

**MODULAR FIBRE MANAGEMENT** 



Supporting upto 288 Fibres

The WREN Fibre management solution for 19" and ETSI rack and cross-connect applications is specifically modular by design with front or rear back plate mounting options, for ultimate installation flexibility. The range is available in 1U, 4U, 6U back or front mounting pivoting optical sub unit modules with integral adaptor mount, splice and cable management which make this solution ideal for legacy or new fibre installations that require convenience, flexibility, ease of installation and performance.

### **Optical Distribution Frame Module**

Pivoting Tray, Front Mount System

This front mounting Optical Distribution Frame (ODF) comprising multiple 1U Rear Mount Patch Panels, utilising a pivoting tray design, and integral patch cord management. It is ideally suited for 19" or ETSI racks with either rear or front fitting mounts.

When combined with Cable Break Out units, it provides flexible cabling access. The modular 4u or 6u Optical Sub Racks are an expandable frame concept with integrated cable management to provide a future proof design. Fibres are protected at all times and patch cord routing carefully controlled.

Front mountable in 19" or ETSI racks in widths of 600mm or 900mm as standard in 4U supporting up to 192 LC fibres or 6U supporting up to 288 LC fibre options



SEE PAGE 6 FOR MORE DETAIL

Front mountable back plates available in two height options designed to hold up to 4 or 6 1U pivoting modular panels, allowing you to expand your installation as needed.



## **Optical Distribution Frame Module**

Pivoting Tray, Rear Mount System

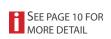
This rear mounting Optical Distribution Frame (ODF) comprising multiple 1U Rear Mount Patch Panels, utilising a pivoting tray design, and integral patch cord management. It is ideally suited for 19" or ETSI racks with either rear or front fitting mounts.

When combined with Cable Break Out units, it provides flexible cabling access. The modular 4u or 6u Optical Sub Racks are an expandable frame concept with integrated cable management to provide a future proof design. Fibres are protected at all times and patch cord routing carefully controlled.

Rear mountable in 19" or ETSI racks in widths of 600mm or 900mm as standard

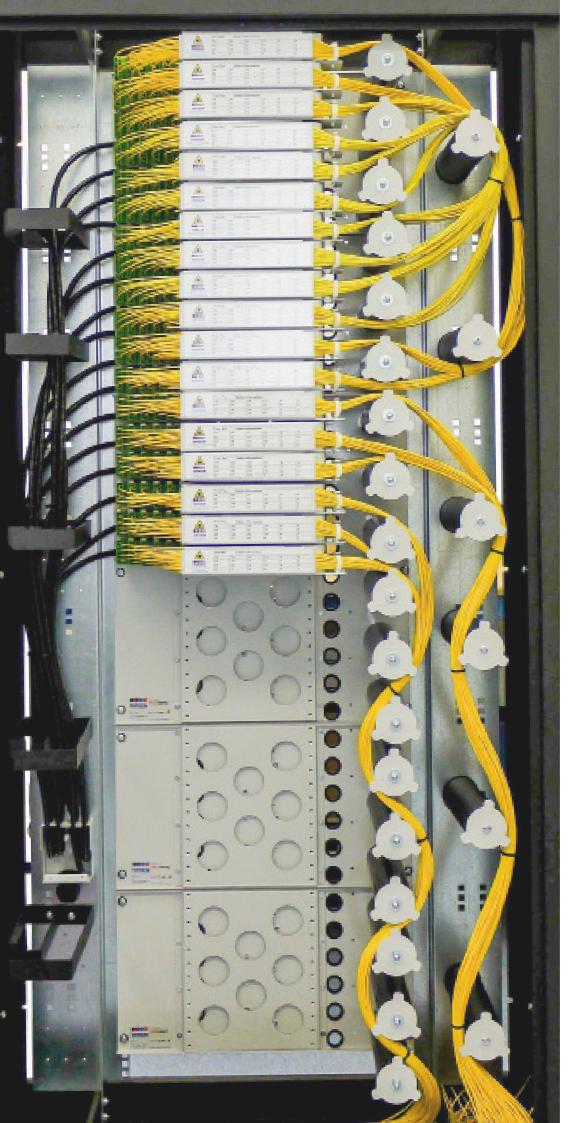


Rear mountable back plates available in two height options designed to hold up to 4 or 6 1U pivoting modular panels, allowing you to expand your installation as needed.









