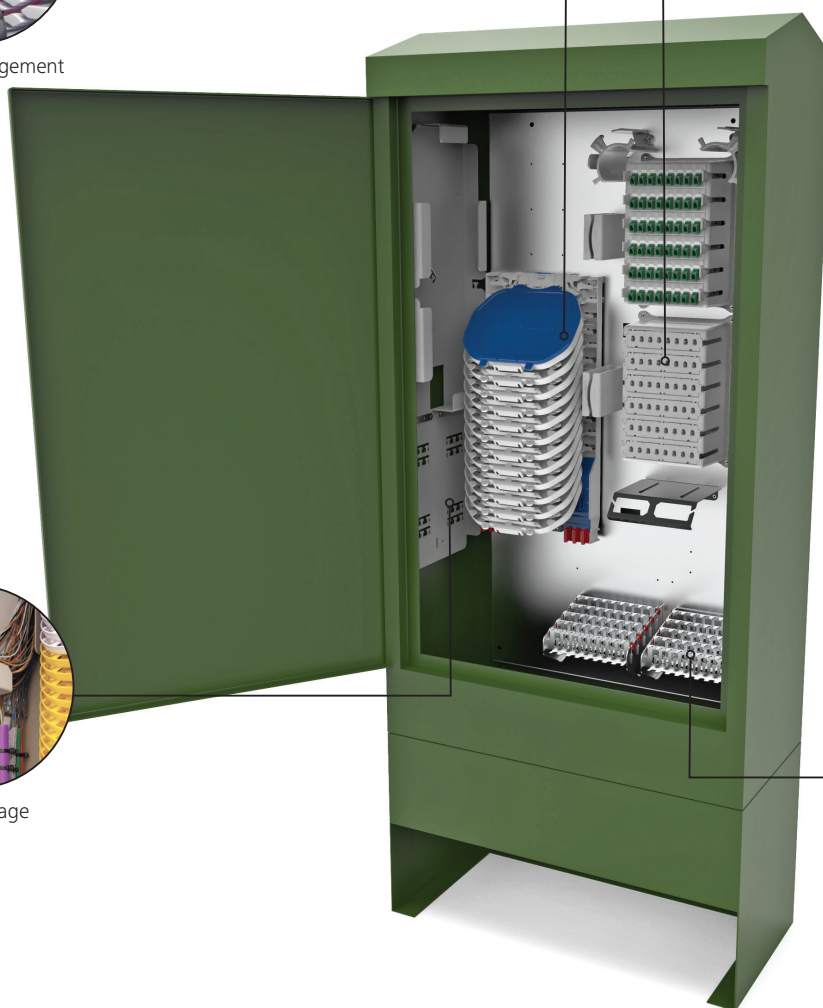
Fibre Fanout and Splitter Cassettes



Loop Storage



Duct Management

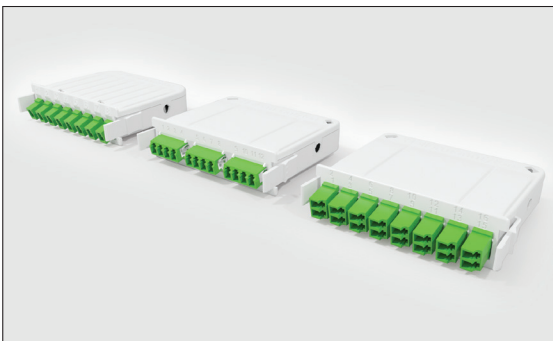




## Fibre Management

The street cabinet fibre management system uses the HellermannTyton Integrated Routing (IR) design giving users product familiarity and flexibility. The modular design of the IR system means that there are a number of options with regards to splice tray choice and fibre management. The IR system is completely scalable, allowing for additional fibre capacity as and when needed.

The fibre management system offers a range of fibre connectivity options in a point to point or point to multipoint design with positive fibre management for both 250µm and 900µm fibre.

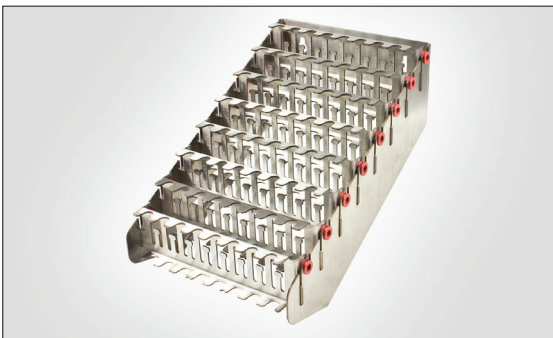


## Fibre Fanout and Splitter Cassettes

There are 2 different fibre cassettes available for the street cabinet configuration. Each cassette has many similarities in terms of fibre connection presentation, the main difference being how the fibre is distributed within the cassette.

The fanout cassette has a 12 core fibre cable that leads from the splice tray to the cassette. Inside the cassette, the cable is pre-terminated to a 12-way fan out using LC APC connectors.

The splitter cassette can present the same LC connectors at the front of the cassette, however from the splice tray, 3 1:4 splitters are used to provide the 12 connections. The splitters are housed in the cassette.



## Duct management

The duct manager brackets are manufactured from stainless steel and provide individual support and anchoring for the customer drops. The brackets are available in 3 sizes 32, 48 or 64 drops and can accommodate 5, 7 or 8mm diameter ducts/drops.

The brackets can be retrospectively fitted allowing the system to expand as customer uptake increases.



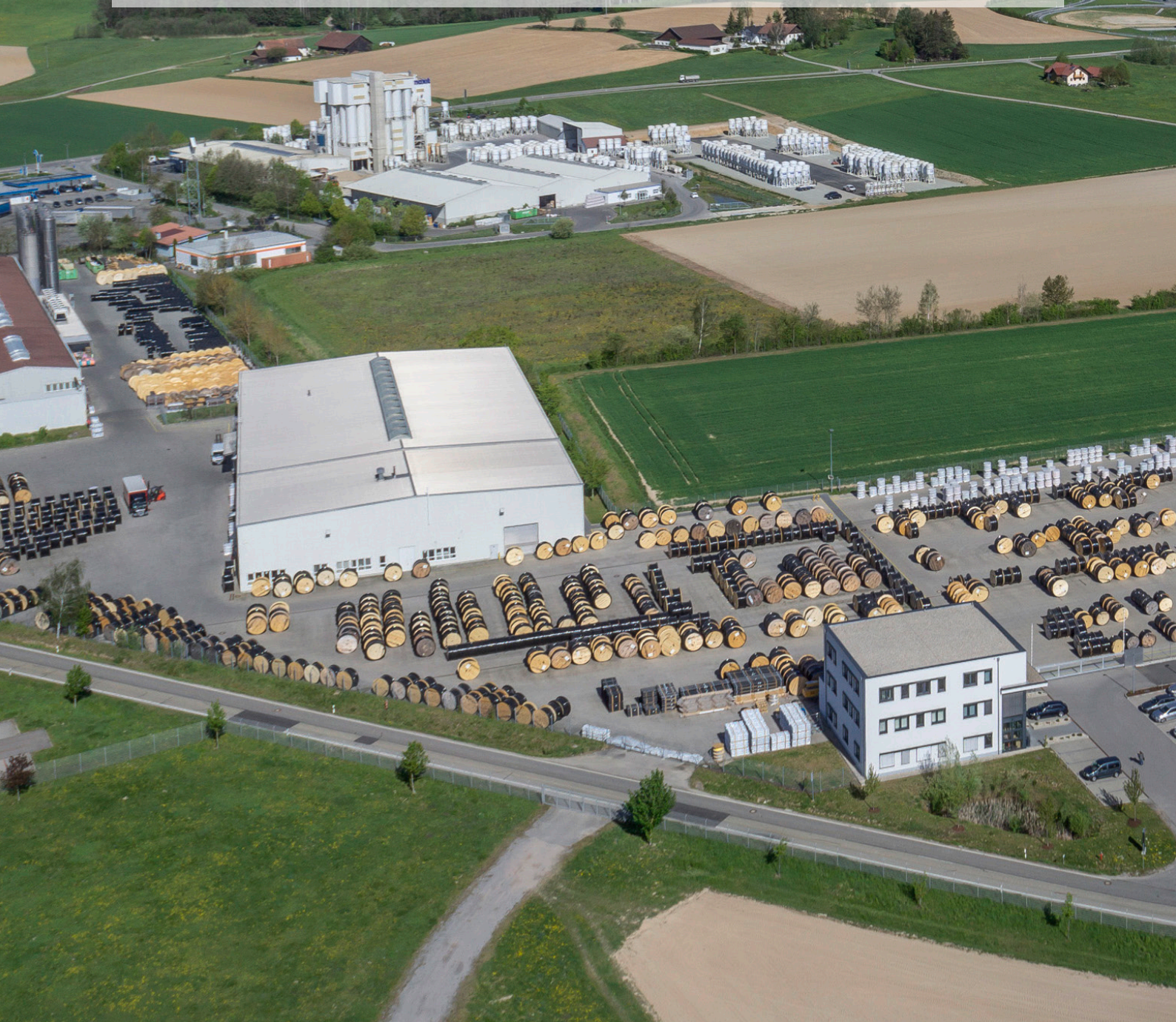
## Loop Storage

The street cabinet has been designed with the option of fibre storage for any loop through applications. A basket can be housed inside the cabinet for the management of any excess fibre and to accommodate any installations with window or mid-span requirements.



# FTTX Microduct Solutions

gabocom's microduct systems are the latest addition to the HellermannTyton Connectivity range of fibre products. Together, gabocom and HellermannTyton provide a complete end to end FTTX network solution.





The gabocom SpeedPipe Solution (SPS) offers a comprehensive range of ducts and fitting options for direct buried (DB) and direct installed (DI) applications ranging from single microducts and subduct to more complex duct bundles for different network applications.

Alongside the external microduct is the indoor speedpipe product range, which can be deployed in FTTH and MDU applications.

The microduct system comes with a comprehensive range of accessories and fittings including connectors, reducers, seals, end stops, branch supports and installation tools.

### Key features of using gabocom:

#### PIA Solution

Perfect for PIA networks and fast fibre installation.

#### Efficient fibre cable installation

groove height, ovality, flexibility.

#### Modular system

Complete, modular, gas- and water-tight system including quality fittings and accessories.

#### Easy branching

Flexible, speedy diversion of fibre cables avoiding additional pits/manholes.

#### Quality and environmentally certified

ISO 9001, ISO 14001, comply with REACH and RoHs.

#### Long lifespan of the passive infrastructure

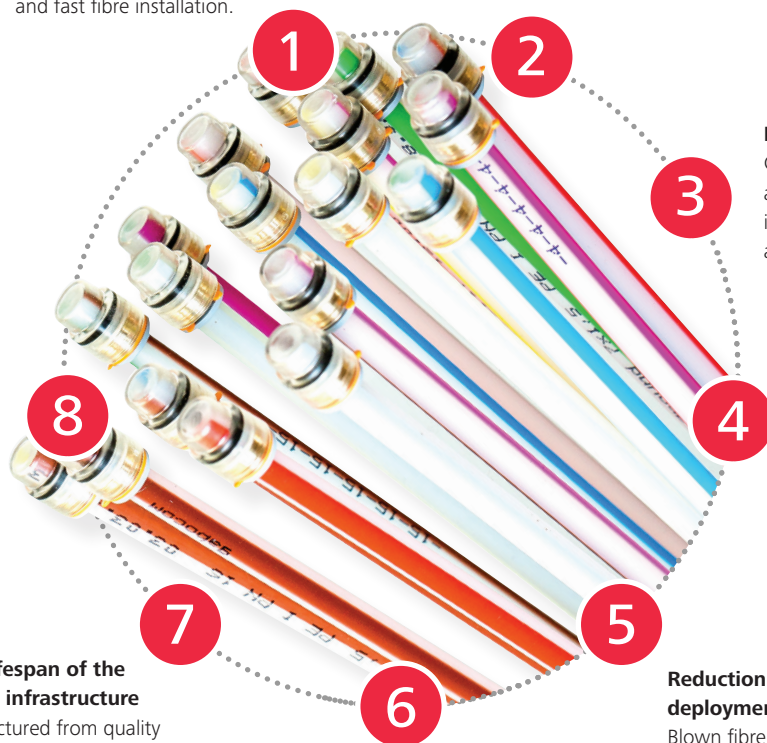
Manufactured from quality materials, UV-resistant, suitable sealing and moulding elements.

#### In-house product development capability

Designed and tailored to customer needs, driving innovation.

#### Reduction of fibre deployment costs

Blown fibre cables over long distances delivers improved deployment speed.



**50+**  
years of experience serving the telecoms industry

**250+**  
employees

Since **2019**  
part of the HellermannTyton Group

**40k sqm**  
Production area for SpeedPipe based in Bavaria, Germany

**30+**  
patents

Serving more than **40+** countries worldwide

**1.3m km** of SpeedPipe ducts and bundles laid globally - enough to go around the world 3½ times!

# New Product Focus

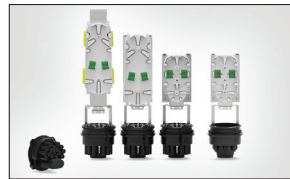
HellermannTyton have introduced a number of new products into the FTTH solutions range. From MDU's to Dome Closures and Building Entry Points to Splice Trays, below is an overview of some of these key additions.

## Dome Closures

Designed and tested at our Northampton facility, we have added a selection of new dome closures to our product portfolio.



*FDN-IR 29 & 53 Port Bases - Page 31.*



*FRBU 16 Port Base - Page 37.*



*Compact Fibre Node (CFN) - Page 36.*

## Building Entry Points

With a range of new building entry point products, HellermannTyton provides a number of options to the FTTH network.



*CCP XL / XT Enclosure - Page 50-51.*



*CCPC - Page 49.*



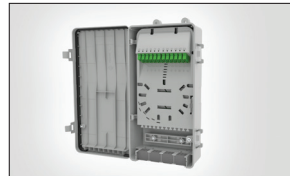
*MCCE - Page 45.*

## MDU's

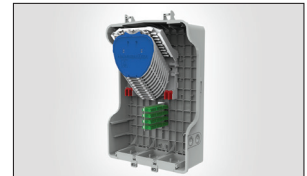
Designed for both Residential and Business, the comprehensive MDU series from HellermannTyton has a wall enclosure for every sized building.



*MDU S1XS - Page 52.*



*MDU S2 - Page 54.*



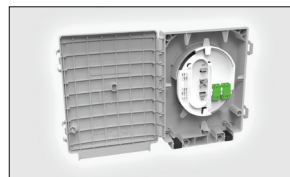
*MDU S4 - Page 56.*

## Additional FTTH Solutions

With a constant focus on design and innovation, there are a number of exciting new fibre solutions and ancillary products available from HellermannTyton.



*Fibre Broadband Extension Kit - Page 62.*



*Customer Wall Box (CWB) - Page 46.*



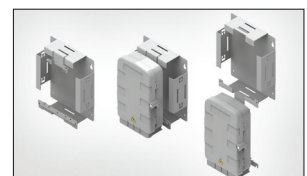
*19" Rack Mount Splitter Distribution Panels - Page 58.*



*Pole Mounting Brackets for the AFN and FFE - Page 71-72.*

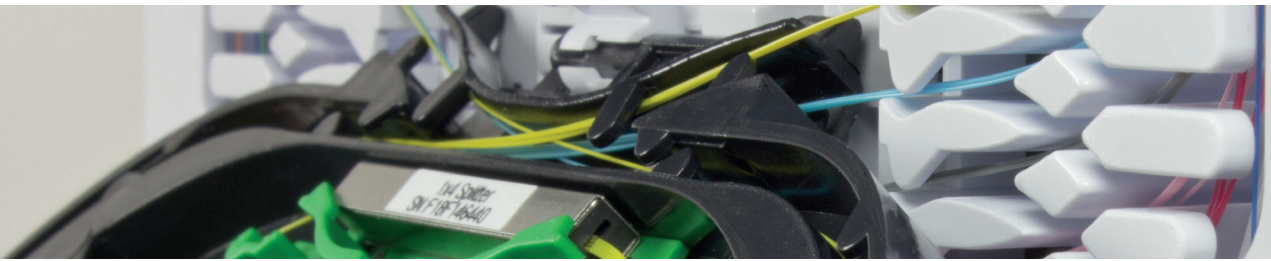


*SE-IR MKII splice trays - Page 64.*



*MDU Rear Mounting Internal Brackets - Page 70.*

# FTTX Broadband Connectivity



## gabocom

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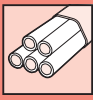
## Broadband Accessories

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## SP-G - SpeedPipe Ground

Direct Buried / Thick Walled / HDPE

### Technical Description

gabocom's SpeedPipe Ground (SP-G) is a thick-walled duct manufactured using high quality HDPE material for direct buried (DB) applications.

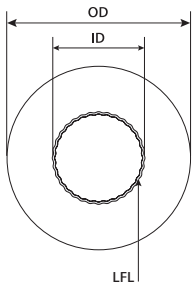
The SP-G duct is available in a variety of different sizes to suit different air blown fibre cables, offering compatible end to end air blown ducted solutions. gabocom manufactures its own in-house range of connecting and sealing elements. More information can be found on pages 17-20.

### Features and benefits

- Ideal Direct Buried (DB) applications
- Optimised for long distance blowing
- Suitable for Push or Pulled installations
- Superior dimensional tolerances
- Very Low Ovality
- Coated with G-Liner gabocom's Low Friction Liner
- >30 bar burst test
- Made from high quality HDPE
- Other colours available upon request (MOQs apply)
- Technical datasheet available on request



Direct Buried / Thick Walled / HDPE.



Cross section view.

TYPE	Outside Ø OD	Inside Ø ID	Length L	Description	Colour	Low Friction Liner
SP-G 7/3.5MM-3930	7	3.5	500	SP-G 7/3.5mm (V-Drum)	Purple	Included
SP-G 7/3.5MM-3931			600	SP-G 7/3.5mm (B-Drum)		
SP-G 7/3.5MM-3919			1250	SP-G 7/3.5mm (B-Drum)		
SP-G 7/4MM-3942	7	4	500	SP-G 7/4mm (V-Drum)		
SP-G 7/4MM-3943			600	SP-G 7/4mm (V-Drum)		
SP-G 7/4MM-3944			1250	SP-G 7/4mm (B-Drum)		
SP-G 8/4MM-3911	8	4	500	SP-G 8/4mm (B-Drum)		
SP-G 8/4MM-3920			800	SP-G 8/4mm (B-Drum)		
SP-G 12/8MM-3921	12	8	2000	SP-G 12/8mm (M-Drum)		
SP-G 14/10MM-3840	14	10	1000	SP-G 14/10mm (M-Drum)		
SP-G 14/10MM-3922			1500	SP-G 14/10mm (M-Drum)		
SP-G 14/10MM-3923			3000	SP-G 14/10mm (C-Drum)		
SP-G 16/12MM-3925	16	12	1000	SP-G 16/12mm (M-Drum)		
SP-G 16/12MM-3924			1200	SP-G 16/12mm (M-Drum)		
SP-G 18/14MM-3926	18	14	500	SP-G 18/14mm (A-Drum)		
SP-G 18/14MM-3927			900	SP-G 18/14mm (A-Drum)		
SP-G 18/14MM-3928			1700	SP-G 18/14mm (C-Drum)		
SP-G 20/16MM-3841	20	16	1400	SP-G 20/16mm (C-Drum)		
SP-G 25/20MM-3932	25	20	900	SP-G 25/20mm (C-Drum)		
SP-G 25/20MM-3933			2000	SP-G 25/20mm (U-Drum)		

All dimensions in mm. Subject to technical changes. MOQs apply. Image for illustration purposes only.



## SRV-G tc - SpeedPipe Ground Bundles

Direct Buried / Thick Walled / HDPE

### Features and benefits

- Ideal Direct Buried (DB) applications
- Optimised for long distance blowing
- Suitable for Push or Pulled installations
- Superior dimensional tolerances
- Very Low Ovality
- >30 bar burst test
- Made from high quality HDPE
- Coated with G-Liner, gabocom's Low Friction Liner
- Ideal for
  - Mole Ploughing
  - Open Dig
  - Slot cutting (Incl. Narrow and Micro trenching)
- Technical datasheet available on request



SpeedPipe ground bundles for direct burying.

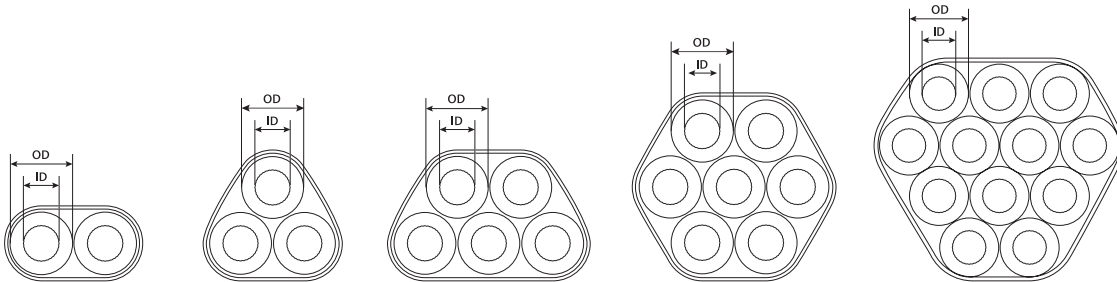
### Technical Description

gabocom's SpeedPipe Ground tube bundles (SRV-G) are a thick-walled duct manufactured from high quality HDPE material for Direct Buried (DB) applications which include, mole ploughing, open trench, slot cutting (Incl. narrow and micro trenching).

The SRV-G tube bundles are available in a variety of different sizes and

can be mixed to create a combination of ducts to suit different network requirements.

To offer compatible end to end air blown ducted solutions, gabocom manufactures its own in-house range of connecting and sealing elements. More information can be found on pages 17-20.



Cross section view of a 2, 3, 5, 7 and 12 way.

## gaboflat

Direct Buried / Thick Walled / HDPE

### Features and benefits

- Designed for micro-trench or Slot Cutting applications
- Can be direct buried
- Optimised for long distance blowing
- Made from quality HDPE material
- Very Low Ovality
- >30 bar burst test
- Technical datasheet available on request

### Technical Description

Designed for micro-trenching applications, gaboflat is a bundled duct solution with each duct laying laterally to the next.

Available in various microduct sizes, the gaboflat bundle is offered as a number of configurations.

gaboflats thick-walled duct, manufactured from quality HDPE material, makes it suitable for direct buried installations.



gaboflat 7 x 14/10.



Cross section view of a 3 way.



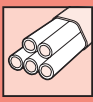
Cross section view of a 5 way.



Cross section view of a 4 way.



Cross section view of a 7 way.



## SP - SpeedPipe

Direct Installed / Thin Wall / HDPE

### Features and benefits

- Ideal Primary Main Duct installation
- Optimised for long distance blowing
- Suitable for Push or Pulled installation
- Superior dimensional tolerances
- Very Low Ovality
- >30 bar burst test
- Made from high quality HDPE
- Translucent to show fibre location in duct
- Technical datasheet available on request

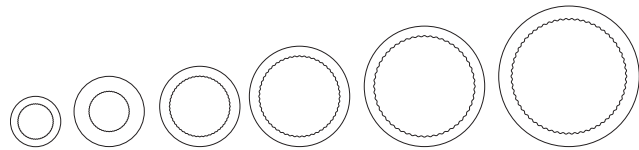
### Technical Description

gabocom's SpeedPipe (SP) is a thin-walled duct manufactured from high quality HDPE material for direct installed (DI) applications into a primary duct network.

The SP is available in a variety of different sizes to suit different air blown fibre cables. To offer a compatible end to end air blown ducted solutions, gabocom manufactures its own inhouse range of connecting and sealing elements. More information can be found on pages 17-20.



Direct Installed / Thin Wall / HDPE.



Cross section view of 5/3.5mm, 7/4mm, 8/6mm, 10/8mm, 12/10mm and 14/11.4mm.

## SRV - SpeedPipe Bundles

Direct Installed / Thin Wall / HDPE

### Features and benefits

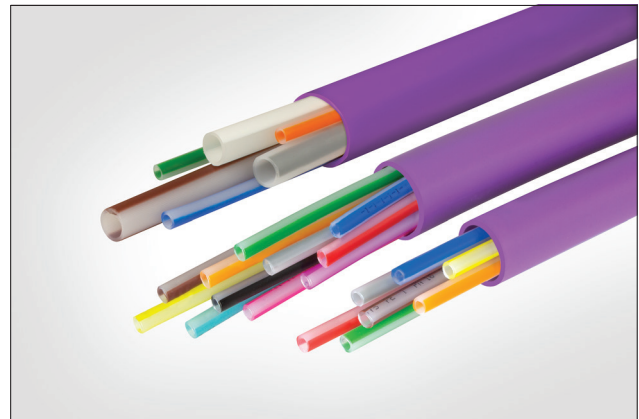
- Ideal Primary Main Duct installation
- Optimised for long distance blowing
- Suitable for Push or Pulled installations
- Superior dimensional tolerances
- Very Low Ovality
- >30 bar burst test
- Made from high quality HDPE
- Available with and without foil
- Technical datasheet available on request

### Technical Description

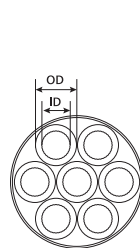
gabocom's SpeedPipe tube bundle (SRV) is a thin-walled duct bundle manufactured from high quality HDPE material for Direct Installed (DI) applications into a primary duct network.

The SRV tube bundles are available in a variety of different sizes and can be mixed to create a combination of ducts to suit different network requirements.

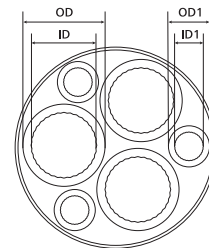
To offer a compatible end to end air blown ducted solution, gabocom manufactures its own in-house range of connecting and sealing elements. More information can be found on pages 17-20.



SpeedPipe bundles for PIA applications (shown without foil).



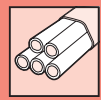
Cross section view of 7 way.



Cross section view of 6 way combo.

TYPE	No. of Duct	Outside Ø OD	Inside Ø ID	Outside Ø OD1	Inside Ø ID1	Length L	Description	Foil	Colour	Low Friction Liner
SRV 7X5/3.5-4072	7	5	3.5	-	-	1500	5/3.5mm	Without Foil	Purple	Included
SRV 12X5/3.5-3779	12	5	3.5	-	-	2000	5/3.5mm			
SRV 3X10/8-5X3.5-3647	3 / 3	10	8	5	3.5	1000	3x10/8 + 3x5/3.5mm			

All dimensions in mm. Subject to technical changes. MOQs apply. Images for illustration purposes only.



## DSM - Transparent Straight Connector

### Direct Buried / Push Fit

#### Features and benefits

- No counter bore
- High quality, well engineered
- Pressure tested to 15 bar and beyond
- Gas and water tight to 0.5 bar
- Resistant to tensile stress
- Easy to install and disconnect
- Push fit application
- Locking ring safety feature
- No specialist tool required
- No adhesive required
- Technical datasheet available on request

#### Technical Description

gabocom's in-house of transparent straight connectors (DSM) are suitable for direct buried applications and provide a perfect fit to the corresponding SpeedPipe duct. The transparent straight connector provides clear visibility to ensure both duct

ends are connected to allow a smooth transition from one duct end to another as the fibre cable travels through. The DSM's are available in variety of different size's to suit the corresponding SpeedPipe duct.



DSM - Transparent Straight Connector.

