Prysmian Group

OAsys

Optical connectivity for next-generation performance

PRYSMIAN

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Contents

Linking the future

As the worldwide leader in the cable industry, Prysmian Group believes in the effective, efficient and sustainable supply of energy and information as a primary driver in the development of communities.

With this in mind, we provide major global organisations in many industries with best-in-class cable solutions, based on state-of-the-art technology. Through two renowned commercial brands – Prysmian and Draka – based in more than 50 countries, we're constantly close to our customers, enabling them to further develop the world's energy and telecoms infrastructures, and achieve sustainable, profitable growth.

In our energy business, we design, produce, distribute and install cables and systems for the transmission and distribution of power at low, medium, high and extra-high voltage.

In telecoms, the Group is a leading manufacturer of all types of copper and fibre cables, systems and accessories – covering voice, video and data transmission.

Drawing on over 130 years' experience and continuously investing in R&D, we apply excellence, understanding and integrity to everything we do, meeting and exceeding the precise needs of our customers across all continents, at the same time shaping the evolution of our industry.

Introducing *xsNet*

From aerial and underground installations, through to both simple and more complex residential networks, Prysmian's *xsNet* family of products and solutions represents a new standard in Fibre To The Home (FTTH). Answering the critical need for ease of deployment, flexibility, reliability and cost-efficiency – and being backed by a full suite of valuable support services – *xsNet* is the ideal range of cabling for today's changing world.

xsNet

Value Innovation for your Broadband Network

xsNet **INDOOR SOLUTIONS**

xsNet **POP SOLUTIONS**

xsNet **OSP SOLUTIONS**

xsNet **ENGINEERING SOLUTIONS**

QUICKDRAW XS   **SIROCCO** XS   **OASYS**   **JETNET** XS

RETRACTANET XS   **VERTICASA** XS   **VERTV** XS   **EASENET** XS

BENDBRIGHT XS   Supported throughout by *BENDBRIGHT* XS fibre technology

OAsys

As demand for high optical network performance grows, so too does demand from network operators for lower power consumption, high density splicing & patching options across Fibre To The Home (FTTH) networks.

Prysmian has designed and developed a range of next-generation solutions specifically for these networks – *OAsys*.

Containing the core range of Prysmian's optical connectivity products, *OAsys* covers all cable-management needs regardless of network type.

Offering indoor and outdoor versatility for applications within aerial and underground installations, central offices, exchanges, customer premises and external networks.

This versatility and ease of installation represent a significant step forward in the performance of FTTx networks. And an opportunity for you to deliver more to your end users.

Where is fibre going?

The increasing number of services available via optical fibre (Broadband Internet, VoIP, Video on Demand, High Definition IPTV) and the need to provide higher bandwidth capability – both upstream and downstream – is leading network operators to replace copper wire networks with optical fibre deeper into the last mile and closer to the customer.

Consequently it is important to keep down installation and operational costs in structures like high-rise buildings and Multi Dwelling Units (MDUs) and minimize the impact of the work on the final customer.

Introduction

Prysmian's *OASYS* connectivity solutions are designed for versatility in both outdoor or indoor applications. The range covers all cable management needs, regardless of the network type. These include aerial and underground installations, as well as cabling in central offices (or exchanges) or customer premises.

Prysmian is also at the forefront of designing next generation products specifically for Fibre To The Home (FTTH) networks, catering for the growing demand for high optical network performance levels from both business and residential customers. There is a demand for more bandwidth, lower power consumption and high density splicing & patching options in all areas of the network, due to space limitations.

The *OASYS* portfolio provides solutions that allow network operators to solve such problems and create networks capable of managing future demands. This *OASYS* catalogue contains the core range of our optical connectivity products, designed for deployment in applications within the central office, customer premises or the external network.

Features & Benefits

The *OASYS* connectivity portfolio uses well established technology that is constantly being upgraded and improved to provide customers with a series of significant benefits for the planning and operation of their network.

Flexible design options
Optimised products are available for any network type.

Installation time and cost are reduced
OASYS products are built for rapid installation and easy access/maintenance.

Upgrading is simple
The majority of the range is built using a modular approach.

High Performance
Products are tested in accordance with world class standards.

Quality
Maintained through the expertise of staff working to world class standards (ISO 9001 & 14000).

Application Guide

Many of our products, especially for Fibre To The Home (FTTH) applications, form part of a complete system together with optical fibre cable e.g. the *SIROCCO*XS Blown Fibre System, the *QUICKDRAW*XS pre-connectorised solution for last mile applications, an Optical Aerial Drop System and the *VERTICASA*XS solution for business and MDU apartment blocks. However, for simplicity, our product range can be grouped into the following:

Racks & Rack Mounted Products
A range of racks together with a wide variety of shelves and trays (suitable for splicing, patching, splitting and/or storage) suitable for application in exchanges/central hubs/offices/data centres.

Outside Plant – External Solutions
Joints and cabinets that can manage the splicing and distribution of optical fibres throughout the network in Point-to-Point (P2P) and Passive Optical Network (PON) environments.

Customer End – Wall Mounted Solutions
Focussing on products for cable entry into business or residential premises and distribution to the final customer.

Accessories
A range of additional items that can assist network operators and installers to complete their network build, including pigtails, patchcords, adapters and installation tools.

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Product List

Racks & Rack Mounted

RS3000
The RS3000 can accommodate up to 45 off SRS3000 shelves (Splice Only, Patch Only, Splice & Patch, with Splitters or for Patchcord Storage) achieving 2160 fibres (splice & patch).

OCR
The Optical Consolidation Rack can accommodate 8 sub-racks each with 12 pull out modules, each with 6 splice trays. Total capacity – 1152 fibres on a dual fibre/tray basis.

Other
A range of other racks and appropriate shelves and sub-racks including standard 19" & ETSI solutions (Modular Main Rack), reduced width racks (Mini Rack) and special designs (GR3A).

Outside Plant

External Joints
Solutions including a compact joint for 48 or 144 fibres, traditional straight & loop joints plus in-line joints. Single circuit & single element trays, ribbon & blown fibre options.

Cabinets
Solutions for outdoor use to accommodate shelves (including splitter trays) for local distribution and passive PONs for FTTx.

***QuickDraw*XS System**
Pre-connectorised solution for the final customer drop. Pre-terminated 1 or 2 fibre Lead-in Assemblies connect a network joint (CLJ) to the home (demarcation unit).

Aerial System
Cable/connectivity solution for the final customer connection (FTTH) with an optical overhead drop cable. Range has anti-creep devices, clamps, aerial joints and customer terminations.

Customer End

Wall Boxes
Solutions to manage the entry of fibre into a building. These usually provide fibre management for the customer but may simply manage *Sirocco*XS tubing entry.

Distribution Boxes
Units that manage the distribution of fibre (possibly *Sirocco*XS tubing) through a building e.g. an MDU or business.

Termination Boxes
Units located inside a customer premises (business, apartment or single residential) for termination and presentation of shuttered adapters for final patchcord link to ONU.

***VertiCasa*XS System**
Complete system for cabling high-rise buildings and apartment blocks with breakout boxes, customer termination units and building distribution management modules.

Accessories & Tools
An extensive range of additional items of equipment, accessories and tools are available including pigtails, patchcords, adapters and cable preparation tools.

OASYS Connectivity Application Matrix

Rack Products

Product Name	Data Sheet Ref	Maximum Capacity — Patching	Splice	Patching Layout — Tray Patching	Front Patching	SIROCCO XS Blown Fibre Compatible	Rack Type — 19"	ETSI
RS3000 Rack	RA007	2160	2160		■	■	■	
Modular Main Rack	RA005	1008	1920	■		■	■	■
19"/ETSI Racks	RA004	Capacity/configuration depends upon equipment mounted in rack.					■	■
OCR	RA009		1152					
Generic Rack 3A	RA002		576		■			
Mini Rack	RA006	120	120		■			

Rack Mounted Products

Product Name	Data Sheet Ref	Maximum Capacity — Patching	Splice	Patching Layout — Tray Patching	Front Patching	SIROCCO XS Blown Fibre Compatible	Rack Type — 19"	ETSI
SRS3000 Splice & Patch Shelf	RM014	48	48		■	■	■	■
SRS3000 Patch Only Shelf	RM019	48			■		■	■
SRS3000 Splice Only Shelf	RM018		48			■	■	■
SRS3000 Patchcord Storage Module	RM020						■	■
SRS3000 Connectorised Splitter Shelf	RM022	32			■		■	■
SRS3000 Distribution Sub-Rack	RM015	144	144		■	■	■	■
Horizontal Routing & Storage Shelf	RM023						■	■
Sliding Sub-Rack (Splicing & Patching)	RM011	72	72	■			■	■
Sliding Sub-Rack (Patching)	RM010	72		■			■	■
Sliding Sub-Rack (Splicing)	RM009		120				■	■
PSP Splice & Patch Shelf	RM012	48	48	■		■	■	■
Connectorised Splitter Shelf	RM013	32			■		■	■
ORDJ10 Distribution Sub-Rack	RM001	144	576	■			■	■
SIROCCO XS 19" Tube Patching Panel	RM007					■	■	■
SIROCCO XS 19" Tube Patching Shelf	RM017					■	■	
SIROCCO XS Splicing Shelf	RM006		8			■	■	■
Generic Sub-Rack 3A	RM002		48					■

Outside Plant

Product Name	Data Sheet Ref	Splicing/Fibre Mgmt — Single Circuit	Single Element	Ribbon	Cable Seal — Heat-shrink	Mechanical	SIROCCO XS Blown Fibre Compatible	Application — Aerial	Direct Burial	Under-ground	Closure Type — Dome	In-line	Cabinet
Compact Joint	OP001		48/144		■			■	■	■	■		
Compact Node	OP005	24			■		■	■		■	■		
Compact Single Circuit Joint	OP002	24	96		■			■	■	■	■		
ESDF4 In-Line Joint	OP004		72			■		■	■			■	
SIROCCO XS Blown Fibre Generic Joint	OP003		360		■		■			■	■		
Standard Straight Joint	OP006		360		■					■	■		
Standard Loop Joint	OP007		360		■					■	■		
Modular Jointing System (MJS)	OP010	384	720	480	■	■	■	■		■	■		
FDN – FTTH Distribution Node	HT001	24	288	576	■	■	■	■		■	■		
FST – Small Size Fibre Joint	HT002		72	96	■	■		■		■	■		
FRBU – Mid Size Fibre Joint	HT003		144	192	■	■	■	■		■	■		
FML – Large Fibre Joint	HT004		576	1152	■	■	■	■		■	■		
UFC – Universal Fibre Joint	HT005		1152	2304	■	■	■	■		■	■		
Tube Distribution Closure (TDC)	OP017				■	■			■			■	
Fibre Distribution Hub (FDH)	OP015	1152	1152										■
SC3000 Streetside Cabinet	OP023	768	768				■						
SIROCCO XS FTTH Streetside Cabinet	OP016						■						■
Branching Units	SA002				■	■			■	■		■	
Resin Filled Joints – SIROCCO XS	OP026				■	■			■	■		■	
Resin Filled Joints	ZA002				■				■	■		■	
Outdoor VERTICASA XS Breakout Unit	OP022				■							■	
QUICKDRAW XS Connectorised Lead-In Joint (CLJ)	OP025	16			■			■			■		

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Customer End

Product Name	Data Sheet Ref	Maximum Fibre Capacity	Maximum Number of Cables	Splicing	Patching	*Sirocco*ˣˢ Blown Fibre Compatible	Application	
							Indoor	Outdoor
Ultra Compact Termination Box Mk1	WM022	2	2 in 2 out	■	■	■	■	
Ultra Compact Termination Box Mk2	WM030	2	2 in 2 out	■	■	■	■	
Compact Termination Box Mk1	WM001	4	1 in 4 out	■	■	■	■	
Compact Termination Box Mk2	WM044	4	4 in 4 out	■	■	■	■	
Pre-Terminated Compact Termination Box	WM049	4	1 in 4 out		■		■	
*QuickDraw*ˣˢ Demarcation Unit	WM028	4	2		■			■
External Compact Termination Box (ECT)	WM017	8	1 in 8 out	■	■	■	■	■
Internal/External Termination Box – 12 fibre	WM019	12	2 in 12 out	■	■		■	■
Internal/External Termination Box – 24 fibre	WM020	24	2 in 24 out	■	■		■	■
Two Door Termination Box	WM037	48	4 in 48 out	■	■		■	■
Internal/External Termination Box – 72 fibre	WM021	72	2 in 72 out	■	■		■	■
Internal Customer Splice Box	WM015	12	1 in 12 out	■	■	■	■	
External Customer Splice Box	WM014	12	1 in 4 out	■	■	■		■
Internal/External Splice Wall Box	WM029	144	1 in 6 out	■		■	■	■
WDB Distribution Box	WM040	48	2 in 12 out	■			■	
MDU Wall Box	WM008	480	8 in 32 out	■	■	■	■	
Multi-Operator MDU Distribution Box	WM023	36	4 in 36 out	■	■		■	
Internal Splitter Node	WM050	32	1 in-line 32 out	■		■	■	
Home Hub	WM038	Capacity/configuration depends on size/usage					■	
Wall Mounted Cabinets	WM036	Capacity/configuration depends on size/usage					■	
Riser Box	WM013	12	1 in-line 12 out	■		■	■	
Multi-Tray Riser Box	WM045	64	1 in-line 32 out	■			■	
Customer Lead-In Unit (FTTH)	WM002		1 in 1 out			■	■	■
Customer Lead-In Unit (Business)	WM007		1 in 1 out			■	■	■
*Sirocco*ˣˢ Blown Fibre Gas Seal Unit	WM003		1 in 6 out			■	■	
*Sirocco*ˣˢ 1 Tube Gas Block Housing	WM016		1 in 1 out			■	■	
*Sirocco*ˣˢ Internal Tube Distribution Unit	WM011		1 in 3 out			■	■	
*VertiCasa*ˣˢ Cable Protection Cover	WM027		1				■	
*VertiCasa*ˣˢ 1 Port Breakout Unit	WM041		1 in-line 1 out				■	
*VertiCasa*ˣˢ 4 Port Breakout Unit	WM026		1 in-line 4 out				■	
*VertiCasa*ˣˢ Internal Transition Box	WM025		1 in-line 4 out	■			■	
*VertiCasa*ˣˢ Mechanical Splice Holder	WM024	4	3 in 3 out	■			■	
*VertiCasa*ˣˢ Top Loop Box	WM034		1				■	
*VertiCasa*ˣˢ Bend Managers	AC020		1				■	
*VertiCasa*ˣˢ 8 Port Breakout Unit	WM042		1 in-line 8 out				■	

Racks

Data Sheet RA007

RS3000 Rack

The RS3000 Rack is a standard rack supplied with 19" mounting rails, used to accommodate a range of SRS3000 shelves and sub-racks or any other 19" rack mounted products. The rack is supplied with side panels and transparent doors. A range of cable anchor brackets can be installed in the left hand side of the rack. Mandrels are supplied in the right hand side of the rack to manage and store patchcords.