Convenient & **Functional Cabinet** 

> Simplified Installation

Modular by Design

Ultimate Performance



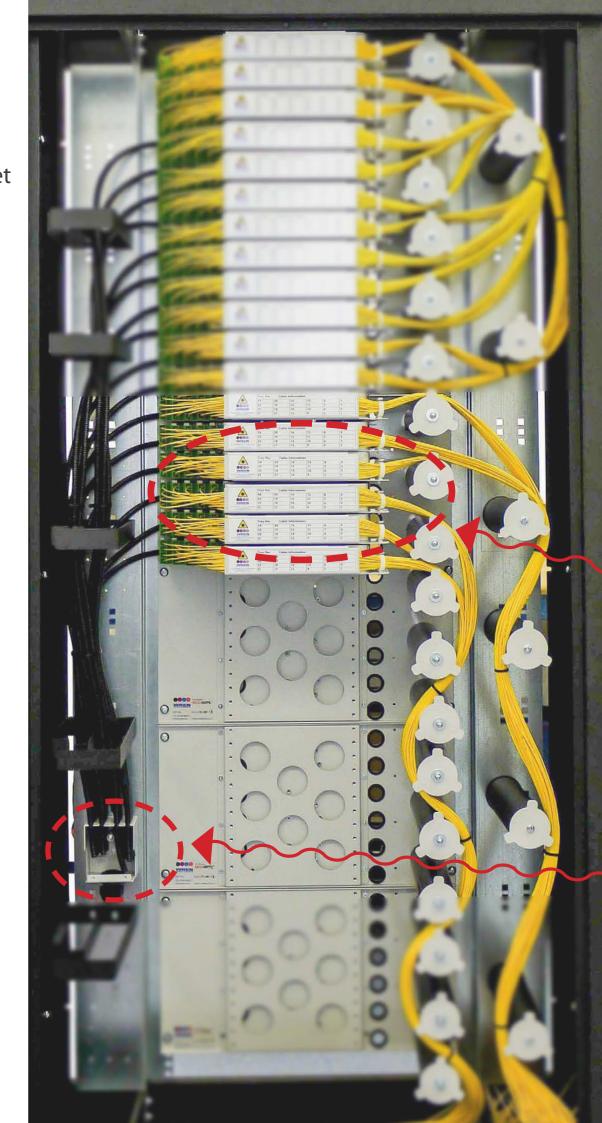
Convenient & Functional Cabinet

Simplified Installation

Modular by Design

Ultimate Performance





Supporting upto 48 Fibres

The 1U Fibre Craft Tray is for a pivoting optical sub-rack front or rear 19" and ETSI rack (other rack types can be catered for by request).

It takes various connector types via interchangeable bulkheads, including LC, SC, E-2000, FC and ST. It is particularly suited for restricted rack space applications, whilst providing many of the fibre management features found in our Optical Distribution Frames.

## Fibre Craft Tray 1U Pivoting Optical Sub-Rack





Stackable, hinged splicing cassette trays

Intergrated mounting points for 10mm copex and cable breakout units

On tray fibre routing protection

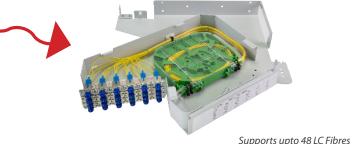
Fibre bend radius managed

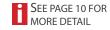
Patchcord routing

Reverse style trays available

Patching only option for preterminated cabling solutions

#### **Rear Mount Patch Panel 1U Pivoting Optical Sub-Rack**





## **Cable Breakout Units**



Comprehensive range of sizes to suit application including 4 way, 8 way, 12 way, 16 way and 24 way as standard.

The Cable Breakout Unit is designed to anchor an incoming cable and route the fibre tubes to individual patch panels or Optical Sub Units within the Optical Distribution Frame.

Each Cable Breakout Unit is provided with central tension member anchorage. The Cable Breakout Unit is made up of a base, lid, compression gland, CTM clamp and flexible copex tubing.

Each 10mm outer diameter copex tube can accommodate two unitubes, typically containing up to 12 fibres each. Typically used where loose tube cables are more suitable and cost effective.