TYPE	Duct Ø mm	Pack cont.	Description
DSM-7MM-EXT	7	50	7mm Transparent Connector
DSM-8MM-EXT	8	50	8mm Transparent Connector
DSM10MM-EXT	10	50	10mm Transparent Connector
DSM-12MM-EXT	12	25	12mm Transparent Connector
DSM-14MM-EXT	14	25	14mm Transparent Connector
DSM-16MM-EXT	16	25	16mm Transparent Connector
DSM-18MM-EXT	18	25	18mm Transparent Connector
DSM-20MM-EXT	20	25	20mm Transparent Connector
DSM-25MM-EXT	25	25	25mm Transparent Connector

All dimensions in mm. Subject to technical changes.

## RSM - Transparent Reducers

### Direct Buried / Push Fit

#### Features and benefits

- No counter bore
- High quality well engineered
- Pressure tested to 15 bar and beyond
- Gas and water tight to 0.5 bar
- Resistant to tensile stress
- Easy to install and disconnect
- Push fit application
- Locking ring safety feature
- No specialist tool required
- No adhesive required
- Technical datasheet available on request

#### Technical Description

gabocom's in-house range of transparent reducers (RSM) are suitable for direct buried applications and provide a perfect connection to the corresponding SpeedPipe size ducts. The transparent reducers provides clear visibility to ensure

both duct ends are connected to allow a smooth transition from one duct end to another as the fibre cable travels through. The RSM's are available in variety of different sizes to suit the corresponding SpeedPipe duct.

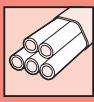


RSM Transparent Reducers.

TYPE	Large Cable Ø	Small Cable Ø	Pack cont.	Description
RSM-7/5MM-EXT	7	5	25	7/5mm Transparent Red Reducer
RSM-8/7MM-EXT	8	7	25	8/7mm Transparent Red Reducer
RSM-10/7MM-EXT	10	7	25	10/7mm Transparent Red Reducer
RSM-12/10MM-EXT	12	10	25	12/10mm Transparent Red Reducer
RSM-14/12MM-EXT	14	12	25	14/12mm Transparent Red Reducer
RSM-16/14MM-EXT	16	14	25	16/14mm Transparent Red Reducer

All dimensions in mm. Subject to technical changes.





## ES - Transparent End Caps

### Direct Buried / Push Fit

#### Features and benefits

- No counter bore
- High quality well engineered
- Pressure tested to 15 bar and beyond
- Gas and water tight to 0.5 bar
- Resistant to tensile stress
- Easy to install and disconnect
- Push fit application
- Locking ring safety feature.
- No specialist tool required
- No adhesive required
- Technical datasheet available on request

#### Technical Description

gabocom's in-house range of transparent end caps (ES) which are suitable for direct buried applications and provide a perfect fit to the corresponding SpeedPipe duct. The end caps are used for closing

SpeedPipe against dirt, gas and water up to 0.5 bar and beyond. They are resistant to tensile stressing and can be easily and installed and disconnect.



ES Transparent End Caps.

TYPE	Duct Ø mm	Pack cont.	Description
EC-5MM-EXT	5	100	5mm Transparent End Plug
ES-7MM-EXT	7	50	7mm Transparent End Plug
ES-8MM-EXT	8	50	8mm Transparent End Plug
ES-10MM-EXT	10	50	10mm Transparent End Plug
ES-12MM-EXT	12	25	12mm Transparent End Plug
ES-14MM-EXT	14	25	14mm Transparent End Plug
ES-16MM-EXT	16	25	16mm Transparent End Plug
EC-18MM-EXT	18	50	18mm Transparent End Plug
ES-20MM-EXT	20	25	20mm Transparent End Plug
EC-25MM-EXT	25	50	25mm Transparent End Plug

All dimensions in mm. Subject to technical changes.

## KmR - End Cap and Marker

### Direct Buried / Push Fit / 2 in 1

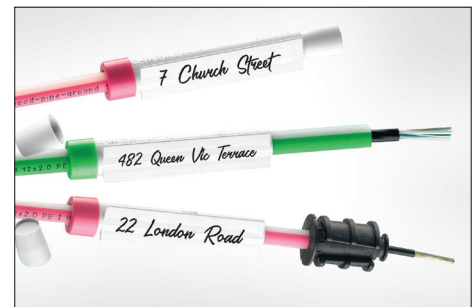
#### Features and benefits

- Seals and identifies in one product
- Gas and water tight up to 0.5 bar
- Push Fit application
- Suitable for chambers or direct buried applications
- No specialist tool required
- No adhesive required
- Technical datasheet available on request

#### Technical Description

The KmR was designed to enable network operators to seal off an open-ended duct against gas, water and dirt, which can act as marker label. The KmR is suitable for

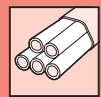
direct buried applications and can be easily installed. KmR's are available in variety of different sizes to suit the corresponding SpeedPipe ducts.



KmR End Cap and Marker.

TYPE	Duct Ø mm	Pack cont.	Description	Colour
KmR-7MM-EXT	7	40	7mm Marker Plug	Orange
KmR-10MM-EXT	10	40	10mm Marker Plug	Pink
KmR-12MM-EXT	12	40	12mm Marker Plug	Yellow/green
KmR-14MM-EXT	14	40	14mm Marker Plug	Orange
KmR-16MM-EXT	16	40	16mm Marker Plug	Turquoise

All dimensions in mm. Subject to technical changes.



## EBM - Inline Seal

### Direct Buried / Compression Seal

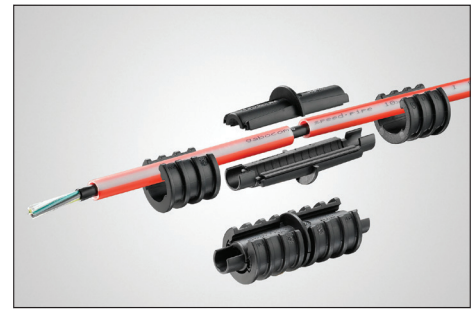
#### Features and benefits

- Gas and water tight up to 0.5 bar
- Quick and simple to install
- Direct buried application
- Compression seal
- No specialist tool required
- No adhesive required

#### Technical Description

The divisible EBM seal has been designed to seal damaged duct which is occupied with a fibre optic cable without having to reinstate the duct. The EBM is suitable for

direct buried application and can be easily installed. EBM's are available in variety of different sizes to suit the corresponding SpeedPipe duct.



EBM Inline Seal.

TYPE	Duct Ø mm	Pack cont.	Description
EBM-7MM-EXT	7	12	Inline Seal 7mm
EBM-8MM-EXT	8	12	Inline Seal 8mm
EBM-10MM-EXT	10	12	Inline Seal 10mm
EBM-12MM-EXT	12	12	Inline Seal 12mm
EBM-14MM-EXT	14	12	Inline Seal 14mm
EBM-16MM-EXT	16	12	Inline Seal 16mm
EBM-20MM-EXT	20	12	Inline Seal 20mm

All dimensions in mm. Subject to technical changes.

## EBM-GS - Inline Gas / Cable Seal

### Direct Buried / Compression Seal

#### Features and benefits

- Seals all cable sizes within the SpeedPipe duct
- Gas and water tight up to 0.5 bar
- Quick and simple to install
- Direct buried application
- Compression seal
- No specialist tool required
- No adhesive required

#### Technical Description

The divisible EBM-GS seal has been designed to gas seal a fibre cable transitioning between two open end ducts without the need for an external enclosure. The EBM-GS is suitable for direct buried

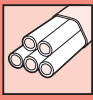
applications and can be easily installed. The EBM-GS seals are available in a variety of different duct sizes each supporting differing seals for different cable sizes.



EBM-GS Inline Gas / Cable Seal.

TYPE	Duct Ø mm	Pack cont.	Description
EBM-GS-7/0.8-4.0-EXT	7mm	12	7/0.8-4.0 Inline Gas Stop/Cable Seal
EBM-GS-8/2.0-4.0-EXT	8mm	12	8/2.0-4.0 Inline Gas Stop/Cable Seal
EBM-GS-10/1.8-3.5-EXT	10mm	12	10/1.8-3.5 Inline Gas Stop/Cable Seal
EBM-GS-10/3.0-5.0-EXT	10mm	12	10/3.0-5.0 Inline Gas Stop/Cable Seal
EBM-GS-10/5.0-6.5-EXT	10mm	12	10/5.0-6.5 Inline Gas Stop/Cable Seal
EBM-GS-12/3.0-5.0-EXT	12mm	12	12/3.0-5.0 Inline Gas Stop/Cable Seal
EBM-GS-12/5.0-6.5-EXT	12mm	12	12/5.0-6.5 Inline Gas Stop/Cable Seal
EBM-GS-12/6.5-8.0-EXT	12mm	12	12/6.5-8.0 Inline Gas Stop/Cable Seal
EBM-GS-14/5.0-6.5-EXT	14mm	12	14/5.0-6.5 Inline Gas Stop/Cable Seal
EBM-GS-14/6.5-8.0-EXT	14mm	12	14/6.5-8.0 Inline Gas Stop/Cable Seal
EBM-GS-16/6.5-8.0-EXT	16mm	12	16/6.5-8.0 Inline Gas Stop/Cable Seal
EBM-GS-16/8.0-9.5-EXT	16mm	12	16/8.0-9.5 Inline Gas Stop/Cable Seal
EBM-GS-16/9.5-11.0-EXT	16mm	12	16/9.5-11.0 Inline Gas Stop/Cable Seal

All dimensions in mm. Subject to technical changes.



## EZA-t - Gas/Cable seal

### Direct Buried / Compression Seal

#### Features and benefits

- Gas and water tight up to 0.5 bar
- Burst test 10 bar.
- Suitable for sealing empty and occupied duct
- Quick and easy install
- Reusable
- Compression seal
- Direct buried
- No specialist tool required
- No adhesive required

#### Technical Description

The divisible EZA-t cable/gas seal has been designed as a duct and cable seal with a safety function all in one product. It seals all cables sizes within a microduct to the same standards. The EZA-t is suitable for direct buried applications and can be easily

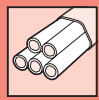
installed. The EZA-t seals are available in a variety of different sizes each supporting different internal seals for different cable sizes.



EZA-t Gas/Cable seal.

TYPE	Duct Ø mm	Sealing Range of Cable Ø from/to	Pack cont.	Description
EZA-t-7/0.8-2.5-EXT	7mm	0.8 - 2.5	40	7/0.8-2.5 Gas/Cable Seal
EZA-t-7/2.0-4.0-EXT	7mm	2.0 - 4.0	40	7/2.0-4.0 Gas/Cable Seal
EZA-t-8/2.0-4.0-EXT	8mm	2.0 - 4.0	40	8/2.0-4.0 Gas/Cable Seal
EZA-t-10/1.8-3.5-EXT	10mm	1.8 - 3.5	40	10/1.8-3.5 Gas/Cable Seal
EZA-t-10/3.0-5.0-EXT	10mm	3.0 - 5.0	40	10/3.0-5.0 Gas/Cable Seal
EZA-t-10/5.0-6.5-EXT	10mm	5.0 - 6.5	40	10/5.0-6.5 Gas/Cable Seal
EZA-t-12/1.8-3.5-EXT	12mm	1.8 - 3.5	40	12/1.8-3.5 Gas/Cable Seal
EZA-t-12/3.0-5.0-EXT	12mm	3.0 - 5.0	40	12/3.0-5.0 Gas/Cable Seal
EZA-t-12/5.0-6.5-EXT	12mm	5.0 - 6.5	40	12/5.0-6.5 Gas/Cable Seal
EZA-t-12/6.5-8.0-EXT	12mm	6.5 - 8.0	40	12/6.5-8.0 Gas/Cable Seal
EZA-t-14/3.0-5.0-EXT	14mm	3.0 - 5.0	40	14/3.0-5.0 Gas/Cable Seal
EZA-t-14/5.0-6.5-EXT	14mm	5.0 - 6.5	40	14/5.0-6.5 Gas/Cable Seal
EZA-t-14/6.5-8.0-EXT	14mm	6.5 - 8.0	40	14/6.5-8.0 Gas/Cable Seal
EZA-t-14/8.0-9.5-EXT	14mm	8.0 - 9.5	40	14/8.0-9.5 Gas/Cable Seal
EZA-t-16/6.5-8.0-EXT	16mm	6.5 - 8.0	40	16/6.5-8.0 Gas/Cable Seal
EZA-t-16/8.0-9.5-EXT	16mm	8.0 - 9.5	40	16/8.0-9.5 Gas/Cable Seal
EZA-t-16/9.5-11.0-EXT	16mm	9.5 - 11.0	40	16/9.5-11.0 Gas/Cable Seal
EZA-t-18/10.5-13.0-EXT	18mm	10.5 - 13.0	20	18/10.5-13.0 Gas/Cable Seal
EZA-t-20/10.5-13.0-EXT	20mm	10.5 - 13.0	20	20/10.5-13.0 Gas/Cable Seal
EZA-t-20/8.0-10.5-EXT	20mm	8.0 - 10.5	20	20/8.0-10.5 Gas/Cable Seal
EZA-t-25/15.0-18.0-EXT	25mm	15.5 - 18.0	20	25/15.5-18.0 Gas/Cable Seal

All dimensions in mm. Subject to technical changes.



## Branch Supports

### Direct Buried / Tube Bundles

#### Features and benefits

- T and L branch supports
- Provides safe branching option for direct buried applications
- Stackable
- Marker peg options
- Maintains bend radius, avoids kinking through misuse.

#### Technical Description

The branch supports enable a network operator to safely guide an individual SP-G duct from the main tube bundle in a

different direction. The branch supports are stackable and can be fitted with a marker peg to help locate at a later stage.



Branch Supports.

TYPE	Pack cont.	Description	
TBS-SRV	12	TBS	T-Branch Support
LBS-SRV	12	LBS	L-Branch Support
LBS-SINGLE	12	BT LBS	L-Branch Support Single SpeedPipe Duct

All dimensions in mm. Subject to technical changes.

## G-Wrap Seal

### Direct Buried / Branch off seal

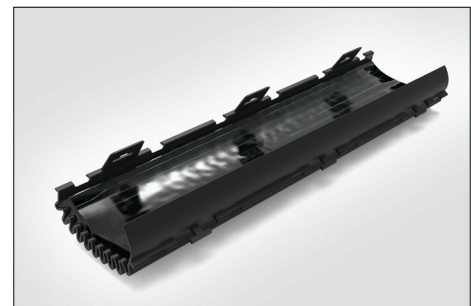
#### Features and benefits

- Gel layer provides quality seal
- Available in 300mm and 400mm lengths
- Suitable for duct diameter 20mm to 35mm
- UV stabilized
- Supplied with 8 (400mm) or 6 (300mm) HellermannTyton Cable ties
- Operating temperature -25 to +60 °C

#### Technical Description

The G-Wrap Seal from HellermannTyton has been designed to seal ducting in any stage of the network. The G-Wrap is available in 2 sizes, 300mm and 400mm and can seal any ducting within a 20mm-35mm diameter range.

G-Wrap can also be used with a multi-duct bundle for branching joints where a single duct is taken from the bundle and routed to a customer connection point or another fibre connection point in the network.

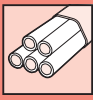


G-Wrap Seal

TYPE	Width W	Depth D	Length L	Cable Ø mm	Pack cont.	Description
G-WRAP-300MM	114	31	300	20-35	1	Gel Wrap Seal 300mm
G-WRAP-400MM			400		1	Gel Wrap Seal 400mm

All dimensions in mm. Subject to technical changes.





## Tools

### Micro-duct / Subduct

#### Features and benefits

- Selected range SpeedPipe tools
- Precision cutters

#### Technical Description

gabocom's selection of precision tools provide network operators with the right tools ensuring a clean right angle cut for a professional installation. Network operators

can order individual tools and spares or gabocom's 'Tool Kit' which features a micro and sub duct cutters, stripping knife, marker and accessories.



SpeedPipe Tools .

TYPE	Pack cont.	Description
CUTTER-1806	1	Sheath cutter with sliding guide
TOOLBOX-1976	1	Tool box gabocom
CUTTER-1204	1	SpeedPipe cutter
BLADE-1205	1	Spare blade for SpeedPipe cutter
CUTTER-2430	1	Ceramic safety cutter
BLADE-2431	3	Replacement blades cutters
PIP-GUIDE12001	1	Pipe guide bend 12-16
CUTTER-42348	1	Pipe cutter with ratchet drive
MARKERPEG-2424	1	Marker peg with holder

All dimensions in mm. Subject to technical changes.

## House Lead-in Kit

### Through the Wall Kit

#### Features and benefits

- Integrated Gas sealed option available
- IP65 rated
- Protective through the wall duct and bend managers supplied
- Gas and water tight to 0.5 bar

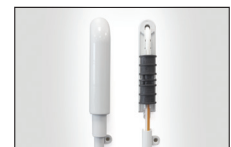
#### Technical Description

gabocom HEO lead-in kit has been designed to enable network operators to transition and gas seal (with the optional

EMB-GS) an air blown customer drop lead from an external to an internal duct without the need for an external enclosure.



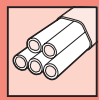
HEO House lead-in kit.



HEO House lead-in kit.

TYPE	Suitable for SpeedPipe	Pack cont.	Description
HEO 7	7	1	HEO 7 7mm House Lead-In kit with Gas Stop
HEO 10	10	1	HEO 10 10mm House Lead-In kit with Gas Stop
HEO 12	12	1	HEO 12 12mm House Lead-In kit with Gas Stop

All dimensions in mm. Subject to technical changes.



## SP-I - SpeedPipe Indoor

LFH / ISP / MDU / SDU

### Features and benefits

- SpeedPipe Indoor duct and fittings are manufactured in-house from the same material
- All common sizes available as an end-to-end solution
- Gas and water tight to 15 Bar
- High dimensional tolerances and low ovality for superior blowing performance
- Suitable for push and pull installations

### Technical Description

gabocom's indoor ducted solutions (SP-I) have been specially designed for an in-building air blown application. Manufactured from special low smoke fire hazard material, the SP-I products range conforms to international standards.

The SP-I is available in a variety of different sizes to suit different air blown fibre cables. SpeedPipe Indoor duct is complimented with a range of in-house manufactured connecting and sealing elements to offer a fully engineered, end-to-end solution. These can be found on pages 24-26.

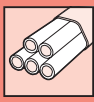


SP-I SpeedPipe Indoor.

### Meets the following Standards:

- IEC 61386-22 Self-extinguishing, temperature, compression and impact strength
- IEC 60684-2 Absence of halogens
- IEC 61034-2 Low smoke density
- IEC 60332-1-2 Flame propagation, cables
- DIN EN 13501-1 Building products standards
- UL2024 Riser rating

TYPE	Outside Ø OD	Inside Ø ID	Length L	Description	Colour
SP-I 4/3.5MM-3510	4	3.5	600	4/3.5mm SpeedPipe Indoor	White
SP-I 4/3.5MM-3500			1600	4/3.5mm SpeedPipe Indoor	
SP-I 5/3.5MM-3511	5	3.5	400	5/3.5mm SpeedPipe Indoor	
SP-I 5/3.5MM-3501			1000	5/3.5mm SpeedPipe Indoor	
SP-I 7/4MM-3513	7	4	250	7/4mm SpeedPipe Indoor	
SP-I 7/4MM-3502			500	7/4mm SpeedPipe Indoor	
SP-I 7/4MM-3503			1250	7/4mm SpeedPipe Indoor	
SP-I 10/8MM-3504	10	8	500	10/8mm SpeedPipe Indoor	
SP-I 10/8MM-3505			2500	10/8mm SpeedPipe Indoor	
SP-I 10/6MM-3526	10	6	500	10/6mm SpeedPipe Indoor	
SP-I 10/6MM-3525			2500	10/6mm SpeedPipe Indoor	
SP-I 12/8MM-3506	12	8	350	12/8mm SpeedPipe Indoor	
SP-I 12/8MM-3507			2000	12/8mm SpeedPipe Indoor	
SP-I 14/12MM-3508	14	12	250	14/12mm SpeedPipe Indoor	
SP-I 14/12MM-3509			1500	14/12mm SpeedPipe Indoor	



## DSM - Indoor LFH Straight Connector

Indoor / LFH / Push Fit

### Features and benefits

- No counter bore
- High quality well engineered
- Pressure tested to 15 bar and beyond
- Gas and water tight to 0.5 bar
- Low Fire Hazard (LFH)
- Easy to install and disconnect
- Push fit application
- No specialist tool required
- No adhesive required

### Technical Description

gabocom's in-house range of indoor LHF straight connectors (DSM) are suitable for internal air blown cable applications and provide a perfect fit to the corresponding LFH indoor duct. The internal construction of the straight connector ensures both duct ends are connected, allowing a smooth

transition from one duct end to another as the fibre cable travels through. The LFH DSM's are available in variety of different size's to suit the corresponding indoor LFH duct. Please refer to page 23.



DSM - Indoor LFH Straight Connector.

TYPE	Duct Ø mm	Pack cont.	Description
DSM-4MM-INT	4	50	4mm Indoor Connector
DSM-5MM-INT	5	50	5mm Indoor Connector
DSM-7MM-INT	7	50	7mm Indoor Connector
DSM-10MM-INT	10	50	10mm Indoor Connector
DSM-12MM-INT	12	25	12mm Indoor Connector
DSM-14MM-INT	14	25	14mm Indoor Connector

All dimensions in mm. Subject to technical changes.

## ES - Indoor LFH End Caps

Indoor / LFH / Push Fit

### Features and benefits

- No counter bore
- High quality well engineered
- Pressure tested to 15 bar and beyond
- Gas and water tight to 0.5 bar
- Low Fire Hazard (LFH)
- Easy to install and disconnect
- Push fit application
- No specialist tool required
- No adhesive required

### Technical Description

gabocom's in-house range of indoor LHF end caps (ES) are suitable for internal air blown cable application and provide a perfect fit to the corresponding LFH indoor SpeedPipe duct. The end caps ES are used

for closing SpeedPipe against dirt, gas and water up to 0.5 bar and beyond. They are resistant to tensile stressing and can be easily and installed and disengage.

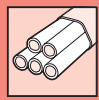


ES Indoor LFH End Caps.

TYPE	Duct Ø mm	Pack cont.	Description
ES-4MM-INT	4	50	5mm End Plug
ES-5MM-INT	5	100	7mm End Plug
ES-7MM-INT	7	50	8mm End Plug
ES-10MM-INT	10	50	10mm End Plug
ES-12MM-INT	12	25	12mm End Plug
ES-14MM-INT	14	25	14mm End Plug

All dimensions in mm. Subject to technical changes.





## EZA-t - Indoor Gas/Cable Seal

### Indoor / LFH / Compression Seal

#### Features and benefits

- Gas and water tight up to 0.5 bar
- Burst test 10 bar
- Suitable for sealing empty and occupied duct
- Reusable
- Quick and easy install
- Compression seal
- No specialist tool required
- No adhesive required

#### Technical Description

The divisible indoor LFH EZA-t cable/gas seal has been designed as a duct and cable seal with a safety function all in one product. It seals all cables sizes within a microduct to the same standards. The EZA-t is suitable for indoor air blown fibre

cable applications, can be easily installed and is reusable. The indoor LFH EZA-t seals are available in a variety of different sizes each supporting different internal seals for different cable sizes.



EZA-t indoor Gas/Cable seal.

TYPE	Duct Ø mm	Sealing Range of Cable Ø from/to	Pack cont.	Description
EZA-t-4/1.0-2.0-INT	4mm	1.0 - 2.0	40	4/1.0-2.0 Indoor Gas/Cable Seal
EZA-t-10/1.8-3.5-INT	10mm	1.8 - 3.5	40	10/1.8-3.5 Indoor Gas/Cable Seal
EZA-t-10/3.0-5.0-INT	10mm	3.0 - 5.0	40	10/3.0-5.0 Indoor Gas/Cable Seal
EZA-t-10/5.0-6.5-INT	10mm	5.0 - 6.5	40	10/5.0-6.5 Indoor Gas/Cable Seal
EZA-t-12/3.0-5.0-INT	12mm	3.0 - 5.0	40	12/3.0-5.0 Indoor Gas/Cable Seal
EZA-t-12/5.0-6.5-INT	12mm	5.0 - 6.5	40	12/5.0-6.5 Indoor Gas/Cable Seal
EZA-t-14/3.0-5.0-INT	14mm	3.0 - 5.0	40	14/3.0-5.0 Indoor Gas/Cable Seal
EZA-t-14/5.0-6.5-INT	14mm	5.0 - 6.5	40	14/5.0-6.5 Indoor Gas/Cable Seal
EZA-t-14/6.5-8.0-INT	14mm	6.5 - 8.0	40	14/6.5-8.0 Indoor Gas/Cable Seal

All dimensions in mm. Subject to technical changes.

## IB Indoor Bend Managers

### Indoor / LFH

#### Features and benefits

- 90 degree manager
- Stackable
- Kink prevention

#### Technical Description

The indoor LFH Indoor Bend manager has been designed to safely guide LFH indoor SpeedPipe round 90-degree bends preventing the indoor duct from kinking.

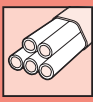
The indoor bend managers are stackable enabling multiple indoor LFH SpeedPipes to be guided round tight corners.



IB Indoor bends managers.

TYPE	Duct Ø mm	Pack cont.	Description
IB-7-D	7	10	IB 7 with dowel
IB-7	7	10	IB 7 without dowel

All dimensions in mm. Subject to technical changes.



## EBM-GS - Indoor Inline Gas / Cable Seal

Indoor / LFH / Compression Seal

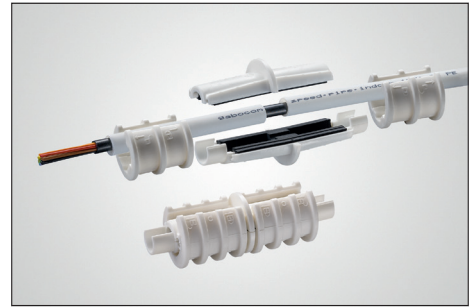
### Features and benefits

- Seals all cable sizes within the microduct
- Gas and water tight up to 0.5 bar
- Quick and simple to install
- Compression seal
- No specialist tool required
- No adhesive required

### Technical Description

The divisible indoor LFH EBM-GS seal has been designed to gas seal a fibre cable transitioning between two open end ducts without the need of an external enclosure. The indoor LFH EBM-GS is suitable for

indoor applications and can be easily installed. The EBM-GS is available in variety of different size's to suit the corresponding indoor LFH ducts. Please refer to page 23.



EBM-GS Indoor Inline Gas / Cable Seal.

TYPE	Duct Ø mm	Sealing Range of Cable Ø from/to	Pack cont.	
EBM-GS-7/0.8-4.0-INT	7mm	0.8 - 4.0	12	7/0.8-4.0 Inline Gas Seal
EBM-GS-10/1.8-3.5-INT	10mm	1.8 - 3.5	12	10/1.8-3.5 Inline Gas Seal
EBM-GS-10/3.0-5.0-INT	10mm	3.0 - 5.0	12	10/3.0-5.0 Inline Gas Seal
EBM-GS-10/5.0-6.5-INT	10mm	5.0 - 6.5	12	10/5.0-6.5 Inline Gas Seal
EBM-GS-12/3.0-5.0-INT	12mm	3.0 - 5.0	12	12/3.0-5.0 Inline Gas Seal
EBM-GS-12/5.0-6.5-INT	12mm	5.0 - 6.5	12	12/5.0-6.5 Inline Gas Seal
EBM-GS-12/10-5.0-6.5-INT	12mm	6.5 - 8.0	12	12/6.5-8.0 Inline Gas Seal
EBM-GS-14/5.0-6.5, INT	14mm	5.0 - 6.5	12	14/5.0-6.5 Inline Gas Seal
EBM-GS-14/6.5-8.0-INT	14mm	6.5 - 8.0	12	14/6.5-8.0 Inline Gas Seal

All dimensions in mm. Subject to technical changes.