SRS3000 shelves and sub-racks are available for Splicing Only, Patching Only, Splicing & Patching and Patchcord Storage. They can be supplied in 1U, 2U or 3U formats. Connectorised Splitter Shelves and a Horizontal Routing & Storage Shelf have recently been added to the portfolio.

Up to 40 single (1U) SRS3000 shelves can be accommodated in a 42U rack providing a capacity of 1920 fibres on a splice & patch basis. Up to 45 single (1U) SRS3000 shelves can be accommodated in the 47U rack, providing a capacity of 2160 fibres on a splice & patch basis using SC or LC connectors. Where FC, ST or E2000 connectors are used, the capacity is reduced to 960 fibres in a 42U rack and 1080 fibres in a 47U rack.

The rack can be supplied with a 3U routing channel in the bottom for patchcord routing to adjacent racks. Note that 3U of the above capacity is lost in these cases.

The required space envelope is (w)900mm x (d)300mm x (h)2000mm or 2200mm.

Data Sheet RA005

Modular Main Rack

The Modular Main Rack is a standard ETSI rack, composed of three independent frames; two side channels (left and right) and the main frame. The main frame allows the mounting of the Sliding Sub-Rack (SSR) series (up to 14). The side channels are either 150mm or 300mm wide. The capacity ranges from 1008 fibre when splicing & patching, or patching only and extending to 1600 fibre when splicing only (1920 fibre in ETSI version). Three types of Sliding Sub-Rack are available, a Splicing Sub-Rack (SSR-S), a Patching Sub-Rack (SSR-P) and a Splicing & Patching Sub-Rack (SSR-SP). Each Sliding Sub-Rack is 3U in height.

The Sliding Sub-Racks are fitted into the rack using rear mounting rails. The rack can be supplied fully configured or the parts can be ordered separately. The side channels are designed to hold cable clamps for routing cable fibres, and patchcord storage drums for overlength management of pigtails and patchcords. Straight or elbowed patchcord storage drums are available.

All panels are removable and allow full access to the rack and accessories during installation or maintenance. Can be used in a cascade layout; either side by side or back to back. Cables are inserted from the top or the bottom.

The required space envelope is (w)1200mm x (d)300mm x (h)2200mm when using 300mm side channels or (w)900mm with 150mm side channels.

Data Sheet RA004

19"/ETSI Racks

The 19"/ETSI racks are standard racks for optical fibre distribution, supplied configured with either 19" or ETSI mounting rails. Double depth racks (600mm) are available for increased capacity, allowing modules to be arranged back to back.

The racks are supplied fully built with a frame, side and rear panels, doors (steel or glass) and a brushed exit roof for patchcord routing. The racks can be supplied empty or Prysmian can install a range of its rack mounted products prior to shipment. They are able to accommodate a range of distribution equipment including splicing & patching shelves and distribution sub-racks.

The required space envelope is (w)600mm x (d)300mm x (h)2000mm or 2200mm.

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OCR Rack

The Optical Consolidation Rack (OCR) is designed for use in the exchange for the splicing of network fibres to pre-terminated drop cables, for direct connection to the active equipment. The rack can accommodate up to eight OCR sub-racks. Each OCR sub-rack contains twelve pull out modules, each accommodating six splice trays. Each OCR sub-rack has a capacity of 144 fibres, managed on a single circuit basis. The total capacity of the rack is 1152 fibres on a dual fibre per tray basis.

The rack contains a unique fibre storage system so that all network cables can be installed and stored on day one, without installing any sub-racks. The rack is pre-tubed so when a sub-rack is installed and connected to the rack via a multi-way tube connector block, the previously stored fibres can simply be routed into the pre-installed tubes directly to the required splice tray. The OCR sub-rack can be installed into the rack at any one of the eight pre-determined levels. It is also supplied with an integral high level storage shelf.

The OCR is supplied in a flat pack format to minimise transport costs and ease handling and can be built by one person.

The required space envelope is (w)900mm x (d)300mm x (h)2200mm.

Data Sheet RA009

Generic Rack 3A

The Generic Rack 3A (GR3A) is designed for use in the exchange, cable chamber and customer premises for cross connection purposes. The GR3A can also be used for the transition from external to internal cable. The GR3A must be used in conjunction with a Generic Sub-Rack 3A which contains a Rack Splicing Module 3A (see page 10).

Depending on the required level of circuit/cable segregation, the capacity of the rack ranges from 288 spliced fibres (single fibre working management) to 576 spliced fibres (2 fibres per tray – single circuit management).

The GR3A accommodates up to 12 Rack Splicing Modules (RSM) which can be installed into the rack at any one of the twelve pre-determined levels. The GR3A can accept cables from both overhead and/or underfloor, and jumper cables from top, bottom, sides, rear or in any combination.

The GR3A is supplied in a flat pack format to minimise transport costs and ease handling and can be built by one person.

The required space envelope is (w)900mm x (d)300mm x (h)2200mm.

Data Sheet RA002

Mini Rack

The Mini Rack is a reduced width rack for use in the exchange or central office where space is at a premium. It can be fitted with up to 5 Compact Sub-Racks (CSR), which each accommodate up to 24 connectors, giving a maximum capacity of 120 fibres on a splice and patch basis (the 12 splice trays in each CSR offering single circuit management).

Compact Sub-Racks are available with a wide range of connectors such as SC, FC, ST, LC and E2000. They can also be used to store patchcord overlengths. They provide easy fibre management as the pivoting main tray allows all splicing modules to be accessed easily. Tube guides allow access of transport tube with fibres coming from the main rack or another sub-rack. The rack is supplied with a Cable Head Splitting Device which contains 5 tubes at 3 metres long. The device is used to breakout a cable in the rack and route the fibres to any of the CSR units within the rack.
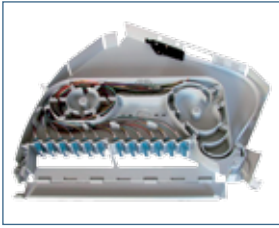
Panels are removable and allow full access to the rack and accessories during installation or maintenance.

The required space envelope is (w)300mm x (d)300mm x (h)2200mm.

Data Sheet RA006

Rack Mounted Products
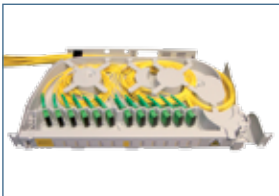

Data Sheet RM014

SRS3000 Splice & Patch Shelf

The SRS3000 Splice & Patch Shelf is a modular unit available in a variety of configurations for integration into 19" and ETSI (as well as ANSI) racks, streetside or wall mounted cabinets. It comprises a metal chassis, a plastic lightweight splice & patch module and a cable anchoring system.

It has high splice & patch density with capacity up to 48 fibres in a 1U unit for SC and LC connectors, and up to 24 fibres for FC, ST and E2000 connectors. The panel has in-built fibre management to ensure the product is installed correctly and consistently. The shelf is fully compatible with all optical cable types, including blown fibre tube cables and can be configured to hold optical devices (i.e. splitters and WDMs).

The modular panel design enables easy capacity upgrades from 12 to 48 fibres. The splice & patch module pivots outwards for easy fibre access and maintenance. The drop down front panel prevents accidental disconnection of patchcords and provides additional space for patchcord routing during installation. The splice & patch bay is covered with a detachable lid to protect the splices and pigtails once installed. All fibres are positively bend managed to a 30mm radius.

The required space envelope is (w)447mm x (d)245mm x (h)44.5mm.

Data Sheet RM019

SRS3000 Patch Only Shelf

The SRS3000 Patch Only Shelf is a modular unit available in a variety of configurations for integration into 19"/ETSI/ANSI racks, streetside or wall mounted cabinets. It comprises a metal chassis, a plastic lightweight patch module and a cable anchoring system.

It has high patch density with capacity up to 48 fibres in a 1U unit for SC and LC connectors, and up to 24 fibres for FC, ST and E2000 connectors. The panel has in-built fibre management to ensure the product is installed correctly and consistently. The shelf is compatible with most optical cable types.

The modular panel design enables easy capacity upgrades from 12 to 48 fibres. The patch module pivots outwards for easy fibre access and maintenance. The drop down front panel prevents accidental disconnection of patchcords and provides additional space for patchcord routing during installation. The patch bay is covered with a detachable lid to protect the splices and pigtails once installed. All fibres are positively bend managed to a 30mm radius.

The required space envelope is (w)447mm x (d)245mm x (h)44.5mm.

Data Sheet RM018

SRS3000 Splice Only Shelf

The SRS3000 Splice Only Shelf is a 1U shelf for splicing up to 48 fibres. The shelf can be installed into 19"/ETSI/ANSI racks, streetside or wall mounted cabinets. It comprises a metal chassis, a plastic lightweight splicing module and a cable anchoring system.

It can be used for a variety of configurations such as cable to cable splicing, cable to blown fibre splicing or cable to ruggedised pigtail splicing. For cable to cable or blown fibre splicing, the shelf is supplied with a bulkhead connector panel fitted with six 5mm bulkhead connectors. For cable to ruggedised pigtail splicing the shelf is supplied with panels that enable aramid restraints to be fitted and secured. The shelf is fully compatible with all optical cable types, including blown fibre tube cables.

The shelf is supplied with splice protector holders for 2.2mm heatshrink splice protectors (crimp splices can be managed using crimp splice holders). The splice module pivots outwards for easy fibre access and maintenance. The drop down front panel prevents accidental disconnection of fibre routing tubes during installation. The splice bay is covered with a detachable lid to protect the fibres once installed. All fibres are positively bend managed to a 30mm radius.

The required space envelope is (w)447mm x (d)245mm x (h)44.5mm.

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SRS3000 Patchcord Storage Module

The SRS3000 Patchcord Storage Shelf is a 1U shelf used for the storage of patchcords or the storage of patchcord overlength. The shelf can be installed into 19"/ETSI/ANSI racks, streetside or wall mounted cabinets. It consists of a metal chassis and a plastic lightweight module.

Storage capacity is up to 2 metres of 24 patchcords (2.8mm in diameter) or 48 patchcords (2.0mm in diameter). Overlength capacity is up to 2.5 metres of 24 patchcords (2.8mm in diameter) or 48 patchcords (2.0mm in diameter). The storage module pivots outwards for easy patchcord access.

The unit can be subsequently upgraded into an SRS3000 Patch Only Shelf with an upgrade kit, if required. All fibres are positively bend managed to a 30mm radius.

The required space envelope is (w)447mm x (d)245mm x (h)44.5mm.

Data Sheet RM020

SRS3000 Connectorised Splitter Shelf

The SRS3000 Connectorised Splitter Shelf is a 1U shelf that allows pre-connectorised splitters to be mounted onto adapter panels. The shelf consists of a metal chassis fitted with a lightweight, swing out plastic shelf holding the splitters and adapters. The shelf can be installed into 19" and ETSI racks, streetside or wall mounted cabinets.

It can accommodate a number of connectorised splitters from 1x2 to 1x32 configurations, using all types of connectors. The shelf is supplied with the splitters pre-installed with both the input and output fibres from the splitter being connectorised with dedicated input and output positions for the splitter legs. This makes patching splitters into networks such as for FTTx high density Passive Optical Networks (PONs) extremely easy.