Pivoting Tray, Front Mount System, Supporting upto 288 Fibres

This front mounting Optical Distribution Frame (ODF) comprising multiple 1U Rear Mount Patch Panels, utilising a pivoting tray design, and integral patch cord management. It is ideally suited for 19" or ETSI racks with either rear or front fitting mounts. When combined with Cable Break Out units, it provides flexible cabling access. The modular 4u or 6u Optical Sub Racks are an expandable frame concept with integrated cable management to provide a future proof design. Fibres are protected at all times and patch cord routing carefully controlled.



## **Features**

- Front mountable in 19" or ETSI racks in widths of 600mm or 900mm as standard
- Expandable back plates mean ODF capacity can suit the application, for example per 6-way Optical Sub Rack, 288 fibres (based on 48 terminations per tray on LC connectors), 144 fibres (based on 24 terminations per tray on SC or E2000 connectors) or 96 fibres (based on FC or ST connectors)
- Integrates with Cable Breakout Units of varying capacities, to route fibre tubes from the bottom of the rack to the individual trays via 10mm diameter conduit.
- Stackable, hinged splicing cassette trays (maximum 3) each with a 12 fibre splice capacity, manufactured using UL94-V0 rated CYCOLAC® VW300 ABS thermoplastic fire resistant resin
- Protected on tray fibre routing
- Patch cords are routed left to right through a front concealed routing channel and are directed up or down the rack. A series of holes on the right hand side wall of the unit allow for cables to be securely affixed
- Solid steel lid protecting pigtails and splicing zones
- Reverse style tray also available where patch leads are routed right to left
- Splitters and ribbon fibre splicing can be accommodated
- Patching only options for hydras and preterminated cabling solutions





- Shallow depth means they can be used where space is limited or back-to-back cross-connect racks
- Connector types to suit application. Fibre type and for non-standard interconnects can be varied on a single platform
- Integrates with Cable Breakout Units
- Simple, practical, secure and highly flexible routing from rear to front of panel
- Crush resistant tubing protects fibres when being routed within trav
- Splice tray designed to control bend radius while ensuring ease of access for splicing
- Secure, bend radius managed patch cord routing without protruding in front of panel with large labelling field for port identification
- Integrated mandrels mounted to the side and/or centrally to dress patch cords and provide cable management
- Trays for WDM and splitter applications available



Pivoting Tray, Front Mount System, Supporting upto 288 Fibres



# **Example Ordering information**

4 Way Optical Sub Unit - Pivoting Tray, Front Mount Back Plate

Part Number	Description
MCO0281	96 Fibre Module 19" c/w 4 x SC/APC 24 Way Trays
MCO0282	96 Fibre Module 19" c/w 4 x SC/PC 24 Way Trays
MCO0283	96 Fibre Module 19" c/w 4 x LC/PC 24 Way Trays

6 Way Optical Sub Unit - Pivoting Tray, Front Mount Back Plate

Part Number	Description
MCO0286	144 Fibre Module 19" c/w 6 x SC/APC 24 Way Trays
MCO0287	144 Fibre Module 19" c/w 6 x SC/PC 24 Way Trays
MCO0288	144 Fibre Module 19" c/w 6 x LC/PC 24 Way Trays

Other configurations available on request

# **Standard Installation Kits Include (Per Tray)**

Description	
12 way splice cassette (up to 3 including 1 lid)	
24 x 45mm splice protectors (60mm available on request)	
Cable ties, saddles clips, laser warning label	
Cage nuts and fixings	

Other installation kits including additional copex (sold per metre) available on request

Part Number	Description
MCO0039	4 Way Cable Breakout Unit (c/w copex tubing)
MCO0027	8 Way Cable Breakout Unit (c/w copex tubing)
MCO0277	12 Way Cable Breakout Unit (c/w copex tubing)
MCO0013	16 Way Cable Breakout Unit (c/w copex tubing)
MCO0278	24 Way Cable Breakout Unit (c/w copex tubing)
10-00009	Rear Copex Mounting Clip
10-00304	Rear Copex Mounting Cage
MAC0020	Copex Tubing (per metre)
MCO0077	4-Way Front Mounting Back Plate
MCO0291	6-Way Front Mounting Back Plate



Pivoting Tray, Rear Mount System

This rear mounting Optical Distribution Frame (ODF) comprising multiple 1U Rear Mount Patch Panels utilises a pivoting tray design, with patch cord mandrels fitted to the right of the trays. It is ideally suited for 19" or ETSI racks with either rear or front fitting mounts. When combined with Cable Break Out units, it provides flexible cabling access. The modular 4u or 6u Optical Sub Racks are an expandable frame concept with integrated cable management to provide a future proof design. Fibres are protected at all times and patch cord routing carefully controlled.