## KmR - Indoor End Cap and Marker

Indoor / LFH / Push Fit / 2 in 1

### Features and benefits

- Seals and identifies in one product
- Gas and water tight up to 0.5 bar
- Push Fit application
- No specialist tool required
- No adhesive required

### Technical Description

The indoor LFH KmR was designed to enable network operator to seal off an open-ended duct against dirt, gas and water, while acting as a marker label. The indoor LFH KmR is suitable for indoor

blown fibre optical cable applications and can be easily installed. KmR's are available in variety of different size's to suit the corresponding indoor LFH ducts. Please refer to page 23.



KmR Indoor End Cap and Marker.

TYPE	Duct Ø mm	Pack cont.	Description
KmR-7MM-INT	7	40	7mm Indoor Marker Plug
KmR-10MM-INT	10	40	10mm Indoor Marker Plug
KmR-12MM-INT	12	40	12mm Indoor Marker Plug
KmR-14MM-INT	14	40	14mm Indoor Marker Plug

All dimensions in mm. Subject to technical changes.

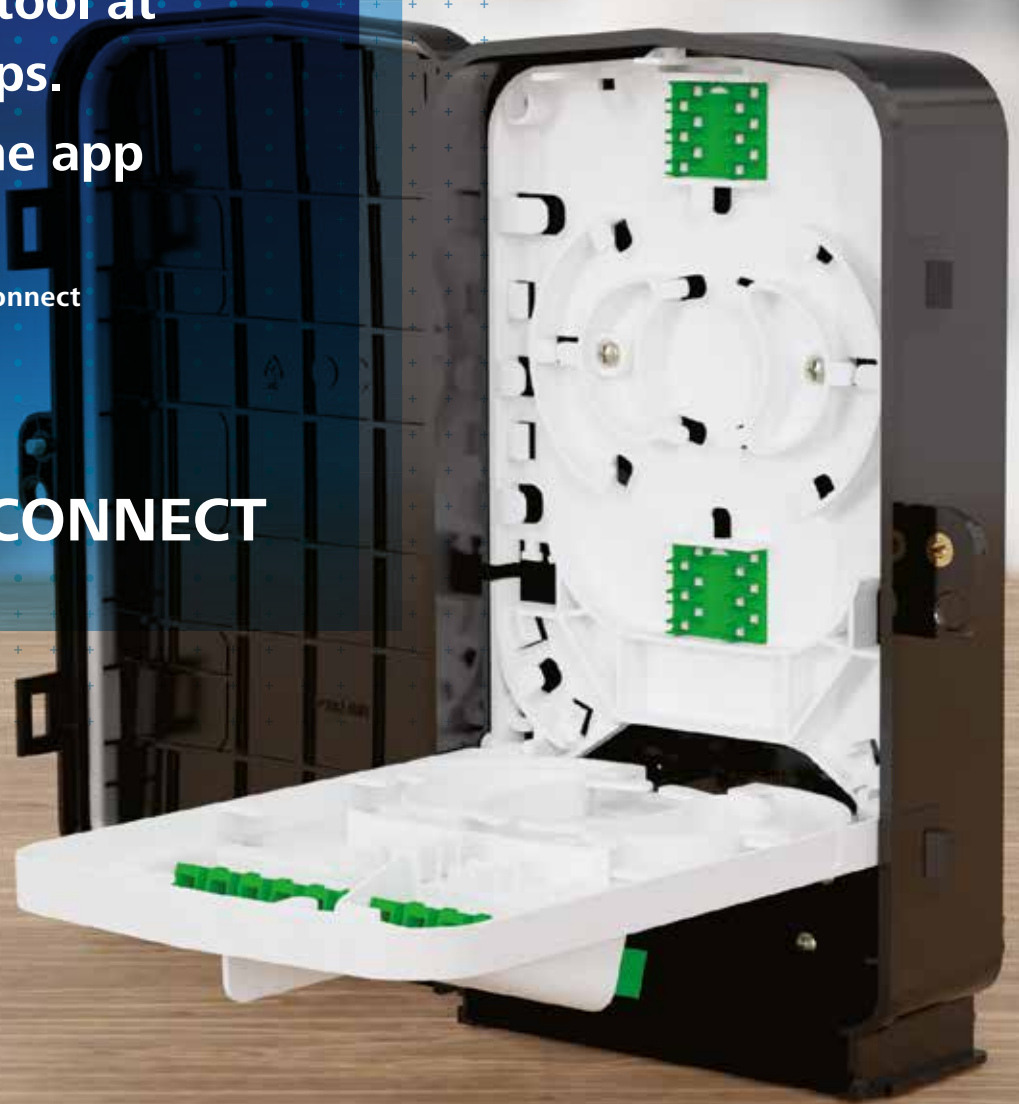
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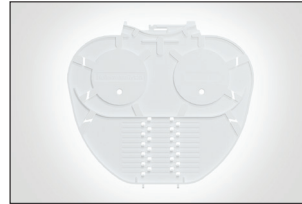
## UFC Integrated Routing Closure continued.

### B - C Length Splice Tray Options

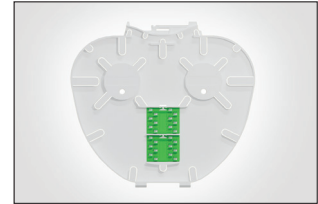
#### Supplied with IR Single Element SE MKII or SC-B MKII

#### Features and benefits

- Positive fibre management - minimum bend radius 30mm
- Splice positions at the front of the tray
- 2 fibre entry ports
- SC-B MKII
  - Moulded splice holder fins for heatshrink (3A) splice protectors
  - Maximum splice capacity of 12 fibres
- SE-IR MKII
  - 2 mounting positions for splice inserts (shown with 3A inserts)
  - Maximum splice capacity of 24 fibres (double stacked)
  - Optical splitter accommodation up to 60 x 7 x 4mm



SC-B MKII Fibre Splice Tray with moulded splice holder fins (front view).



SE-IR MKII Fibre Splice Tray with 2 x 3A Splice bridges (front view).

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.
UFCIR-BXXCMX	275	310	549	30	SE-IR MKII	12	3A	None	857-02030
UFCIR-BXBCMXX						30		Medium	857-02033
UFCIR-CXXCMX						24		None	857-02032
UFCIR-CXBCMXX						24		Large	857-02035
UFCIR-BXXCXP			SC-B MKII		549	24		None	857-02165
UFCIR-BXBCXP					749	24		Medium	857-02166
UFCIR-CXXCXP					60	60		None	857-02167
UFCIR-CXBCXP					60	60		Large	857-02168

All dimensions in mm. Subject to technical changes. Other tray configurations are available on request.

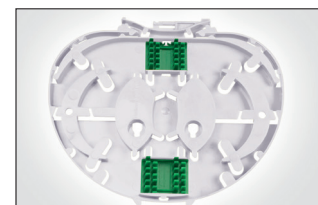
#### Supplied with IR Single Element SE MKI or SC-B MKI

#### Features and benefits

- Positive fibre management minimum bend radius 30mm
- Splice positions at the front and rear of the tray
- 2 fibre entry ports
- SC-B MKI
  - Moulded splice holder fins for heatshrink (3A) or Crimp (ANT) splice protectors
  - Maximum splice capacity of 12 fibres
- SE-IR MKI
  - 2 mounting positions for splice inserts (shown with 3A inserts)
  - Maximum splice capacity 24 fibres (double stacked)
  - Optical splitter accommodation up to 60 x 7 x 4mm



SC-B MKI Fibre Splice Trays with moulded 3A Splice holder fins (front view).



SE-IR MKI Fibre Splice Trays with 2 x 3A Splice bridges (front view).

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.	
UFCIR-BXXCWXX	275		549	30	SE-IR MKI	12	3A	None	857-00522	
UFCIR-BXBCWXX						24		Medium	857-00525	
UFCIR-BXDCWXX						30		None	857-00528	
UFCIR-CXXCWXX			749			24		None	857-00531	
UFCIR-CXBCWXX						48		Large	857-00534	
UFCIR-CXDCWXX						60		None	857-00537	
UFCIR-BXXHXN		310	549			SC-B MKI		24	None	857-00889
UFCIR-BXBHXN								48	Medium	857-00886
UFCIR-BXDHXN								60	None	857-00892
UFCIR-CXXHXN			749		60			None	857-00891	
UFCIR-CXBHXN					120			Large	857-00888	
UFCIR-CXDHXN					120			None	857-00894	

All dimensions in mm. Subject to technical changes. Other tray configurations are available on request.





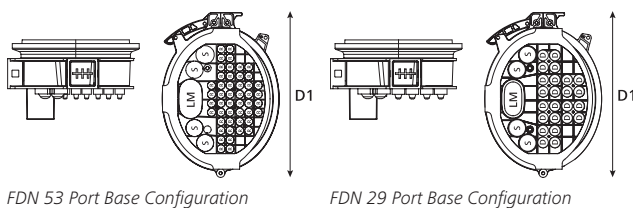
### FDN-IR 29 and 53 Port Closures

#### A - C Length

The FDN fibre splice closure delivers fibre to individual buildings or properties. The FDN is an oval shaped fibre closure with a high drop count making it the ideal solution for built up areas where there are multiple buildings to service.

#### Features and benefits

- Maximum 432 when using SE MKII trays (C Length)
- 52 or 28 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm bend radii throughout
- Fibre storage basket for loop through applications
- Bi-directional fibre routing
- Accommodates SC, SC-B and SE trays
- 3A and ANT splice options
- Maximum 12 splices per tray (without double stacking)
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



FDN 53 Port Base Configuration

FDN 29 Port Base Configuration

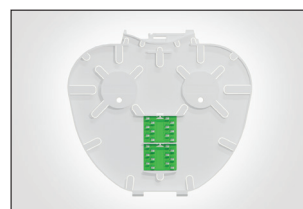
#### Technical Description

The FDN 29 and 53 Port Integrated Routing (IR) closures are supplied with a Polypropylene base. With base configurations of either 52 round ports and 1 oval port or 28 round ports and 1 oval port, the FDN accommodates a cable diameter range of 1.7mm – 20.0mm when using Cablelok mechanical seals.

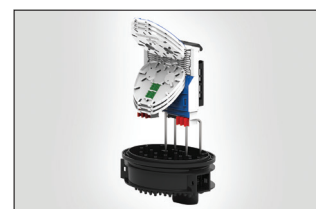
The mounting system is manufactured from Grade 304 stainless steel and the backplane is an aluminium extrusion which is suitable for use with both the MKI and MKII trays and can accommodate up to 36 IR SE trays or 72 IR SC/SC-B trays or a combination of SE, SC and SC-B trays. The FDN closure can be supplied with splice trays offering either 3A or ANT splice bridges.



FDN IR 53 Port C-Length Closure with basket.



SE-IR MKII Fibre Splice Tray with 2 x 3A Splice bridges (front view).



FDN IR 29 Port A-Length Closure with basket.

The position of the mounting system allows easy access for the routing of the fibre on to the trays and the basket provides 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 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 clips are coloured red to aid in identification if they are dropped.

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.
FDNIR-AXXBMX	312	222	455	53	SE-IR MKII	6	3A	None	857-02169
FDNIR-AXBBMX				Small				857-02170	
FDNIR-AXXDMX				None				857-02171	
FDNIR-AXBDMX				Small				857-02172	
FDNIR-CXXBMX			789	53		None		857-02173	
FDNIR-CXBBMX						Large		857-02174	
FDNIR-CXXDMX						None		857-02175	
FDNIR-CXBDMX						Large		857-02176	

All dimensions in mm. Subject to technical changes. Other tray configurations are available on request.



View 3D Model  
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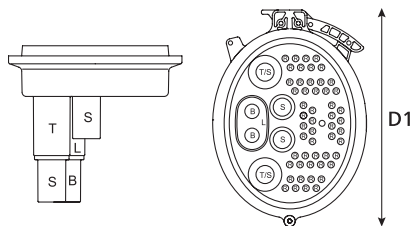
### FDN-IR 16 and 59 Port Closures

#### A - C Length

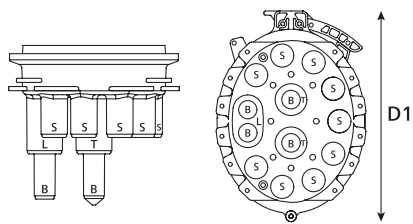
The FDN fibre splice closure delivers fibre to individual buildings or properties. The FDN is an oval shaped fibre closure with a high drop count making it the ideal solution for built up areas where there are multiple buildings to service.

#### Features and benefits

- Maximum fibre splice capacity
  - 432 when using SE MKII trays (C Length)
  - 864 when using SC-B tray (C Length)
- 58 or 15 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, SE trays
- 3A and ANT splice options available
- Maximum 12 splices per tray (without double stacking)
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional pressure release valve



FDN 59 Port Base Configuration



FDN 16 Port Base Configuration

#### Technical Description

The FDN 16 and 59 Port Integrated Routing (IR) closures are supplied with a Polypropylene base. With base configurations of either 58 round ports and 1 oval port or 15 round ports and 1 oval port, the FDN accommodates a cable diameter range of 1.7 – 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 extrusions which is suitable for use with MKI and MKII trays. The closure can accommodate up to 36 SE-IR trays or 72 SC/SC-B trays or a combination of SE, SC and SC-B trays. The FDN closure can be supplied with splice trays offering either 3A or ANT splice bridges.



FDN IR 16 Port C-Length and A-Length Closures with basket and SE-IR MKII fibre splice trays.



FDN IR 59 Port C-Length and A-Length Closures with basket and SC-B fibre splice 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.







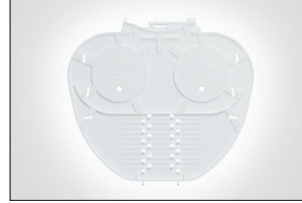
### FDN-IR 16 and 59 Port Closures

#### A - C Length Splice Tray Options

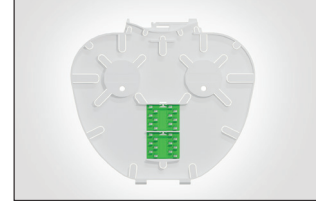
#### Supplied with IR Single Element SE MKII or SC-B MKII

#### Features and benefits

- Positive fibre management - minimum bend radius 30mm
- Splice positions at the front of the tray
- 2 fibre entry ports
- SC-B MKII
  - Moulded splice holder fins for heatshrink (3A) splice protectors
  - Maximum splice capacity of 12 fibres
- SE-IR MKII
  - 2 mounting positions for splice inserts (shown with 3A inserts)
  - Maximum splice capacity of 24 fibres (double stacked)
  - Optical splitter accommodation up to 60 x 7 x 4mm



SC-B MKII Fibre Splice Tray with moulded splice holder fins (front view).



SE-IR MKII Fibre Splice Tray with 2 x 3A Splice bridges (front view).

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.		
FDNIR-AXXAMX	312	222	455	16	SE-IR MKII	6	3A	None	857-02044		
FDNIR-AXBAMX				59				Small	857-02048		
FDNIR-AXXCMX				789				16	None	857-02036	
FDNIR-AXBCMCMX									Small	857-02040	
FDNIR-CXXAMX			SC-B MKII	455		16		36	None	857-02047	
FDNIR-CXBAMX									Large	857-02051	
FDNIR-CXXCMX						789			59	None	857-02039
FDNIR-CXBCMCMX										Large	857-02043
FDNIR-AXXAXP				72	455	16		12	None	857-02185	
FDNIR-AXBAXP									Small	857-02189	
FDNIR-AXXCXP						789			59	None	857-02177
FDNIR-AXBCXP										Small	857-02181
FDNIR-CXXAXP	789	16	72		None	857-02188					
FDNIR-CXBAXP					Large	857-02192					
FDNIR-CXXCXP		59			None	857-02180					
FDNIR-CXBCXP					Large	857-02184					

All dimensions in mm. Subject to technical changes.





### FDN-IR 16 and 59 Port Closures continued.

#### A - C Length Splice Tray Options

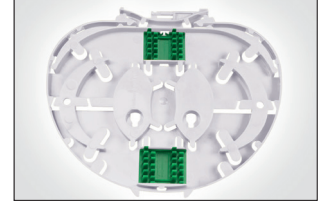
#### Supplied with IR Single Element SE MKI or SC-B MKI

#### Features and benefits

- Positive fibre management minimum bend radius 30mm
- Splice positions at the front and rear of the tray
- 2 fibre entry ports
- SC-B MKI
  - Moulded splice holder fins for heatshrink (3A) or Crimp (ANT) splice protectors
  - Maximum splice capacity of 12 fibres
- SE-IR MKI
  - 2 mounting positions for splice inserts (shown with 3A inserts)
  - Maximum splice capacity 24 fibres (double stacked)
  - Optical splitter accommodation up to 60 x 7 x 4mm



SC-B MKI Fibre Splice Trays with moulded 3A Splice holder fins (front view).



SE-IR MKI Fibre Splice Trays with 2 x 3A Splice bridges (front view).

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.			
FDNIR-AXXAWX	312	222	455	16	SE-IR MKI	6	3A	None	857-01012			
FDNIR-AXBAXX				59				Small	857-01008			
FDNIR-AXXCWX				789				16	None	857-00488		
FDNIR-AXBCWX									Small	857-00491		
FDNIR-CXXAWX			789	16		None		857-00988				
FDNIR-CXBAWX						Large		857-00984				
FDNIR-CXXCWX			789	59		None		857-00506				
FDNIR-CXBCWX						Large		857-00509				
FDNIR-AXXAXN			455	16	455	SC-B MKI		12	None	857-01014		
FDNIR-AXBAXN									Small	857-01010		
FDNIR-AXXCXN									None	857-00899		
FDNIR-AXBCXN									Small	857-00895		
FDNIR-CXXAXN					789			16	789	72	None	857-00990
FDNIR-CXBAXN											Large	857-00986
FDNIR-CXXCXN									None		857-00902	
FDNIR-CXBCXN									Large		857-00898	

All dimensions in mm. Subject to technical changes.



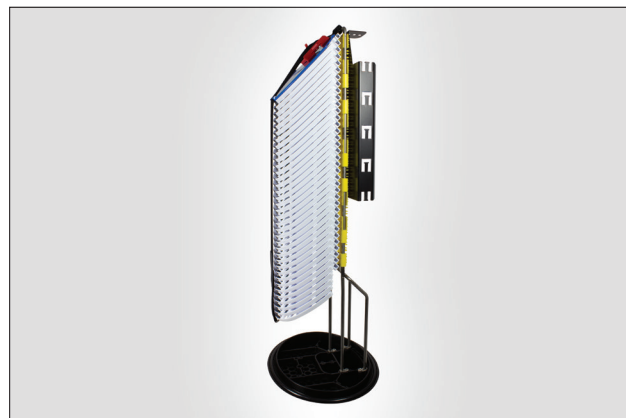
### FDN 16 and 59 Port Tubed Closures

#### A - C Length

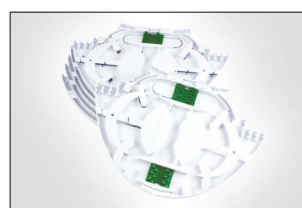
The FDN fibre splice closure delivers fibre to individual buildings or properties. The FDN is an oval shaped fibre closure with a high drop count making it the ideal solution for built up areas where there are multiple buildings to service.

#### Features and benefits

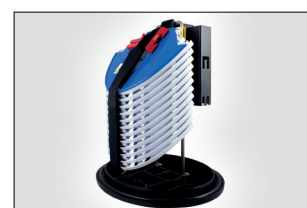
- Maximum 864 fibre splice capacity when using SMF SE-A trays (C Length)
- 58 or 15 round ports and 1 oval port
- Fibre storage basket for loop through applications (where specified)
- Accommodates Hellipse NZDF SE-A and SMF SE-A trays
- Maximum 24 splices per tray without double stacking (SMF SE-A trays)
- 3A and ANT splice options available
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test valve and/or grounding feed-through



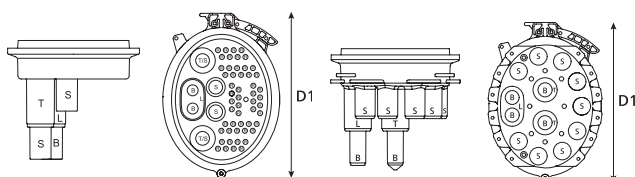
FDN 59 Port C-Length Closure with basket.



Hellipse NZDF SE-A Fibre Splice Trays



FDN A-Length Closure with basket.



FDN 59 Port Base Configuration

FDN 16 Port Base Configuration

#### Technical Description

The FDN 16 and 59 Port closures are supplied with a Polypropylene base. With base configurations of either 58 round ports and 1 oval port or 15 round ports and 1 oval port, the FDN accommodates a cable diameter range of 1.7 – 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 up to 36 Hellipse NZDF SE-A or SMF SE-A trays giving a maximum of 864 fibre splices based on 24 fibres per tray (when

using Hellipse SMF SE-A trays). The FDN closure can be supplied with splice trays offering either 3A or ANT splice bridges.

The tubed closure and the position of the mounting system allows for ease of access and traceability of the fibre on to the trays and the basket provides storage space for the storage of fibre loops. 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.

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.	
FDNTB-AXXAD21	312	222	455	16	Hellipse NZDF SE-A	12	3A	None	857-01037	
FDNTB-AXBAD21				59				Small	857-01034	
FDNTB-AXXCD21				789				16	None	857-00640
FDNTB-AXBCD21									Small	857-00641
FDNTB-CXXA61			36	59		789		16	None	857-01019
FDNTB-CXBAD61								Large	857-01016	
FDNTB-CXXCD61								None	857-00662	
FDNTB-CXBCD61								Large	857-00663	

All dimensions in mm. Subject to technical changes.



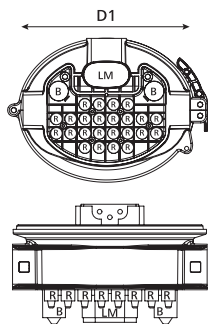
### CFN-IR Compact Fibre Node Closures

#### 19 and 27 Port

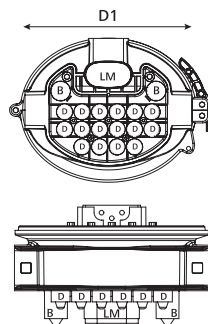
The CFN fibre splice closure range offers a closure for a wide range of FTTx applications for both P2P and P2MP topologies.

#### Features and benefits

- Maximum splice capacity
  - Medium - SE-IR 288 3A splices
  - Small - SE-IR 144 3A splices
- 26 or 18 round ports and 1 oval port
- Positive fibre management to ensure consistent 15mm bend radii throughout
- Fibre storage basket for loop through applications
- Bi-directional routing
- Accommodates a maximum of 12 CFN SE or 24 SC-B trays
- Off tray PLC splitter accommodation
- Cablelok compatible for all port sizes
- Quick Release cover
- Integrated closure mounting points for MOBRA, pole and facade fixing
- Optional pressure release valve/cable location/toning point



CFN R Port Base Configuration



CFN D Port Base Configuration

#### Technical Description

The CFN 19 and 27 Port Integrated Routing (IR) closures are supplied with a UV stable Polypropylene base. With base configurations of either 26 round ports and 1 oval port or 18 round ports and 1 oval port, the CFN accommodates a cable diameter range of 1.7 - 20.0mm when using mechanical cablelok seals.

The IR Fibre Management System (FMS) accommodates a maximum of 12 compact SE single element (SE) or 24 single circuit (SC-B) splice trays in the M length closure and 6 SE or 12 SC-B in the S length closure. The SE trays can be fitted with a range of fibre splice bridges including 3A and ANT.

The position of the FMS allows unrestricted access to the cable entry ports, each of which has the option of integrated cable anchoring.



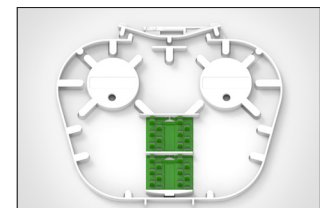
CFN IR 19 Port M-Length Closure with basket.



CFN IR 27 Port S-Length Closure with basket.



CFN IR 19 Port S-Length Closure with lid.



Compact SE Splice Tray.

The loop storage basket is situated directly above the oval cable port enabling efficient routing to it and the fibre splice trays via the modular IR FMS. The splice trays and the fibre optic routing modules are white in colour making it easy to clearly identify the individual fibre colours as they are routed through the positive fibre management system.

The fibre entry block has dedicated PLC splitter accommodation for a maximum of 2 x 250µm bare end PLC splitters and fibre management for fibre direction changes and storage of excess fibre. Fibre retention guides manage the fibre elements into the IR system.

All IR system cover parts are coloured blue identifying them as removable parts allowing access to the fibre.

TYPE	Width D1	Width D2	Length L	Port Count	Tray Type	Tray Quantity	Splice Protector Type	Basket Size	Article-No.
CFNIRC-SXBDWX	250	180	335	19	Compact SE	6	3A	Small	857-02426
CFNIRC-SXBBWX				27					857-02427
CFNIRC-MXBDWX			410	19		12		Medium	857-02428
CFNIRC-MXBBWX				27					857-02429
CFNIRC-SXBDXW			335	19	Compact SC-B	12		Small	857-02449
CFNIRC-SXBBXW									27
CFNIRC-MXBDXW			410	19		24		Medium	857-02447
CFNIRC-MXBBXW									27

All dimensions in mm. Subject to technical changes.







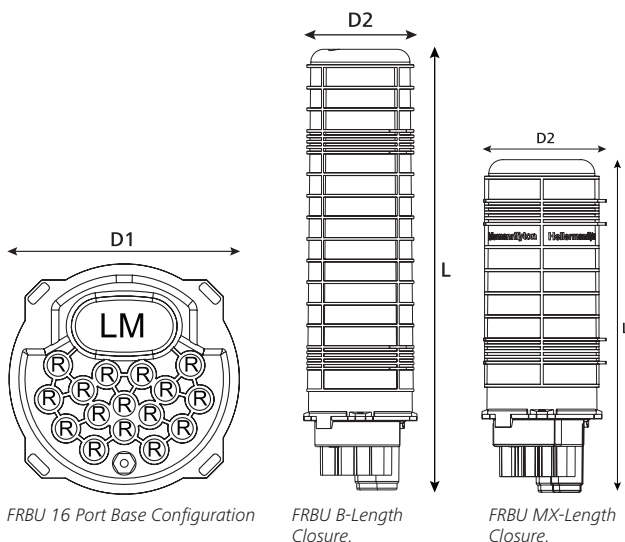
### FRBU 16 Port Closures

#### MX and B Length

The FRBU fibre splice closure distributes fibre directly to individual buildings or properties. The FRBU is a smaller fibre closure from HellermannTyton that is often deployed in rural and less built up locations with fewer buildings to connect.

#### Features and benefits

- Maximum 144 fibre splice capacity
- 16 round ports and 1 oval port
- 2 Cover Length options
- Fibre storage basket for loop through applications
- Maximum 6 Hellapon Medium trays
- Maximum 24 splices per tray (double stacked)
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test valve and/or grounding feed-through



FRBU 16 Port Base Configuration

FRBU B-Length Closure.

FRBU MX-Length Closure.



FRBU B-Length 16 Port Closure with 3 Medium Hellapon Trays and Basket.



FRBU B-Length 16 Port Closure with 6 Medium Hellapon Trays.



FRBU MX-Length 16 Port Closure with 3 Small Hellapon Trays and Basket.

#### Technical Description

The FRBU 16 Port closure offers two cover lengths and is supplied with a Polypropylene base. The 16 port base configuration has 16 round ports and 1 oval port which accommodates a cable diameter range of 1.7 – 9.5mm (R Ports) and 4.0 – 15.0mm (LM port) when using Cablelok mechanical seals.