It is a cost effective design for housing connectorised splitters in racks or cabinets for high density applications. The shelf pivots out to enable access to the splitter storage area for maintenance. The patchcords are bend managed for extra protection. All fibres are positively managed to a 30mm minimum bend radius.

The required space envelope is (w)447mm x (d)245mm x (h)44.5mm.

Data Sheet RM022

SRS3000 Distribution Sub-Racks

The SRS3000 Distribution Sub-Rack is a modular sub-rack available in a variety of configurations for integration into 19"/ETSI/ANSI racks, streetside or wall mounted cabinets. They consist of a metal chassis in 1U, 2U and 3U containing a choice of modules, including Splice & Patch, Patch Only, Splice Only, Connectorised Splitter and Patchcord Storage. This allows users to customise the product for different applications using the same building blocks (sub-rack).

Modules can be supplied in 12, 24 or 48 fibre capacities in a 1U unit. They are supplied with a range of connector types for singlemode and multimode fibre, which can be factory fitted or supplied as a kit. The cable anchoring systems allow all types of optical cables (including blown fibre) to be routed onto the sub-rack and modules. Optical devices (i.e. splitters & WDMs) can be mounted within the modules.

They are supplied front mounted as standard (rear mounting brackets are available). Fibres are actively managed to a minimum bend radius (30mm) throughout the modules. Splicing and bare fibre excess storage is performed inside a tray protected by a cover to prevent accidental damage when opening and closing the shelves. Modules pivot outwards for easy access. Cables are completely protected from entry to exit of the panel. Modules have drop down fronts for easier patchcord routing, enclosing patchcords and protecting adapters.

The required space envelope is (w)447mm x (d)245mm x (h)44.5mm per 1U shelf.

Data Sheet RM015

Rack Mounted Products
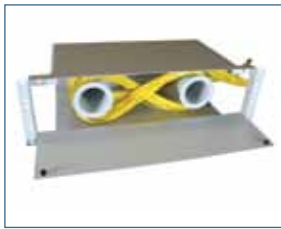
Data Sheet RM023

Horizontal Routing & Storage Shelf

The horizontal routing & storage shelf is a 3U shelf used to transport patchcords from one side of a 19" or ETSI rack to the opposite side. The shelf can also be used as a storage shelf for patchcord overlengths. It contains two routing mandrels for coiling the patchcords.

The shelf can be mounted in racks, wall cabinets and streetside cabinets. It fits directly into 19" racks and cabinets and can also be mounted into ETSI racks and cabinets using the conversion brackets supplied. It can also be rear mounted using additional brackets upgrades (available separately). The unit is manufactured from steel and powder coat painted to RAL7035.

The required space envelope is (w)447mm x (d)245mm x (h)133.5mm.

Data Sheet RM011

Sliding Sub-Rack (Splicing & Patching)

The Sliding Sub-Rack (Splicing & Patching) is a 3U shelf for use within 19" and ETSI standard racks. It is used to connect up to 72 fibres onto adapter panels. The shelf contains six pull out modules, which each house a splice tray and 12 adapters. The modules hinge upwards to provide access to the module below.

The shelf is supplied with all of the pigtails and adapters pre-installed to save installation time, and a variety of different adapter types can be accommodated (including SC, LC, FC, ST and E2000).

It is a modular upgradeable solution, compatible with the *OAsys* Modular Main Rack. Fibres are fully bend managed to a 30mm minimum bend radius.

The required space envelope is 19" rack (w)415mm x (d)280mm x (h)132mm or ETSI rack (w)495mm.
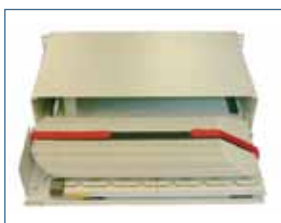
Data Sheet RM010

Sliding Sub-Rack (Patching)

The Sliding Sub-Rack (Patching) is a 3U shelf for use within 19" and ETSI standard racks. It is used to connect up to 72 fibres onto adapter panels. The shelf contains six pull out modules, which each house 12 adapters. The modules hinge upwards to provide access to the module below.

The shelf is supplied with all of the adapters pre-installed to save installation time, and a variety of different adapter types can be accommodated (including SC, LC, FC, ST and E2000).

It is a modular upgradeable solution, compatible with the *OAsys* Modular Main Rack. Fibres are fully bend managed to 30mm minimum bend radius.

The required space envelope is 19" rack (w)415mm x (d)280mm x (h)132mm or ETSI rack (w)495mm.

Data Sheet RM009

Sliding Sub-Rack (Splicing)

The Sliding Sub-Rack (Splicing) is a 3U shelf for use within 19" and ETSI standard racks. It is used to splice internal cables directly to connectorised pigtails or for cable to cable jointing.

The shelf can adopt single circuit management (up to 4 fibres per tray), single element management (up to 12 fibres per tray) or ribbon fibre management (up to 2 ribbons per tray). Each shelf can accommodate up to 25 single element trays or 42 single circuit trays in a 19" rack, and up to 30 single element trays or 50 single circuit trays in an ETSI rack. The shelf is supplied without splice trays.

It is a modular upgradeable solution. The shelf pulls outwards to provide easy access to the splice trays. Splice tray holders are available for crimp, heatshrink or fiberlock (only with half of the capacity) splices. It is compatible with the *OAsys* Modular Main Rack. Fibres are fully bend managed to a 30mm minimum bend radius.

The required space envelope is 19" rack (w)415mm x (d)280mm x (h)132mm or ETSI rack (w)495mm.

Prysmian Group

PSP Splice & Patch Shelf

The PSP splice & patch shelf is a low cost plastic 1U shelf designed for the data market, allowing the connection of up to 48 fibres and is compatible with 19" and ETSI racks. Cables enter at the rear of the shelf on the left hand side and pigtails exit the unit from the front face. The lightweight product is easy to install and in-built fibre management on the panel ensures that all installations are consistent, eliminating installation errors.

The shelf is supplied either empty, in kit form (pigtails and adapters in a bag) for installer loading, or with the pigtails and adapters pre-installed. It is a high density, low cost, compact design for up to 48 fibres using SC and LC connectors, or up to 24 fibres using FC, E2000 and ST.

Cables anchor on the rear of the unit using a cable anchor plate supplied. The shelf pivots out for access to the splice tray and pigtail area. It can be used as a patch only solution and allows excess cable lengths to be stored. With a stackable splice bay, it supports easy upgrade of splicing capacity. The shelf offers the ability to terminate up to 2 cables and allows through splicing of fibres. All fibres are positively managed to a 30mm minimum bend radius.

It is compatible with *SIROCCO^{XS}* blown fibre cables using a blown fibre manifold enabling up to 6 blown fibre tubes to be routed to a single shelf.

The required space envelope is (w)481mm x (d)230mm x (h)44mm.

Data Sheet RM012

Connectorised Splitter Shelf

The connectorised splitter shelf is a 1U plastic shelf that allows pre-connectorised splitters to be mounted onto adapter panels. The shelf is compatible with 19" and ETSI racks and can accommodate connectorised splitters from 1x2 to 1x32 configurations, using SC or LC connectors.

The lightweight shelf is supplied with the splitters pre-installed with both input and output fibres from the splitter being connectorised which makes patching splitters into networks extremely easy. There are dedicated input and output positions for the splitter legs. The shelf pivots out to enable access to the splitter storage area for maintenance. All fibres are positively managed to a 30mm minimum bend radius

It is a high density, cost effective, compact design for housing connectorised splitters in racks or streetside or wall mounted cabinets. It is ideal for high density FTTx applications using Passive Optical Networks (PON).

The required space envelope is (w)481mm x (d)230mm x (h)44mm.

Data Sheet RM013

ORDJ-10 Distribution Sub-Rack

The ORDJ-10 Distribution Sub-Rack is a modular sub-rack available in a variety of sizes for integration into racks or wall mounted cabinets. It consists of a chassis and splice and/or patch modules. The chassis are available in 1U, 4U, 5U and 13U sizes, which fit directly into a standard 19" rack, or an ETSI rack using an adapter bracket. The 4U chassis will hold 3 modules (5U chassis 4 modules etc.) and each module has capacity for 12 fibres (patching or splicing & patching) or 48 fibres (splice only).

The chassis can be supplied empty (without modules) for configuration at a later date or can be ordered with selected modules pre-fitted. Cable anchor systems are available for a variety of cables providing an anchor point for the cable and the components required to route the cable fibres onto the modules.

It is a modular system so modules can be fitted on an 'as required' basis either on day one or when extra capacity is required. Splicing & patching or patch only modules can accommodate a wide range of connector types including SC, FC, ST, E2000 and LC.

Splicing and bare fibre excess storage is performed inside a tray protected by a cover. The modules pivot outwards for easy access. Provision is made for storage of excess patchcord length.

The required space envelope is (w)480mm x (d)250mm x (h)44mm.

Data Sheet RM001

Rack Mounted Products

Data Sheet RM007

SIROCCO^{XS} 19" Tube Patching Panel

The SIROCCO^{XS} blown fibre tube patching panel is compatible with 19" and ETSI rack practice and is horizontally mounted within the rack framework. It provides the patching capacity for up to 24 x 5mm diameter blown fibre tubes and allows for quick and easy reconfiguration of tube routing. It is front facing, allowing easy access to all bulkhead connectors.

It is supplied with 24 x 5mm diameter bulkhead connectors and all accessories required to install the patching panel in to the rack. Manufactured in mild steel (finish: zinc passivate clear).

The required space envelope is (w)481mm x (d)140mm x (h)44mm.

Data Sheet RM017

SIROCCO^{XS} 19" Tube Patching Shelf

The SIROCCO^{XS} 19" blown tube patch shelf provides a solution for connecting up to 48 blown fibre tubes of 5mm in diameter. The shelf is 3U in height and can be mounted into a 19" rack or streetside cabinet.

The connectors inside the shelf are gas block connectors which means the shelf is ideal for connecting external tubes to internal tubes. The unit is supplied with 48 gas block connectors mounted into the steelwork and the fixings required to install it into a rack or streetside cabinet. Manufactured in mild steel (painted black).

The required space envelope is (w)490mm x (d)260mm x (h)135mm.

Data Sheet RM006

SIROCCO^{XS} Splicing Shelf

The SIROCCO^{XS} splicing shelf is compatible with 19" rack practice (direct mounting) and is horizontally mounted within the rack framework. It is also compatible with ETSI rack practice (2SU) using front mounting adapter plates (not supplied).

The unit provides the splicing capacity for up to 8 connectorised pigtails. It is supplied with one pair of connectorised pigtails. Three additional pairs may be added for system upgrade. Two blown fibre tube entries are provided at the front of the shelf enabling 2 or 4 fibre blown units to be installed. Manufactured from mild steel and high impact FR polystyrene (grey).

The required space envelope is (w)481mm x (d)230mm x (h)44mm.

Data Sheet RM002

Generic Sub-Rack 3A

The Generic Sub-Rack 3A is designed for use in ETSI compliant optical equipment racks. It must be used in conjunction with a Rack Splicing Module (RSM) whose maximum capacity is 48 spliced fibres, based on single circuit management. Using the RSM, connectorised pigtails from the optical equipment can be spliced directly to internal cables.

The RSM has a multi-functional role: input cable and sheath termination, fibre flexibility, circuit segregation, fibre routing, fibre storage, splice storage and jumper cable routing. Each RSM consists of 12 'swing out' splice modules, each housing 2 splice trays.

It is simple to install, supplied in 'flat pack' format to minimise transport costs and make handling easier. The input cables enter from the top or bottom left. Output jumper cables exit from left or right hand side (or combination of both). Jumper cables are always routed down from the RSM bend manager to the jumper storage shelf and then up or down the left or right hand cable duct. Left and right hand mounting brackets can be front or rear mounted. There is a storage area for excess lengths of jumper cable/patchcord. All fibres and jumper cables are positively managed to a 30mm minimum bend radius.

The required space envelope is (w)535mm x (d)235mm x (h)240mm except ETSI 10SU (250mm) or TEP-1E 8VU (244mm).

Prysmian Group

Outside Plant

Compact Joint

The primary application for the compact joint is connecting optical fibre cables at cable element level. It is ideal as a cable chamber joint, track joint or spur joint due to its capacity and size. It is available in two sizes; with 48 or 144 fibre maximum splicing capacity (note: the 48 fibre joint cannot be upgraded to 144 fibres later). The joint is sealed to IP68.

The splice trays are factory fitted with each tray accommodating up to 12 spliced fibres (for heatshrink or crimp splice protectors). Splice trays hinge upwards individually, allowing full access to spliced fibres without disturbing live fibres in adjacent trays. All fibres are positively managed to maintain a 30mm minimum bend radius.

The joint has a base with six circular ports or an oval port and four circular ports (cables up to 22mm in diameter in each port). Cables are sealed using adhesive lined heatshrink sleeves. The base entry ports are pre-shot blasted and configured with easy knock out ends, eliminating the need for cutting and abrading.

A multi-functional bracket is supplied with the aerial version which enables wall or pole mounting of the joint vertically or horizontally. The bracket can also be strapped to a pole using a metallic band. The joint can be used for direct buried applications.

