

LMJ - Large Multi-Function Joint

Prysmian Part Number: *See Following Pages*



The LMJ is used for access applications within the external optical network and can be used for track, spur and loop applications. It can accommodate a wide variety of cables such as loose tube, central loose tube, Flextube and blown fibre. The modular tray system is designed for positive fibre management for Single Circuit Management (SCM) and Single Element Management (SEM), and the splice trays can accommodate a variety of different types of splice protectors and splitters. The joint has ten circular ports and one oval port for mechanical entry. Mechanical glands are used to seal cables into the circular ports. Multi way glands are also available to fit multiple cables into each circular port depending on the cable diameter.

Features and Benefits

- A large closure for optical cable splicing with two vertical tray stacks.
- Different lengths available to configure the closure to the number of trays needed.
- Maximum capacity is 1344 fibres using 12 fibre single element trays.
- Capacity can be increased to 2688 fibres using 24 fibre single element trays or 4032 fibres using 36 fibre single element trays.
- Contains a mechanical oval port and central loop storage for up to 276 fibres using loose tubes. (Loop capacity 3.4m of 23 elements, 2.2mmØ in medium joint).
- Two input manifolds manage cable tubes to a common routing channel.
- Input manifolds enable fibres to be passed from stack to stack.
- One mechanical oval port cable entry for cables up to 21.5mm. Ten circular port cable entries.
- Cables are sealed using mechanical sealing glands. Cables from 4 to 23mm in diameter can be accommodated into each circular port.
- Multi Way Entry Glands provide alternate mechanical entry to allow up to 8 cables in each circular port.
- Can accommodate a range of splitter modules from 1x2 to 2x64.
- The closure is sealed to IP68.

Kit Contents

The LMJ is supplied as an empty closure with a cap, a base, a clamp, a sealing gasket and a support frame.

Cable entry kits, splice trays and accessories are ordered separately as required.

The closures can also be pre-configured by Prysmian. Contact the Prysmian sales office for further information.

Additional Items

- Oval Port Entry Kits
- Circular Port Gland Kits
- Splicing Modules
- Splitter Modules
- Splice Protectors
- Mounting Brackets
- Closure Upgrade Kits

Technical Data

- Required space envelope (mm): (l) 493 x (d) 310 for LMJ Short Cap (l) 600 x (d) 310 for LMJ Medium Cap
(l) 721 x (d) 310 for LMJ Long Cap

- Capacity for Single Element Management (SEM) – 12f, 24f and 36f per tray)

| | LMJ Short Cap | LMJ Medium Cap | LMJ Long Cap |
|-------------------------|--------------------|--------------------|---------------------|
| Maximum number of trays | 48 trays (24 + 24) | 80 trays (40 + 40) | 112 trays (56 + 56) |
| Maximum splices | 576f | 960f | 1344f |
| Using 24f splice tray | 1152f | 1920f | 2688f |
| Using 36f splice tray | 1728 | 2880 | 4032 |

- Capacity for Single Circuit Management (SCM) – 4f per tray

| | LMJ Short Cap | LMJ Medium Cap | LMJ Long Cap |
|-------------------------|--------------------|---------------------|-----------------------|
| Maximum number of trays | 96 trays (48 + 48) | 160 trays (80 + 80) | 224 trays (112 + 112) |
| Maximum splices | 384f | 640f | 896f |

- Minimum Fibre Bend Radius (mm): 30
- Number of Cable Ports: 10 circular and 1 oval
- Cable Diameter Range (mm):
 - Circular Port: 4 to 23
 - Multi Port (in circular port): 5 to 9 (2 Way), 5 to 7 (4 Way), 3x2mm flat cable (8 Way),
 - Oval Port: 6 to 21.5
- Cable Retention (N):
 - Circular Port: > Cable (Ø/45) x 500N with central strength member secured.
 - 4 Way Multi Way (in circular port): > 150N for cables with Aramid yarns, > 30N for cables without Aramid yarns
- Splitter capacity: See page 4
- Operating temperature: -20°C to + 60°C (5 to 95% RH)
- Material:-
 - Cap: GF Polypropylene
 - Base: GF Polypropylene
 - Clamp: GF Nylon
 - Splice Trays: FR ABS
- Testing:-
 - Closure Sealing: IP68 (5 metres) (IEC 61300-2-23)
 - Optical: Tested 1310nm, 1550nm, 1625nm
 - Change of Temperature: IEC 61300-2-22
 - Dry Heat: BS EN 60068-2-2 Test Bb
 - Damp Heat: IEC 60068-2-3: 1969
 - Vibration: IEC 61300-2-1
 - Torsion: IEC 61300-2-5
 - Bending: IEC 61300-2-37
 - Impact: IEC 61300-2-12
 - Cable Retention: IEC 61300-2-4
 - Crush Resistance: IEC 61300-2-10