With a range of mounting systems, manufactured from Grade 304 stainless steel, the closure can accommodate a maximum of 6 Hellapon Medium trays giving a maximum of 144 fibre splices based on 24 fibres

per tray or 3 Hellapon Medium/Hellapon Small trays with a loop storage basket. The loop storage basket provides storage space for fibre loops within the closure and is situated directly above the oval cable port enabling efficient routing to it and the fibre splice 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	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Max. Splice Capacity	Basket Size	Article-No.
FRBTB-BXXSB61	130	130	505	17	Hellapon Medium	6	3A	144	None	857-02059
FRBTB-BXXSC61						857-02060				
FRBTB-BXBSB31						857-02061				
FRBTB-BXBSC31						857-02062				
FRBTB-MXBSA31			360		Hellapon Small	2	48	Small	857-02063	
FRBTB-MXBSA21						857-02064				
FRBTB-MXBSA11						1			24	857-02065

All dimensions in mm. Subject to technical changes.



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### FRBU 9 and 11 Port Closures

#### B Length

The FRBU fibre splice closure distributes fibre directly to individual buildings or properties. The FRBU is a smaller fibre closure from HellermannTyton that is often deployed in rural and less built up locations with fewer buildings to connect.

#### Features and benefits

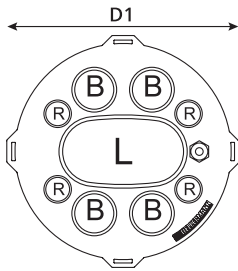
- Maximum 144 fibre splice capacity
- 10 or 8 round ports and 1 oval port
- Accommodates Hellapon Medium stacked or side hinged trays
- Fibre storage basket for loop through applications (Hellapon Medium side hinged 3 tray version only)
- Maximum 24 splices per tray (double stacked)
- 3A and ANT splice options available
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test valve and/or grounding feed-through



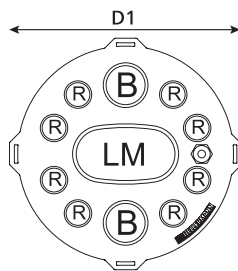
FRBU B-Length 11 Port Closure with 6 Medium Hellapon Trays.



FRBU B-Length 11 Port Closure with 3 Medium Hellapon Trays and Basket.



FRBU 9 Port Base Configuration



FRBU 11 Port Base Configuration

#### Technical Description

The FRBU B Length closure is supplied with a Polypropylene base. With base configurations of either 10 round and 1 oval port or 8 round and 1 oval port. The 9 Port FRBU accommodates a cable diameter of 1.7 - 20.0mm when using Cablelok mechanical seals and 6.0 - 24.0mm when using heatshrink. The 11 Port configuration accommodates a cable diameter of 1.7 - 16.5mm when using Cablelok mechanical seals and 6.0 - 22.0mm when using heatshrink.

The mounting system is manufactured from Grade 304 stainless steel and can accommodate a maximum of 6 Hellapon Medium stacked or side hinged trays or 3 Hellapon Medium side hinged trays and basket,

giving a maximum of 144 fibre splices based on 24 fibres per tray. The FRBU closure can be supplied with splice trays offering either 3A or ANT splice bridges. The fibre basket provides storage space for the storage of fibre loops within the closure.

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	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Max. Splice Capacity	Basket Size	Article-No.
FRBTB-BXXNC2X	130	130	505	9	Hellapon Medium	2	3A	48	None	857-00632
FRBTB-BXBNC3X						3		72	Medium	857-00635
FRBTB-BXXNC4X						4		96	None	857-00633
FRBTB-BXXNC6X						6		144	None	857-00634
FRBTB-BXXEC2X						2		48	None	857-00624
FRBTB-BXBEC3X						3		72	Medium	857-00627
FRBTB-BXXEC4X				4		96		None	857-00625	
FRBTB-BXXEC6X				6		144		None	857-00626	
									11	

All dimensions in mm. Subject to technical changes.





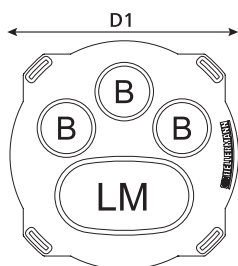
### FST 4 and 13 Port Closures

#### A Length

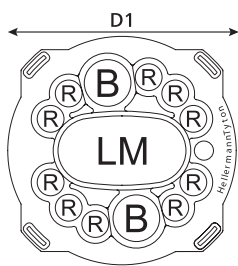
The FST fibre splice closure distributes fibre directly to individual buildings or properties. The FST is HellermannTyton's smallest fibre closures that is often deployed in rural and less built up locations with fewer buildings to connect.

#### Features and benefits

- Maximum 36 fibre splice capacity
- 12 or 3 round ports and 1 oval port
- Accommodates Hellapon Small trays
- Fibre storage basket for loop through applications (Hellapon Small 1 tray version only)
- Maximum 12 splices per tray
- 3A and ANT splice options available
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover



FST 4 Port Base Configuration



FST 13 Port Base Configuration

#### Technical Description

The FST closure is supplied with a Polypropylene base. With base configurations of either 12 or 3 round ports and 1 oval port, the FST accommodates a cable diameter range of 1.7 – 16.5mm when using Cablelok mechanical seals and 6.0 – 22.0mm when using heatshrink (4 port only).

The mounting system is manufactured from Grade 304 stainless steel and can accommodate a maximum of 3 Hellapon Small trays or 1 Hellapon Small tray and basket, giving a maximum of 36 fibre splices



FST 13 Port Closure with 1 Small Hellapon Tray and basket.



FST 4 Port Closure with 2 Small Hellapon Tray.

based on 12 splices per tray. The FST closure can be supplied with splice trays offering either 3A or ANT splice bridges. The fibre basket provides space for the storage of fibre loops within the closure.

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	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Max. Splice Capacity	Basket Size	Article-No.
FSTTB-AXBFA11	110	110	310	4	Hellapon Small	1	3A	12	Small	857-00616
FSTTB-AXXFA21						2		24	None	857-00615
FSTTB-AXBTA11				1		12		Small	857-00618	
FSTTB-AXXTA21				2		24		None	857-00617	
FSTTB-AXXTA31				3		36		None	857-00619	

All dimensions in mm. Subject to technical changes.



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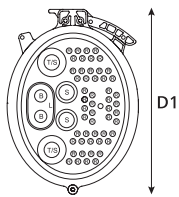
### Connectorised Closures - Integrated Routing

#### FDN-IR Closure

The FDN IR connectorised closures are available configured with splice trays, a selection of fibre connector options and pre-connectorised splitters. This allows for the quick connection or disconnection of circuits using pre-configured fibre pigtails or field terminated connectors used in a SDU network.

#### Features and benefits

- 48 or 32 LC/APC Connections
- Supplied with bare end to LC/APC PLC splitters
- Maximum splice capacity 134 (double stacked)
- 58 round ports and 1 oval port
- Positive fibre management to ensure consistent 30mm bend radii throughout
- Fibre storage basket for loop through applications
- Bi-directional fibre routing
- Fitted with SE-IR trays (maximum 24 splices per tray)
- Cablelok compatible for all ports
- Quick release cover
- Optional flash test valve and/or grounding feed-through



FDN 59 Port Base Configuration

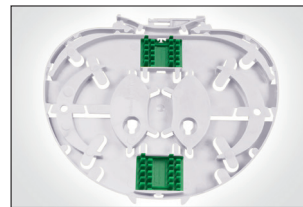
#### Technical Description

The FDN IR AB length connectorised closure is supplied with a loop storage basket and Polypropylene base. The base configuration is 58 round ports and 1 oval port for loop through applications with a cable range of 1.7mm to 29mm when using Cablelok mechanical seals or 6mm to 35mm when using heatshrink.

The mounting system is manufactured from powder coated Grade 304 stainless steel and can accommodate a maximum of 6 SE-IR trays.



FDN IR AB-Length Connectorised Closure.



SE-IR MKI Fibre Splice Trays with 2 x 3A Splice bridges (front view).



FDN IR AB-Length Connectorised Closure (side view).

Supplied with either 6 x 1:8 or 2 x 1:16 Bare End to LC/APC pre-connectorised PLC splitters and fitted with LC/APC adaptors mounted in the connector plate providing either 48 or 32 LC/APC drops.

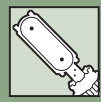
The connectorised closure and the position of the mounting system allows for easy access for the routing of fibre on to the trays and the basket is positioned at the front of on the IR mounting system to provide storage for fibre loops.

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splitter (Bare End to LC-APC)	Splitter Quantity	Connector Type	Article-No.
FDNIR-ABBCWX-CT48-0384	312	222	561	59	SE-IR MKI	6	1:8	6	LC-APC	857-01678
FDNIR-ABBCWX-CT32-0385							1:16	2		857-01679

All dimensions in mm. Subject to technical changes.







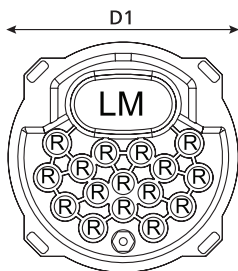
### Connectorised Closures - Tubed

#### FRBU 16 Port Closure

The FRBU is a smaller tubed connectorised closure, available configured with splice trays, a selection of fibre connector options and pre-connectorised splitters. This allows for the quick connection or disconnection of circuits using pre-configured fibre pigtailed or field terminated connectors used in a SDU network.

#### Features and benefits

- 16 LC/APC Connections
- Supplied with bare end to LC/APC PLC splitters
- Maximum 24 splice capacity
- 16 round ports and 1 oval port
- Fibre storage basket for mid-span applications
- Fitted with 2 x Hellapon Small trays
- Positive fibre management to ensure consistent 30mm bend radius throughout
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test and/or grounding feed-through



FRBU 16 Port Base Configuration

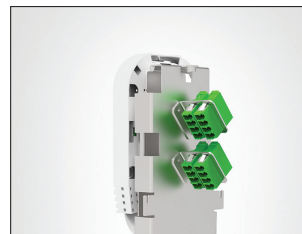
#### Technical Description

The FRBU 16 Port Connectorised closure is an IP68/IK09 sealed dome closure manufactured from UV stable polypropylene and meets the environmental and optical performance requirements of the European and International standards for sealed dome closures. The Cablelok base has 16 Cablelok R ports allowing for cables or ducts up to 9.5mm to be mechanically sealed to the base as well as an LM Cablelok oval port for mid-span cable deployments in both aerial and subterranean locations.

The mounting system is manufactured from Grade 304 stainless steel and is supplied with 2 Hellapon Small splice trays which house 2 x 1:8 bare end to LC/APC PLC splitters. An integral adaptor mounting plate



FRBU 16 Port M-Length Closure with 2 Hellapon Small Trays and Basket.



View of 4 x LC Quad Adaptors.



Rear view.

which manages 4 LC Quad Adaptors and a loop storage basket is fitted between the trays and the adaptor plate providing storage for excess fibre for mid-span applications. A removable connector shield is fitted to the back of the mounting support to provide additional protection to the connections once they have been installed. In-base features for closure mounting on poles, building facades or inside underground chambers enable the cover to be removed whilst the closure is still mounted allowing in-situ installation or maintenance.

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Adaptor Type	Article-No.
FRBCT-MXXSA21-M4	130	130	360	16	Hellapon Small	2	3A	LC-APC	857-02275

All dimensions in mm. Subject to technical changes.



### Connectorised Closures - Tubed

#### FDN and FRBU Closures

A range of connectorised closures are available configured with splice trays, a selection of fibre connector options and pre-connectorised splitters. This allows for the quick connection or disconnection of circuits using pre-configured fibre pigtailed or field terminated connectors used in a FTTH network.

#### Features and benefits

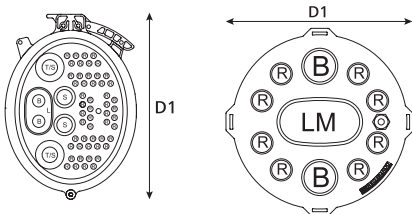
- Maximum 180 fibre splice capacity
- FDN 59 Port - 58 round ports and 1 oval port
- FRBU 11 port - 10 round ports and 1 oval port
- Offers LC or SC connections
- Splitter accommodation
- Cablelok compatible for all port sizes
- Quick release cover
- Optional flash test valve and/or grounding feed-through



FDN 59 Port Connectorised Closure.



FRBU 11 Port B-Length Connectorised Closure.



FDN 59 Port Base Configuration

FRBU 11 Port Base Configuration

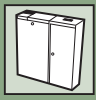
#### Technical Description

HellermannTyton offer a range of connectorised solutions in the FDN and FRBU fibre splice closures. The closures are supplied with a Polypropylene base and the mounting system is manufactured from Grade 304 stainless steel.

The connectorised closures and the position of the mounting systems allow 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 in to the trays.

TYPE	Width D1	Width D2	Length L	Port count	Tray Type	Tray Quantity	Splice Protector Type	Connector Type	Article-No.
FRBCT-BXXEC2X-TF	130	130	505	11	Hellapon Medium	2	3A	SC-APC	857-00910
FRBCT-BXXEC3X-TF						3		857-00961	
FDNCT-ABBCDW1-LJ	312	222	561	59	Hellipse NZDF SE-A	15		LC	857-00795
FDNCT-ABBCDW1-AJ								LC-APC	857-00797
FDNCT-ABBCDW1-SJ								SC	857-00799
FDNCT-ABBCDW1-TJ							SC-APC	857-00801	

All dimensions in mm. Subject to technical changes.



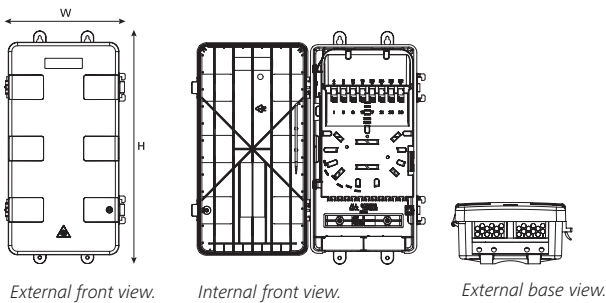
### AFN 32 Way - Aerial Fibre Node

#### Fibre Optic External Enclosure

The AFN has been designed for deployment within the last mile of the FTTx network. This enclosure can be used within a P2P (Point to Point) or P2MP (Point to Multi Point) network with the addition of connectorised PLC splitters or pigtails and adaptors.

#### Features and benefits

- Maximum capacity 8 LC Quad Adaptors
- 4 Inbound/24 Outbound ports
- Separation of inbound fibre from connectorised drop cables
- Maximum of 48 3A splices
- Positive fibre management to maintain consistent 30mm minimum bend
- PLC splitter accommodation (60mm x 7mm x 4mm)
- IP55 and IK08 rating
- Pole or building/facade mounted



External front view.

Internal front view.

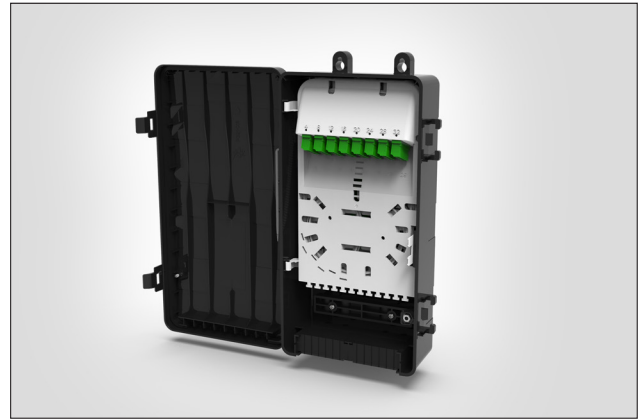
External base view.

#### Technical Description

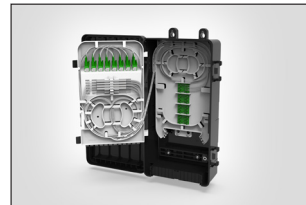
The AFN is manufactured from a UV stable black polycarbonate with a detachable lid allowing unrestricted access to all fibre management areas. The enclosure has 3 separate management areas for inbound cable, fibre splice management and drop cable management. The inbound cable management area has a dedicated cable entry port with loop storage capacity.

The fibre splice management area has capacity for a maximum of 48 x 3A splices and maintains positive fibre management throughout.

The drop cable management area presents 32 LC APC connections using 8 LC Quad adaptors for connection to industry standard pre-terminated



Internal view of the AFN 32 Way Aerial Fibre Node.



Internal view of the AFN 32 Way Aerial Fibre Node.



External view of the AFN 32 Way Aerial Fibre Node.

drop cables and a maximum of 4 1:8 PLC splitters can be fitted on the inside of the management area.

The drop cable management area cover prevents access to the network cables and splicing area and the adaptors are angled to allow for inspection prior to connection. The 12 anchor points secure the drop cables and an integral seal maintains the IP55 rating. There are two exit seals that allow 32 customer drops (8 exit ports per seal with maximum of 2 x 4mm cables per exit port).

Other incoming and drop seal ranges are available on request for more information please contact the sales team.

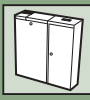
TYPE	Height (H)	Width (W)	Depth (D)	Max. Cable Diameter Ø		Splice Protector Type	Pigtail or Splitter	Connector Type	Article-No.
				Incoming	Drop Cable				
AFN32-0404LCBS181/BK	342	177	90	7	8 or 2 x 4	3A	1 x 1:8	LC-APC	857-02480
AFN32-0404LCBS281/BK							2 x 1:8		857-02481
AFN32-0404LCBS381/BK							3 x 1:8		857-02482
AFN32-0404LCBS481/BK							4 x 1:8		857-02483
AFN32-0404LCXXX1/BK							-		857-02479

All dimensions in mm. Subject to technical changes.

AFN 24 way available. Visit website for more info.



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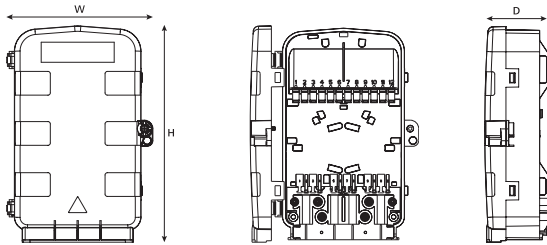
### FFE - Fibre Facade Enclosure

#### Fibre Optic External Enclosure

The FFE has been designed to provide a Fibre Connection Point. The closure can be building/facade or pole mounted and provides 12 SC or LC Simplex customer connection points.

#### Features and benefits

- Maximum capacity: 12 SC or LC Simplex Adaptors
- 2 Inbound / 12 Outbound ports
- Separation of inbound fibre from connectorised drop cables
- Positive fibre management to maintain consistent 30mm minimum bend
- PLC splitter accommodation (60mm x 7mm x 4mm)
- Supports 3A and ANT splice protector types
- IP55 and IK08 rating
- Pole or building/facade mounted



External front view.

Internal front view.

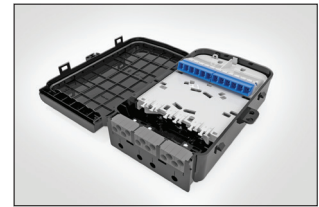
External side view.



Internal view shown with LC APC adaptors.



Internal view shown with drop cable management tray.



Internal view shown with SC PC adaptors.

#### Technical Description

The FFE is manufactured from UV stable black polycarbonate with a completely detachable lid which can also be snapped back in to position using the snap back hinges allowing unrestricted access to all fibre management areas.

The enclosure has 3 separate management areas for inbound cable, fibre splice management and drop cable (customer connection) management. The inbound cable management area has a dedicated cable entry port which supports both cable end and mid-span applications with loop storage capacity for up to 1.5m of excess fibre and the entry port is sealed with a cable entry kit to maintain the IP55 rating.

The fibre splice management area has capacity for a maximum of 12 x 3A or 24 ANT splices and maintains positive fibre management (30mm minimum bend radius) throughout. The tray has a crossover facility which allows for alternative routing requirements and a fibre storage capacity of 1.5m for 250µm fibre and 1.0m of 900µm fibre.

The drop cable management area presents either 12 SC or LC Simplex adaptors for connection to industry standard pre-terminated drop cables and a PLC splitter (60mm x 7mm x 4mm) can be fitted on the inside of the management area. The drop cable management area cover prevents access to the network cables and splicing area and the adaptors are angled and spaced to allow for inspection prior to connection. Anchor guides are provided for securing the drop cables (maximum diameter 6.0mm) and an integral seal maintains the IP55 rating.

TYPE	Height (H)	Width (W)	Depth (D)	Suitable for Cable Ø from/to	Splice Protector Type	Pigtail or Splitter	Connector Type	Article-No.				
FFE12-04LCXXX1/BK	241	154	71.6	10 - 15	3A	-	-	857-01820				
FFE12-04SCXXX1/BK							-	857-01825				
FFE12-04SCSPXX1/BK							12 x Pigtails	12 x SC	857-01821			
FFE12-04SCTPXX1/BK								12 x SC-APC	857-01823			
FFE12-04LCPXX1/BK								12 x LC	857-01817			
FFE12-04LCRPXX1/BK							12 x LC-APC	857-01818				
FFE12-03LCXXX1/BK				7 - 10		-	-	-	-	-	857-01811	
FFE12-03SCXXX1/BK										-	857-01816	
FFE12-03LCPXX1/BK										12 x Pigtails	12 x LC	857-01808
FFE12-03LCRPXX1/BK											12 x LC-APC	857-01809
FFE12-03SCSPXX1/BK											12 x SC	857-01812
FFE12-03SCTPXX1/BK											12 x SC-APC	857-01814

All dimensions in mm. Subject to technical changes.







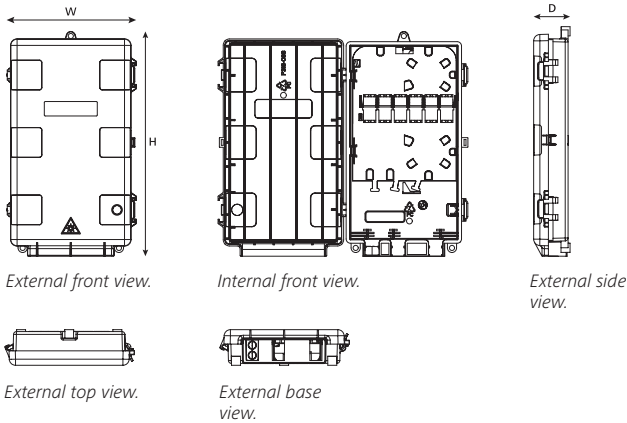
### MCCE - Multi Customer Connection Enclosure

#### Fibre Optic External Enclosure

The MCCE has been designed as a Building Entry Point (BEP) to provide a fibre termination and network demarcation point external to the connected premise in a Fibre to the Home (FTTH) network. In addition to providing an external test point the enclosure can also accommodate up to 12 customer fibre connections.

#### Features and benefits

- 12 Customer Connections
- 6 LC Duplex / SC Simplex connectors
- Up to 30 fibre splices
- Splitter accommodation
- Positive fibre management (30mm minimum bend radius)
- IP54 rating
- Low Profile
- Tamper-proof



Internal view of Multi Customer Connection Enclosure (MCCE).



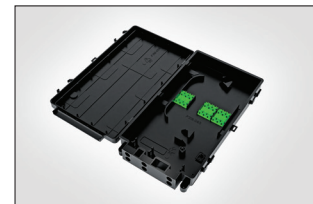
Closed view of MCCE..



Inside view of MCCE with tray and 6 LC/APC Duplex Adaptors.



Internal view of MCCE with unloaded tray.



Inside view of MCCE without tray.

#### Technical Description

The MCCE has an IP54 sealing performance with up to 6 entry/exit ports at the bottom of the enclosure which are suitable for cables or ducts up to a maximum diameter of 8 mm. A loop through facility allows for single fibre elements to be removed and spliced whilst the remaining fibres can be fed on to the next connection point.

Mechanical fixing is provided to secure all incoming/outgoing cables or blown fibre ducts and to provide strain relief where necessary. Internal positive fibre management and fibre retention clips maintain a minimum 30mm bend radius throughout.

The MCCE manages up to 6 LC duplex or SC simplex adaptors and has features to secure a maximum of 30 fibre splices.

The lid is hinged allowing quick and clear access to the internal fibre for splicing and termination and the lid can be replaced if damaged.

The MCCE can be supplied pre-loaded with fibre adaptors, and pre-terminated PLC splitters or pigtailed as required.

TYPE	Height (H)	Width (W)	Depth (D)	Splice Protector		Pigtail or Splitter	Connector Type	Splice Tray	Article-No.	
				Qty	Type					
MCCE-T12AP11X	233	135	37	1	3A	4 x Pigtails	2 x LC/APC DX	Splice Tray	857-02070	
MCCE-T14AP21X				2		8 x Pigtails			4 x LC/APC DX	857-02071
MCCE-T16AP21X				2		12 x Pigtails			6 x LC/APC DX	857-02072
MCCE-T12AS11S				1	SP/3A Bridge	1 x 1:4 Bare End to LC/APC Splitter	2 x LC/APC DX		857-02073	
MCCE-T14AS21S				2		2 x 1:4 Bare End to LC/APC Splitter			4 x LC/APC DX	857-02074
MCCE-T16AS21S				2		3 x 1:4 Bare End to LC/APC Splitter			6 x LC/APC DX	857-02075
MCCE-T1XXX21X				2	3A	-	-		857-02076	
MCCE-X1XXX31X				3		-	-		857-02077	

All dimensions in mm. Subject to technical changes.



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Further information at [www.htdata.co.uk](http://www.htdata.co.uk)



# FTTX Broadband Connectivity

## External Fibre Enclosures

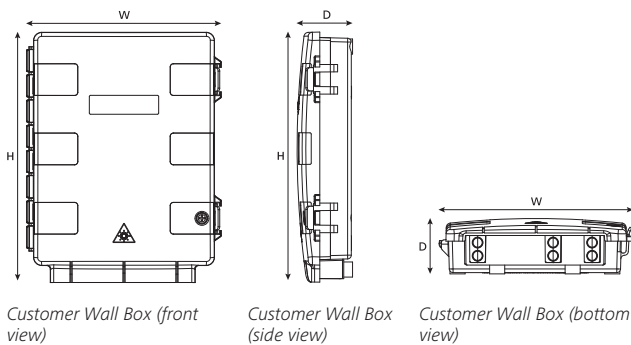
### CWB - Customer Wall Box

#### Fibre Optic External Enclosure

The CWB has been designed as a Building Entry Point (BEP) to provide a fibre termination and demarcation point external to the connected premise in a Fibre to the Home (FTTH) network.

#### Features and benefits

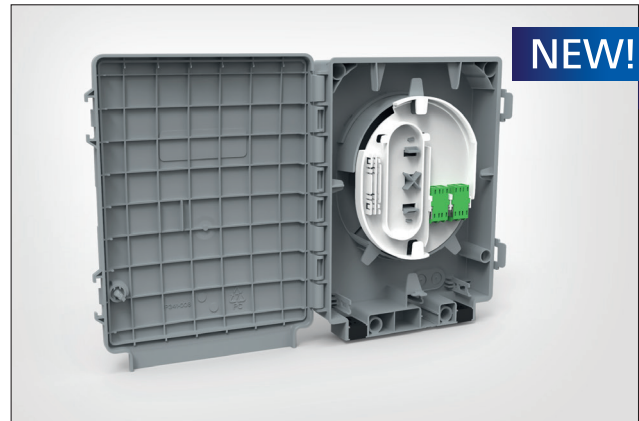
- Maximum 4 Customer Connections
- 6 Entry/Exit Ports at the base max. 8mm
- 2 Entry/Exit Ports at the rear max. 6.4mm
- 2 x LC Duplex/SC Simplex Adaptors
- Up to 4 x 3A splices
- IP54
- Storage for excess fibre
- Tamper-proof



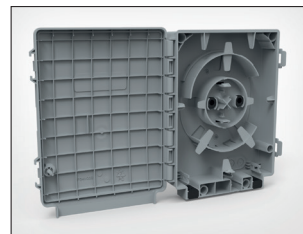
Customer Wall Box (front view)

Customer Wall Box (side view)

Customer Wall Box (bottom view)



Customer Wall Box (open, tray on)



Customer Wall Box (open)



Customer Wall Box (closed)

#### Technical Description

The CWB is an IP54/IK07 rated enclosure manufactured from UV stable polycarbonate. The enclosure is fitted with a tamper-proof lock and has provision in the lid for a moulded customer logo.