**The required space envelope is: 48 fibre (w)231mm x (d)164mm x (h)410mm
144 fibre (w)231mm x (d)164mm x (h)500mm.**

Data Sheet OP001

Compact Node

The compact node is used for ready access applications within the external optical fibre network. It can be used where *Sirocco^{XS}* blown fibre cables are to be spliced within the joint (to cables or blown fibre cables) and is pre-fitted with a pressure relief valve, to prevent accidental pressurisation during blown fibre installation. The joint is sealed to IP68.

The joint is supplied with 12 single circuit splice trays enabling the breakout of up to 24 fibres (dual fibre circuits) for connection to customer drop cables. Splice trays hinge upwards individually, allowing full access to spliced fibres without disturbing live fibres in adjacent trays. All fibres are positively managed to maintain a 30mm minimum bend radius.

The closure base has 6 circular entry ports (cables up to 22mm in diameter in each port). Cables are sealed using adhesive lined heatshrink sleeves. The base entry ports are pre-shot blasted and configured with easy knock out ends, eliminating the need for cutting and abrading. The joint is quickly and easily re-enterable.

The required space envelope is (w)231mm x (d)164mm x (h)500mm.

Data Sheet OP005

Compact Single Circuit Joint

The compact single circuit joint allows splicing of up to 96 fibres (4 fibres per tray). Available with either 6 circular ports or 1 oval port and 4 circular ports (cables up to 22mm in diameter in each port). It allows the storage of continuous fibre loops in the splice trays and, with the oval port option, in the dedicated fibre loop storage facility at the rear of the joint. The joint is sealed to IP68. The joint can be used for direct buried applications.

The enclosure can be supplied without a valve in the base, with a pressure relief valve to prevent accidental over-pressurisation when using blown fibre, or a pressure test valve, allowing the installer to flash test the joint to ensure sealing performance.

The joint is supplied with 24 splice trays, each splice tray accommodating four fibres, all positively managed to maintain a 30mm minimum bend radius. Splice trays hinge upwards individually, allowing full access to spliced fibres without disturbing live fibres in adjacent trays. Cables are sealed using adhesive lined heatshrink sleeves. The base entry ports are pre-shot blasted and configured with easy knock out ends, eliminating the need for cutting and abrading.

The required space envelope is (w)231mm x (d)164mm x (h)500mm.

Data Sheet OP002

Outside Plant

Data Sheet OP004

ESDF4 In-Line Joint

The ESDF4 in-line joint is an underground joint suitable for direct burial and underground chamber applications. It is used for the jointing and branching of optical cables and has a total capacity of 72 fibres. The joint is sealed to IP68.

The joint will manage between 4 and 16 cable entries depending on cable diameter (up to 4 cables per port). It is possible to branch additional cables at a later date: reliable sealing of the box is achieved using a mechanical gasket which allows easy entry. Cable sealing is also mechanical. The cable anchor system allows cables to be prepared away from the joint.

The joint is supplied with six splice trays each able to accommodate up to 12 fibre splices. Cable entry glands, splice protectors and pole or wall mounting brackets are ordered separately to suit the application requirements.

The required space envelope is (w)160mm x (d)90mm x (l)560mm.

SIROCCO^{XS}

Data Sheet OP003

SIROCCO^{XS} Blown Fibre Generic Joint

The SIROCCO^{XS} blown fibre generic joint is used where blown fibre cables are to be installed and spliced. The joint is fitted with a pressure relief valve to prevent accidental pressurisation of a sealed closure during blown fibre installation. It has capacity for 30 splice trays. The closure base has 6 circular entry ports and one oval entry port for mid-span breakout applications. Cables up to 30mm in diameter can be installed in each port. The joint is sealed to IP68.

It is supplied without splice trays and accessories and is configured using joint upgrade kits, general accessories and blown fibre accessories. A number of mounting bracket options are available.

The required space envelope is (Ø)270mm x (h)490mm.

Data Sheet OP006

Standard Straight & Loop Joints

The standard straight & loop joints are used for easy access application within the external optical fibre network or at the interface within the exchange/central office. The standard straight joint allows for the splicing of two or more cables together on a single element basis, while the standard loop joint allows for the storage of a continuous cable loop from a cable mid span section.

The standard straight joint is supplied with splicing modules pre-fitted in the joint, capable of accommodating up to 12 spliced fibres per tray. The standard loop joint is supplied without splice trays, which must be ordered separately depending on the required configuration. The joints have capacity for 30 splice trays. They can be re-configured to allow additional splice trays, cables or a cable mid span loop to be installed in the straight joint. The joints are quickly and easily re-enterable and can be upgraded to include additional cables and splices. The joint is sealed to IP68.

Each closure base has 6 circular entry ports and one oval entry port for mid span breakout applications. Cables up to 30mm in diameter can be installed in each port. All cables are sealed using adhesive lined heatshrink sleeves. The base entry ports are pre-shot blasted and configured with easy knock out ends, eliminating the need for cutting and abrading.

Splice trays open outwards individually, providing full access to spliced fibres without disturbance to adjacent live fibre circuits. All fibres are positively managed to maintain a 30mm minimum bend radius within the joint. A number of mounting bracket options are available for securing the joint.

Data Sheet OP007

The required space envelope is (Ø)270mm x (h)490mm.

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Modular Jointing System (MJS)

The Modular Jointing System (MJS) is for access applications within the external optical network and can be used for track, spur and loop applications, accommodating a wide variety of cables such as loose tube, central loose tube, ribbon and blown fibre. The joint is sealed to IP68.

The modular tray system is designed for positive fibre management for Single Circuit Management (SCM) and Single Element Management (SEM). The splice trays can manage different splice protectors (crimp or heatshrink, with mechanical for SEM only) and splitters. Cable entries to the joint can be sealed using heatshrink sleeves or mechanical seals.

Fibres are positively managed to maintain a 30mm minimum bend radius. The trays hinge upwards individually, allowing full access to spliced fibres without disturbing live fibres in adjacent trays. Splitter modules can be mounted in the joint and can be supplied pre-assembled (any combination between 1x2 to 1x32 can be accommodated). The joint is quickly and easily re-enterable. Mounting brackets are available.

The required space envelope is (Ø)250mm x (h)440mm, 500mm, 610mm or 685mm.

Data Sheet OP010

	Short		Medium		Long		Extra Long	
	Trays	Max. Splices	Trays	Max. Splices	Trays	Max. Splices	Trays	Max. Splices
SEM	20	240	30	360	50	600	60	720
SCM	32	128	48	192	80	320	96	384
RIBBON	20	160	30	240	50	400	60	480

FDN – FTTH Distribution Node

The FDN is used for the distribution of optical cables or blown fibres in aerial and underground fibre networks. It is oval, medium in size and offers high flexibility due to the cable entry options presented by the joint base. The single base configuration offers 58 round cable ports and one oval port for loop through applications. Up to 52 small diameter (1.7mm to 9.5mm) drop cables can be distributed from the closure making it ideal for the distribution of subscriber drops in FTTx networks and providing a critical flexibility point in the last mile network. The joint is sealed to IP68.

Maximum capacity is 144 fibres (using standard heatshrink splice protectors), 288 using crimp splice protectors and up to 576 for ribbon. Splice trays hinge upwards individually, allowing full access to spliced fibres without disturbing live fibres in adjacent trays. The joints are supplied with tray inserts to cater for heatshrink splice protectors. Inserts are also available for crimp and ribbon splice protectors and mechanical splices.

The joint cover is fitted with a pressure release valve and the cap/base are sealed with an 'O' ring and clamp mechanism. Cable entries can be sealed using mechanical cable entry kits (Cablelok) on any of the ports and/or heatshrink sleeves on any of the larger ports.

The required space envelope is (w)312mm x (d)222mm x (h)455mm.

Data Sheet HT001

Outside Plant

Data Sheet HT002

FST – Small Size Fibre Joint

The FST is used for local distribution of optical cables in aerial and underground fibre networks. It is circular, small in size and offers high flexibility due to the cable entry options presented by the base options – 3, 10 or 12 round cable ports plus one oval port for loop through applications. The joint is sealed to IP68.

Maximum capacity is 36 fibre (using standard heatshrink splice protectors), 72 using crimp splice protectors. With up to 12 small diameter ports it is ideal for the distribution of subscriber drops in FTTx networks and provides a critical flexibility point in the last mile network. Also suitable for low fibre count cables in CCTV, trunk and campus (between buildings) networks.

Can be configured using connectorised cables and pigtails, on the curved splice tray only. The joint cap and base are sealed with a rolling 'O' ring and clamp mechanism. Cable entries can be sealed using either mechanical cable entry kits (Cablelok) and/or heatshrink sleeves on most of the larger ports, only Cablelok for the smaller entries.

The required space envelope is (Ø)110mm x (h)310mm.

Data Sheet HT003

FRBU – Mid Size Fibre Joint

The FRBU is used for local distribution of optical cables and blown fibres in aerial and underground fibre networks. It is circular and compact. The base offers 8 round cable ports together with one oval port for loop through applications. The joint is sealed to IP68.

Maximum capacity is 72 fibre (using standard heatshrink splice protectors) or 144 using crimp splice protectors. With up to 8 small diameter ports it is ideal for the distribution of subscriber drops in FTTx networks and provide a critical flexibility point in the last mile network. Also suitable for low/medium fibre count cables in CATV and trunk networks.

The joint cover is fitted with a pressure release valve and its cap/base are sealed with a rolling 'O' ring and clamp mechanism. Cable entries can be sealed using either mechanical cable entry kits (Cablelok) and/or heatshrink sleeves.

The required space envelope is (Ø)130mm x (h)435mm or 505mm.

Data Sheet HT004

FML – Large Fibre Joint

The FML is used to distribute optical cables and blown fibres in aerial and underground fibre networks. It can be used with high fibre count ribbon cables in super highway primary rings, in metropolitan networks for both single element and single circuit applications and trunk applications. The joint is sealed to IP68.

The joint is circular, large in size and the base offers 12 round cable ports and one oval port for loop through applications. 4 different splice tray options are available; the choice depending on capacity, if interchangeable splice inserts are needed, number of tray entries and type of fibre/cable selected.

Maximum capacity is 384 fibre (using standard heatshrink splice protectors), up to 1152 fibre using 12 fibre ribbons. Cables are sealed in the joint using Cablelok or heatshrink. The joint cover (4 sizes) is fitted with a pressure release valve, the cap and base sealed with an 'O' ring and clamp mechanism.

The required space envelope is (w)275mm x (d)220mm x (h)400mm, 550mm, 600mm or 750mm.

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UFC – Universal Fibre Joint

The UFC is a high capacity joint for local distribution of optical cables and blown fibres in aerial and underground fibre networks. It can be used with high fibrecount ribbon cables in super highway primary rings, distributing subscriber drops in FTTx networks or primary rings in metropolitan networks. The joint is sealed to IP68.

It is circular and offers high flexibility. The base configuration offers 28 round cable ports together with two oval ports for loop through applications. 3 splice tray options are available to allow single fibre and ribbon fibre splicing; the choice depending on capacity, if interchangeable splice inserts are needed, number of tray entries and type of fibre/cable selected.

Maximum capacity is 432 fibres (using standard heatshrink splice protectors), up to 2304 fibre using 12 fibre ribbons. Cables are sealed in the joint using Cablelok or heatshrink. The joint cover (4 sizes) is fitted with a pressure release valve, the cap and base sealed with an 'O' ring and clamp mechanism.

The required space envelope is (Ø)310mm x (h)400mm, 550mm, 600mm or 750mm.
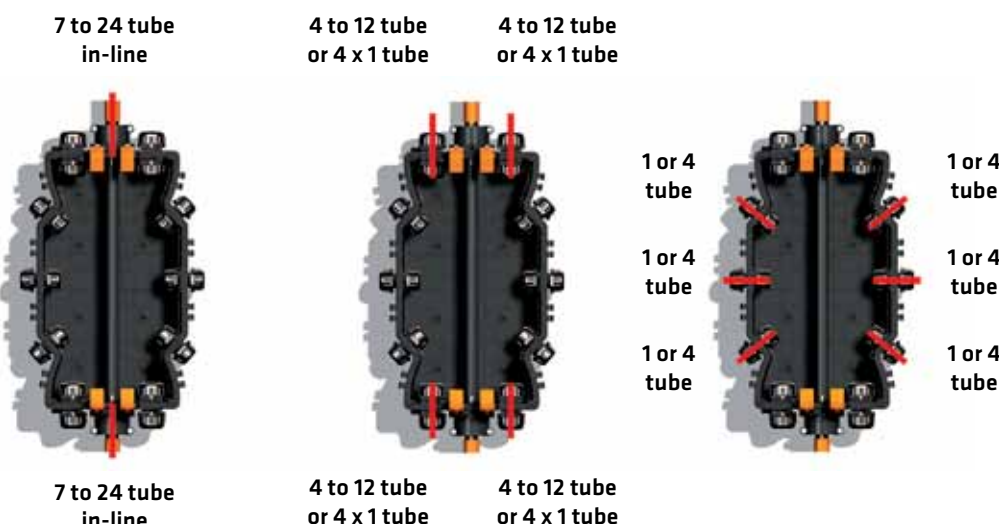
Data Sheet HT005

Tube Distribution Closure

The tube distribution closure (TDC) is a direct bury in-line sealed closure (IP 68 rated) designed for intercepting a blown fibre tube cable/duct assembly to allow multiple spur-offs to smaller blown fibre tube cables or ducts. It can be installed at the time of tube cable installation (day one) or fitted over an already installed cable as a retro-fit allowing ultimate flexibility for a blown fibre/duct network.

