

# Medium Multi-function Joint - MMJ

**Prysmian**

A Brand of Prysmian Group

Product code – See page 3

## DESIGN & CONSTRUCTION

- A compact closure for the splicing of optical cables.
- Supplied with 24 single element trays each able to accommodate 12 splices providing a maximum capacity of 288 fibres, or 48 single circuit splice trays. Each single circuit splice tray has two storage sections providing a total of 24 trays per joint. Each tray can accommodate up to 4 splices providing a total capacity of 192 fibres.
- An input manifold manages the tubes to a common routing channel and has the provision to mount up to two optical splitters.
- The joint is for use with heat shrink splice protectors 2.2mm in diameter and 45mm in length, and 4.8mm diameter for ribbon. It can also be used with crimp splice protectors.
- The closure base has 4 circular entry ports and an oval port. Cables up to 23mm in diameter can be installed into each port. A further two small ports are available as emergency ports. These ports are for heat shrink entry and can accommodate a cable of up to 12mm in diameter.
- Circular port cables are sealed using a mechanical sealing gland. The gland can be assembled onto the cable away from the joint and is then simply plugged into the base.
- Oval port cables are sealed using adhesive lined heat shrink sleeves or using a mechanical oval port entry kit.
- Multi Way Entry Glands are available to allow the installation of a number of cables into one circular port. See page 3 for more information.
- Splice trays hinge upwards individually, allowing full access to spliced fibres without disturbance to live fibres in adjacent trays.
- Integrated loop storage basket for mid-span applications.
- Can be supplied with a pole/wall mounting bracket.
- Can be supplied with a flash test valve or a pressure relief valve. These can also be used for earthing.
- Closure and glands sealing to IP68.



## Product description

The Medium Multi Function Joint (MMJ) is for jointing optical fibre cables. The joint is ideal for use as a Cable Chamber Joint, Track Joint, Spur Joint or Distribution Joint due to its capacity and compact size. It has a maximum capacity of 288 fibres. The splice trays are factory fitted and each tray can accommodate up to 12 spliced fibres. The single element 2.2 tray also has the ability to house up to 1x1:8 splitter. A multi-functional bracket can be supplied with the joint which enables wall or pole mounting of the joint vertically or horizontally. The joint has four circular ports for mechanical entry glands, one oval port for heat shrink or mechanical entry and two additional small circular ports also for heat shrink entry.

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### Main characteristics

#### Kit Contents

The MMJ is supplied with: -

- 01 x Base
- 01 x Cap
- 01 x Clamp
- 01 x O Seal
- 01 x Fibre routing manifold
- 02 x Tube Retainer
- 04 x Tube Retainer Cover
- 01 x Loop Storage Basket

Optional parts are supplied dependent on the part number selected. See page 3 for the part number table. The optional parts are: -

- 24 x SE or SC Trays
- 01 x Oval Port Entry Kit
- 04 x Circular Port Entry Kit
- 01 x Pressure Test Valve
- 01 x Pole / Wall Bracket

#### Logistics

##### Packing Dimensions (mm):

- (l) 480 x (d) 210 x (w) 250

##### \*Packed Weight (Kg):

- 2.4

##### \*Net Weight (Kg):

- 1.9

*\* weights do not includes kits*

- Minimum Fibre Bend Radius (mm): 30 (**Note:** The input manifold contains mandrels to cross fibres from one side of the stack to the other. These are limited to 20mm radius if used).
- Number of Cable Ports: 4 circular and 1 oval (also contains 2 additional small emergency ports)
- Cable Diameter Range (mm):
  - Circular Port: 4 to 23
  - Multi Port (in circular port): 2.5-8.5 (4 Way), 3x2mm flat cable (8 Way), 5-9 (2 Way), 2.5-4.2mm (8 Way)
  - Oval Port: 7 to 21 (Heat Shrink), 5 to 14.8 (mechanical)
  - Emergency Port: 4 to 12
- Cable Retention (N):
  - Circular Port: > Cable (Ø/45) x 1000N with central strength member secured.
  - 4 Way Multi Way (in circular port): > 150N for cables with Aramid yarns, > 30N for cables without Aramid yarns
- Maximum number of splice trays: 24 Single Element  
24 single Circuit Double Trays (each tray has two storage area so 48 trays total)
- Maximum fibre capacity of Joint: 288 Single Element  
192 Single Circuit
- Splitter capacity: 2 optical splitters of 4mm x 4mm x 60mm
- Required space envelope (mm): (l) 390 x (w) 231 x (d) 164
- Operating temperature: -40°C to + 70°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 and 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

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### Part Numbers

Before creating part numbers be sure to read the information on the following pages with regards to entry kit options. Part numbers for the MMJ can be created using the configurator below. This enables the user to configure a part number so that the joint is supplied with the required input and output cable kits, valve and bracket options.