The closure has a total of 8 entry points, 6 in the bottom and 2 in the rear, which will manage cable/ducts up to a maximum diameter of 8mm. Mechanical fixing is provided to secure all incoming/outgoing cables/blown fibre ducts and to provide strain relief where necessary.

A fibre storage module allows for the management and storage of up to 30m of a blowable fibre unit (nominal diameter 1.2mm) or 10m of aerial drop cable (nominal diameter 3mm).

A dedicated customer drop tray houses a maximum of 2 x LC Duplex or SC Simplex adaptors and has features to secure up to a maximum of 4 x 3A splices.

Additional storage space at the rear of the enclosure allows for the management of up to 5m of customer drop cable (nominal diameter 5mm).

**For more information please contact our sales team.**

TYPE	Height (H)	Width (W)	Depth (D)	Connector Type	Max. Splice Capacity	Colour
For more information please contact our sales team	198	154	44	4 x LC DX	4	Available in a range of colours (MOQ applies)
				2 x SC SX		

All dimensions in mm. Subject to technical changes.



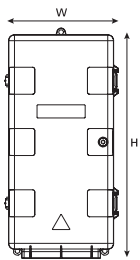
### CCE - Customer Connection Enclosure

#### Fibre Optic External Enclosure

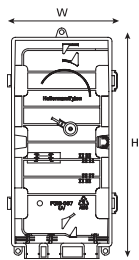
The CCE has been designed to be used as an external building entry point. The closure can be wall mounted providing a fibre termination and external network test point. The CCE is the same size as a 'Brick Blow-Out Cover' to cover any unsightly damage caused by drilling.

#### Features and benefits

- Maximum capacity: 2 x SC Simplex or LC Duplex Adaptors
- Fibre Management for 4 x 3A splices
- 6 inbound/outbound access points
- Through the wall capability
- Loop through facility
- Integral positive fibre management and storage capacity
- IP54 Rated



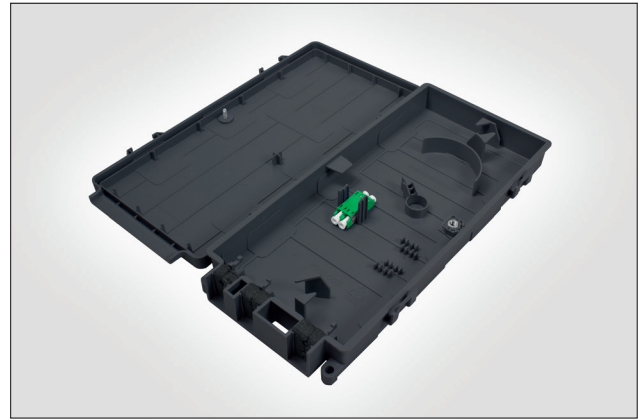
External front view.



Internal front view.



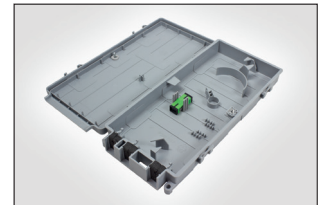
External side view.



Customer Connection Enclosure with 1 LC APC adaptor.



External view.



Internal view with 1 SC PC Adaptor.

#### Technical Description

The Customer Connection Enclosure (CCE) supports a maximum 2 x SC Simplex or LC Duplex adaptors. The closure is manufactured from UV stable ABS with a hinged lid which locks in the open position to allow for quick and clear access to the internal fibre.

The closure has 6 entry/exit ports at the bottom of the closure which are suitable for cables and ducts up to a maximum diameter of 8.5mm. A loop through facility allows for single fibre elements to be removed and spliced whilst the remaining fibres can be fed on to the next connection

point. A single port in the rear of the closure allows for fibre to be passed through the wall into the customer premises.

Mechanical fixing is provided to secure all incoming/outgoing cables/ blown fibre ducts and to provide strain relief where necessary. Internal positive fibre management and fibre retention clips maintain a minimum 30mm bend radius throughout for up to a maximum of 50m of 1.1mm diameter cable.

TYPE	Height (H)	Width (W)	Depth (D)	Suitable for Cable Ø from/to	Splice Protector Type	Pigtail or Splitter	Connector Type	Colour	Article-No.
CCE-A1112XXX1/BK	263	130	37	2.5 - 8.5	3A	-	-	Black	857-01434
CCE-A11121SX1/BK						-	-		857-01436
CCE-A11121S11/BK						1 x Pigtail	SC		857-01439
CCE-A11121TX1/BK						-	SC-APC		857-01441
CCE-A11121T11/BK						1 x Pigtail			857-01443
CCE-A11121LX1/BK						-	LC		857-01445
CCE-A11121L11/BK						1 x Pigtail			857-01447
CCE-A11121AX1/BK						-	LC-APC		857-01449
CCE-A11121A11/BK						1 x Pigtail			857-01451
CCE-A1112XXX1/GY						-	-		857-01433
CCE-A11121SX1/GY						-	-		857-01435
CCE-A11121S11/GY						1 x Pigtail	SC		857-01437
CCE-A11121TX1/GY						-	SC-APC		857-01440
CCE-A11121T11/GY						1 x Pigtail			857-01442
CCE-A11121LX1/GY						-	LC		857-01444
CCE-A11121L11/GY						1 x Pigtail			857-01446
CCE-A11121AX1/GY	-	LC-APC	857-01448						
CCE-A11121A11/GY	1 x Pigtail		857-01450						

All dimensions in mm. Subject to technical changes.



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### CCP - Customer Connection Point

#### Fibre Optic External Enclosure

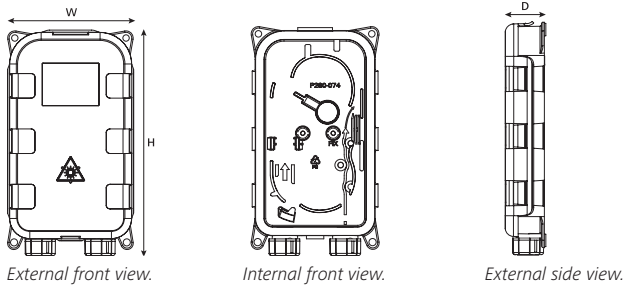
The Customer Connection Point closure has been designed to be used as an external building entry point. The closure can be wall/facade mounted or put in a buried chamber (located at the property boundary or just outside the point of access) providing an external building entry point and network test point.

#### Features and benefits

- Maximum capacity: 2 x SC Simplex or 1 x LC Duplex Adaptor
- Fibre management for 2 x 3A or 2 x ANT splices
- Integral positive fibre management and fibre storage capacity
- Separate inbound/outbound access points
- Fully detachable snap on lid
- IP68/IK08 Rated
- White option available



External view of the Customer Connection Point shown in White and Black.



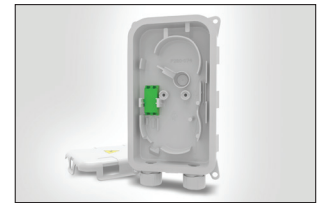
External front view.

Internal front view.

External side view.



Internal view with 1 SC-PC adaptor.



Internal view with 1 LC-APC adaptor.

#### Technical Description

The Customer Connection Point (CCP) supports 2 x SC Simplex or 1 x LC Duplex adaptor and provides splice management for 2 x 3A or 2 x ANT splices. The closure is manufactured from V0 and UV stable black polycarbonate and has a fully detachable snap on lid.

The closure has 2 separate cable access points which are sealed with a silicon cable entry kit (cable diameter range 4.0mm - 6.0mm) to maintain the IP68 rating. A range of alternative cable seals are available

on request. A gortex breather membrane is fitted to the lid to prevent condensation forming in the base of the closure. The CCP can also be surface mounted to the wall with an optional sealed rear cable entry/exit point enabling the drop cable to pass directly into the premises.

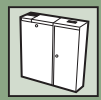
Internal fibre management features ensure that a 30mm minimum bend radius is maintained within the closure and provides fibre storage capacity for any excess fibre.

TYPE	Height (H)	Width (W)	Depth (D)	Suitable for Cable Ø from/to	Splice Protector Type	Connector Type	Colour	Article-No.
CCPA-M11XXX/BK-0	160	89	28	4.0 - 6.0	3A, Crimp (ANT)	-	Black	857-01106
CCPA-M111SP/BK-0						SC-PC		857-01107
CCPA-M111TP/BK-0						SC-APC		857-01108
CCPA-M111LP/BK-0						LC-PC		857-01109
CCPA-M111AP/BK-0						LC-APC		857-01110

All dimensions in mm. Subject to technical changes.







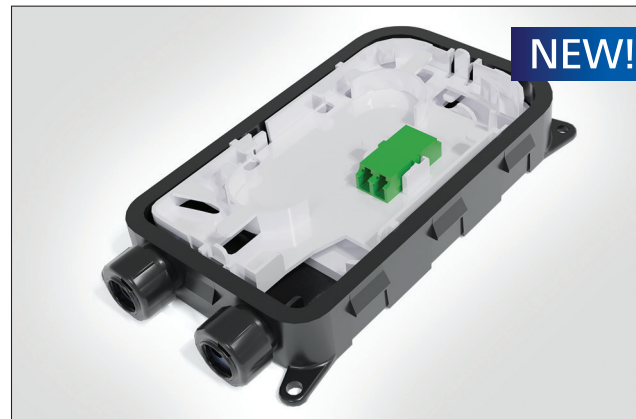
### CCPC - Customer Connection Point with Cassette

#### Fibre Optic External Enclosure

The Customer Connection Point with fibre splice tray and fibre management cassette (CCPC) is used as a Building Entry Point (BEP) to provide a fibre termination and network demarcation point external to the connected premise in a Fibre to the Home (FTTH) network. It also presents a network test point outside of the customer location.

#### Features and benefits

- Maximum capacity: 1 x SC Simplex or LC Duplex Adaptor
- Integral positive fibre management and fibre storage capacity
- Separate inbound/outbound access points
- Fully detachable snap on lid
- IP68/IK08 Rated
- Minimum fibre bend radius of 30mm throughout
- Fibre Management Tray supports 2 x 3A sleeves
- Fibre Management Cassette for mounting for 1 off SC SX or LC DX connections
- Mechanical fixing for cable strength member



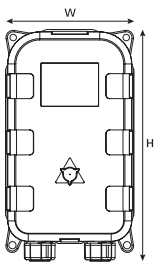
Internal View showing optional Fibre Management Cassette.



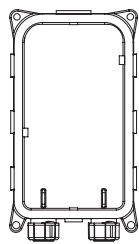
Closed External View.



Internal View showing Fibre Splice Tray.



External front view.



Internal front view.



External side view.

#### Technical Description

The CCPC has high (IP68) sealing performance and a compact design and can therefore be housed in a small subterranean access chamber (eg: "Toby Box") whilst protecting the fibre connection point from water or dirt contamination. Incoming and outgoing cables are sealed at the base of the CCPC using a quick twist lock sealing mechanism. An optional vent gauze feature prevents internal moisture condensation.

The CCPC is fitted with a fibre splice tray which provides management for the incoming/outgoing cables and 2 x 3A splices. The fibre management cassette supports a single LC Duplex or SC Simplex adaptor and provides

additional fibre management for up to 2 pigtails. The cassette and tray have been designed to ensure a 30mm minimum radius. Fibre retention fingers are used to keep the fibre in place and define the routing paths between levels.

The CCPC enclosure can be provided pre-loaded with adaptors and pigtails as required, the standard colour is black however, other options are available on request.

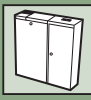
A range of cable seals are available from a minimum of 3.0mm to 9.0mm.

TYPE	Height (H)	Width (W)	Depth (D)	Suitable for Cable Ø from/to	Splice Protector Type	Pigtail or Splitter	Connector Type	Membrane	Colour	Article-No.	
CCPC-M11XXX/BK	160	89	28	4.0 – 6.0	3A	-	-	Membrane	Black	857-01878	
CCPC-M111AP/BK						2 x Pigtails	LC-APC			857-02307	
CCPC-M111LP/BK						2 x Pigtails	LC-PC			857-01905	
CCPC-M111TP/BK						1 x Pigtail	SC-APC			857-01896	
CCPC-M111SP/BK						1 x Pigtail	SC-PC	857-01887			
CCPC-X11XXX/BK						-	-	-		-	857-01916
CCPC-X111AP/BK						2 x Pigtails	LC-APC				857-01871
CCPC-X111LP/BK						2 x Pigtails	LC-PC				857-02012
CCPC-X111TP/BK						1 x Pigtail	SC-APC				857-02010
CCPC-X111SP/BK						1 x Pigtail	SC-PC				857-02008

All dimensions in mm. Subject to technical changes.



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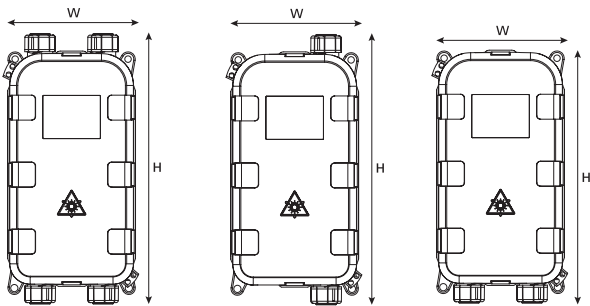
### CCP XL/XT - Customer Connection Point XL / XT

#### Fibre Optic External Enclosure

The CCP XL/XT has been designed to be used as an external building entry point. The enclosure can be wall/facade mounted or placed in to a buried chamber (located at the property boundary or just outside the point of access) providing an external building entry point and network test point.

#### Features and benefits

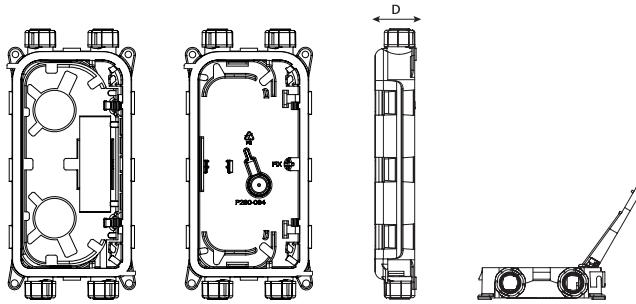
- Available in 3 Port Configurations
- Supports 2 x SC Simplex or LC Duplex Adaptors
- Separate splice tray with 3A splice bridge
- Maximum 13 x 3A splices
- Separate inbound/outbound access points
- Rear Entry Port
- Tamper-proof lock mount
- IP68/IK08 Rated



External front view of 4 Port.

External front view of 2 Port Inline.

External front view of 2 Port.



Internal front view with tray.

Internal front view.

External side view.

External base view.



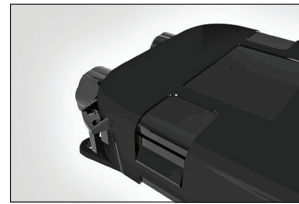
Angled view of the 2 Port, 4 Port and 2 Port Inline with optional splice tray.



Closed external view.



Internal view showing position of adaptors.



Closed external view showing tamper-proof lock mount.



Internal view showing optional splice tray.

#### Technical Description

The CCP XL/XT is available in 3 port configurations and supports 2 x SC Simplex or LC Duplex adaptors. The enclosure is fitted with a splice tray with a 3A splice bridge (maximum 12 x 3A splices), and each cable access point is sealed with a cable entry kit to maintain the IP68 rating. A gortex breather membrane can be fitted to the lid to prevent condensation forming in the base of the closure due to temperature fluctuations. Internal fibre management features ensure that a 30mm

minimum bend radius is maintained within the closure and provides storage capacity for any excess fibre.

The base of the CCP XL/XT has wall mounting points in each corner and the lid snaps in to place using lid retaining clips. The closure also has a tamper-proof lock mount which can be used to provide additional security if required.

A range of cable seals are available from a minimum from 3.0 - 9mm.





TYPE	No. of Ports	Height (H)	Width (W)	Depth (D)	Suitable for Cable Ø from/to	Pigtail or Splitter	Connector Type	Splice Tray	Article-No.
CCPXX-X1111XXXXXX/BK	4 Port	188	94	28.5	4.0 - 6.0	-	-	-	857-01872
CCPXX-X1111X1SP001/BK						1 x Pigtail	SC-PC		857-01873
CCPXX-X1111X2SP002/BK						2 x Pigtails			857-01874
CCPXX-X1111X1TP001/BK						1 x Pigtail	SC-APC		857-01875
CCPXX-X1111X2TP002/BK						2 x Pigtails			857-01876
CCPXX-X1111X1LP002/BK						2 x Pigtails	LC-PC		857-01877
CCPXX-X1111X1AP002/BK						2 x Pigtails	LC-APC		857-01879
CCPXT-X1111XXXXXX1X/BK						4.0 - 6.0	-		-
CCPXT-X1111X1SP0011X/BK					1 x Pigtail		SC-PC	857-01927	
CCPXT-X1111X2SP0021X/BK					2 x Pigtails			857-01928	
CCPXT-X1111X1TP0011X/BK					1 x Pigtail		SC-APC	857-01929	
CCPXT-X1111X2TP0011X/BK					2 x Pigtails			857-01930	
CCPXT-X1111X1LP0021X/BK					2 x Pigtails		LC-PC	857-01931	
CCPXT-X1111X2LP0041X/BK					4 x Pigtails		LC-APC	857-01932	
CCPXT-X1111X1AP0021X/BK					2 x Pigtails			857-01933	
CCPXT-X1111X2AP0041X/BK					4 x Pigtails	857-01934			
CCPXX-X11XXXXXX/BK	2 Port	188	94	28.5	4.0 - 6.0	-	-	-	857-01890
CCPXX-X11XX1SP001/BK						1 x Pigtail	SC-PC		857-01891
CCPXX-X11XX2SP002/BK						2 x Pigtails			857-01892
CCPXX-X11XX1TP001/BK						1 x Pigtail	SC-APC		857-01893
CCPXX-X11XX2TP002/BK						2 x Pigtails			857-01894
CCPXX-X11XX1LP002/BK						2 x Pigtails	LC-PC		857-01895
CCPXX-X11XX1AP002/BK						2 x Pigtails	LC-APC		857-01897
CCPXT-X11XXXXXX1X/BK						4.0 - 6.0	-		-
CCPXT-X11XX1SP0011X/BK					1 x Pigtail		SC-PC	857-01945	
CCPXT-X11XX2SP0021X/BK					2 x Pigtails			857-01946	
CCPXT-X11XX1TP0011X/BK					1 x Pigtail		SC-APC	857-01947	
CCPXT-X11XX2TP0011X/BK					2 x Pigtails			857-01948	
CCPXT-X11XX1LP0021X/BK					2 x Pigtails		LC-PC	857-01949	
CCPXT-X11XX2LP0041X/BK					4 x Pigtails		LC-APC	857-01950	
CCPXT-X11XX1AP0021X/BK					2 x Pigtails			857-01951	
CCPXT-X11XX2AP0041X/BK					4 x Pigtails	857-01952			
CCPXX-X1X1XXXXXX/BK	2 Port Inline	188	94	28.5	4.0 - 6.0	-	-	-	857-01908
CCPXX-X1X1XX1SP001/BK						1 x Pigtail	SC-PC		857-01909
CCPXX-X1X1XX2SP002/BK						2 x Pigtails			857-01910
CCPXX-X1X1XX1TP001/BK						1 x Pigtail	SC-APC		857-01911
CCPXX-X1X1XX2TP002/BK						2 x Pigtails			857-01912
CCPXX-X1X1XX1LP002/BK						2 x Pigtails	LC-PC		857-01913
CCPXX-X1X1XX1AP002/BK						2 x Pigtails	LC-APC		857-01915
CCPXT-X1X1XXXXXX1X/BK						4.0 - 6.0	-		-
CCPXT-X1X1XX1SP0011X/BK					1 x Pigtail		SC-PC	857-01963	
CCPXT-X1X1XX2SP0021X/BK					2 x Pigtails			857-01964	
CCPXT-X1X1XX1TP0011X/BK					1 x Pigtail		SC-APC	857-01965	
CCPXT-X1X1XX2TP0011X/BK					2 x Pigtails			857-01966	
CCPXT-X1X1XX1LP0021X/BK					2 x Pigtails		LC-PC	857-01967	
CCPXT-X1X1XX2LP0041X/BK					4 x Pigtails		LC-APC	857-01968	
CCPXT-X1X1XX1AP0021X/BK					2 x Pigtails			857-01969	
CCPXT-X1X1XX2AP0041X/BK					4 x Pigtails	857-01970			

All dimensions in mm. Subject to technical changes.



# FTTx Broadband Connectivity

## Internal Fibre Enclosures

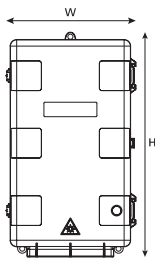
### MDU/MBU Series - S1 XS

#### Fibre Optic Internal / External Enclosure

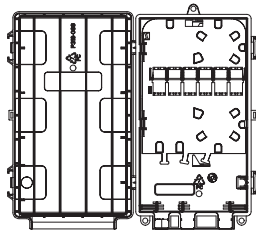
Designed for deployment within the last mile of the FTTx network. The S1 XS can be used within a Point to Point (P2P) or Point to Multi Point (P2MP) network with the addition of PLC splitters, connectorised or bare end, pigtailed and adaptors.

#### Features and benefits

- 12 Customer Connections
- 6 SC Simplex/LC Duplex connectors
- Up to 30 fibre splices
- Positive fibre management (30mm minimum bend radius)
- Splitter accommodation
- IP54 rating
- UV Stable
- Low Profile
- Tamper-proof



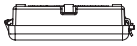
External front view.



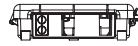
Internal front view.



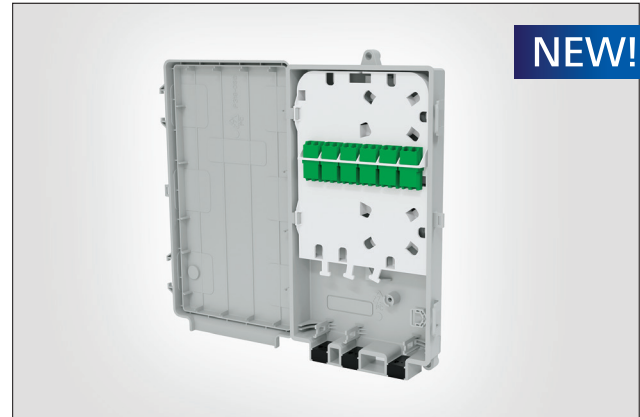
External side view.



External top view.



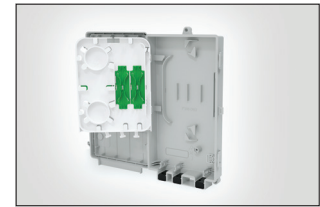
External base view.



Internal view of the S1 XS Enclosure.



External view of the S1 XS Enclosure.



Internal view of the S1 XS Enclosure.

#### Technical Description

The S1 XS is V0 rated with an IP54 sealing performance. With up to 6 entry/exit ports at the bottom of the enclosure which are suitable for cables or ducts up to a maximum diameter of 8mm. A loop through facility allows for single fibre elements to be removed and spliced whilst the remaining fibres can be fed on to the next connection point.

Mechanical fixing is provided to secure all incoming/outgoing cable or blown fibre ducts and to provide strain relief where necessary. Internal positive fibre management and fibre retention clips maintain a minimum 30mm bend radius throughout.

The S1 XS manages up to 6 SC simplex or LC duplex adaptors and has features to secure a maximum of 30 fibre splices.

The lid is hinged allowing quick and clear access to the internal fibre for splicing and termination and the lid can be replaced if damaged.

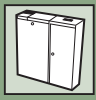
The S1 XS can be supplied pre-loaded with fibre adaptors and pigtailed as required.

TYPE	Height (H)	Width (W)	Depth (D)	Splice Protector		Pigtail or Splitter	Connector Type	Splice Tray	Article-No.
				Qty	Type				
MDU-S1XS-T16AP21X	233	135	37	2	3A	12 x Pigtailed	6 x LC/APC DX	Splice Tray	857-02220
MDU-S1XS-T15AP21X				2		10 x Pigtailed	5 x LC/APC DX		857-02226
MDU-S1XS-T14AP21X				2		8 x Pigtailed	4 x LC/APC DX		857-02227
MDU-S1XS-T13AP11X				1		6 x Pigtailed	3 x LC/APC DX		857-02228
MDU-S1XS-T12AP11X				1		4 x Pigtailed	2 x LC/APC DX		857-02229
MDU-S1XS-T11AP11X				1		2 x Pigtailed	1 x LC/APC DX		857-02230
MDU-S1XS-T16AS21S				2	SP/3A Bridge	3 x 1:4 Bare End to LC/APC Splitter	6 x LC/APC DX		857-02221
MDU-S1XS-T14AS21S				2		2 x 1:4 Bare End to LC/APC Splitter	4 x LC/APC DX		857-02223
MDU-S1XS-T12AS11S				1		1 x 1:4 Bare End to LC/APC Splitter	2 x LC/APC DX		857-02225
MDU-S1XS-T1XXX21X				2	3A	-	-		857-02222
MDU-S1XS-X1XXX31X				3		-	-		-

All dimensions in mm. Subject to technical changes.







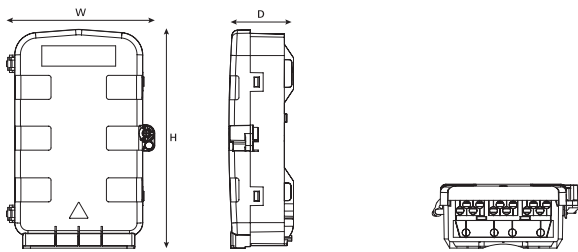
### MDU/MBU Series - S1

#### Fibre Optic Internal / External Enclosure

Designed for deployment within the last mile of the FTTx network. The S1 can be used within a Point to Point (P2P) or Point to Multi Point (P2MP) network with the addition of PLC splitters, connectorised or bare end, pigtailed and adaptors.

#### Features and benefits

- Separation of incoming feeder cable from customer drops
- 12 SC or LC Simplex customer connections
- 2 inbound / 12 outbound ports
- Positive fibre management throughout (30mm min bend radius)
- IP55/IK08/V0 rating
- UV Stable
- Tamper proof
- Wall/pole mounting features
- Low profile



External front view.

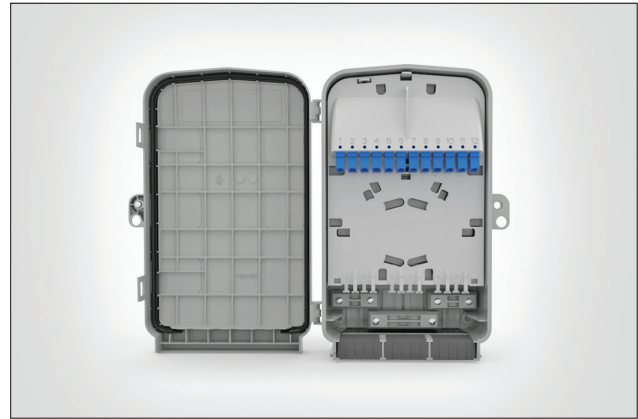
External side view.