#### **Features**

- Rear mountable in 19" or ETSI racks in widths of 600mm or 900mm as standard
- Expandable back plates mean ODF capacity can suit the application, for example per 6-way Optical Sub Rack, 288 fibres (based on 48 terminations per tray on LC connectors), 144 fibres (based on 24 terminations per tray on SC or E2000 connectors) or 96 fibres (based on FC or ST connectors)
- Integrates with Cable Breakout Units of varying capacities, to route fibre tubes from the bottom of the rack to the individual trays via 10mm diameter conduit
- Stackable, hinged splicing cassette trays (maximum 3) each with a 12 fibre splice capacity, manufactured using UL94-V0 rated CYCOLAC® VW300 ABS thermoplastic fire resistant resin
- · Protected on tray fibre routing
- Patch cords are routed left to right through a front concealed routing channel and over vertically mounted storage mandrels for full bend radius control
- Solid steel lid protecting pigtails and splicing zones
- Reverse style tray also available where patch leads are routed and managed from right to left
- Splitters and ribbon fibre splicing can be accommodated
- Patching only options for hydras and preterminated cabling solutions





- Shallow depth means they can be used where space is limited or back-to-back cross-connect racks
- Connector types to suit application. Fibre type and for non-standard interconnects can be varied on a single platform
- Integrates with Cable Breakout Units
- Simple, practical, secure and highly flexible routing from rear to front of panel
- Crush resistant tubing protects fibres when being routed within tray
- Splice tray designed to control bend radius while ensuring ease of access for splicing
- Secure, bend radius managed patch cord routing without protruding in front of panel with large labelling field for port identification
- Integrated mandrels mounted to the side and/or centrally to dress patch cords and provide cable management
- Trays for WDM and splitter applications available



Pivoting Tray, Rear Mount System, Supporting upto 288 Fibres



# **Example Ordering information**

4 Way Optical Sub Unit - Pivoting Tray, Front Mount Back Plate

Part Number	Description
MCO0281	96 Fibre Module 19" c/w 4 x SC/APC 24 Way Trays
MCO0282	96 Fibre Module 19" c/w 4 x SC/PC 24 Way Trays
MCO0283	96 Fibre Module 19" c/w 4 x LC/PC 24 Way Trays

6 Way Optical Sub Unit - Pivoting Tray, Front Mount Back Plate

Part Number	Description
MCO0286	144 Fibre Module 19" c/w 6 x SC/APC 24 Way Trays
MCO0287	144 Fibre Module 19" c/w 6 x SC/PC 24 Way Trays
MCO0288	144 Fibre Module 19" c/w 6 x LC/PC 24 Way Trays

Other configurations available on request

# **Standard Installation Kits Include (Per Tray)**

Description	
12 way splice cassette (up to 3 including 1 lid)	
24 x 45mm splice protectors (60mm available on request)	
Cable ties, saddles clips, laser warning label	
Cage nuts and fixings	

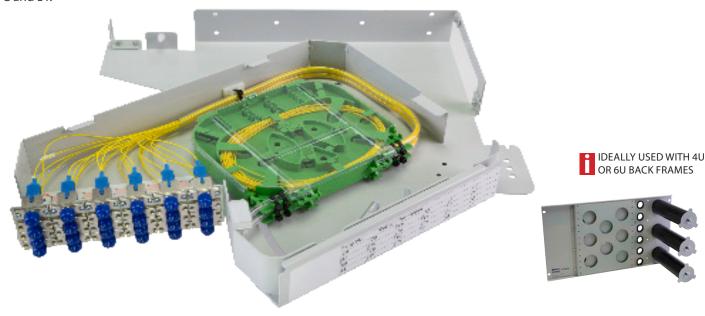
Other installation kits including additional copex (sold per metre) available on request