The closure protects the accessed tubes and connectors and contains an integral pressure relief valve to prevent accidental over-pressurisation. It is fitted with toggle clips for easy access. Rubber seals to seal the in-line cables are sold separately to suit the required diameter of the cable. Cable glands to distribute the drop cables are supplied separately as required. An example of port configurations (for *Sirocco*^XS^ blown fibre) is shown below.

The required space envelope is (l)550mm x (w)290mm x (d)108mm.

Sirocco^XS^

Data Sheet OP017

7 to 24 tube in-line

4 to 12 tube or 4 x 1 tube

4 to 12 tube or 4 x 1 tube

1 or 4 tube   1 or 4 tube

1 or 4 tube   1 or 4 tube

1 or 4 tube   1 or 4 tube

7 to 24 tube in-line

4 to 12 tube or 4 x 1 tube

4 to 12 tube or 4 x 1 tube

Outside Plant

Fibre Distribution Hub (FDH)

The Fibre Distribution Hub (FDH) cabinet has been developed for outdoor applications and in particular for use in Fibre To The Home (FTTH) passive optical networks (PONs) to manage distribution and customer drops. It is equipped with front mounted 19" uprights.

The internal layout of the cabinet has been designed for efficient use of space. It has a large accessible front and also has access on both sides. With 24U of workable space offered internally, the FDH can accommodate a wide range of connectivity products such as the SRS3000 range of splicing shelves, patching shelves, splice & patch shelves, patchcord storage shelves and splitter shelves. The cabinet can be supplied empty or pre-configured to customer specific requirements.

The FDH will accept a splitter shelf accommodating a number of pre-connectorised splitter modules up to 1 x 64 using FC/UPC, FC/APC, SC/UPC, SC/APC, LC/UPC or LC/APC connectors. Total capacity is 1152 fibre (splice only, patch only or splice & patch) when using SC or LC connectors, 576 fibre when using FC, ST and E2000.

The cabinet is designed for operation in a variety of climatic conditions. It can be supplied with pre-terminated input and output tail cables to the internal patch panel for fast initial field installation. The cabinet is on a 300mm plinth for ease of cable installation. It is manufactured from a robust heavy duty but lightweight casing material and is sealed to IP55.

The required space envelope is (h)1470mm x (w)890mm x (d)330mm including plinth.

SC3000 Streetside Cabinet

The SC3000 streetside cabinet has 19" mounting rails, used to accommodate a range of SRS3000 shelves and sub-racks or any other 19" rack mounted products. SRS3000 shelves and sub-racks are available for splicing only, patching only, splicing & patching and patchcord storage. They can be supplied in 1U, 2U or 3U formats. The streetside cabinet can also accommodate SRS3000 connectorised splitter shelves to manage distribution and customer drops in a FTTH PON.

It can accommodate up to 16 1U shelves and can accept standard optical cables and blown fibre tube cables. The capacity of the cabinet is 768 fibre (splice only as well as patch only and splice & patch using SC or LC connectors) or 384 fibre when patching or splicing & patching using FC, ST or E2000 connectors.

It is supplied with two hinged doors. Cable brackets are supplied in the left hand side of the cabinet to enable a range of cable anchor brackets to be installed. Mandrels are supplied in the right hand side of the cabinet to manage and store patchcords. It is fitted with cable gland plates in the left and right hand side of the cabinet. Cable entry glands are available as required.

The cabinet has a built-in seal providing protection to IP54. It is fitted with a 300mm plinth with a front access panel to ease cable installation and routing.

The required space envelope is (h)1300mm x (w)1200mm x (d)330mm including plinth.

Sirocco[XS] FTTH Streetside Cabinet

The *Sirocco*[XS] FTTH streetside cabinet is a distribution/drop off access point within a blown fibre network. It allows a blown fibre cable of up to 24 tubes to be connected and distributed to up to 24 single blown tube cables. The cabinet is lockable to prevent unwanted access, although the fully removable front allows easy access to the working area.

All tubes are positively managed to a 50mm diameter to allow continuous blowing. The cabinet is supplied with 24 x 5mm bulkhead connectors and is manufactured from 1.5mm galvanised steel.

The required space envelope depends upon the choice of mounting i.e. pole mounted is (h)720mm x (w)650mm x (d)535mm, while pedestal mounted is (h)970mm x (w)650mm x (d)535mm.

Prysmian Group

Branching Units

There are a number of branching units available for the *Sirocco*^{XS} Blown Fibre System which are easily installed at initial cable installation stage or if later breakout is required. They can be installed in pits or directly buried, resisting the ingress of mud, sand, debris and silt. These are:

Swept Tee Branching Unit allowing 1 or 2 way cable drops (fibre can be installed from one direction only).

90º Tee Branching Unit which also allow 1 or 2 way cable drops (fibre can be installed from either direction).

4 Port Extended In-Line Enclosure suitable for connecting 12, 19 & 24 way cables (plus 7 way Direct Buried cable) in any combination.

Extended In-Line Enclosure suitable for connecting 12, 19 & 24 way cables (plus 7 way Direct Buried cable) in any combination and dropping 1 way to 12 way cable from connecting side ports.

For information on a similar range of branching units suitable for 10/8 and 12/10 blown tube drop-offs, please contact Prysmian.

SIROCCO^{XS}

Data Sheet SA002

Resin Filled Joints

Ranges of resin filled joints are available to address the requirements of both *Sirocco*^{XS} blown fibre and small diameter blown cable tubes. They are designed for in-line jointing or multiple spur-offs to smaller tube counts. The standard portfolio covers 1 way to 4 way cables in a blown fibre network and 1 way to 7 way for mini-blown applications.

The products can be installed in a ducted network or can be directly buried. They have an IP rating of 68. The joints are intended for day 1 installation as part of the initial set up or can be retro-fitted at any future time providing maximum flexibility for a blown network, which is also highly cost effective.

The resin is supplied in a 2 part bag which ensures that the resin/filler mixing is undertaken in a safe manner. The typical cure time for the resin is 30 minutes. Once the resin has cured the joint can be re-entered to re-configure the tube arrangement if necessary.

SIROCCO^{XS}

Data Sheet OP026

Outdoor *VertiCasa*^{XS} Breakout Unit

The outdoor *VertiCasa*^{XS} breakout unit is used to breakout and distribute the fibres from an in-line *VertiCasa*^{XS} cable into drop tubes, for routing to customer premises. It is UV resistant and sealed to IP67 and can accommodate an in-line *VertiCasa*^{XS} cable of up to 13mm in diameter.

A window can then be cut in the cable to access the fibres, which can be spurred off into an external drop tube of up to 7.2mm in diameter. At building entry, the tube can be fed through customer lead-in units into suitable termination boxes.

The required space envelope is (l)185mm x (w)50mm x (d)50mm.

VertiCasa^{XS}

Data Sheet OP022

Sirocco^{XS} DB1 Connection Kit

The *Sirocco*^{XS} DB1 connection kit is used to connect two single tube direct buried blown tube cables together. Its application is likely to be in last mile customer drops for simple length enhancement prior to blowing. It is a highly cost efficient jointing system.

The cables are connected using a standard 5–5mm tube connector. A length of protective conduit is then used to protect the joint and the conduit is sealed to the cable sheath using two pieces of low temperature heatshrink.

The connection is sealed to IP68 using the low temperature heatshrink and then protected using a 20mm diameter conduit.

SIROCCO^{XS}

Data Sheet OP018

Outside Plant

QuickDraw^{xs}

Data Sheet OP025

QuickDraw^{xs}

Data Sheet OP024

QuickDraw^{XS} Connectorised Lead-In Joint & Lead-In Assembly

The *QuickDraw*^{XS} Connectorised Lead-in Joint (CLJ) is a purpose-built customer access termination that allows the rapid and incremental activation of customer services. It allows the plug-in connection of up to 8 individual customer Lead-In Assemblies (LIAs) at the time of service activation. One end of the LIA has a pulling shroud to provide protection during installation, while the connector at the other end is protected by a transport tube.

The CLJ is designed to be cascaded on a single distribution cable for optimised network design (any type of PON and PTP network configurations). The customer LIAs are supplied for a single fibre or dual fibre connection with SC or LC connectors supplied at both ends of the unit. The CLJ can be supplied with pre-installed connectorised passive splitters (1x8 or 1x16) so that 8 customers can be fed from a single incoming fibre.

The system is designed for one-man customer connection using semi-skilled labour, thus significantly reducing the cost of subscriber connections, deferring installation cost through incremental customer connection. Skilled labour is only required for initial CLJ installation in the distribution phase. Subsequent lead-in cable connections require minimal training.

The joint allows the storage of a continuous loop of loose tube or Rapier micro-module cable elements within the dedicated storage area at the front of the closure. Fibres are positively managed to a 30mm bend radius. The CLJ closure is sealed to IP68, the LIAs to IP67.

A secondary splice tray can be used in applications where a spur cable is required to be dropped from the primary looped cable (it can accommodate 24 fibre splices).

The required space envelope of the CLJ is (l)300mm x (w)231mm x (d)164mm (length 410mm when heatshrink applied).

Optical Aerial Drop System

There is a complete system solution available to enable operators to rapidly establish a final short span optical aerial drop to each customer. In addition to the small lightweight cable, which can be supplied with 2 to 12 fibres of either G652 or G657 as standard, there are a number of fibre management and installation accessories that support the network build.

The range includes helical tension clamps as well as pole head rings, clamps and cleats to secure the cable in place, anti-creep devices that anchor the fibres within the loose tube to avoid fibre bend, special stripping tools, underground and aerial joints with suitable mounting brackets and termination boxes for use in small business or residential accommodation.

The cable, normally supplied in 300 metre lengths, is installed using standard cabling practices. It can be installed in a variety of applications including new or existing wooden pole routes, between buildings, across bridges and existing power line routes. It provides a cost effective, fast, easy deployment when building an FTTH connection.

For more information visit the website or see the mini-brochure for the 'Optical Aerial Drop System'.

Prysmian
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Customer End

Ultra Compact Termination Box (Mk1 & Mk2)

There are two versions of the ultra compact termination box (UCTB), designed for use in residential and business applications for the termination of up to two fibres. The UCTB enables a small cable to be spliced to up to two SC pigtails (PC or APC), which connect to shuttered adapters at the base of the unit.

The units can be quickly installed within an office, house or communication room environment. Both units are compact with attractive design features for internal wall mounting. They will allow cables to enter from the rear, bottom or top of the unit while the Mk2 unit will also allow access from either side.

All fibres are positively managed to maintain a 20mm minimum bend radius (the units can be supplied with pre-installed G657.A1 fibre pigtails).

There is a flip tray to allow access to connectorised tails and cable entry, and a removable cover for easy access. Patchcords exit the unit on the bottom face. The units can be supplied with the adapters but without pigtails so that field mountable connectors can be used. Heatshrink or mechanical splices can be used inside the units.

The required space envelope is Mk1 (w)80mm x (d)24mm x (h)100mm.
                              Mk2 (w)83.5mm x (d)25mm x (h)106mm.

Data Sheet WM022

Data Sheet WM030

Compact Termination Box (Mk1 & Mk2)

There are two versions of the compact termination box (CTB), designed for use in residential and business applications for the termination of up to four optical fibres. The CTB enables the termination of a customer drop cable onto SC/UPC or SC/APC pigtails and adapters. It is a compact unit with attractive design features for interior wall mounting.

It can also be used as a splice point between two cables. The CTB can be supplied with pigtails and adapters pre-installed, and can also be supplied on a reel with a length of cable pre-installed. Patchcords exit unit on the bottom face and are protected by the use of shuttered adapters. There is a flip tray to allow access to connectorised tails and cable entry. There is a removable cover for easy access. It is supplied with a security screw to prevent unauthorised access.

The Mk2 unit is supplied with a fixing bracket for mounting directly onto a wall or onto a DIN rail. Pigtails supplied are G657.A1 fibre (all fibres being positively managed to maintain a 20mm minimum bend radius). Cables can enter unit from rear, bottom, top, right hand side or left hand side. The Mk1 unit only allows cable entry from the rear or bottom of the unit.

The required space envelope is Mk1 (w)120mm x (d)25mm x (h)80mm.
                              Mk2 (w)100mm x (d)27mm x (h)83mm.

Data Sheet WM001

Data Sheet WM044

Pre-Terminated Compact Termination Box

The pre-terminated compact termination box is designed for use in residential and business applications. The wall box is supplied on a cardboard reel with a length of cable pre-installed in the factory, eliminating the need for splicing or fitting field mountable connectors in the customer premises.