External base view.

#### Technical Description

A 241 x 154 x 72mm (H x W x D) enclosure manufactured from UV stable light grey (RAL7035) polycarbonate with an IP55, IK08 and V0 rating.

The S1 has 3 separate management areas for inbound cable, fibre splice management and drop cable (customer connection) management. The inbound cable management area has a dedicated cable entry port which supports both cable end and mid-span applications with loop storage capacity for up to 1.5m of excess fibre and the entry port is sealed with a cable entry kit (cable diameter 10mm - 15mm) to maintain the IP55 rating. The fibre splice management area has capacity for a maximum of 12 x 3A splices and maintains positive fibre management (30mm minimum bend radius) throughout. The tray has a crossover facility



Internal view of the S1 Enclosure.



Internal view showing the drop cable management tray.



External view of the S1 Enclosure.

which allows for alternative routing requirements and a fibre storage capacity of 1.5m of 250µm fibre and 1.0m of 900µm fibre.

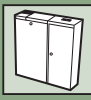
The drop cable management area accommodates 12 LC or SC Simplex adaptors for connection to industry standard pre-terminated drop cables and a PLC splitter (60mm x 7mm x 4mm) can be fitted on the inside of the management area. The drop cable management area cover prevents access to the network cables and splicing area and the adaptors are angled and spaced to allow for inspection prior to connection. Twelve anchor guides are provided for securing the drop cables (maximum diameter 6.0mm) and an integral seal maintains the IP55 rating.

TYPE	Height (H)	Width (W)	Depth (D)	Suitable for Cable Max. Ø	Splice Protector Type	Pigtail or Splitter	Connector Type	Article-No.	
MDU-S1-03LC	241	154	72	Up to 8 mm	3A	-	-	857-01826	
MDU-S1-03SC							-	857-01779	
MDU-S1-03SC12SA1						12 x Pigtailed	12 x SC	857-01780	
MDU-S1-03SC12TA1							12 x SC-APC	857-01782	
MDU-S1-03LC12RA1							12 x LC-APC	857-01777	
MDU-S1-03LC12PA1							12 x LC	857-01778	
MDU-S1-04LC				Up to 16 mm		-	-	857-01783	
MDU-S1-04SC							-	857-01786	
MDU-S1-04SC12SA1							12 x Pigtailed	12 x SC	857-01787
MDU-S1-04SC12TA1								12 x SC-APC	857-01789
MDU-S1-04LC12PA1								12 x LC	857-01785
MDU-S1-04LC12RA1								12 x LC-APC	857-01784

All dimensions in mm. Subject to technical changes.



View 3D Model  
Scan with your smart phone



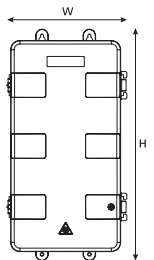
### MDU/MBU Series - S2

#### Fibre Optic Internal / External Enclosure

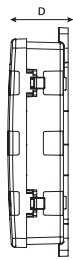
The HellermannTyton S2 provides a cost effective secure solution for installing pre-terminated drop cables in Fibre to the Home (FTTH) applications.

#### Features and benefits

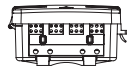
- Maximum capacity 24 LC / SC Simplex Adaptors
- 4 Inbound/24 Outbound ports
- Separation of inbound fibre from connectorised drop cables
- Positive fibre management to maintain consistent 30mm minimum bend
- PLC splitter accommodation (60mm x 7mm x 4mm)
- Maximum of 48 3A splices
- IP55 and IK08 rating
- Pole or building/facade mounted
- Low profile
- Low smoke material



External front view.



External side view.



External base view.

#### Technical Description

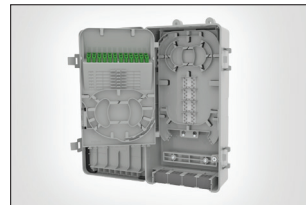
The S2 is an IP55/IK08 rated enclosure manufactured from light grey (RAL 7035) polycarbonate with a detachable lid allowing unrestricted access to all fibre management areas. The enclosure has 3 separate management areas for inbound cable, fibre splice management and drop cable management. The inbound cable management area has a dedicated cable entry port with loop storage capacity.

The fibre splice management area has capacity for a maximum of 48 x 3A splices and maintains positive fibre management throughout.



**NEW!**

Internal view of the S2 with 24 LX SX connections.



Drop management tray shown open.



External view.

The drop cable management area presents 24 LC Simplex adaptors for connection to industry standard pre-terminated drop cables and a maximum of 6 PLC splitters can be fitted on the inside of the management area.

The drop cable management area cover prevents access to the network cables and splicing area and the adaptors are angled to allow for inspection prior to connection. The 12 anchor points secure the drop cables and an integral seal maintains the IP55 rating.

TYPE	Height (H)	Width (W)	Depth (D)	Max. Cable Diameter Ø		Splice Protector Type	Pigtail or Splitter	Connector Type	Article-No.
				Incoming	Drop Cable				
MDU-S2-24LC	342	177	90	7	4	3A	-	24 x LC/PC	857-02231
MDU-S2-24LCA1							24 x Pigtails		857-02232
MDU-S2-24LC-3X1:8							3 x 1:8		857-02259
MDU-S2-24LC/APC							-	24 x LC/APC	857-02233
MDU-S2-24LC/APCA1							24 x Pigtails		857-02234
MDU-S2-24LC/APC-3X1:8							3 x 1:8		857-02025
MDU-S2-24SC							-	24 x SC/PC	857-02235
MDU-S2-24SCA1							24 x Pigtails		857-02236
MDU-S2-24SC-3X1:8							3 x 1:8		857-02260
MDU-S2-24SC/APC							-	24 x SC/APC	857-02237
MDU-S2-24SC/APCA1							24 x Pigtails		857-02238
MDU-S2-24SC/APC-3X1:8							3 x 1:8		857-02239

All dimensions in mm. Subject to technical changes.





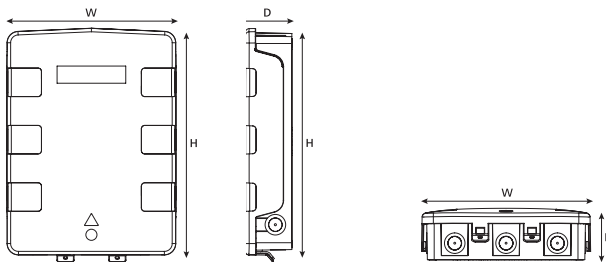
### MDU/MBU Series - S3

#### Fibre Optic External/Internal Enclosure

Designed for deployment within the last mile of the FTTx network. The S3 can be used within a Point to Point (P2P) or Point to Multi Point (P2MP) with the addition of PLC splitters, connectorised or bare end, pigtails and adaptors.

#### Features and benefits

- Maximum 96 Fibre Splices
- IR Angled Fibre Management System with provision for 3 PLC Splitters
- 4 SE or 8 SC-B IR Trays with 3A Splice Bridges
- LC or SC connections
- 7 Input/Output Positions
- In-built spirit level
- IP54/IK08
- UV Stable
- V0 Rating

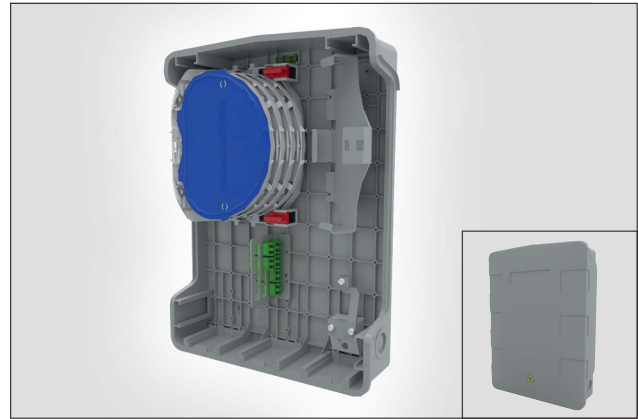


External front view. External side view. External base view.

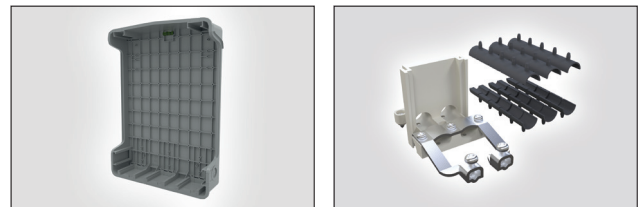
#### Technical Description

The S3 enclosure is configured with the HellermannTyton 250µm IR Management System. The management system accommodates 4 SE-IR trays giving a maximum of 48 3A fibre splices and 3 PLC splitters. The position of the fibre management system allows for easy access for the routing of fibre on to the trays. The trays and fibre optic routing modules 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 the fibre elements on 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 retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.



Internal view of the MDU S3 Connectorised Enclosure (detail with lid on).



Internal view of the MDU S3 Enclosure. Seals Available. See page 68.

A 340 x 247 x 76mm (H x W x D) enclosure manufactured in light grey (RAL 7035) ABS (Acrylonitrile Butadiene Styrene). The enclosure is UV stable with an IP54, IK08 and V0 rating.

Designed with 7 input/output ports, 3 across the bottom, 2 on the top and 1 on each side.

A 100 x 25mm inset position on the front cover allows for a customer logo to be moulded in to the enclosure.

The S3 is a modular solution and can be configured in a number of ways to suit the deployment of a specific project or installation. Options include splice trays, loop storage, connectorised versions, splitter accommodation and loop through provision.

**A range of seals and accessories for the S3 enclosure are available - See pages 66 to 68.**

TYPE	Tray Type	Tray Quantity	Splice Capacity	Splice Protector Type	Connector Type	Basket Size	Article-No.
MDU-S3	-	-	-	-	-	-	857-01480
MDU-S3-BXN	SC-B MKI	8	96	3A	-	Small	857-01483
MDU-S3-XXN					-	-	857-01484
MDU-S3-XWX-CP06L31:4	SE-IR MKI	4	48		LC-PC	-	857-01489
MDU-S3-BWX-CP06L31:4						Small	857-01490
MDU-S3-XWX-CP12L31:8						-	857-01491
MDU-S3-BWX-CP12L31:8					Small	857-01492	
MDU-S3-XWX					-	857-01481	
MDU-S3-BWX					Small	857-01482	
MDU-S3-XWX-CP06LA1	LC-PC	-	857-01485				
MDU-S3-BWX-CP06LA1		Small	857-01486				
MDU-S3-XWX-CP12LA1		-	857-01487				
MDU-S3-BWX-CP12LA1		Small	857-01488				

All dimensions in mm. Subject to technical changes.



View 3D Model  
Scan with your smart phone



### MDU/MBU Series - S4

#### Fibre Optic External/Internal Enclosure

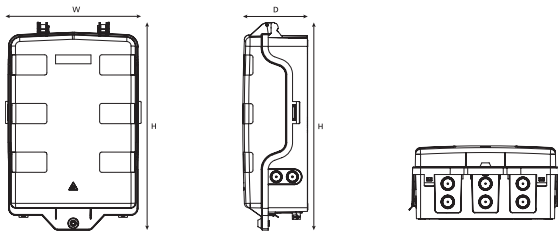
The HellermannTyton S4 wall mountable enclosures are suitable for both internal and external applications and have been developed for use within the last mile of the FTTX network.

The S4 has been designed to accommodate the HellermannTyton IR Fibre Management system and offers the adaptability of point to multi point (P2MP) or point to point (P2P) configuration.

The enclosure can be supplied pre-connectorised with up to 24x LC duplex adaptors (48 Fibres or 24x SC simplex adaptors (24 fibres). A splice only configuration can offer up to 240 fibres.

#### Features and benefits

- IR Fibre Management System
- 10 x SE-IR MKII or 20 x SC-B MKII trays
- 48 Fibres with LC Duplex
- 24 Fibres with SC Simplex
- 240 Fibres splice only
- Loop Storage Management
- IP54/IK08 Rating
- V0 Rating
- 24 way drop seal cable entry
- Works with 250µm, 600µm, 900µm fibre
- Cable anchor brackets
- Optional rear storage mounting bracket
- Splitter configurations available



External front view.

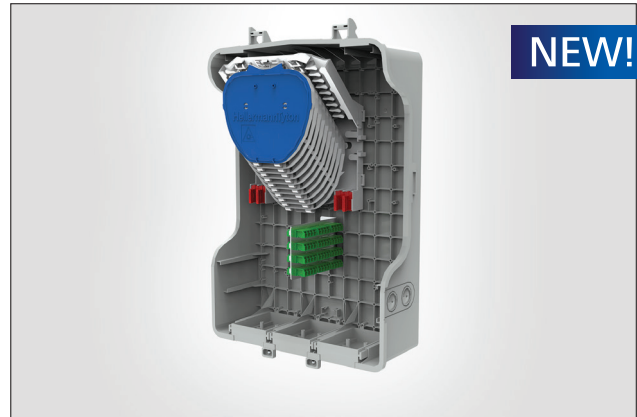
External side view.

External base view.

#### Technical Description

The S4 can be configured the HellermannTyton angled IR Fibre Management System which can accommodate a maximum of 10 x SE-IR MKII trays, which offer up to 24 x 3A splices double stacked or 20 x SC-B MKII trays which offer up to 12 x 3A splices.

The S4 is compatible with 250µm, 600µm and 900µm fibre. The enclosure is 470mm x 307mm x 147mm (H x W x D) and manufactured in light grey (RAL 7035), UV stable ABS (Acrylonitrile Butadiene Styrene) and has an IP54, IK08 and V0 rating.

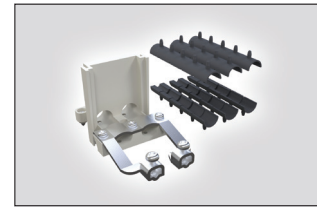


**NEW!**

Internal view of the MDU S4.



External view.



Seals Available. See page 68.

Features Drop cable entry via the HellermannTyton 24 way drop seal. Each entry point will accept 7mm OD. Backbone cable entry via the loop through gland seal which accepts 3-14mm OD cable.

A range of seals and accessories for the S4 enclosure are available See pages 66 to 68.

TYPE	Height (H)	Width (W)	Depth (D)	Tray		Splice Capacity	Splice Protector Type	Connector Type	Basket Size	Article-No.
				Type	Qty					
MDU-S4	471	307	147	-	-	-	-	-	-	857-02242
MDU-S4-BWA				SE-IR MKII	10	240	3A	-	Small	857-02243
MDU-S4-XWA				-	-			-	857-02244	
MDU-S4-BAN				SC-B MKII	20	-	Small	857-02247		
MDU-S4-XAN				-	-	-	-	857-02248		
MDU-S4-BWA-CP24AA1				SE-IR MKII	10	48	LC/APC	Small	857-02251	
MDU-S4-XWA-CP24AA1				-	-	857-02252				
MDU-S4-BWA-CP24SA1				SC/PC	Small	857-02253				
MDU-S4-XWA-CP24SA1				-	-	857-02254				
MDU-S4-BAN-CP24AA1				LC/APC	Small	857-02255				
MDU-S4-XAN-CP24AA1				-	-	857-02256				
MDU-S4-BAN-CP24SA1				SC/PC	Small	857-02257				
MDU-S4-XAN-CP24SA1				-	-	857-02258				

All dimensions in mm. Subject to technical changes.







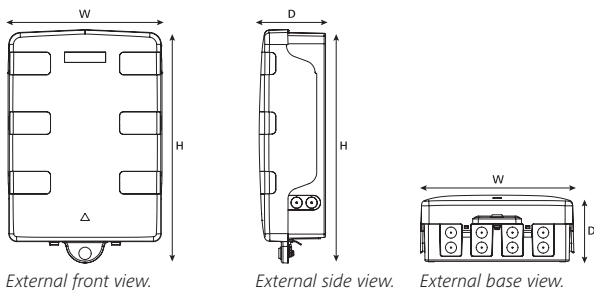
### MDU/MBU Series - S5

#### Fibre Optic External/Internal Enclosure

Designed for deployment within the last mile of the FTTx network. The S5 can be used within a Point to Point (P2P) or Point to Multi Point (P2MP) with the addition of PLC splitters, connectorised or bare end, pigtails and adaptors.

#### Features and benefits

- Maximum 432 Fibre Splices
- IR Fibre Management System
- 18 SE/36 SC-B or 9 x 900µm Trays
- LC or SC connections
- Multiple Loop Storage Management options
- 8 Dual Input/Output positions
- Strength Member Anchor
- In-built spirit level
- IP54/IK08 Rating
- UV Stable
- V0 Rating



External front view.

External side view.

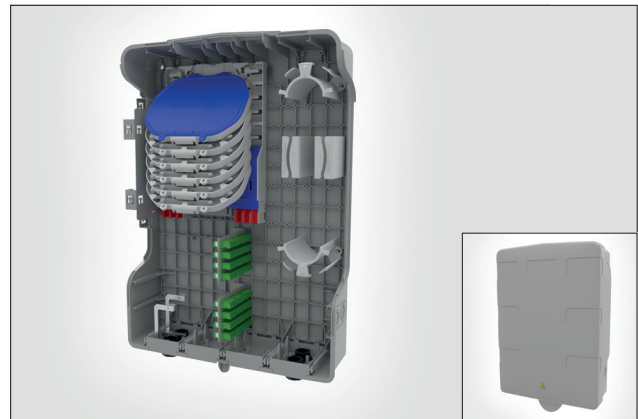
External base view.

#### Technical Description

The S5 can be configured with either a 250µm or 900µm IR Management System. The position of the fibre management system allows for easy access for the routing of fibre on to the trays. The trays and fibre optic routing modules 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 the fibre elements on 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 retaining block and tray retaining clips are coloured red to aid in identification if they are dropped.

A 568 x 375 x 165mm (H x W x D) enclosure manufactured in light grey (RAL 7035) ABS (Acrylonitrile Butadiene Styrene). The enclosure is UV stable with an IP54, IK08 and V0 rating.



Internal view of the S5 Connectorised Enclosure (detail with lid on).



Internal view of the S5 Splice Enclosure. Seals Available. See page 68.

Designed with 8 dual input/output ports, 4 across the bottom, 2 on the top and 2 on each side.

A 100 x 25mm inset position on the front cover allows for a customer logo to be moulded in to the enclosure.

The S5 is a modular solution and can be configured in a number of ways to suit the deployment of a specific project or installation. Options include splice trays, loop storage, connectorised versions, splitter accommodation and loop through provision. The S5 can be used with both 900 and 250µm.

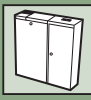
**A range of seals and accessories for the S5 enclosure are available See page 66 to 68.**

TYPE	Height (H)	Width (W)	Depth (D)	Tray Type	Tray Quantity	Splice Capacity	Splice Protector Type	Connector Type	Basket Size	Article-No.
MDU-S5	568	375	165	-	-	-	-	-	-	857-01493
MDU-S5-LLXN				SC-B MKI	36	432	-	-	857-01495	
MDU-S5-LLWX				SE-IR MKI	18	216	-	-	857-01494	
MDU-S5-BXMX06CS048R48A1				Versatile Routing ME	6	72	3A	LC-APC	Small	857-01496
MDU-S5-LBMX01CP024B96A1										857-01497
MDU-S5-LXMX06CS048R031:8										857-01498
MDU-S5-LBMX02CP024B121:8										857-01499

All dimensions in mm. Subject to technical changes.



View 3D Model  
Scan with your smart phone



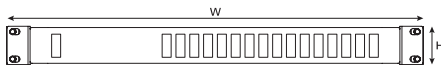
### Rack Mount Splitter Distribution Panels

#### LC-APC & SC-APC Connectivity

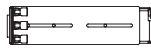
HellermannTyton Rack Mount Splitter Panels have been designed to house PLC splitter technology in a robust and user friendly 19" footprint. This allows a variety of splitter configurations to be easily installed into environments that utilize industry standard 19" mounting profiles whilst taking up minimal real estate within the enclosure.

#### Features and benefits

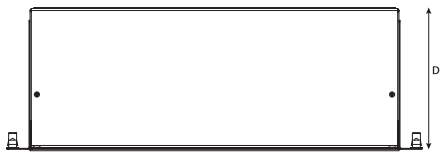
- Industry standard 19" fixed panel format
- Factory configured panels
- Simple 'plug and play' design
- Available in LC/APC Quad or SC/APC Duplex
- Multiple splitters in one housing
- Minimal impact on enclosure real estate
- Suitable for FTTx, PON, LAN



External front view.



External side view.



External top view.

#### Technical Description

The Rack Mount Splitter Panel housing is made from aluminium and powder coated in black. This not only makes the panel lightweight but also allows for use in external cabinet applications.

The design is consistent with traditional fibre patch panels used within a LAN or data centre environment. The splitters are configured and managed in a factory environment and protected by a secure panel lid.

Depending upon the configuration each panel houses a single or multiple array of PLC splitters terminated with either LC/APC or SC/APC



External view of the Fibre Splitter Panel with 1 x 2:64 LC Quad Adaptors.



Fibre Splitter Panel with 1 x 1:32 SC Duplex Adaptors.

connectivity onto 900um fibre. Every splitter is tested to 1310nm and 1550nm with a maximum connector loss of 0.25db.

HellermannTyton take a unique approach to rack mount splitter panels by using LC/APC quad adaptors or SC/APC duplex adaptors. This allows for a higher density of splitters to be utilized in such a small space.

Each configuration is assembled with a Traffolyte label which clearly indicates the sequenced input and output ports.

TYPE	Height (H)	Width (W)	Depth (D)	Connector Type	No. of Splitters	No. of Inputs	No. of Outputs	Article-No.
RMSP-LCAPQD-1X1:32/BK	44	483	165	LC-APC QD	1 x 1:32 Splitter.	1	32	857-02193
RMSP-LCAPQD-1X1:64/BK					1 x 1:64 Splitter.		64	857-02194
RMSP-LCAPQD-1X2:32/BK					1 x 2:32 Splitter.	2	32	857-02195
RMSP-LCAPQD-1X2:64/BK					1 x 2:64 Splitter.		64	857-02196
RMSP-LCAPQD-2X2:16/BK					2 x 2:16 Splitters.	16	857-02197	
RMSP-LCAPQD-2X1:32/BK					2 x 1:32 Splitters.	1	32	857-02198
RMSP-LCAPQD-3X1:8/BK					3 x 1:8 Splitters.		8	857-02199
RMSP-LCAPQD-4X1:8/BK					4 x 1:8 Splitters.		8	857-02200
RMSP-LCAPQD-8X1:4/BK					8 x 1:4 Splitters.		4	857-02201
RMSP-LCAPQD-8X1:8/BK					8 x 1:8 Splitters.	8	857-02202	
RMSP-LCAPQD-16X1:4/BK					16 x 1:4 Splitters.	4	857-02203	
RMSP-SCAPDX-1X1:32/BK					SC-APC DX	1 x 1:32 Splitter.	2	32
RMSP-SCAPDX-1X2:32/BK				1 x 2:32 Splitter.		32		857-02205
RMSP-SCAPDX-2X2:16/BK				2 x 2:16 Splitters.		16	857-02206	
RMSP-SCAPDX-3X1:8/BK				3 x 1:8 Splitters.		1	8	857-02207
RMSP-SCAPDX-4X1:8/BK				4 x 1:8 Splitters.			8	857-02208

All dimensions in mm. Subject to technical changes.





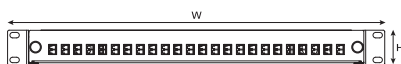
## Telecom Grade Fibre Distribution Panels

### LC-APC & SC-APC Connectivity

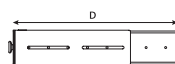
HellermannTyton traditional 19" rack mount sliding patch panels assembled with telecom grade connectivity. Suitable for FTTX and Telecoms applications where 19" racks and enclosures are being used for fibre distribution.

#### Features and benefits

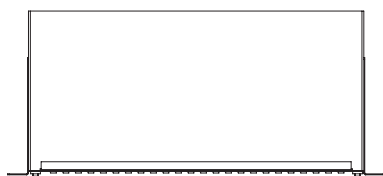
- 19" 1U Sliding Panels for easy access when terminating
- Factory configured
- On board Fibre Optic Management (FOM)
- Multiple cable entry options and securing points
- Available up to 96 fibre (LC Quad) or 48 fibre (LC duplex / SC Duplex)
- Supplied with Rack Snap mounting fixings
- Suitable for FTTx, PON, LAN



External front view of LC Duplex.



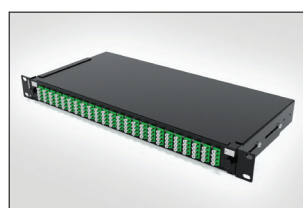
External side view of LC Duplex.



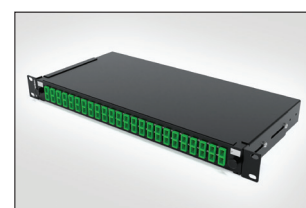
External top view of LC Duplex.



External view of the Fibre Panel with 24 LC Duplex Adaptors.



Fibre Panel with 24 LC Quad Adaptors.



Fibre Panel with 24 SC Duplex Adaptors.

### Technical Description

The Telecom Grade Fibre Distribution Panels present up to a maximum of 96 fibres (using LC Quad Adaptors) or 48 fibres (using LC Duplex or SC Duplex Adaptors) in 1U of space. Each panel comes with the correct number of corresponding 1m 900um pigtails as standard. The 1U sliding drawer can be locked into position using two simple push catches.

When fully extended the drawer is designed to lower to 45° giving access to the panel. The drawer can also be locked to a lower maximum of 10°, providing the perfect working platform during installation and maintenance, by sliding the drawer sideways.

The rear drawer offers a number of cable options including 4 x 10mm and 2 x 20mm gland holes and has a removable section in the centre for specialist cables and patch leads.

In addition, the base of the tray has cable securing points and cable management holes for securing the Fibre Optic Management Kit (FOM) that is included. Adjustable mounting ears allow the panel to be positioned within the rack or frame

TYPE	Height (H)	Width (W)	Depth (D)	Connector Type	No. of Ports	Pigtails Included	Article-No.	
FBPDBKL-LCAPDX-8VF1PT/T	44	483	165	LC-APC DX	16	Yes	855-00296	
FBPDBKL-LCAPDX-12VF1PT/T					24		855-00297	
FBPDBKL-LCAPDX-16VF1PT/T					32		855-00298	
FBPDBKL-LCAPDX-24VF1PT/T					48		855-00293	
FBPDBKL-LCAPQD-8VF1PT/T				LC-APC QD	32		855-00299	
FBPDBKL-LCAPQD-12VF1PT/T					48		855-00300	
FBPDBKL-LCAPQD-16VF1PT/T					64		855-00301	
FBPDBKL-LCAPQD-24VF1PT/T					96		855-00302	
FBPDBKL-SCAPSX-8VF1PT/T				SC-APC SX	8		855-00303	
FBPDBKL-SCAPSX-12VF1PT/T					12		855-00304	
FBPDBKL-SCAPSX-16VF1PT/T					16		855-00305	
FBPDBKL-SCAPSX-24VF1PT/T					24		855-00306	
FBPDBKL-SCAPDX-8VF1PT/T					SC-APC DX		16	855-00307
FBPDBKL-SCAPDX-12VF1PT/T							24	855-00308
FBPDBKL-SCAPDX-16VF1PT/T							32	855-00309
FBPDBKL-SCAPDX-24VF1PT/T							48	855-00310

All dimensions in mm. Subject to technical changes.