Part Number	Description
MCO0039	4 Way Cable Breakout Unit (c/w copex tubing)
MCO0027	8 Way Cable Breakout Unit (c/w copex tubing)
MCO0277	12 Way Cable Breakout Unit (c/w copex tubing)
MCO0013	16 Way Cable Breakout Unit (c/w copex tubing)
MCO0278	24 Way Cable Breakout Unit (c/w copex tubing)
10-00009	Rear Copex Mounting Clip
10-00304	Rear Copex Mounting Cage
MAC0020	Copex Tubing (per metre)
MCO0077	4-Way Front Mounting Back Plate
MCO0291	6-Way Front Mounting Back Plate



Pivoting Optical Sub-Rack, Supporting upto 48 Fibres

The 1U Rear Mount Patch Panel utilises a pivoting tray design and is ideally suited for 19" or ETSI racks (other rack types can be catered for by request). It requires rear or front mounting back plates. When used in multiple units and with optional patch cord mandrels fitted to one side of the trays, and mounted on various 4U or 6U rear or front mounting back plates, it forms part of the Optical Distribution Frame system. It takes various connector types via interchangeable bulkheads, including LC, SC, E-2000, FC and ST.



# **Features**

- Mountable in 19" and ETSI racks for use in either 600mm or 900mm wide Optical Distribution Frame systems
- Large adaptor mounting field for various connector types, including LC (up to 48 fibre) and SC, E-2000, FC and ST (up to 24 fibre)
- Integrated rear and front mounting points for 10mm diameter copex tubing
- Stackable, hinged splicing cassette trays (maximum 3) each with a 12 fibre splice capacity, manufactured using UL94-V0 rated CYCOLAC® VW300 ABS thermoplastic fire resistant resin and supplied with a plastic cover on top tray
- Protected for on-tray fibre routing
- Patch cords are routed left to right through a front concealed routing channel
- Mounting points for optional C-clips for dressing patch cords into side cable routing system
- Solid steel lid protecting pigtails and splicing zones
- Reverse style tray also available where patch leads are routed right to left
- Splitters and ribbon fibre splicing can be accommodated
- Patching only options for hydras and preterminated cabling solutions

- Multiple 1U modules can be mounted to standard 4-Way and 6-Way back plates to form Optical Distribution Frames. Fits most standard 600mm or 900mm wide racks. Modifications for non-standard rack applications on request
- Shallow 220mm depth means they can be use where space is limited or back-to-back cross-connect racks
- Connector types to suit application. Fibre type and for non-standard interconnects can be varied on a single platform
- Integrates with Cable Breakout Units or can be used with various cable fixing solutions to suit the application
- Simple, practical, secure and highly flexible routing from rear to front of panel
- Crush resistant tubing protects fibres when being routed within tray
- Splice tray designed to control bend radius while ensuring ease of access for splicing
- Secure, bend radius managed patch cord routing without protruding in front of panel with large labelling field for port identification
- Can be combined with mandrels mounted to the side to dress patch cords and provide cable management

Pivoting Optical Sub-Rack, Supporting upto 48 Fibres



# **Example Ordering information**

Part Number	Description
MCO0205	Rear Mount c/w 24 x SC/APC Pigtails and Adaptors
MCO0157	Rear Mount c/w 24 x SC/PC Pigtails and Adaptors
MCO0292	Rear Mount c/w 24 x LC/PC Pigtails and Adaptors
MCO0293	Rear Mount c/w 16 x FC/PC Pigtails and Adaptors

Other configurations available on request

# **Standard Installation Kits Include**

Description	
12 way splice cassette (up to 3 including 1 lid)	
24 x 45mm splice protectors (60mm available on request)	
Cable ties, saddles clips, laser warning label	
Cage nuts and fixings	

Other installation kits including additional copex (sold per metre) available on request

Part Number	Description
MCO0039	4 Way Cable Breakout Unit (c/w copex tubing)
MCO0027	8 Way Cable Breakout Unit (c/w copex tubing)
MCO0277	12 Way Cable Breakout Unit (c/w copex tubing)
MCO0013	16 Way Cable Breakout Unit (c/w copex tubing)
MCO0278	24 Way Cable Breakout Unit (c/w copex tubing)
10-00009	Rear Copex Mounting Clip
10-00304	Rear Copex Mounting Cage
MAC0020	Copex Tubing (per metre)
MCO0003	4-Way Rear Mounting Back Plate
MCO0075	6-Way Rear Mounting Back Plate
MCO0077	4-Way Front Mounting Back Plate
MCO0291	6-Way Front Mounting Back Plate



Rack Mountable Fibre Craft Pivoting Optical Sub-Rack

The 1U Fibre Craft Tray is a pivoting optical sub-rack for front or rear 19" and ETSI racks (other rack types can be catered for by request). It takes various connector types via interchangeable bulkheads, including LC, SC, E-2000, FC and ST. It is particularly suited for restricted rack space applications, whilst providing many of the fibre management features found in our Optical Distribution Frames.