The cable is simply pulled out of the box, back to the floor/riser box and the compact termination box (Mk2) can be secured to the wall, without needing to open the unit. The standard drop cable is 4mm in diameter and contains 1 to 4 G657.A1 fibres, terminated with SC/APC connectors. The standard lengths of cable supplied are 30 and 50 metres.

The required space envelope is (w)100mm x (d)27mm x (h)83mm.

Data Sheet WM049

Customer End

QuickDraw^{xs} Demarcation Unit

The demarcation unit enables up to two *QuickDraw*^{xs} cable lead-in assemblies to be terminated on the outside wall of a building. It provides a connection on the external wall for test and maintenance access. Patchcords can then be passed, fully bend managed to a 30mm bend radius, through the wall into the building for connection to active FTTH equipment. An internal CLI can be used on the inside wall to provide patchcord management. The unit is sealed to prevent the ingress of moisture to IP55.

The unit accommodates up to two simplex SC adapters or 2 duplex LC adapters, depending on the preference for single fibre or dual fibre operation. The cover is removable for easy access, fitted with an integral seal to prevent the ingress of moisture. A quick-set resin is used to seal the cables into the unit. It is fitted with tamperproof screws for enhanced security.

The required space envelope is (l)275mm x (w)60mm x (d)37mm.

External Compact Termination Box

The external compact termination box is designed for use in residential, small and large business premises. It houses a single splice tray allowing fibres from external cables to be spliced to pigtails for connection to customer drop patchcords. The external cable enters from the bottom of the unit and the customer drop cables (patchcords) also exit from the bottom (through a split grommet) or through the back of the box and the wall.

The unit can be mounted inside or outside (it is sealed to IP55). There is a removable cover for easy access, fitted with a lock for enhanced security. The splice tray is hinged to access for working. It is supplied with interchangeable inserts and can accommodate up to 8 fusion splices (heatshrink or crimp) or 8 mechanical splices. 4 SC pigtails and adapters or 8 LC pigtails and adapters can be accommodated. A splice only version is also available.

Fibres are positively bend managed to a 30mm minimum bend radius. Cable up to 11mm in diameter can be accommodated. For blown fibre applications a gas block connector can be housed in the box.

The required space envelope is (h)185mm x (w)140mm x (d)32mm.

Internal/External Termination Box – 12 Fibre

The 12 fibre internal/external termination box allows connection of 12 fibres to an adapter panel secured within a lockable wall box. It contains 6 single circuit splice trays and 12 pigtails and adapters (each splice tray has 2 splices with heatshrink or crimp splice protectors and pigtails for customer segregation). Hinged trays enable easy access to the adapter panel.

A variety of connector types can be accommodated (SC, FC, ST, LC and E2000). The box is fitted with a gasket to achieve an IP rating of 55. It is manufactured from UV resistant material, so is suitable for internal and external use. It has two cable entry ports and one exit port for up to 12 patchcords or cables. Input cables up to 16mm in diameter can be accommodated, secured and sealed using heatshrink sleeves (mechanical cable glands as an option). Output patchcords or cables exit the box through a plastic cable gland securing a 25mm corrugated tube (sold separately).

The required space envelope is (w)270mm x (h)272mm x (d)100mm.

Internal/External Termination Box – 24 Fibre

The 24 fibre internal/external termination box allows connection of 24 fibres to an adapter panel secured within a lockable wall box. It contains 12 single circuit splice trays and 24 pigtails and adapters (each splice tray has 2 splices with heatshrink or crimp splice protectors and pigtails for customer segregation). Hinged trays enable easy access to the adapter panel.

A variety of connector types can be accommodated (SC, FC, ST, LC and E2000). The box is fitted with a gasket to achieve an IP rating of 55. It is manufactured from UV resistant material, so is suitable for internal and external use. It has two cable entry ports and one exit port for up to 24 patchcords or cables. Input cables up to 16mm in diameter can be accommodated, secured and sealed using heatshrink sleeves (mechanical cable glands as an option). Output patchcords or cables exit the box through a plastic cable gland securing a 25mm corrugated tube (sold separately).

The required space envelope is (w)270mm x (h)272mm x (d)100mm.

Data Sheet WM020

Two Door Termination Box

The two door internal/external termination box allows the connection of up to 48 fibres onto an adapter panel which is secured within a lockable wall box. The unit is supplied with 5 single element splice trays (either heatshrink or crimp splice protectors) and 48 pigtails and adapters. A variety of connector types can be accommodated (SC, FC, ST, LC and E2000). Each splice tray accommodates 12 splices and pigtails. The wall box has 2 doors, both fitted with seals for outdoor use in applications of up to IP66 but can also be used internally. Each door has a lock to provide security. The locks are keyed alike as standard.

The box has four cable entry ports for input cables of up to 24mm in diameter. Input cables are secured and sealed into the box using heatshrinks. Output patchcords or cables exit the box through a 40mm plastic cable gland. The gland can be used to secure a 40mm diameter corrugated tube.

The required space envelope is (w)450mm x (d)152mm x (h)490mm.

Data Sheet WM037

Internal/External Termination Box – 72 Fibre

The large internal/external termination box allows connection of 72 fibres to an adapter panel secured within a lockable wall box. It contains 36 single circuit splice trays and 72 pigtails and adapters (each splice tray has 2 splices with heatshrink or crimp splice protectors and pigtails for customer segregation). Hinged trays enable easy access to the adapter panel.

A variety of connector types can be accommodated (SC, FC, ST, LC and E2000). The box is fitted with a gasket to achieve an IP rating of 66. It is manufactured from UV resistant material, so is suitable for internal and external use. It has two cable entry ports and one exit port for up to 72 patchcords or cables. Input cables up to 14mm in diameter can be accommodated, secured and sealed using mechanical cable glands. Output patchcords or cables exit the box through a plastic cable gland securing a 40mm corrugated tube (sold separately).

The required space envelope is (w)400mm x (h)600mm x (d)200mm.
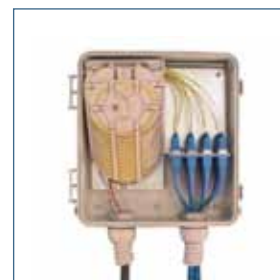
Data Sheet WM021

Customer End

Data Sheet WM015

Internal Customer Splice Box

The internal customer splice box is designed for use in residential, small or large business premises. It houses a single splice tray and allows fibres from internal or external cables to be spliced to pigtails for connection to an adapter panel with exit patchcords at the bottom protected by a snap-on cover. The unit can be quickly installed within a home, office or communication room environment. The internal or external cable can enter the unit from the bottom of the box or through the wall. A single hinged splice tray enables access for working. Pigtails exit from the bottom of the unit. Up to 12 SC pigtails and adapters can be accommodated.

Cable up to 13mm in diameter can be accommodated with a cable gland, to 18mm using a cable port adaptor. Cable interstices can be sealed against water/gas ingress using resin. A gas seal connector may be required on blown fibre tube.

The required space envelope is (w)220mm x (d)50mm x (h)150mm.

Data Sheet WM014

External Customer Splice Box

The external customer splice box is designed for use on the external wall of residential or small business premises. It houses a single splice tray and allows fibre from externally fed cables (blown fibre or conventional cable) to be spliced to up to 4 pigtails to connect to adapters. Up to 4 patchcords are routed through the external wall fabric into the premises via a rear exit port. The unit can also be used as a transition point between internal and external cable.

The cover is removable and fitted with a re-enterable seal. Water ingress protection is to IP55. An internal customer lead-in unit is supplied to manage the bend radius of the pigtails or cable at the inside wall. Cable up to 13mm in diameter can be accommodated with a cable gland, to 18mm using a cable port adaptor. Cable interstices can be sealed against water/gas ingress using resin. A gas seal connector may be required on blown fibre tube.

The required space envelope is (w)220mm x (d)50mm x (h)150mm.

Data Sheet WM029

Internal/External Splice Wall Box

The internal/external distribution box is designed for splicing optical cables in either internal or external applications. There are three wall mountable units available, with 4, 8 or 12 single element trays for 48, 96 and 144 fibre or with 6, 12 or 20 single circuit trays for 12, 24 or 36 fibre. The trays can be for either heatshrink splice protectors or crimp splice protectors.

The cassettes are hinged for easy access during splicing and maintenance. The units have multiple cable entry/exit points for cables (up to 9) ranging from 13 to 20mm. The unit is supplied with a lockable hinged door and a rubber seal providing an IP rating of 55. It is compatible with blown fibre products.

The required space envelope is (w)270mm x (d)100mm x (h)272mm.

Data Sheet WM040

WDB Distribution Box

The WDB distribution box is designed for splicing optical cables in internal or external applications. The unit uses single element splice cassettes, which are hinged for easy access during splicing and maintenance. The maximum splice capacity is 48 fibres (4 trays of 12 fibre) on a single element basis. The splice trays hinge upwards for ease of installation and maintenance.

The unit can accommodate input cables of up to 13.5mm in diameter. Uncut cables can be installed and a storage area is provided for the uncut cable elements. Up to 12 drop cables of 2 or 3mm in diameter can exit the unit; it is fitted with an internal clamping block with output cables routed through a 25mm gland. The unit is sealed to IP66.

The required space envelope is (w)380mm x (d)95mm x (h)305mm.

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MDU Wall Box

The MDU wall box enables the distribution of optical fibre within a large residential dwelling or business. There are two standard sizes of MDU wall box, covering a wide range of applications.

The units can house various passive optical splitter modules, between 1x2 and 1x64, which cater for up to 480 customers (depending upon building construction). The MDU wall box also boasts an optional adapter panel which can house up to 48 SC or 96 LC connections. The MDU wall box is fully compatible with blown fibre and most other cable configurations.

It is a modular system that supports easy installation and system upgrade e.g. by adding splitters later. Single circuit or single element splice trays can be used. Cable management within the unit ensures the minimum bend radius (30mm) is not exceeded. Plug and play connectors allow for easy tube routing. A changeable cable output plate maximises the flexibility by allowing a wide range of cable constructions and diameters.

A brush option is available for the inputs and outputs to allow easy installation of second phase cables. There is an input gland for cable diameters ranging from 8mm to 13mm.

The required space envelope is (w)450mm x (d)145mm x (h)550mm or 860mm.

Data Sheet WM008

Multi-Operator MDU Distribution Box

The multi-operator MDU distribution box (MMDB) allows the connection of several operators to a shared internal building network. It can be installed in the building basement.

The internal cabling is connected to a customer module (more than one can be used for large buildings) ready for patching across to operator modules (more than one can be located beneath the customer modules). The operator modules allow external network cables to be terminated and then patched across to the customer modules as and when required. Optical splitters can also be located in the operator modules if required.

The MMDB system thus enables a common internal cabling solution to be accessed by multiple operators. The customer modules can be equipped with up to 36 fibres on a splice & patch basis for SC/PC or SC/APC connectors. The operator modules can be equipped with up to 36 ruggedised pigtails. The customer and operator modules are mechanically linked together creating a patching channel to route the fibres with ruggedised pigtails from one module to another.

The required space envelope per module is (w)440mm x (d)102mm x (h)175mm.

VertiCasa^{XS}

Data Sheet WM023

Internal Splitter Node

The internal splitter node is an internal wall box typically used in large MDUs, for the connection of customer drop cables to a building cable, via one or more optical splitters. The unit can accommodate up to two splitters (each up to 1x32). The wall box is supplied with 17 double splice trays, where each tray has a separate splice tray within it for customer segregation. This provides a total capacity of 34 splice trays, with two used for splitter input connections and the remaining 32 used for splitter output connections.

A drop cable manifold is supplied in the top of the box for direct connection of the customer drop cables using push fit connectors. Drop cables can be up to 6mm in diameter – they exit from the top of the unit. Cables enter the unit from the right hand side and pass-through riser cables can also be accommodated.

The required space envelope is (w)400mm x (d)131mm x (h)307mm.

Data Sheet WM050

Customer End

Home Hub

Data Sheet WM038

The stylish home hub box is designed for use in business or residential premises to manage all types of networking equipment. It is a modular design and enables the installer to use either a single hub box or, using a joining bar, stack the box to other hub boxes, to accommodate the equipment to be housed.

The unit is quickly installed, on or within the wall, in new or existing buildings to safely house all types of networking equipment. It is supplied with a keyed lock for secure access, or a slotted lock for easier access using a standard flat screwdriver. The front cover can be fitted to hinge to the left or right hand side. Cable entry and exit is possible from the bottom, top or rear.

Tailored mounting brackets can be fitted in the box for fixing of additional items such as a GTU, ONT etc. Patch panels can be fitted for data or phone keystone jacks or to fit a 6 socket electrical distribution board with surge protection.

The required space envelope is (w)400mm x (d)131mm x (h)307mm.

Wall Mounted Cabinets

Data Sheet WM036

A range of strong and robust 19" wall mounted cabinets, with sliding 19" mounting rails front and rear, fully vented with lockable steel framed glass doors for safety and security. The doors, right or left hinged, will open 180°.

Quick release hinges provide easy access for loading equipment and cables. Removable side panels allow access from each side and gland plate covers and cable strain relief positions are included in the top and bottom. A rear panel is included. Standard ventilation is supplied top and bottom while two fans can be fitted to top and bottom covers to cool active equipment.