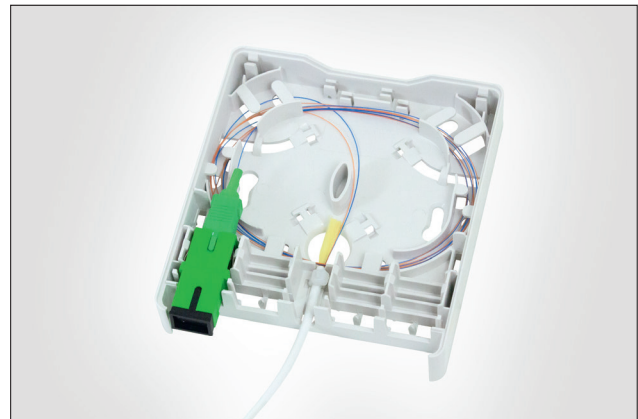
### Fibre Wall Outlet with Pre-terminated Internal Connecting Cable

#### Fibre Optic Internal Enclosure

The wall mounted fibre optic wall outlet with a pre-terminated connection cable provides a internal connection point in the end user house or apartment. The pre-terminated cable allows the installer to complete all splicing of fibre cable away from the customer premises.

#### Features and benefits

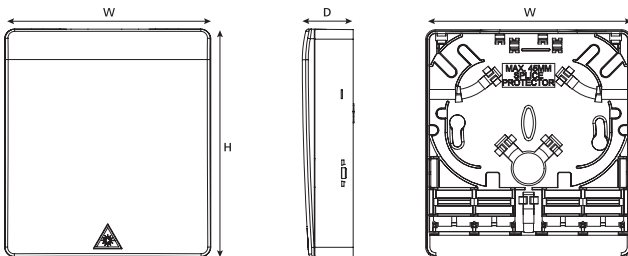
- Maximum capacity: 4 SC Simplex or LC Duplex adaptors
- Pre-terminated internal connection cable 5m - 100m
- Install directly on the wall or onto a flush-mount back box
- Cable entry at the base or through the rear of the unit
- Accommodates upto 4 splice protectors (upto 45mm)
- Quality surface finish
- Tamper-proof latches
- Positive fibre management to ensure a 30mm minimum bend radius
- V0 rated
- IP20 rated



Fibre Wall Outlet with 1 x SC APC adaptor and pre-terminated drop cable.



Unloaded view.



External front view.

External side view.

Internal front view.

#### Technical Description

The Terminayed Fibre Wall Outlet provides a fibre optic cable connection point designed to provide the final connection to the router or active equipment.

The wall outlet is a small single socket size outlet which is manufactured from Polycarbonate + ABS V0 rated material. The outlet has cable entry positions at the base, rear and on each side. Designed with fibre management features which ensure a 30mm minimum bend radius and cable tie fixings at all entry ports to provide strain relief. Tamper-proof latches on the side of the outlet secure the cover to the base and the

overhang restricts the removal of any adaptors and connectors when the cover is in place.

Supplied with 4 output port covers which can be used to provide additional shielding of the adaptors prior to fitting the customer connection cable.

The base has adjustable keyholes to allow for ease of positioning and installation and each outlet is supplied with a standard fixing kit.

The outlet can be supplied either unloaded, with a pre-terminated connector to bare end connection cable or with adaptors and pigtails.

TYPE	Height (H)	Width (W)	Depth (D)	Splice Protector Type	Connector Type	Description	Article-No.
FWOA-SXW21-010/WH	85	85	21	3A, ANT	SC	FWO with 1 x SC SX PC Adaptor and 1 x 10m 2 fibre pre-terminated cable.	857-01352
FWOA-SSW22-010/WH						FWO with 2 x SC SX PC Adaptors and 1 x 10m 2 fibre pre-terminated cable.	857-01365
FWOA-LXW21-010/WH					LC	FWO with 1 x LC DX PC Adaptor and 1 x 10m 2 fibre pre-terminated cable.	857-01391
FWOA-LXW22-010/WH						FWO with 2 x LC DX PC Adaptors and 1 x 10m 2 fibre pre-terminated cable.	857-01417
FWOA-VXW21-010/WH					SC-APC	FWO with 1 x SC SX APC Adaptor and 1 x 10m 2 fibre pre-terminated cable.	857-01296
FWOA-VVW22-010/WH						FWO with 2 x SC SX APC Adaptors and 1 x 10m 2 fibre pre-terminated cable.	857-01339
FWOA-AXW21-010/WH					LC-APC	FWO with 1 x LC DX APC Adaptor and 1 x 10m 2 fibre pre-terminated cable.	857-01378
FWOA-AXW22-010/WH						FWO with 2 x LC DX APC Adaptors and 1 x 10m 2 fibre pre-terminated cable.	857-01404

All dimensions in mm. Subject to technical changes.





### FWO - Fibre Wall Outlet

#### Fibre Optic Internal Enclosure

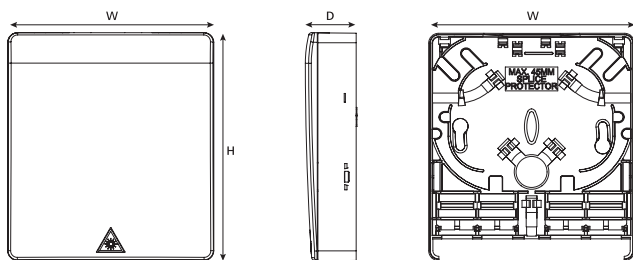
The wall mounted fibre optic outlet allows a fibre optic cable to be connected directly into the end user apartment.

#### Features and benefits

- Maximum capacity 2 SC Simplex or LC Duplex Fibre Adaptor
- Install directly on the wall or onto a flush-mount back box
- Cable entry at the base, through the rear of the unit or at the sides
- Accommodates up to 4 splice protectors (up to 45mm)
- Quality surface finish
- Tamper-proof latches
- Positive fibre management to ensure a 30mm minimum bend radius



Internal view of Fibre Wall Outlet with 2 x SC APC adaptors and pigtails.



External front view.

Side view.

Internal front view.



Unloaded Fibre Wall Outlet.

#### Technical Description

The FWO has been designed to be used as an optical telecommunications outlet with a choice of cable access options.

It is a small single socket size enclosure designed for managing up to 4 fibres within the property and can be discretely mounted on the wall close to the building entry point providing the connection point for a router or active equipment.

The closure is manufactured from ABS plastic and tamper proof latches secure the cover to the base. The closure has multiple entry points and four fibre adaptor mounting points (SC simplex or LC duplex).

TYPE	Height (H)	Width (W)	Depth (D)	Splice Protector Type	Connector Type	Description	Article-No.				
FWOA-XX-XX/WH	85	85	21	3A, ANT	-	Unloaded Fibre Wall Outlet.	857-40368				
FWOA-XX-VX/WH					SC-APC	FWO with 1 x SC SX APC Adaptor.	857-01092				
FWOA-XX-VP/WH						FWO with 1 x SC SX APC Adaptor and 1 x SC APC Pigtail.	857-01093				
FWOA-VX-VX/WH						FWO with 2 x SC SX APC Adaptors.	857-01094				
FWOA-VP-VP/WH						FWO with 2 x SC SX APC Adaptor and 2 x SC APC Pigtails.	857-01095				
FWOA-XX-LX/WH						LC	FWO with 1 x LC DX PC Adaptor.	857-40384			
FWOA-LX-LX/WH					FWO with 2 x LC DX PC Adaptors.		857-01621				
FWOA-XX-LP/WH					FWO with 1 x LC DX PC Adaptor and 2 x LC PC Pigtails.		857-01622				
FWOA-LP-LP/WH					LC-APC	FWO with 2 x LC DX PC Adaptors and 4 x LC PC Pigtails.	857-01623				
FWOA-XX-AX/WH						FWO with 1 x LC DX APC Adaptor.	857-01624				
FWOA-AX-AX/WH						FWO with 2 x LC DX APC Adaptors.	857-01227				
FWOA-XX-AP/WH						FWO with 1 x LC DX APC Adaptor and 2 x LC APC Pigtails.	857-01625				
FWOA-AP-AP/WH					SC	FWO with 2 x LC DX APC Adaptors and 4 x LC APC Pigtails.	857-01626				
FWOA-XX-SX/WH						FWO with 1 x SC PC Adaptor.	857-01235				
FWOA-XX-SP/WH						FWO with 1 x SC SX PC Adaptor and 1 x SC PC Pigtail.	857-01236				
FWOA-SX-SX/WH						FWO with 2 x SC SX PC Adaptors.	857-01627				
FWOA-SP-SP/WH										FWO with 2 x SC SX PC Adaptor and 2 x SC PC Pigtails.	857-01628

All dimensions in mm. Subject to technical changes.



View 3D Model  
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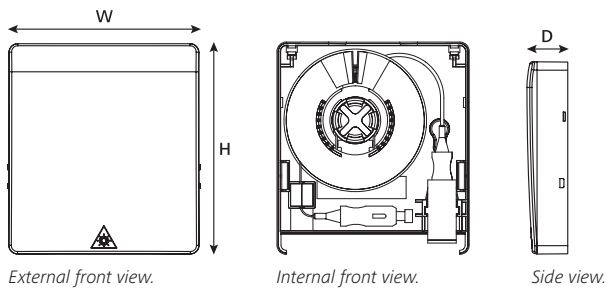
### Fibre Broadband Extension Kit 30m

#### Fibre Optic Internal Enclosure

The Fibre Broadband Extension Kit solution has been designed to provide the property owner flexibility with positioning of the broadband router while simultaneously offering quick and easy installation for the fibre engineer or property developer.

#### Features and benefits

- 30m length provides Router location flexibility within the property
- Pre-terminated fibre connector for quick and easy connection
- 600µm fibre allows for cable runs to be almost invisible
- Fibre management kit provides protection for corners and edges
- Low profile outlet fits in with any home or office environment
- Minimal tools required with all fixings included
- 30mm minimum bend radius
- Integrated safety features – restricts removal of connectors/adaptors
- V0 rated



External front view.

Internal front view.

Side view.



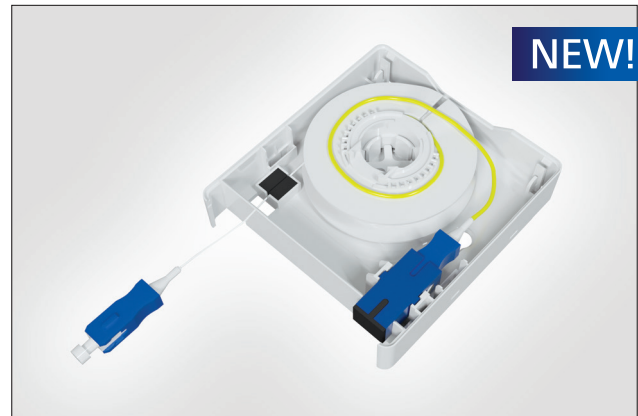
External top view.

#### Technical Description

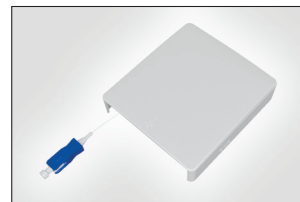
The outlet has a built-in fibre spool with 30m of 600µm white fibre. The fibre cable is pre-terminated at both ends with a fibre connection point fixed inside the outlet for the incoming fibre and a fibre connector on the fibre spool that can be run up to 30m within the property for router connection.

The 600um fibre is paintable and can also be further secured or hidden along skirting and frames by using decorator's caulk.

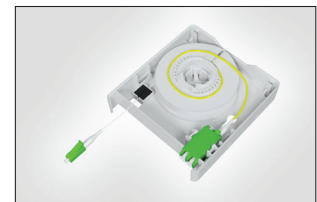
The lid of the outlet has a built-in locking design that prevents the spool from winding once the lid is in place. A fibre management routing kit is provided as standard and is designed for safe fibre routing of corners, bends and through walls.



Internal view of the Fibre Broadband Extension Kit with fibre spool, SC SX adaptor and connector.



Fibre Broadband Extension Kit with lid.



Internal view of the Fibre Broadband Extension Kit with fibre spool, LC DX adaptor and connector.



Application image of the Outlet in-situ.

The Fibre Broadband Extension Kit is a small single gang socket size outlet, which is manufactured from Polycarbonate + ABS V0 rated material.

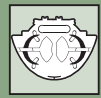
Tamper-proof latches on the side of the outlet secure the cover to the base and the overhang restricts the removal of any adaptors and connectors when the cover is in place.

The base has adjustable keyholes to allow for ease of positioning and installation and each outlet is supplied with a standard fixing kit.

TYPE	Height (H)	Width (W)	Depth (D)	Length (L)	Connector Type	Single Pack Includes	Pack Cont.	Article-No.
FFO-LC-SMA2-30M-FX1/R	95.5	86.5	24	G657.A2 - 30m	LC-PC	1x Air Fix Kit, 4 x P-clips	1	855-35026
FFO-LP-SMA2-30M-FX1/R					LC-APC			855-35027
FFO-SC-SMA2-30M-FX1/R					SC-PC			855-35028
FFO-SP-SMA2-30M-FX1/R					SC-APC			855-35029
FFO-LC-SMA2-30M-FX1/C					50		LC-PC	855-35030
FFO-LP-SMA2-30M-FX1/C							LC-APC	855-35031
FFO-SC-SMA2-30M-FX1/C							SC-PC	855-35032
FFO-SP-SMA2-30M-FX1/C							SC-APC	855-35033

All dimensions in mm unless stated otherwise. Subject to technical changes.





### Integrated Routing Fibre Optic Splice Tray

#### IR Single Element SE MKI

##### Features and benefits

- Positive fibre management - minimum bend radius 30mm
- 2 fibre entry ports
- 2 mounting positions for splice inserts
- Option for optical splitter/3A or ANT splice bridge
- Optical splitter accommodation up to a maximum of 60 x 7 x 4mm
- Maximum splice capacity of 24 fibres (double stacked)
- Different splice bridge options allow for a splice type of up to 60mm



Single Element IR Coloured Splice Trays.

##### Technical Description

The Integrated Routing (IR) single element tray is manufactured from ABS and finished to a high specification to eliminate the risk of snagging or microbends. All retaining tabs on the tray have radius edges and rounded corners where fibre may pass. The overall dimensions of the tray are 148 x 125 x 7mm. The IR single element tray accepts a wide range of splice protector inserts and the maximum splice capacity of the tray is based on 24 double stacked heatshrink (3A) splice protectors up

to 60mm long.

The IR single element tray can accommodate 2 x 60 x 7 x 4mm optical splitters when using the optional splitter/3A or ANT splice bridge. The IR single element tray is suitable for use in the UFC-IR, FDN-IR or FML-IR closures.

TYPE	Tray Type	Splice Protector Type	Tray Quantity	Colour	Article-No.
TRAY-SE-IR-2X3A-06	SE-IR MKI	3A	6	White (WH)	857-40257
TRAY-SE-IR-BK-2X3A-06				Black (BK)	857-40487
TRAY-SE-IR-BL-2X3A-06				Blue (BU)	857-40504
TRAY-SE-IR-GN-2X3A-06				Green (GN)	857-40507
TRAY-SE-IR-RD-2X3A-06				Red (RD)	857-40506
TRAY-SE-IR-YL-2X3A-06				Yellow (YE)	857-40505

All dimensions in mm. Subject to technical changes.

### Integrated Routing Fibre Optic Splice Tray

#### IR Single Element Splitter SE-B

##### Features and benefits

- Positive fibre management minimum bend radius 30mm
- 2 fibre entry ports
- Supplied with either heatshrink (3A) and splitter/3A bridge inserts or ANT and splitter/ANT bridge inserts
- Black tray colour provides high contrast to standard fibre management trays
- Maximum splice capacity of 14 fibres (heatshrink/3A)



IR SE-B Tray with Splitter and 3A splice holders.

##### Technical Description

The Integrated Routing (IR) single element splitter tray is manufactured from black ABS and finished to a high specification to eliminate the risk of snagging or microbends. All retaining tabs on the tray have radius edges and rounded corners where fibre may pass. The overall dimensions of the tray are 148 x 125 x 7mm. The IR single element splitter tray is supplied with an optical splitter/3A or ANT splice bridge at

the front, which will accommodate 2 x 60 x 7 x 4mm optical splitters, and a 3A heatshrink (3A) / ANT bridge at the rear. The maximum splice capacity of the tray is 14 fibres based on 14 double stacked heatshrink (3A) splice protectors up to 60mm long. The IR single element splitter trays is suitable for use in the UFC-IR, FDN-IR and FML-IR closures.

TYPE	Tray Type	Splice Protector Type	Tray Quantity	Colour	Article-No.
TRAY-SE-IR-SP/3A-06	SE-IR MKI	Splitter, 3A	6	White (WH)	857-40416
TRAY-SE-IR-SP/ANT-06	SE-IR MKI	Splitter, Crimp (ANT)			857-40417
TRAY-BK-SE-B-IR-SP/3A-06	SE-IR MKI/BK	Splitter, 3A		Black (BK)	857-40428
TRAY-BK-SE-B-IR-SP/ANT-06	SE-IR MKI/BK	Splitter, Crimp (ANT)			857-40429

All dimensions in mm. Subject to technical changes.



### Integrated Routing Fibre Optic Splice Tray

#### IR Single Circuit SC-B MKI

#### Features and benefits

- Positive fibre management minimum bend radius 30mm
- 2 fibre entry ports
- Moulded splice holder fins for heatshrink (3A) or Crimp (ANT) splice protectors
- Maximum splice capacity of 12 fibres



Single Circuit IR 3A Coloured Splice Trays.

#### Technical Description

The Integrated Routing (IR) single circuit SC-B trays is manufactured from ABS and finished to a high specification to eliminate the risk of snagging or microbends. All retaining tabs on the tray have radius edges and rounded corners where fibre may pass. The overall dimensions of

the tray are 148 x 125 x 3.5mm. The tray is available in two styles which accept either 3A or ANT/Crimp splice protectors.

The IR single circuit SC-B tray is suitable for use in the UFC-IR, FDN-IR and FML-IR closures.

TYPE	Tray Type	Splice Protector Type	Tray Quantity	Colour	Article-No.
TRAY-SC-B-IR-2X3A-12	SC-B MKI	3A	12	White (WH)	857-40335
TRAY-SC-B-IR-BK-2X3A-12		3A	12	Black (BK)	857-40498
TRAY-SC-B-IR-BL-2X3A-12		3A	12	Blue (BU)	857-40499
TRAY-SC-B-IR-GN-2X3A-12		3A	12	Green (GN)	857-40500
TRAY-SC-B-IR-RD-2X3A-12		3A	12	Red (RD)	857-40501
TRAY-SC-B-IR-YL-2X3A-12		3A	12	Yellow (YE)	857-40502

All dimensions in mm. Subject to technical changes.

### Integrated Routing Fibre Optic Splice Tray

#### IR Single Element SE MKII

#### Features and benefits

- Positive fibre management - minimum bend radius 30mm
- 2 fibre entry ports
- 2 mounting positions for splice inserts fitted with 3A splice holders
- Maximum splice capacity of 24 fibres (double stacked)
- Optical splitter accommodation up to 60 x 7 x 4mm



Single Element IR SE-IR MKII Coloured Splice Trays.

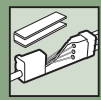
#### Technical Description

The Integrated Routing (IR) single element tray is manufactured from ABS and finished to a high specification to eliminate the risk of snagging or microbends. All retaining tabs on the tray have radius edges and rounded corners where fibre may pass. The overall dimensions of the tray are 150 x 124 x 7mm. The IR single element tray accepts a wide

range of splice protector holders at the front of the tray for ease of fibre measurement and installation. The maximum splice capacity of the tray is based on 24 double stacked heatshrink (3A) splice protectors up to 60mm long. The IR single element tray is suitable for use in the UFC-IR, FDN-IR or FML-IR closures.

TYPE	Tray Type	Splice Protector Type	Tray Quantity	Colour	Article-No.
TRAY-SE-MKII-IR-2X3A-06	SE-IR MKII	3A	12	White (WH)	857-40635
TRAY-SE-MKII-IR-BK-2X3A-06				Black (BK)	857-40639
TRAY-SE-MKII-IR-BL-2X3A-06				Blue (BU)	857-40640
TRAY-SE-MKII-IR-GN-2X3A-06				Green (GN)	857-40641
TRAY-SE-MKII-IR-RD-2X3A-06				Red (RD)	857-40642
TRAY-SE-MKII-IR-YL-2X3A-06				Yellow (YE)	857-40643

All dimensions in mm. Subject to technical changes.



### Integrated Routing Fibre Optic Splice Tray

#### IR Single Circuit SC-B MKII

#### Features and benefits

- Positive fibre management - minimum bend radius 30mm
- 2 fibre entry ports
- Moulded splice holder fins for 3A splice protectors
- Maximum splice capacity of 12 fibres



Single Circuit IR SC-B MKII Coloured Splice Trays.

#### Technical Description

The Integrated Routing (IR) single circuit SC-B MKII tray is manufactured from ABS and finished to a high specification to eliminate the risk of snagging or microbends. All retaining tabs on the tray have radius edges and rounded corners where fibre may pass. The overall dimensions of the tray are 150 x 124 x 3.5mm. The IR single circuit tray moulded splice

protector holders are positioned at the front of the tray for ease of fibre measurement and installation. The maximum splice capacity of the tray is based on 12 heatshrink (3A) splice protectors up to 60mm long. The IR single circuit tray is suitable for use in the UFC-IR, FDN-IR or FML-IR closures.

TYPE	Tray Type	Splice Protector Type	Tray Quantity	Colour	Article-No.
TRAY-SC-B-MKII-IR-2X3A-12	SC-B MKII	3A	12	White (WH)	857-40684
TRAY-SC-B-MKII-IR-BK-2X3A-12				Black (BK)	857-40685
TRAY-SC-B-MKII-IR-BL-2X3A-12				Blue (BU)	857-40686
TRAY-SC-B-MKII-IR-GN-2X3A-12				Green (GN)	857-40687
TRAY-SC-B-MKII-IR-RD-2X3A-12				Red (RD)	857-40688
TRAY-SC-B-MKII-IR-YL-2X3A-12				Yellow (YE)	857-40689

All dimensions in mm. Subject to technical changes.

### Splice Protector Holders

#### Fibre Splice Tray Accessories

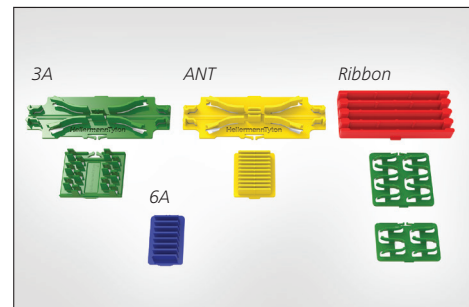
#### Features and benefits

- Used to secure different types of splice protector within the splice tray
- 8 options available for the most common applications
- Optical splitter/3A or ANT option

#### Technical Description

A range of Splice Protector Holders (Splice Bridges) to allow for different types of splice protectors in the tray. Inserts are suitable for use with HellermannTyton Hellipse NZDF-SE-A/SE-B, IR-SE and Hellapon Medium

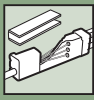
(Style C)/Small and Hellamass Large trays. All trays accept 2 splice protector holders excluding the Hellamass Large which accepts 12 inserts.



Splice Bridges

TYPE	Description		Compatible Trays	Colour	Pack Cont.	Recov. Ø d max.	Article-No.
BRIDGE-3A	Splice Protector Holder	3A	IR trays: SE-B, SE, SE MKII Tubed trays: Hellamass Large, Hellapon Medium (Style C) & Hellapon Small, Hellipse NZDF-SE-A/SE-B	Green	10	2.4	857-40298
BRIDGE-6A		6A		Blue	10	1.6	857-40299
BRIDGE-CRIMP		ANT		Yellow	10	-	857-40300
BRIDGE-MECH		RIBBON		Red	10	4.75	857-40301
BRIDGE-SP/3A	Splitter/Splice Protector Holder	3A		Green	10	2.4	857-40426
BRIDGE-SP/ANT	Splitter/Splice Protector Holder	ANT		Yellow	10	-	857-40427
BRIDGE-RIBBON-4WAY	Ribbon Splice Protector Holder	RIBBON	SE-IR MKII	Green	10	4.5x3.8	857-40705
BRIDGE-RIBBON-6WAY	Ribbon Splice Protector Holder		Multi-Ribbon Tray	Green	10	4.5x3.9	857-40706

All dimensions in mm. Subject to technical changes.

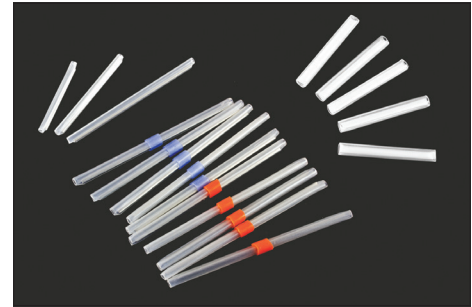


### Splice Protectors

#### Fibre Splice Tray Accessories

#### Features and benefits

- Clear sleeve allows visual location of splice
- Stainless steel rod or ceramic member to provide additional support to the joint
- 3A/6A versions available
- Suitable for fibre sizes 250/900µm
- Low shrink temperature
- Coloured anti-vibration band available



Fibre Splice Protectors (assortment shown).

#### Technical Description

HellermannTyton's range of fibre splice protectors are specifically designed for the mechanical and environmental protection of fused fibre splices. The splice protectors consist of clear heat shrinkable tubing to allow for visual location of the splice

prior to heat shrinking with a pre-installed stainless steel (3A/6A) reinforcing rod. The tubing has a wide operating range -45°C to +100°C and a full recovery temperature of 120°C.

TYPE	Splice Protector Type	Anti-Vibration Band Colour	Pack Cont.	Length (L)	Recov. Ø d max.	Article-No.
FSP 35MM	3A	-	100	35	2.4	857-40262
FSP 45MM	3A	-	100	45	2.4	857-40263
FSP 60MM	3A	-	100	60	2.4	857-40264
FSP650	3A	Blue (BU), Orange (OG)	80	35	2.4	857-40120
FSP738	3A	Blue (BU), Orange (OG)	80	45	2.4	857-40127
FSP1242	3A	Blue (BU), Orange (OG)	100	60	2.4	857-40112
FSP3563	6A	-	80	25	1.6	857-40118
FSP3564	6A	-	80	40	1.6	857-40119

All dimensions in mm. Subject to technical changes.

### Cable Glands

#### Fibre Optic Enclosure Accessories

#### Features and benefits

- Cable range coverage from 5mm to 18mm
- Supplied in multiples of 5
- M25 Gland suitable for use with MDU S4 or MDU S5
- M20 Gland suitable for use with MDU S3, MDU S4 or MDU S5



Selection of M25 Cable Glands.

#### Technical Description

A range of M20 and M25 cable gland kits each of which contain 5 x cable glands. The cable gland is fitted in to the cable entry

port which is secured to the enclosure to provide additional fibre management and support.

TYPE	Suitable for Cable Ø from/to	Pack Cont.	Description	Article-No.
CG-M20-5-9MM-05	5 - 9	5	M20 5-9mm Cable Glands	857-40525
CG-M20-6-12MM-05	6 - 12	5	M20 6-12mm Cable Glands	857-40526
CG-M20-10-14MM-05	10 - 14	5	M20 10-14mm Cable Glands	857-40527
CG-M25-9-16MM-05	9 - 16	5	M25 9-16mm Cable Glands	857-40528
CG-M25-13-18MM	13 - 18	5	M25 13-18mm Cable Glands	857-40529

All dimensions in mm. Subject to technical changes.