## **Features**

- Front or rear mountable in 19" and ETSI racks
- Large adaptor mounting field for various connector types, including LC up to 48 fibre and SC, E-2000, FC and ST (up to 24 fibre)
- Stackable, hinged splicing cassette trays (maximum 3) each with a 12 fibre splice capacity, manufactured using UL94-V0 rated CYCOLAC® VW300 ABS thermoplastic fire resistant resin and supplied with a plastic cover on top tray
- Integrated rear and front mounting points for 10mm diameter copex tubing
- Mounting points for Cable Breakout Unit or cable
- Options for mounting loose tube or tight buffered pre-terminated cables
- Protected tubing for on-tray fibre routing
- Bend radius managed patch cord routing through a front concealed routing channel
- Generous rear side and vertical access slots
- Solid steel lid protecting pigtails and splicing zones
- Reverse style tray also available where patch leads are routed right to left
- Splitters and ribbon fibre splicing can be accommodated
- Patching only options for hydras and preterminated cabling solutions

- Fits most standard racks. Modifications for non-standard rack applications on request
- Shallow 220mm depth means they can be used in where space is limited or back-to-back cross-connect racks
- Connector types can be mixed to suit application, fibre type and for non-standard and legacy interconnects in a single platform
- Splice tray designed to control bend radius while ensuring ease of access for splicing
- Simple, practical, secure and highly flexible cable breakout and routing from rear to front of panel
- Integrates with Cable Breakout Units or can be used with various cable fixing solutions to suit the application
- Highly flexible crush resistant tubing protects fibres when being routed within tray
- Secure, bend radius managed patch cord routing with large labelling field for port identification
- Side access slot ensures patch cords are kept tidy and enter side containment without protruding in front of panel
- Vertical access slot means patching can be routed up or down the rack within a 19" footprint, reducing space and eliminating the need for side containment

# ·> FIBRE CRAFT PIVOTING OPTICAL SUB-RACK

# **1U OPTICAL DISTRIBUTION FRAME SOLUTIONS**

Rack Mountable Fibre Craft Pivoting Optical Sub-Rack



# **Example Ordering information**

Part Number	Description
MCO0256	Craft Tray c/w 24 x LC/PC Pigtails and Adaptors
MCO0290	Craft Tray c/w 24 x SC/PC Pigtails and Adaptors
MCO0268	Craft Tray c/w 24x E2000/PC Pigtails and Adaptors
MCO0215	48 Fibre (2 tray module) c/w 48 x SC/APC Pigtails and Adaptors

Other configurations available on request

# **Standard Installation Kits Include**

Description
12 way splice cassette (up to 3 including 1 lid)
24 x 45mm splice protectors (60mm available on request)
Cable ties, saddles clips, laser warning label
Cage nuts and fixings

Other installation kits including additional copex (sold per metre) available on request

Part Number	Description
MCO0039	4 Way Cable Breakout Unit (c/w copex tubing)
MCO0027	8 Way Cable Breakout Unit (c/w copex tubing)
MCO0277	12 Way Cable Breakout Unit (c/w copex tubing)
MCO0013	16 Way Cable Breakout Unit (c/w copex tubing)
MCO0278	24 Way Cable Breakout Unit (c/w copex tubing)
10-00009	Rear Copex Mounting Clip
10-00304	Rear Copex Mounting Cage
MAC0020	Copex Tubing (per metre)



**Cable Breakout Units** 

The Cable Breakout Unit is designed to anchor an incoming cable and route the fibre tubes to individual patch panels or Optical Sub Units within the Optical Distribution Frame. Each Cable Breakout Unit is provided with central tension member anchorage. The Cable Breakout Unit is made up of a base, lid, compression gland, CTM clamp and flexible copex tubing. Each 10mm outer diameter copex tube can accommodate two unitubes, typically containing up to 12 fibres each. Typically used where loose tube cables are more suitable and cost effective.