The cabinets can accommodate a range of 19" products including the SRS3000 shelves, and are available in a range of sizes from 6U up to 22U (required space envelopes as follows).

6U	(w)600mm x (d)450mm	x (h)368mm
9U	(w)600mm x (d)450mm or 600mm	x (h)501mm
12U	(w)600mm x (d)450mm	x (h)635mm
15U	(w)600mm x (d)450mm or 600mm	x (h)767mm
18U	(w)600mm x (d)450mm or 600mm	x (h)900mm
22U	(w)600mm x (d)450mm	x (h)1034mm

Riser Box

Data Sheet WM013

The riser box is designed for use within apartment blocks and mid- to high-rise office blocks. It houses a single integral splice tray and allows fibres from an in-line or butt cable to be spliced to up to 12 customer drop cables which exit the unit from the bottom. Drop cables are secured using either rubber grommets for conventional cables, or bulkhead connectors for blown fibre tube cables.

The compact wall mounted unit allows installation within small spaces in residential and business premises alike. It has a removable cover for easy access but can be tamperproof (security screws available). Cables up to 18.6mm in diameter can be accommodated.

The box can be configured to accommodate heatshrink or crimp splice protectors or mechanical splices (splice protector inserts cannot be re-configured in the field). All fibres are positively managed to a 30mm minimum bend radius.

The required space envelope is (w)220mm x (d)50mm x (h)150mm.

Multi-Tray Riser Box

The multi-tray riser box is designed for use within apartment blocks and mid- to high-rise office blocks. It can house either 4 or 8 splice trays and a module storage area. Each splice tray can accommodate up to 8 fibre splices i.e. 8 fusion splices or 4 mechanical splices in each of the splice trays (total of 64 fusion or 32 mechanical splices for the RBMT8 and 32 fusion or 16 mechanical splices for the RBMT4). Optical splitters can also be accommodated.

An in-line cable entry port enables the box to be installed onto an in-line riser cable and up to 24 drop ports are available for drop cables of 5mm in diameter (32 drop cables of 4.2mm). Alternatively, it can be used with butt cables entering from the top or bottom. In both cases, the maximum cable diameter is 15mm. The inner tray module can be moved to either side enabling the riser cable to be installed into the box on either the left or right hand side. Drop cables exit the unit from the bottom face. Cable management ensures a 20mm minimum bend radius.

The required space envelope is (w)130mm x (d)60mm x (h)176mm.

Data Sheet WM045

Customer Lead-In Unit FTTH

The customer lead-in unit (CLI) is designed for use in residential and small business premises to manage the entry of cables into buildings. It prevents the accidental damage of optical cables during installation through walls, and so eliminates return to site costs due to fibre breaks and macro-bending. It can also be a transition point between external grade tubing to internal low smoke tubing with the possibility of including a gas/water blocking facility.

One version can be used for single blown tube cable entry and another for single optical cable entry up to a diameter of 13mm. Fibres are positively managed to maintain a 30mm minimum bend radius. There is a removable cover for easy access. The external unit is rated to IP68 when fully resin sealed.

The required space envelope is (w)26mm x (d)15mm x (h)65mm for the internal unit (single tube) while the internal unit for cable and both external units are (w)36mm x (d)36mm x (h)180mm.

Data Sheet WM002

Customer Lead-In Unit Business

The customer lead-in enables external cable to be passed through the building fabric from an outside wall and is typically used in business premises. It comprises two separate units mounted either side of the wall. This product can be used with *Sirocco*^{XS} blown fibre tubing or conventional optical cable.

Up to 24 x 5mm blown fibre cable tubes can be accommodated or conventional cable up to 30mm diameter. There is a removable cover for easy access. The external unit can be sealed using a quick-set resin. This ensures the external cable interstices are sealed against the ingress of water or gas into the customer premises. All cable elements are positively managed to a 50mm minimum bend radius.

The internal unit interfaces with the blown fibre gas seal unit.

The required space envelope is (w)58mm x (d)68mm x (h)182mm.

Data Sheet WM007

Customer End

Sirocco^XS Blown Fibre Gas Seal Unit

The Sirocco^XS blown fibre gas seal unit is typically used in business premises or entry to apartment blocks. It is a wall mounted unit that is positioned internally at the cable entry point. Incoming external blown tube cables are connected to internal blown tube cables for distribution. The unit provides a point for housing gas seal connectors. These connectors are used to seal both populated (with blown fibre bundle) and unpopulated blown tubing to prevent the ingress of gas and moisture.

It is used for internally fed cable (a quick-set resin is supplied) or with a Customer Lead-In Unit (supplied) for cables entering through the fabric of the wall. It will accommodate up to one 12 tube external Sirocco^XS cable and internal Sirocco^XS cables in any combination up to 12 tubes.

The required space envelope is (w)96mm x (d)63mm x (h)253mm.

Sirocco^XS

Data Sheet WM003

Sirocco^XS 1 Tube Gas Block Housing

The Sirocco^XS single tube gas block housing is a wall mounted unit that is positioned internally at the cable entry point. An incoming external blown tube cable is connected to an internal blown tube cable using a gas seal connector. The connector is used to seal both populated (with blown fibre bundle) and unpopulated blown tubing to prevent the ingress of gas into the building.

It can be used with internally fed cable or with a Customer Lead-In Unit (Data Sheet WM002) for a cable entering through the fabric of the wall. It can also feed directly into the 4 fibre Compact Termination Box (Data Sheet WM001).

The required space envelope is (w)25mm x (d)25mm x (h)90mm.

Sirocco^XS

Data Sheet WM016

Sirocco^XS Internal Tube Distribution Unit

The Sirocco^XS internal tube distribution unit (TDU) is used as a 3 or 4 way distribution point for tube management for vertical/horizontal connections of blown fibre tube cables. The TDUs allow the interception of a blown fibre cable and connection to spur-off cables for distribution within the internal environment. Ports can accept up to a 19 way low fire hazard tube cable but can also manage individual tube breakout and tube re-routing.

It enables the interception of existing part populated tube and can provide a location for external/internal interface interstitial gas blocking. All parts are made from flame retardant materials.

The required space envelope is (w)240mm x (d)68mm x (l)390mm (3 way)
and (w)280mm x (d)70mm x (l)520mm (4 way).

Sirocco^XS

Data Sheet WM011

Prysmian Group

VERTICASA^{XS} Cable Protection Cover

The VERTICASA^{XS} cable system is a solution for FTTH in apartment blocks or in office accommodation. It is used to provide an internal building optical fibre network with easy breakout of fibres from the riser cable to drop tubes.

The cable protection cover is typically used to cover and protect the window cut in a VERTICASA^{XS} cable where there is no fibre breakout – it is a point at which the fibre is cut for extraction at a lower level. The unit can accommodate VERTICASA^{XS} cables up to 15mm in diameter.

The required space envelope is (w)24mm x (d)27mm x (h)90mm.

VERTICASA^{XS}

Data Sheet WM027

VERTICASA^{XS} 1 Port Breakout Unit

The VERTICASA^{XS} breakout unit 1 port is typically used in MDUs to breakout and distribute the fibres from an in-line VERTICASA^{XS} cable into a drop tube, for routing to the customer premises.

It can accommodate VERTICASA^{XS} cables up to 15mm in diameter. It enables a window to be cut in the cable to access the fibres, which can be spurred off into a drop tube of 5mm in diameter. The part is reversible which allows the single drop tube to be taken out from the left or right hand side.

The required space envelope is (w)32mm x (d)24.5mm x (h)110mm.

VERTICASA^{XS}

Data Sheet WM041

VERTICASA^{XS} 4 Port Breakout Unit

The VERTICASA^{XS} breakout unit 4 port is typically used in MDUs to breakout and distribute the fibres from an in-line VERTICASA^{XS} cable into drop tubes, for routing to the customer premises.

It can accommodate VERTICASA^{XS} cables up to 15mm in diameter. It enables a window to be cut in the cable to access the fibres, which can be spurred off into drop tubes of 5mm in diameter. Up to 4 drop tubes can be accommodated from the one unit.

The required space envelope is (w)50mm x (d)27mm x (h)120mm.

VERTICASA^{XS}

Data Sheet WM026

VERTICASA^{XS} Internal Transition Box

The VERTICASA^{XS} in-line transition box (ITB), is mainly used in MDUs or office fibre cabling systems. It is a compact splicing box enabling the splicing of up to 4 drop cables to a riser cable. The ITB houses a single splicing tray, suitable for heatshrink or mechanical splices. It is available in two versions, one for 12 and 24 fibre VERTICASA^{XS} cables (12.5mm diameter) and one for 48 fibre VERTICASA^{XS} cable (15mm diameter).

The compact dimensions allow the unit to be installed where access is restricted e.g. riser, duct, etc. The cable entries are suitable for 5mm OD VERTICASA^{XS} drop tubes or standard cables from 2.5 to 5mm OD. The unit ensures the minimum 20mm bend radius for optical fibre is not exceeded.

The required space envelope is (w)80mm x (d)32mm x (h)100mm.

VERTICASA^{XS}

Data Sheet WM025

Data Sheet WM024

VertiCasa^XS Mechanical Splice Holder

The VertiCasa^XS mechanical splice holder (MSH) is mainly used in MDUs or office fibre cabling systems. The unit is suitable for splicing together up to 2 fibres using mechanical splices or 4 fibres using heatshrink e.g. from 2 x 2 fibre VertiCasa^XS fibre module drops, although small cables can also be managed within the MSH.

The compact dimensions allow the unit to be installed where access is restricted e.g. riser, duct, etc. Cables of up to 6mm in diameter can be accommodated. The MSH cover hinges open for easy access.

The required space envelope is (w)165mm x (d)13mm x (h)46mm.

Data Sheet WM034

VertiCasa^XS Top Loop Box

The VertiCasa^XS top loop box is a secure box allowing the coiling of extra lengths of VertiCasa^XS fibre modules to enable extended lengths of fibre units to be extracted at a lower level.

The box does not contain any splice trays and is used purely to coil the overlength of fibre modules at the top of a VertiCasa^XS riser cable. The box is wall mountable and is for internal use. The unit enables one cable of up to 15mm to enter through the centre of the base.

**The required space envelope is (w)270mm x (d)100mm x (h)272mm.**

Data Sheet AC020

VertiCasa^XS Bend Managers

VertiCasa^XS bend managers are used to control the bend radius of the 5mm internal VertiCasa^XS drop tubes. They simply clip around the drop tube during installation to ensure that the radius of the bends does not go below 15mm. This eases fibre installation where long drop lengths and multiple bends are present and ensures the fibre bend radius is not compromised.

The bend managers are multi-purpose and can be used for applications where the drop tube needs to be passed through a 90° internal bend, a 90° external bend or to pass through a wall, where a cover is supplied.

Dimensions are 80mm (length) x 8.2mm (diameter).
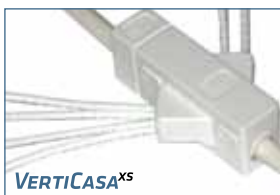
Data Sheet WM042

VertiCasa^XS 8 Port Breakout Unit

The VertiCasa^XS breakout unit 8 port is typically used in MDUs to breakout and distribute fibres from an in-line VertiCasa^XS cable into up to 8 drop tubes, for routing to a customer premise.

Unlike the other VertiCasa^XS products, this unit can only be utilised with 3mm drop tubes and VertiCasa^XS riser cables of up to 12mm in diameter. It enables a window to be cut in the cable to access the fibres, which can be spurred off into the drop tubes.

The required space envelope is (w)45mm x (d)25.5mm x (h)71mm.

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Accessories

Pigtails

High performance optical pigtails are a defining factor in ensuring any network performs to the highest level. An extensive range of optical pigtails is available for all telecom and datacom applications. All pigtails are fully qualified to Telcordia GR326 and IEC 61300 and all materials used are RoHS compliant. Full traceability and test certification is supplied with each assembly.

Pigtails can be supplied in a variety of lengths, colours and connector types e.g. FC, SC, ST, E2000 and LC. Ultra polish (UPC) is standard with angle polish (APC) also available. All connectors have ceramic ferrules. Pigtails are un-tuned, although tuned pigtails are available.

Available in multimode (62.5/125 and 50/125 including OM3) and singlemode: the standard fibre is G657a, but different fibre types and cable diameters are available. The standard length is 2 metres, the standard diameter is 900 micron with easy strip buffering, supplied in sets of 1, 2, 4, 6, 8 or 12 colours. Ruggedised pigtails can also be supplied (1.6, 2.0 and 3.0mm). Both fibre and buffer are coloured to ensure ease of identification when stripped.

Data Sheet AC003

Patchcords

High performance optical patchcords are a defining factor in ensuring any network performs to the highest level. An extensive range of optical patchcords is available for all telecom and datacom applications. All patchcords are fully qualified to Telcordia GR326 and IEC 61300 and all materials used are RoHS compliant. Full traceability and test certification is supplied with each assembly.

Patchcords can be supplied in a variety of lengths and connector types e.g. FC, SC, ST, E2000 and LC. Ultra polish (UPC) is standard with angle polish (APC) also available. All connectors have ceramic ferrules. Patchcords are un-tuned, although tuned patchcords are available. Different fibre types and cable diameters are also available. Hybrid patchcords with different connector types on each end are also available.