The part number is a 18 digit code built up using the information below, where:

- The first 3 letters are for the type of joint. In this case this is always MMJ.
- Next a dash is used as a separator.
- The next letter then determines the type of splice trays required.
- Next a dash is used as a separator.
- The next letter denotes the type of oval port kit. The joint can be supplied with none (X).
- Next a dash is used as a separator.
- Then there are four letters for up to four circular port kits. The joint can be supplied with none (XXXX).
- Next a dash is used as a separator.
- The next letter denotes whether a valve (Flash Test or Pressure Relief) is required or not.
- Next a dash is used as a separator.
- The next letter denotes whether a mounting bracket (Pole/Wall or Flat) is required or not.
- Next a dash is used as a separator.
- The final letter denotes if splice protectors are required and also the type and quantity.

Example = MMJ-E-H-CMXX-X-Y-E

In the above example the MMJ would be configured with single element trays and supplied with a heat shrink oval port kit, one circular port kit for cables 7-20mm, one Multi 4 Way gland for four cable 5-7mm. The joint would be configured without a pressure test valve and supplied with a pole bracket and 2 packs of (50) splice protectors.

zMJ	DASH	TRAY	DASH	OVAL	DASH	PORT 1	PORT 2	PORT 3	PORT 4	DASH	VALVE	DASH	BRACKET	DASH	SPLICE PROTECTOR
MMJ	-	E	-	H	-	C	M	X	X	-	X	-	Y	-	E
Medium Joint	SE 1.3		Heat Shrink		Single Cable Entry 7-20mm 4 Way Gland Aramid 5-7mm No Circular Port No Circular Port					No Valve		Pole/Wall Bracket		1.3mm x 30 (PACK 50)	

  

Select Joint Type to be supplied	Select Splice Trays to be supplied.	Select Oval Port Kit to be supplied	Select Mechanical Glands to be supplied for each Port. Up to four glands can be supplied with the joint. The joint can also be supplied without glands and they can be ordered separately at a later date.	Select Valve type to be supplied	Select Bracket to be supplied	Select Splice Protector type and Number of Packs to be supplied
UMJ CMJ MMJ	E = SE 1.3 F = SE 2.2 C = SC 1.3 H = Crimp R = Ribbon	X = None H = Heat Shrink A = Mechanical 5-7mm B = Mechanical 7-9mm C = Mechanical 9-11mm D = Mechanical 11-13mm E = Mechanical 13-14.8mm A' = Mechanical 5-7mm B' = Mechanical 7-9mm C' = Mechanical 9-11mm D' = Mechanical 11-13mm E' = Mechanical 13-14.8mm	X = None B = Single Cable Entry 4-7mm C = Single Cable Entry 7-20mm D = Single Cable Entry 20-23mm G = 2 Way Gland CSM 5-9mm A = 3 Way Gland Aramid/CSM 8.5-10mm J = 4 Way Gland Oval Cables 8.5x5mm M = 4 Way Gland Aramid 5-7mm P = 4 Way Gland CSM 6.5-8.5mm L = 4 Way Gland 2.5-4.2mm S = 4 Way Gland ULLW 6mm T = 4 Way Gland CSM 4-6mm U = 4 Way Gland CSM 5-7mm V = 4 Way Gland Aramid 7-8.5mm W = 5 Way Gland Aramid 5-6mm E = 6 Way Gland 2x3mm Flat Drop with Messenger K = 8 Way Gland for 2x3mm Flat Cable No Messenger F = 8 Way Gland Aramid 3mm Round Cable N = 8 Way Gland Aramid 2.0-3.0mm Round Cables Q = 8 Way Gland Aramid 2.5-4.2mm Round Cables H = Heat Shrink Port up to 32mm	X = No Valve Y = Flash Test Valve P = Pressure Relief Valve	X = No Bracket Y = Pole/Wall Bracket F = Flat Bracket	X = None A = 1 pack of 12 (1.3) B = 2 packs of 12 (1.3) C = 3 packs of 12 (1.3) D = 1 pack of 50 (1.3) E = 2 packs of 50 (1.3) F = 3 packs of 50 (1.3) G = 4 packs of 50 (1.3) H = 5 packs of 50 (1.3) J = 6 packs of 50 (1.3) K = 1 pk of 12 (2.2) L = 2 pk of 12 (2.2) M = 3 pk of 12 (2.2) N = 1 pk of 50 (2.2) P = 2 pk of 50 (2.2) Q = 3 pk of 50 (2.2) R = 4 pk of 50 (2.2) S = 5 pk of 50 (2.2) T = 6 pk of 50 (2.2) U = 1 pk of 50 (Crimp) V = 2 pk of 50 (Crimp) W = 3 pk of 50 (Crimp) Y = 1 pk of 12 (Ribbon) Z = 2 pk of 12 (Ribbon)