Logistics

Packing Dimensions (mm):

- (l) 563 x (d) 342 x (w) 302 Short Cap
- (l) 678 x (d) 342 x (w) 302 Medium Cap
- (l) 793 x (d) 342 x (w) 302 Long Cap

Packed Weight (Kg):

- Short Cap:
- Medium Cap:
- Long Cap:

Net Weight (Kg):

- Short Cap
- Medium Cap
- Long Cap

Part Numbers

LMJ - Closure

The LMJ Closure is supplied in three different sizes depending on the splice capacity required. The closure is supplied empty and is configured as required by adding splice modules, splitter modules and cable entry glands. The closure has a single oval port and 10 circular ports for mechanical entries.

The closure is supplied with the components below: -

- 01 x Closure Cap
- 01 x Closure Base
- 01 x Seal
- 01 x Clamp
- 01 x Pressure Test Valve
- 01 x Joint Chassis
- 02 x Input Manifold

An installed joint closure can be upgraded at a later date using a closure upgrade kit as shown below.



| Prysmian Part No. | Joint Size | Total Tray Capacity | Splice Capacity SCM | Splice Capacity SEM (12f Tray) | Splice Capacity SEM (24f Tray) | Splice Capacity SEM (36f Tray) |
|-------------------|------------|---------------------|---------------------|--------------------------------|--------------------------------|--------------------------------|
| XJTSC02256 | Short Cap | 48 (24+24) | 384 * | 576 | 1152 | 1728 |
| XJTSC02257 | Medium Cap | 80 (40+40) | 640 * | 960 | 1920 | 2880 |
| XJTSC02258 | Long Cap | 112 (56+56) | 896 * | 1344 | 2688 | 4032 |

* Single circuit trays are double trays where each tray unit comprises of a splice tray with a hinged inner splice tray providing two trays in a single tray footprint, where each of the two trays can accommodate 4 splices.

LMJ – Closure Upgrade Kits

Closure upgrade kits can be used to upgrade a joint to a larger size after it has been installed. The upgrade kit contains a larger cap and additional chassis plates. It contains all of the fixings required and an installation guide to describe the upgrade process. It does not include additional splice trays which are ordered separately.

| Prysmian Part No. | Description | From (Tray Capacity) | To (Tray Capacity) |
|-------------------|-------------------------|----------------------|--------------------|
| XJTSC02321 | Short Cap to Medium Cap | 48 | 80 |
| XJTSC02322 | Short Cap to Long Cap | 48 | 112 |
| XJTSC02323 | Medium Cap to Long Cap | 80 | 112 |

Additional Items

Mechanical Oval Port Entry Kits

The LMJ Oval Port Mechanical Entry Kit is used to install a loop of cable into the oval port of the LMJ. The kit contains all of the components required to prepare and install the cable, and route the cable fibres to the splice trays. The cables are sealed into the oval port using a mechanical gland system comprising of two plates and a rubber block that fits inside the oval port of the joint. It is important to order the correct kit dependant on the diameter of the cables to be sealed.



| Prysmian Part No. | Gland Type | Sealing Type | Min Cable Ø | Max Cable Ø |
|-------------------|------------|--------------|-------------|-------------|
| XJTSC02382 | Oval | Mechanical | 6.0 | 8.0 |
| XJTSC02269 | Oval | Mechanical | 8.1 | 10.0 |
| XJTSC02270 | Oval | Mechanical | 10.1 | 12.0 |
| XJTSC02271 | Oval | Mechanical | 12.1 | 14.0 |
| XJTSC02272 | Oval | Mechanical | 14.1 | 16.0 |
| XJTSC02273 | Oval | Mechanical | 16.1 | 18.0 |
| XJTSC02555 | Oval | Mechanical | 18.1 | 20.0 |
| XJTSC02556 | Oval | Mechanical | 20.1 | 21.5 |