Data Sheet AC004

Available in multimode (62.5/125 and 50/125 including OM3) and singlemode: the standard fibre is G657a, but different fibre types and cable diameters are available. Lengths available range from 1 metre to 99 metres. Cable diameters available are 1.6, 2.0 and 3.0mm. Sheath colour is yellow, orange, turquoise or violet.

Adapters

There is an extensive range of optical adapters for use in telecom and datacom applications. All adapters are fully qualified to Telcordia GR326 and IEC 61300 and all materials used are RoHS compliant.

Adapters can be supplied in a variety of colours and connector types such as FC, SC, ST, LC, E2000 etc. All adapters are supplied with ceramic inserts. They are supplied in a range of different colours to match connector type. (e.g. blue for UPC, green for APC, beige for multimode). Both simplex and duplex adapters are available.

Data Sheet AC002

Shuttered Adapters

The shuttered adapter contains a spring loaded door which closes automatically when the connector is not installed, which helps to minimise the ingress of dust. This safety feature is used to prevent potentially harmful exposure to the eye when the connector is not installed or is disengaged.

These adapters are used in a range of termination boxes and are available in SC/PC and SC/APC configurations. The adapters are fully qualified to Telcordia GR326 and IEC 61300 and all materials used are RoHS compliant. All adapters are supplied with ceramic inserts. They are supplied in different colours to match the connector type. (e.g. blue for PC, green for APC).

Data Sheet AC019

PLC Splitters

Using advanced planar technology, PLC splitters are used to provide a compact and reliable method of splitting an optical signal. Splitters are available with up to 64 outputs and are ideal for passive optical networks (PONs). They have excellent uniformity and low Polarisation Dependent Loss (PDL). Full traceability and test certification is supplied with each assembly. They are designed to meet Telcordia GR1209 and GR1221 standards.

They can be supplied in a range of packaging options e.g. with the input and output legs terminated in all standard connector types, such as FC, SC, ST, E2000 and LC. The splitters are also available pre-installed in a number of connectivity products such as joints, distribution cabinets and wall boxes.

Data Sheet AC005

Mechanical Splices

The universal mechanical splice is designed for fast splicing of optical fibres in a variety of situations in telecom and private fibre networks.

Mechanical splicing is an alternative to traditional fusion splicing with heatshrink or crimp splice protectors. Splicing of the fibres is achieved through 'cladding to cladding' alignment and clamping of the fibres using a mechanical push-pull wedge process. This achieves excellent optical and mechanical performance along with cost benefits. The splicing process is simple and requires minimal training and no electrical equipment. Low cost mechanical splicing kits are available with or without high precision cleave tools. Typical mechanical splicing operation time is 1 to 2 minutes. Typical insertion loss values are less than 0.1dB. Many connectivity products, especially for FTTx, have been designed to accept mechanical splices.

A mechanical splice can be used with singlemode and multimode fibres and is very flexible in allowing splicing of 250µm to 250µm, 900µm to 900µm, or 250µm to 900µm fibre. The splice is tested to conditions and criteria determined with reference to Telcordia GR-765-CORE Generic Requirements for Single Fiber Singlemode Optical Splices and Splicing Systems.

Data Sheet AC007

FAST Connectors

FAST Connectors are field installable connectors that provide a quick, simple and clean solution for field terminating SC and LC connectors. The connectors provide a dual terminating solution for 0.25mm and 0.9mm diameter fibres.

This two for one solution is achieved through a 'stepped' clamping method to the outer-coating of the fibre. With a connectorisation time of less than 30 seconds, including preparation, this field installable connector makes other connector termination methods appear cumbersome, time consuming and expensive. The FAST connectors require no specialised tooling, only standard fibre preparation tools. The product has also been factory-polished, eliminating the need for any polishing materials, enabling the preparation and termination of optical fibres in a fraction of the time of other conventional methods.

SC/PC, LC/PC and SC/APC connectors have an insertion loss of ≤0.4 dB for singlemode and ≤0.2 dB for multimode. Return loss is ≥40dB for singlemode PC and ≥65dB for APC.

Data Sheet AC015

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VERTICASA^{XS} Storage Reel

The VERTICASA^{XS} storage reel is used to temporarily store an extracted fibre module before installation into a customer drop tube. The reel ensures that the extracted fibre is kept safe from damage and is stored to the correct bend radius (the inner diameter of 180mm ensures that fibre bend radius is not compromised).

The fibre module can be simply wound onto the lightweight plastic reel as the fibre module is extracted from the riser cable and wound back off when the fibre module is ready to be installed into the drop tube.

Data Sheet AC017

VERTICASA^{XS} Stripping Tools

The VERTICASA^{XS} cable stripping tools are used to create a longitudinal window cut into the VERTICASA^{XS} cable to extract fibre modules. The VERTICASA^{XS} cable stripping tools' special design will expose the cable elements without any damage to the fibres.

Both designs are compact, safe, easy to handle, typically used in MDUs or office fibre cabling systems. Using the dedicated adapters supplied, the tool is suitable for the 12, 24 or 48 fibre VERTICASA^{XS} cables. The compact tool is suitable to be used only on 8 – 9mm OD cables without GRP inside the sheath. The tools can be used to cut a window in a cable or strip the cable at a butt without any length limitations.

Data Sheet AC009 and AC022

VERTICASA^{XS} Crimping Tool

The VERTICASA^{XS} crimp set is used to crimp a fibre module to the pulling rope in a VERTICASA^{XS} drop tube, for pulling the fibre module (one or two fibre) into the customer premises (the drop tube is supplied complete with a pulling rope). It is also used to crimp the 5mm metal crimp ring in the VERTICASA^{XS} customer connection kit to grip the 2mm cable to the tube.

The crimp pliers' head has been designed to get the best grip between the pulling rope and fibre(s). The nominal diameter for the micro tube is 1.95mm OD and 1.6mm ID. The tube has a 1mm slot for ease of module insertion. The length of the tube is 5mm.

Data Sheet AC010 - VERTICASA^{XS} Crimp Set

VERTICASA^{XS} Drop Tubes

The VERTICASA^{XS} drop tubes are used to route VERTICASA^{XS} fibre modules from the riser cable to the customer's premises. Drop tubes are available for internal and for external VERTICASA^{XS} networks.

The internal drop tube is a 5mm diameter LSOH tube with a low friction anti-static liner on the inside wall of the tube. The tube also contains a pre-installed pulling rope to simplify installation.

The external drop tube is a 5mm diameter LSOH tube with a low friction anti-static liner on the inside wall of the tube, over-sheathed with polyethylene to provide weather resistance and protection from UV light. A ripcord is installed between the sheath and the tube for easy sheath removal. The internal tube also contains a pre-installed pulling rope to make fibre installation easy.

Tube plugs are available to ensure access to the pulling rope when cutting the drop tube into lengths.

Data Sheet AC016 - Internal
Data Sheet AC018 - External

Data Sheet AC013

Transport Tube

Reduced fire hazard transport tube is supplied in 10m coils for applications where routing of fibre within equipment racks and cable nodes is required. The tube provides protection of fibres in environments where reduced fire hazard materials are essential. The tube has a low friction, anti-static liner which aids fibre installation.

It provides excellent protection in these environments where resistance to crushing and kinking are required and fibre bends are limited and maintained to an acceptable radius (30mm). It is suitable for protection of fibre and pigtails up to 3.0mm OD. It provides the wherewithal to achieve improved fibre management.

Data Sheet AC012

Bend Limiting Tube

Smooth bore bend limiting transport tube is supplied in 10m coils for applications where routing of fibre within equipment racks and cable nodes is required. It provides excellent protection in these environments especially where resistance to crushing and kinking are required and fibre bends are limited and maintained to an acceptable radius (30mm). It is suitable for protection of fibre and pigtails up to 2.8mm OD. It provides the wherewithal to achieve improved fibre management.

Data Sheet AC021

Customer Connection Kit

The customer connection kit is designed for use in residential and business applications. It is used to protect a fusion splice at the floor level near the building riser. The kit enables the installer to splice a fibre from the riser cable to the customer fibre and feed the fusion splice into the embedded corrugated tubes linking the riser vane to the customer apartment.

Its flexibility makes it easy to install and run through bends inside the wall. It creates a rigid axial link between the 3mm protection tube and the 2mm or 3mm simplex cable. Its small overall diameter of 5mm enables its insertion into embedded corrugated tubes. The crimp rings are easily and safely installed using *VertiCasa*^XS^ crimp pliers.

Data Sheet AC001

Cable Clamps

The ARS cable clamp is used to anchor a single cable and to distribute up to 4 cable elements (48 fibres). The ARS is suitable for cables between 12 and 48 fibres. 10 metres of routing tube is supplied with the ARS. The ARS allows for the anchoring/termination of both the cable strength member and any aramid in the cable construction.

The BEM cable clamp is used to anchor a single cable and to distribute up to 16 cable elements (192 fibres). The BEM is suitable for cables between 36 and 192 fibres. 20 metres of routing tube is supplied with the BEM. The BEM allows for the anchoring/termination of both the cable strength member and any aramid in the cable construction.

These clamps ensure the secure termination of a cable externally of the rack, prevents movement of the cable elements and fibre once installed, providing anchoring for the optical cables. Mounting brackets are available to secure each cable clamp in the rack.

Data Sheet AC011

Sirocco^XS^ Blown Fibre Manifold

The *Sirocco*^XS^ blown fibre manifold can be used on a variety of Prysmian rack mounted products including the SRS3000 sub-rack system and the PSP splice & patch shelf. It provides the ability to enter onto a shelf with up to six blown fibre tubes. The manifold clips into place on the back of the shelves and is supplied with a cover to protect the fibres.

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One-stop-shopping with Prysmian's comprehensive integrated *XSNET* portfolio

Deploying a future-proof FTTx network is all about achieving the highest network reliability and customer satisfaction, whilst making the most of available resources and keeping costs low. Prysmian's fully integrated range of connectivity products provides all you need to build or adapt each segment of a low-maintenance FTTx network quickly and cost-effectively.

Our integrated *XSNET* range offers high grade optical fibre cables, carefully matched and easy-to-handle connectivity components and a choice of ducting solutions for indoor networks, outside plant networks and POP. And there's more: flexible design software and engineering advice based on three decades of broadband network design. With minimal effort, any network design, regardless of complexity or size, can be put together from scratch, updated or reconfigured.

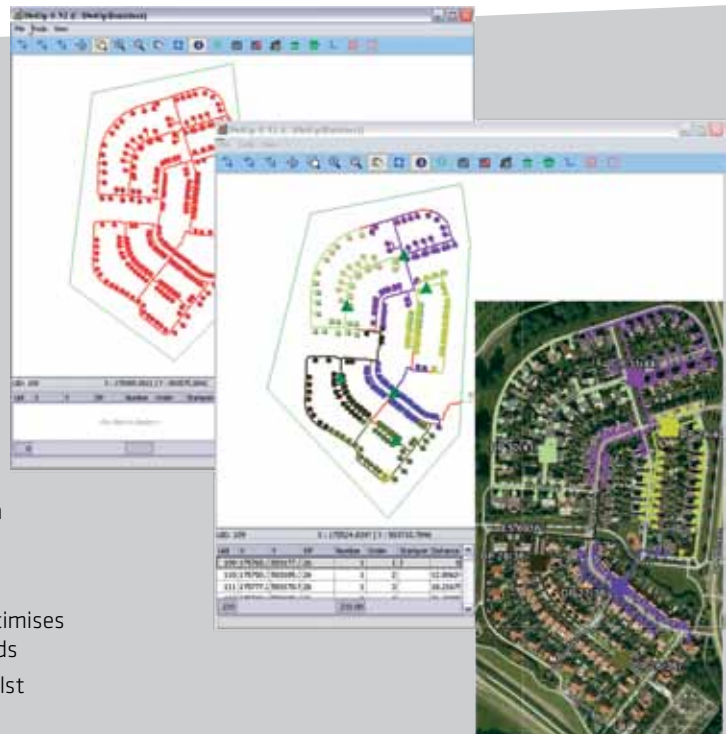## Prysmian Group's fibre optic and connectivity products
– Combined portfolio brings down the cost of FTTx

– Reach every community with an extensive portfolio of cable, connectivity and deployment technologies

XSNET
Value Innovation for your Broadband Network

Integrated *XSNET* concept
– Each standardised *XSNET* solution integrates seamlessly with the rest of the portfolio

– Each *XSNET* solution contains everything required to build a specific part of the network

– Operators can make service choices now, but also accommodate future upgrades and expansion

– Reduces the need for skilled labour

– Excellent logistical support

– Proprietary design software maps, configures, optimises and calculates costs of network concepts in seconds

– Changes and variations are easy to implement whilst designing and even after installation

– Expert engineering and consultancy services, plus professional support for building a winning business case

Linking communications to communities

Prysmian Group, members of:

Fibre to the Home Council Europe

Fibre to the Home Council Middle East & North Africa

FTTH COUNCIL ASIA PACIFIC | FIBER TO THE HOME

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