## **Features**

- Comprehensive range of sizes to suit application including 4 way, 8 way, 12 way, 16 way and 24 way as standard
- Based around 10mm outer diameter copex tubing. Each copex tube can take up to 2 unitubes, allowing up to individual fibres to be routed to each panel
- Slots are designed to retain the copex securely
- Trunk cable is secured using a standard compression gland (varying sizes - see ordering information)
- Supplied with central tension member clamp for securing the strength member of the cable (up to 7mm diameter)
- The Giant Breakout Unit can accommodate up to 6 individual cable entry points and 36 copex tubes providing cable breakout for large capacity Optical Distribution Frames in cross-connect applications.

- Safe secure transition between cable and panel where it is not possible to route the cable directly to the tray
- Copex tubes are secured quickly without compression or tightening of screws
- Can be fixed using cage nuts to side of rack, back board or wall
- Also integrates with 1U Fibre Craft Tray and Optical Distribution Frame 4-way and 6-way back plates enabling the Cable Breakout Unit to be mounted sideways on the rear of the panel or back plate where the access to the bottom or side of the rack is limited

Cable Breakout Units



# **Example Ordering information**

MCO0039 4-Way Cable Breakout Unit

Supplied with M20 compression gland (cable diameter min 7.5mm/max 11.3mm) and 4 metres of copex tubing as standard

No. Copex Tubes	Maximum Fibres (2 Unitube x 12 fibres each)
Up to 4	Up to 96

MCO0027 8-Way Cable Breakout Unit

Supplied with M25 compression gland (cable diameter min 10.8mm/max 15.8mm) and 8 metres of copex tubing as standard

No. Copex Tubes	Maximum Fibres (2 Unitube x 12 fibres each)
Up to 8	Up to 192

MCO0277 12-Way Cable Breakout Unit

Supplied with M25 compression gland (cable diameter min 10.8mm/max 15.8mm) and 10 metres of copex tubing as standard

No. Copex Tubes	Maximum Fibres (2 Unitube x 12 fibres each)
Up to 12	Up to 288

MCO0013 16-Way Cable Breakout Unit

Supplied with M25 compression gland (cable diameter min 10.8mm/max 15.8mm) and 12 metres of copex tubing as standard

No. Copex Tubes	Maximum Fibres (2 Unitube x 12 fibres each)
Up to 16	Up to 384

MCO0278 24-Way Cable Breakout Unit

Supplied with M25 compression gland (cable diameter min 10.8mm/max 15.8mm) and 16 metres of copex tubing as standard

No. Copex Tubes	Maximum Fibres (2 Unitube x 12 fibres each)
Up to 24	Up to 576

M32 glands (cable diameter min 14.6mm/max 19.5mm) and non-standard lengths of copex tubing can be supplied on request

Part Number	Description
10-00009	Rear Copex Mounting Clip
MAC0020	Copex Tubing (per metre)
MCO0205	Rear Mount c/w 24 x SC/APC Pigtails and Adaptors
MCO0157	Rear Mount c/w 24 x SC/PC Pigtails and Adaptors
MCO0292	Rear Mount c/w 24 x LC/PC Pigtails and Adaptors
MCO0293	Rear Mount c/w 24 x FC/PC Pigtails and Adaptors
MCO0256	Craft Tray c/w 24 x LC/PC Pigtails and Adaptors
MCO0290	Craft Tray c/w 24 x SC/PC Pigtails and Adaptors
MCO0268	Craft Tray c/w 24 x E2000/PC Pigtails and Adaptors
MCO0215	Craft Tray (2 Tray Module) c/w 48 x SC/APC Pigtails and Adaptors
MCO0003	4 Way Rear Mount Back Plate
MCO0075	6 Way Rear Mount Back Plate
MCO0077	4 Way Front Mount Back Plate
MCO0291	6 Way Front Mount Back Plate



Wren's capabilities are focused on fast-turnaround manufacture of bespoke and custom fibre optic cable assemblies and fibre management products, to see more visit Wrenuk.com.

High performance patchcords and custom assemblies

Pre-terminated multi-fibre cables, including harsh environment and re-deployable solutions

Repair and re-termination

Optical distribution frames

Splice management solutions

Patch panels, wall boxes and cable management products

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