Mechanical Circular Port Entry Glands

Circular port entry glands are used to install cables into one of the 10 ports of the LMJ base. The glands can be installed onto the cable and then simply pushed into the base of the joint. The kit contains all of the parts necessary to seal the cable and secure the strength members. Multi-way glands are available to install multiple smaller cables into one circular port. For larger cables a heat shrink port is also available (see page 6).



| Prysmian Part No. | Gland Type | Number of Entries | Min Cable Ø | Max Cable Ø | Used For |
|-------------------|------------|-------------------|-------------|-------------|-------------------------------------|
| XJTSC02278 | Single | 1 | 4.0 | 7.0 | Single cable with Aramid or CSM |
| XJTSC01754 | Single | 1 | 7.1 | 20.0 | Single cable with Aramid or CSM |
| XJTSC02193 | Single | 1 | 20.1 | 23.0 | Single cable with Aramid or CSM |
| XJTSC02186 | Dual | 2 | 5.0 | 9.0 | For interface with flexible conduit |
| XJTSC01755 | Quad | 4 | 5.0 | 7.0 | Up to four cables with Aramid |
| XJTSC02767 | Quad | 4 | 4.0 | 6.0 | With CSM retention for mini cables |
| XJTSC02768 | Quad | 4 | 5.0 | 7.0 | With CSM retention for mini cables |
| XJTSC02769 | Quad | 4 | 7.0 | 8.5 | With CSM retention for mini cables |
| XJTSC02260 | 8 Way | 8 | 3.0 | 3.0 | Up to 8 cables - 3.0mm diameter |
| XJTSC01878 | 8 Way | 8 | 2.0 | 3.0 | Up to 8 flat cables 2.0 x 3.0mm |

Splicing and Splitting Modules

Splicing Modules

Splicing modules are available to be installed into the LMJ. Single element modules for 12f, 24f AND 36F per tray can be utilised using 1.3mm splice protectors. A 12f per tray module is also available for 2.2mm splice protectors. Single circuit modules have double the tray capacity in the same space envelope. This is achieved using a double splice tray where each tray unit incorporates a hinged second tray within the first tray. Each SC tray can accommodate 4 spliced fibres. A crimp splice tray is also available (using the same tray as 36f). The 36f tray can also be used for 12f and 24f. When used as a 12f tray splice protectors no longer need to be stacked.



| Prysmian Part No. | Tray Type | Splice Protector | No of Trays | Fibres per Tray | Fibre Capacity | Tray Positions Used |
|-------------------|-------------------|------------------|-------------|-----------------|----------------|---------------------|
| XJTSC02144 | Single Element 12 | 1.3mm x 30mm | 4 | 12 | 48 | 4 |
| XJTSC02262 | Single Element 12 | 2.2mm x 45mm | 4 | 12 | 48 | 4 |
| XJTSC02584 | Single Element 16 | 2.2mm x 45mm | 4 | 16 | 64 | 4 |
| XJTSC02261 | Single Element 24 | 1.3mm x 30mm | 4 | 24 | 96 | 4 |
| XJTSC02468 | Single Element 36 | 1.3mm x 30mm | 4 | 36 | 144 | 4 |
| XJTSC02145 | Single Circuit * | 1.3mm x 30mm | 8 | 4 | 32 | 4 |
| XJTSC02468 | Crimp | Crimp | 4 | 12 | 48 | 4 |
| XJTSC02582 | Ribbon | Ribbon | 2 | 24 | 48 | 4 |
| XJTSC02583 | Micro Module | 1.3mm x 30mm | 2 | 48 | 96 | 4 |

* Single circuit trays are double trays where each tray unit comprises of a splice tray with a hinged inner splice tray providing two trays in a single tray footprint, where each of the two trays can accommodate 4 splices.