### MDU Locks

#### Fibre Optic Enclosure Accessories

#### Features and benefits

- Polished chrome finish
- Supplied with 2 keys for MDU S3 or MDU S5
- Triangular Key option for MDU S5 only

#### Technical Description

A 10.5mm 4 pin radial pin tumbler lock suitable for use with the MDU S3 wall box. The lock has a polished chrome finish and is supplied with a 13mm flat cam, two keys and all fixings.

An 8mm industry standard Triangular drive (tri-drive) cam lock which is suitable for use with the MDU S5 wall box. The lock has

a chrome plated finish and is supplied with 30mm flat cam and all fixings. Key supplied separately

A 20.5mm quarter turn cam lock suitable for use with the MDU S5 wall box. The lock has a chrome plated finish and is supplied with a 30mm flat cam, two keys and all fixings.



MDU S5 1/4 turn keyed lock.



MDU S3 1/4 turn keyed lock.



MDU S5 triangular key lock.

TYPE	Pack Cont.	Description	Article-No.
LOCK-S3-KG	1	1/4 turn keyed lock for the MDU S3.	857-40532
LOCK-S4-CAM	1	20mm Cam Lock for the MDU S4.	857-40708
LOCK-S4-UK	1	Lock unique key for the MDU S4 - 9113A.	857-40707
LOCK-S5-TTG	1	A 8mm Tri-drive Cam Lock for the MDU S5.	857-40534
LOCK-S5-KG	1	1/4 turn keyed lock for the MDU S5.	857-40533
KEY-S5-TTG	1	8mm Triangular Key for Lock-S5-TTG	857-40545

All dimensions in mm. Subject to technical changes.

### MDU Anchor Kits

#### Fibre Optic Enclosure Accessories

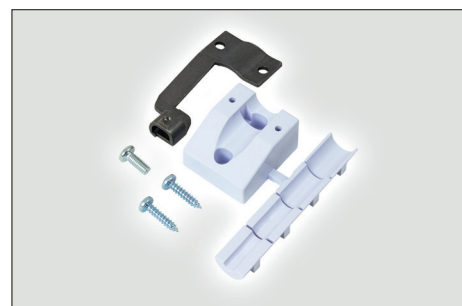
#### Features and benefits

- Provides strain relief to fibre optic cables maximum diameter 13mm or fibre optic cables with solid strength members
- Simple installation
- Suitable for use with MDU S3, MDU S4 or MDU S5

#### Technical Description

Two anchor kits for use within the MDU S3, MDU S4 and MDU S5. Both kits are used to secure the cable and strength member inside the enclosure. Designed to

ensure that no undue stress is put upon the fibre cables which may affect the optical performance.



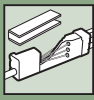
MDU S3 Anchoring Kit.



MDU S4/S5 Anchoring Kit.

TYPE	Cable Ø min.	Cable Ø max.	Pack cont.	Description	Article-No.
S3-AK-001	13	4.5	Clamp Base (Plastic) Anchor Bracket (Metal) Fixing Screws	Anchor Kits for MDU S3	857-40530
S5-AK-001	0.1	4.5	Anchor bracket (Metal) Fixing Screws	Anchor Kits for MDU S4 and MDU S5	857-40531

All dimensions in mm. Subject to technical changes.



### MDU Seals

#### Fibre Optic Enclosure Accessories

#### Features and benefits

- Single seal to manage 24 x 7mm drops for MDU S4 or MDU S5
- Single seal to manage 24 x 5mm drops for MDU S3
- Loop through seal for cable diameter 3.0mm to 14.0mm
- Quick and simple to install

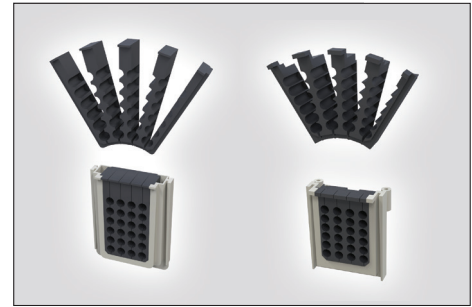
#### Technical Description

There are two different seals available for the MDU S3, MDU S4 and MDU S5. Both provide excellent cable and tube management for incoming and outgoing cables to the enclosures.

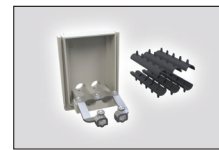
The S4 and S5 drop seal can accommodate up to 24 x 7mm drop cables/tubes, whereas the S3 drop seal

can hold up to 24 x 5mm drops.

The loop through seals for both the S4/S5 and S3 can accept a cable diameter of 3.0mm through to 14.0mm, again providing an excellent seal into the enclosure while making the cable more secure.



MDU S4/S5 24x7mm and MDU S3 24x5mm Multi Drop Seals.



MDU S4/S5 3-14mm Loop Through Seal.



MDU S3 3-14mm Loop Through Seal.

TYPE	Cable Ø min.	Cable Ø max.	Pack cont.	Description	Article-No.
LG-S3-3MM-14MM	14	3	Loop Gland Seal Plates, Cable Diameter Spacers and Cable Anchor Clamp	MDU S3 Loop Through Seal 3mm - 14mm	857-50232
LGS-S5-3MM-14MM	14	3	Loop Gland Seal Plates, Cable Diameter Spacers and Cable Anchor Clamp	MDU S4 and MDU S5 Loop Through Seal 3mm - 14mm	857-50233
MDS-S3-24X5MM	5	-	Drop Gland Seal Plate and Multi Drop Seal	MDU S3 Drop Seal 24 x 5mm	857-50234
MDS-S5-24X7MM	7	-	Drop Gland Seal Plates and Multi Drop Seal	MDU S4 and MDU S5 Drop Seal 24 x 7mm	857-50235
MDSL-P-S3-24X5MM*	5	-	Drop Gland Seal Plates, Multi Drop Seal and Lock Fixing Plate	MDU S3 Drop Seal 24 x 5mm + Lock Plate	857-50236

All dimensions in mm. Subject to technical changes. \*Required if the MDU S3 is fitted with a lock.

### Fibre Adaptors

#### SC Adaptors

#### Features and benefits

- A range of high performance Single Mode SC Adaptors
- SC SX or SC DX versions
- APC + UPC

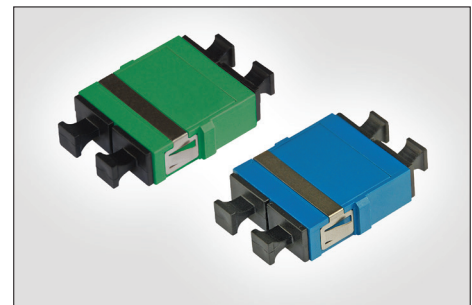
#### Technical Description

The fibre adaptor is used to mate two connectors together aligning the ferrule of the connectors keeping the fibres in perfect alignment and minimising losses. The fibre adaptors fool proof design and audible click mechanism provide a secure inter-connect.

The adaptor is supplied with secure fit dust caps which have a high mechanical

retention ensuring they remain in place if they are accidentally knocked or encounter excessive vibration.

All fibre adaptors and connectors comply with the IEC874-14 standard ensuring interoperability.



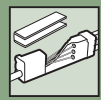
SC APC and PC Duplex.



SC APC and PC Duplex.

TYPE	Performance Category	Height (H)	Width (W)	Depth (D)	Port count	Colour	Article-No.
FBASMBL-SCSCDX-FL001T	Single Mode	9.3	22	44	2	Blue (BU)	855-20059
FBAAPGN-SCSCDX-FL001T	Single Mode	9.3	22	44	2	Green (GN)	855-20062
FBASMBL-SCSCSX-FL001T	Single Mode	9.5	15	44	1	Blue (BU)	855-20061
FBAAPGN-SCSCSX-FL001T	Single Mode	9.5	15	44	1	Green (GN)	855-20057

All dimensions in mm. Subject to technical changes.



## Fibre Adaptors

### LC Adaptors

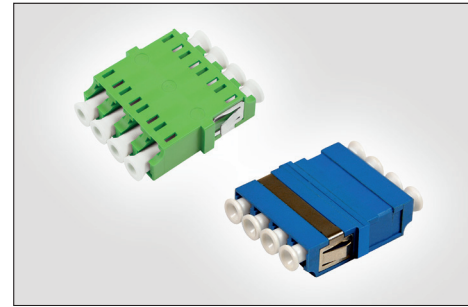
#### Features and benefits

- A range of high performance Single Mode LC Adaptors
- APC + UPC
- LC SX, DX + Quad versions

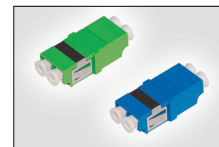
#### Technical Description

The fibre adaptor is used to mate two connectors together aligning the ferrule of the connectors keeping the fibres in perfect alignment and minimising losses. The adaptor has a simple to use latched

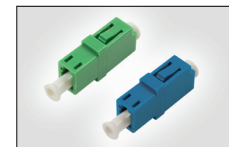
lever mechanism which prevents accidental disconnection and precision housing for optimum performance. All fibre adaptors and connectors comply with the IEC874-14 standard ensuring inter-operability.



LC APC and PC Quad Adaptors.



LC APC and PC Duplex.



LC APC and PC Simplex.

TYPE	Performance Category	Height (H)	Width (W)	Depth (D)	Port count	Colour	Article-No.
FBASMBL-LCLCDX-FL001T	Single Mode	9.3	15	35	2	Blue (BU)	855-20058
FBAAPGN-LCLCDX-FL001T	Single Mode	9.3	15	35	2	Green (GN)	855-20053
FBASMBL-LCLCQD-FL001T	Single Mode	9.3	28	35	4	Blue (BU)	855-20074
FBAAPGN-LCLCQD-FL001T	Single Mode	9.3	28	35	4	Green (GN)	855-20054
FBASMBL-LCLCSX-FL001T	Single Mode	13.1	6.9	27	1	Blue (BU)	855-20064
FBAAPGN-LCLCSX-FL001T	Single Mode	13.1	6.9	27	1	Green (GN)	855-20063

All dimensions in mm. Subject to technical changes.

## Fibre Pigtails

### LC and SC Pigtails

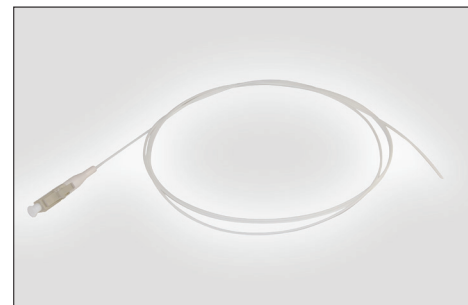
#### Features and benefits

- A range of single mode pigtails
- LC and SC Connectors
- Manufactured to ISO standards
- Pre-terminated connector saves installation time on site
- 1m or 1.5m lengths
- 600µm and 900µm tight buffered fibre optic cable
- Pre-tested with test results supplied

#### Technical Description

The LC Pigtails are manufactured using 600µm or 900µm tight buffered cable in OS2 as standard.

All LC Pigtails are tested prior to despatch and individually bagged with individual test certificates.



LC Fibre Pigtails.

TYPE	Performance Category	Colour	Length (L)	Port count	Connector Colour	Article-No.
FBTXOS2-LCXXSW-01.0M-APC-T	G657.A1	White (WH)	1	1	Green (GN)	855-25054
FBTXOS2-LCXXSW-01.0M-T	G657.A1	White (WH)	1	1	Blue (BU)	855-25056
FBTXOS2-LCXXSW-01.5M-APC-600	G657.A1	White (WH)	1.5	1	Green (GN)	855-25071
FBTXOS2-LCXXSW-01.5M-APC-T	G657.A1	White (WH)	1.5	1	Green (GN)	855-25072
FBTXOS2-LCXXSW-01.5M-PC-600	G657.A1	White (WH)	1.5	1	Blue (BU)	855-25073
FBTXOS2-LCXXSW-01.5M - T	G657.A1	White (WH)	1.5	1	Blue (BU)	855-25074
FBTXOS2-SCXXSW-01.5M-APC-600	G657.A1	White (WH)	1.5	1	Green (GN)	855-25067
FBTXOS2-SCXXSW-01.5M-T-600	G657.A1	White (WH)	1.5	1	Blue (BU)	855-25068
FBTXOS2-SCXXSW-01.5M-APC-T	G657.A1	White (WH)	1.5	1	Green (GN)	855-25069
FBTXOS2-SCXXSW-01.5M-PC-T	G657.A1	White (WH)	1.5	1	Blue (BU)	855-25070
FBTXOS2-SCXXSW-01.0M-T	G657.A1	White (WH)	1	1	Blue (BU)	855-25055
FBTXOS2-SCXXSW-01.0M-APC-T	G657.A1	White (WH)	1	1	Green (GN)	855-25057

All dimensions in metres (m). Subject to technical changes.



### Rear Mounting Storage Bracket

#### Fibre Optic Enclosure Accessories

#### Features and benefits

- Dual use; MDU mounting and drop cable storage
- Stores up to 4m of drop cable
- Allows easy removal of MDU to working level
- Integrated hook to hang the MDU from
- Multiple anchor points
- Grey Powder coated stainless steel

#### Technical Description

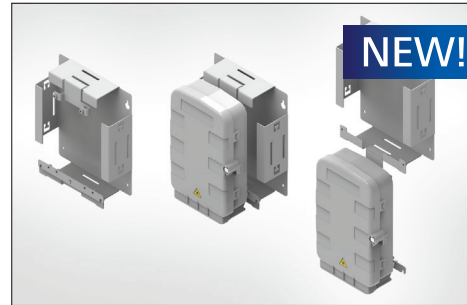
The Rear mounting storage brackets have been designed to allow for effective MDU wall mounting at both low and high levels.

The MDU is fitted to a back plate which then secures to the wall mounted storage bracket.

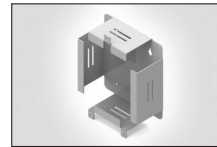
It allows engineers to safely remove the MDU and bring it down to working level. The back plate also features a hook system

that allows engineers to hang the MDU off the storage bracket and offers flexibility in working methods and environments.

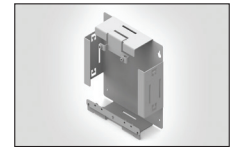
The storage bracket has been designed to hold and store up to 4 metres of drop cable. A number of anchor points are located around the bracket to allow for multiple cable tie points, ensuring stability and security for the stored drop cable.



Basket with MDU S1 in-situ and hung off the Rear Mounting Storage Bracket.



Unloaded MDU S1XS Basket.



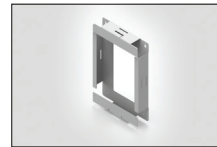
Unloaded MDU S1 Basket.



Unloaded MDU S2 Basket.



Unloaded MDU S3 Basket.



Unloaded MDU S4 Basket.



Unloaded MDU S5 Basket.

TYPE	Height (H)	Width (W)	Depth (D)	Drop Cable Length (L)	Drop Cable Quantity	Colour	Article-No.
MDU-S1XS-RMSBRKT/GY	236	180	80	4m	12 x 3mm	Grey	857-40699
MDU-S1-RMSBRKT/GY	228	186	71	4m	12 x 3mm		857-40700
MDU-S2-RMSBRKT/GY	368	206	62	4m	24 x 3mm		857-40701
MDU-S3-RMSBRKT/GY	357	228	63	4m	24 x 3mm		857-40702
MDU-S4-RMSBRKT/GY	416	285	63.5	4m	64 x 3mm		857-40703
MDU-S5-RMSBRKT/GY	521	360	65	4m	64 x 3mm		857-40704

All dimensions in mm unless otherwise stated. Subject to technical changes.



### Mounting Brackets

#### V Shaped Mounting Bracket

##### Features and benefits

- Suitable for use with the AFN and FFE enclosures
- Offers management for a maximum of 2 enclosures
- Powder coated stainless steel

##### Technical Description

A V shaped pole mounting bracket designed to provide mounting positions for 2 enclosures and which is suitable for use with the AFN and the FFE.

Anchoring is provided at the base of the bracket for incoming cables. The bracket is

manufactured from powder coated stainless steel and designed not to exceed the width of the pole top. The bracket can pre-loaded with the enclosures and then secured to the pole.



V Bracket for the AFN and FFE.

TYPE	Height (H)	Width (W)	Depth (D)	Description	Article-No.
MB-AFN/FFE-V-BRKT	384	179	201	V Shaped Mounting Bracket for AFN and FFE.	857-40577

All dimensions in mm. Subject to technical changes.

### Mounting Brackets

#### Universal Mounting Bracket

##### Features and benefits

- Suitable for use with the AFN and FFE enclosures
- Angled or flat mounting on to pole
- Cable management for a maximum of 24 x 6mm duct/drop cables
- Cable retention hooks and loop storage for incoming cables
- Multiple mounting positions for each enclosure type:
  - AFN - 4 positions
  - FFE - 3 positions
- Offset fixing points for ease of installation

##### Technical Description

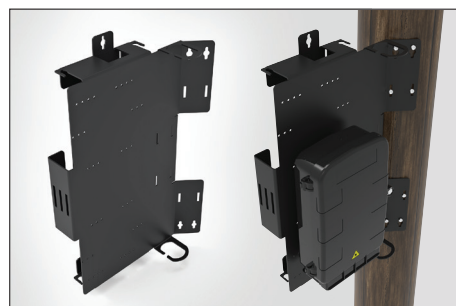
A pole mounting bracket designed for use in aerial applications for the HellermannTyton Aerial Fibre Node (AFN) and Fibre Facade (FFE) enclosures.

The MB-AFN/FFE-AF-PB-002 mounting bracket is manufactured from powder coated stainless steel and has been designed to offer the option of being mounted at an angle or flat on to the pole. Separate offset screw fixing or strap mounting points for angled and flat orientation allow for a quick and easy fix to the pole.

Multiple mounting positions have been designed in to the bracket for the enclosure, 4 for the AFN and 3 for the FFE, to allow for accurate positioning and cable management.

The bracket can also be mounted upside down. This allows two brackets to be fitted side by side whilst maintaining all of the fibre management features. Retaining hooks and cable anchor points are provided to manage the incoming duct/cables as they transition from the loop storage area in to the AFN/FFE.

The loop storage area will manage up to 30m of 6mm duct or cable and two drop cable hooks and velcro cable tie fixing points offer duct/ cable management and support for a maximum of 24 x 6mm duct/drop cable.



Universal Mounting Bracket for the AFN and FFE.

TYPE	Height (H)	Width (W)	Depth (D)	Description	Article-No.
MB-AFN/FFE-AF-PB-002	440	266	106	Universal Mounting Bracket for AFN and FFE.	857-40765

All dimensions in mm. Subject to technical changes.





### Mounting Brackets

#### AFN Mounting Bracket - 400mm

#### Features and benefits

- Designed to be used with the AFN Enclosure
- Anchoring and cable management for up to 24 customer drops
- Manufactured from powder coated stainless steel

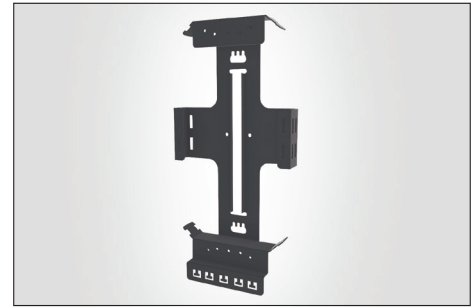
#### Technical Description

The universal pole mounting bracket, suitable for use with the Aerial Fibre Node, provides secure anchoring for up to ten metres of ultra lightweight cable and 24 distribution drop fibres.

Constructed from powder coated stainless steel and designed not to exceed the

width of the pole-top the bracket can be preloaded with the enclosure and then secured to the pole.

The bracket has been designed with a front loading storage basket to allow for secure storage of excess cables.



400mm Mounting Bracket for the AFN.

TYPE	Height (H)	Width (W)	Depth (D)	Description	Article-No.
MB-AFN-PWB/BK-400MM	384	186	53	400mm AFN Mounting Bracket	857-40582

All dimensions in mm. Subject to technical changes.



## Cablelok

### R, B, S, T, LM and L Port Cablelok

#### Features and benefits

- Cable range coverage from 1.7mm – 29.0mm
- Port closure plug available
- Supplied in multiples of 1 and 10
- Supplied with installation lubricant sachets

#### Technical Description

Cablelok is a mechanical seal manufactured from external grade flexible polychloroprene. There are 6 Cablelok port sizes which cover a cable range of 1.7mm – 29.0mm including a port plug for blocking unused drop ports.



B Series Cablelok.

### R Port Cablelok

TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-R10-01		1.7 - 2.0	1	857-50163
CABLELOK-R10-10		1.7 - 2.0	10	857-50164
CABLELOK-R10D-01		1.7 - 2.0	1	857-50161
CABLELOK-R10D-10		1.7 - 2.0	10	857-50162
CABLELOK-R15-01		2.0 - 3.0	1	857-50224
CABLELOK-R15-10		2.0 - 3.0	10	857-50225
CABLELOK-R15D-01		2.0 - 3.0	1	857-50226
CABLELOK-R15D-10		2.0 - 3.0	10	857-50227
CABLELOK-R20-01		3.0 - 3.8	1	857-50165
CABLELOK-R20-10		3.0 - 3.8	10	857-50166
CABLELOK-R30D-01		3.8 - 4.8	1	857-50159
CABLELOK-R30D-10		3.8 - 4.8	10	857-50160
CABLELOK-R40-01		3.8 - 5.2	1	857-50151
CABLELOK-R40-10		3.8 - 5.2	10	857-50152
CABLELOK-R50-01		5.2 - 8.0	1	857-50153
CABLELOK-R50-10		5.2 - 8.0	10	857-50154
CABLELOK-R70-01		6.0 - 8.5	1	857-50167
CABLELOK-R70-10		6.0 - 8.5	10	857-50168
CABLELOK-R80-01		8.0 - 9.5	1	857-50155
CABLELOK-R80-10		8.0 - 9.5	10	857-50156
CABLELOK-R99-01		-	1	857-50157
CABLELOK-R99-10		-	10	857-50158

All dimensions in mm. Subject to technical changes.

### R750V Cablelok

The R750V Cablelok has been designed to provide a seal the R port of the HellermannTyton closures with an oval cable.

TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-R750V-01		7.7 x 4.2 - 4.5	1	857-50241
CABLELOK-R750V-10			10	857-50242





All dimensions in mm. Subject to technical changes.



## Cablelok

### R, B, S, T, LM and L Port Cablelok



#### B Port Cablelok

TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-B10-01		4.8 - 9.0	1	857-50149
CABLELOK-B10-10		4.8 - 9.0	10	857-50150
CABLELOK-B20-01		8.0 - 14.0	1	857-50143
CABLELOK-B20-10		8.0 - 14.0	10	857-50144
CABLELOK-B30-01		13.0 - 16.5	1	857-50145
CABLELOK-B30-10		13.0 - 16.5	10	857-50146
CABLELOK-B99-01		-	1	857-50147
CABLELOK-B99-10		-	10	857-50148

All dimensions in mm. Subject to technical changes.







#### D Port Cablelok

Designed to provide a seal for 10-12mm cable/duct in the D Port of the HellermannTyton closures.

TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-D10-01		10	1	857-50243
CABLELOK-D10-10			10	857-50244
CABLELOK-D20-01		12	1	857-50245
CABLELOK-D20-10			10	857-50246

All dimensions in mm. Subject to technical changes.

#### S Port Cablelok

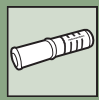
TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-S10-01		5.0 - 8.5	1	857-50179
CABLELOK-S10-10			10	857-50180
CABLELOK-S20-01		8.0 - 12.0	1	857-50169
CABLELOK-S20-10			10	857-50170
CABLELOK-S30D-01		10.0 - 11.5	1	857-50177
CABLELOK-S30D-10			10	857-50178
CABLELOK-S40-01		12.0 - 16.0	1	857-50171
CABLELOK-S40-10			10	857-50172
CABLELOK-S50-01		16.0 - 20.0	1	857-50173
CABLELOK-S50-10			10	857-50174
CABLELOK-S99-01		-	1	857-50175
CABLELOK-S99-10			10	857-50176

All dimensions in mm. Subject to technical changes.

#### S Port Multi-Drop Cablelok

TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-S15M5-01		6.8 - 7.2	1	857-50228
CABLELOK-S15M5-10			10	857-50229

All dimensions in mm. Subject to technical changes.



## Cablelok

### R, B, S, T, LM and L Port Cablelok

#### T Port Cablelok

TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-T10-01		15.5 - 22.0	1	857-50189
CABLELOK-T10-10		15.5 - 22.0	10	857-50190
CABLELOK-T20-01		20.0 - 23.5	1	857-50181
CABLELOK-T20-10		20.0 - 23.5	10	857-50182
CABLELOK-T30-01		23.5 - 25.5	1	857-50183
CABLELOK-T30-10		23.5 - 25.5	10	857-50184
CABLELOK-T40-01		24.5 - 29.0	1	857-50185
CABLELOK-T40-10		24.5 - 29.0	10	857-50186
CABLELOK-T99-01		-	1	857-50187
CABLELOK-T99-10		-	10	857-50188

All dimensions in mm. Subject to technical changes.

#### LM Port Cablelok

TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-LM10C-01		4.0 - 6.5	1	857-50203
CABLELOK-LM10C-10		4.0 - 6.5	10	857-50204
CABLELOK-LM20C-01		6.0 - 9.5	1	857-50205
CABLELOK-LM20C-10		6.0 - 9.5	10	857-50206
CABLELOK-LM30C-01		9.0 - 12.5	1	857-50207
CABLELOK-LM30C-10		9.0 - 12.5	10	857-50208
CABLELOK-LM40C-01		12.5 - 15.0	1	857-50209
CABLELOK-LM40C-10		12.5 - 15.0	10	857-50210
CABLELOK-LM99C-01		-	1	857-50211
CABLELOK-LM99C-10		-	10	857-50212

All dimensions in mm. Subject to technical changes.

#### L Port Cablelok



TYPE	Drawing	Suitable for Cable Ø from/to	Pack Cont.	Article-No.
CABLELOK-L10C-01		5.5 - 9.5	1	857-50199
CABLELOK-L10C-10		5.5 - 9.5	10	857-50200
CABLELOK-L20C-01		9.0 - 12.5	1	857-50213
CABLELOK-L20C-10		9.0 - 12.5	10	857-50214
CABLELOK-L30C-01		12.0 - 15.0	1	857-50191
CABLELOK-L30C-10		12.0 - 15.0	10	857-50192
CABLELOK-L40C-01		15.0 - 18.5	1	857-50193
CABLELOK-L40C-10		15.0 - 18.5	10	857-50194
CABLELOK-L50C-01		18.3 - 20.0	1	857-50195
CABLELOK-L50C-10		18.3 - 20.0	10	857-50196
CABLELOK-L99C-01		-	1	857-50197
CABLELOK-L99C-10		-	10	857-50198

All dimensions in mm. Subject to technical changes.



## Cablelok

### Port Opening Accessories

TYPE	Drawing	Description	Port	Content	Pack Cont.	Article-No.
SBT-B-01		B Port Opening Blade	B	-	1	857-40433
SBT-R-01		R Port Opening Blade	R	-	1	857-40432
SBT-S-01		S Port Opening Blade	S	-	1	857-40434
TPC3337		Coping Saw	L, LM, T	-	1	857-40179
TPC1942		Inset Disc	B	-	1	857-40176
TPC1941		Inset Disc	R	-	1	857-40175
TPC1943		Inset Disc	S	-	1	857-40177
TPC1940		Top Hat	B	-	1	857-40174
TPC1939		Top Hat	R	-	1	857-40173
TPC1944		Top Hat	S	-	1	857-40367
TPCK3924		Port Opening Tool Kit	-	TPC1939 TPC1940 TPC1941 TPC1942 TPC1943 Cover Release Tool	1	857-40221

All dimensions in mm. Subject to technical changes.



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