Splitter Modules

Splitter modules can be installed into the LMJ. The splitter modules are supplied with a splitter and the input fibre pre-installed into the bottom tray and the output fibres installed into a number of trays above depending on the size of the splitter. The splitter input tray is coloured green. Standard splitters use G657A1 fibre. Refer to data sheet AC005 for splitter technical information.

| Prysmian Part No. | Splitter Ratio | Tray Type | Input Tray | Output Trays | Spare Trays | Outputs per Tray | Splice Protector | Tray Positions Used |
|-------------------|----------------|-----------|------------|--------------|-------------|------------------|------------------|---------------------|
| XJTSC02310 | 1 x 4 | SE12 | 1 | 1 | 2 | 4 | 1.3mm x 30mm | 4 |
| XJTSC02311 | 1 x 4 | SC * | 1 | 1 | 4 | 4 | 1.3mm x 30mm | 4 |
| XJTSC02312 | 1 x 8 | SE12 | 1 | 1 | 2 | 8 | 1.3mm x 30mm | 4 |
| XJTSC02313 | 1 x 8 | SC * | 1 | 2 | 4 | 4 | 1.3mm x 30mm | 4 |
| XJTSC02314 | 1 x 16 | SE12 | 1 | 2 | 1 | 8 | 1.3mm x 30mm | 4 |
| XJTSC02315 | 1 x 16 | SC * | 1 | 4 | 2 | 4 | 1.3mm x 30mm | 4 |
| XJTSC02316 | 1 x 32 | SE24 | 1 | 2 | 1 | 16 | 1.3mm x 30mm | 4 |
| XJTSC02317 | 1 x 32 | SC * | 1 | 8 | 6 | 4 | 1.3mm x 30mm | 8 |

* Single circuit trays are double trays where each tray unit comprises of a splice tray with a hinged inner splice tray providing two trays in a single tray footprint, where each of the two trays can accommodate 4 splices. Other splitter modules are available including onto trays with 2.2mm splice protectors. Contact Prysmian for further information.

Additional Items

| Item | Prysmian Part No. | Description | Image |
|------------------------------|--|--|---|
| SILICONE GREASE | XBFSC00260 (Pack OF 5) | Grease is used when installing a cable into one of the entry glands. A sachet of grease is supplied with each gland. The purpose of this spare tube of grease is for use adding additional cables into the 4 Way Gland at a later date. |  |
| SPLICE PROTECTORS 1.3mm | XKTSC01284 (Pack OF 12) | Splice protectors are used to protect the fibre splice. They are 1.3mm in diameter and 30mm in length. |  |
| | XPESC00057 (Pack of 50) | | |
| SPLICE PROTECTORS 2.2mm | XKTSC00050 (Pack OF 12) | Splice protectors are used to protect the fibre splice. They are 2.2mm in diameter and 45mm in length. |  |
| | XPESC00053 (Pack of 50) | | |
| SPLICE PROTECTORS Crimp | XKTSC00079 (Pack of 12) | Splice protectors are used to protect the fibre splice. They are 1.3mm x 3.2mm and 30mm in length. |  |
| | XKTSC00078 (Pack of 50) | | |
| Heat Shrink Port | XJTSC02608 | The Heat Shrink port is a mechanical port that plugs into a circular port of the LMJ base and enables a cable to be heat shrunk into the port. The port can be used for cases where larger sized cables need to be installed into the joint. The port can be used for cables up to 30mm in diameter. |  |
| GLAND SPANNER | XJTSC02320 | The gland spanner is used to tighten the cable glands used for circular port entry. The spanner has a flat profile on one end and a cupped profile on the other end. The cupped profile is used to tighten or loosen a gland already installed into the joint in cases where additional cable entry is required. |  |
| WALL / POLE MOUNTING BRACKET | XJTSC02597 | The Wall / Pole Mounting Bracket allows a Joint to be mounted vertically against a wall or a pole. The bracket is secured using either bolts or screws (provided). |  |
| SUPPORT TOOL | XJTSC02274 | The Support Tool allows the user to support a joint within a portable workbench. The bracket is designed to fit most commercially available workbenches. |  |
| HANLDE KIT | XJTSC02548 | The Handle Kit contains two handles and two long cable ties. The handles can be strapped to the LMJ cap to ease lifting in and out of the jointing pit. |  |

Please contact your local sales office listed on www.prysmiangroup.com

© Prysmian Group 2018, All Rights Reserved.

The information contained within this document must not be copied, reprinted or reproduced in any form, either wholly or in part, without the written consent of Prysmian Group. The information is believed correct at the time of issue. Prysmian Group reserves the right to amend this specification without notice. This specification is not contractually valid unless specifically authorised by Prysmian Group.