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### Additional Items

#### Mechanical Cable Entry Glands

A range of mechanical cable entry glands can be used with the MMJ. Below is a selection of glands for a full list, please refer to datasheet OP080.

Circular port entry glands are used to install cables into one of the four ports of the MMJ 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).

*Typical weight of a kit is 110g.*



#### Single - Mechanical Cable Entry Glands

Mechanical entry glands are used to install cables into one of the entry ports of the MMJ base. The glands can be installed onto the cable and then are simply pushed into the base of the joint.

*Typical weight of a kit is 100g.*



Part Number	Gland Type	No. Entries	Min Cable Ø	Max Cable Ø	Used for
<b>XJTSC01754</b>	Single	1	7.1	20.0	Single cable with aramid or CSM

#### 2 Way - Mechanical Cable Entry Glands

Mechanical entry glands are used to install up to two cables into one of the entry ports of the MMJ base. The glands can be installed onto the cable and then are simply pushed into the base of the joint. A blank plug is provided to seal unused entry holes. These can be removed when a cable is ready to be installed.

*Typical weight of a kit is 87g.*



Part Number	Gland Type	No. Entries	Min Cable Ø	Max Cable Ø	Used for
<b>XJTSC03437</b>	2 Way	2	5.0	9.0	Two cables with CSM

#### 3 Way - Mechanical Cable Entry Glands

Mechanical entry glands are used to install up to three cables into one of the entry ports of the MMJ base. The glands can be installed onto the cable and then are simply pushed into the base of the joint. Blank plugs are provided to seal unused entry holes. These can be removed when a cable is ready to be installed.

*Typical weight of a kit is 84g.*

Part Number	Gland Type	No. Entries	Min Cable Ø	Max Cable Ø	Used for
<b>XJTSC03151</b>	3 Way	3	7.0	9.5	Three cables with aramid or CSM
<b>XJTSC03320</b>	3 Way	3	8.5	10.0	Three cables with aramid or CSM

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### Additional Items

#### 4 Way - Mechanical Cable Entry Glands

Mechanical entry glands are used to install up to four cables into one of the entry ports of the MMJ base. The glands can be installed onto the cable and then are simply pushed into the base of the joint. Blank plugs are provided to seal unused entry holes. These can be removed when a cable is ready to be installed.

*Typical weight of a kit is 83g.*



Part Number	Gland Type	No. Entries	Min Cable Ø	Max Cable Ø	Used for
<b>XJTSC02767</b>	4 Way	4	4.0	6.0	Four cables with CSM
<b>XJTSC03149</b>	4 Way	4	5.0	7.0	Four cables with aramid or GRP
<b>XJTSC03287</b>	4 Way	4	6.0	6.0	Four Prysmian Ultra light weight cables up to 36f
<b>XJTSC02352</b>	4 Way	4	Oval cables 8.5 x 5.0		Four oval cables is GRP strength members

#### 8 Way - Mechanical Cable Entry Glands

Mechanical entry glands are used to install up to eight cables into one of the entry ports of the MMJ base. The glands can be installed onto the cable and then are simply pushed into the base of the joint. Blank plugs are provided to seal unused entry holes. These can be removed when a cable is ready to be installed.

*Typical weight of a kit is 87g.*



Part Number	Gland Type	No. Entries	Min Cable Ø	Max Cable Ø	Used for
<b>XJTSC03049</b>	8 Way	8	2.5	4.2	Eight cables with aramid
<b>XJTSC01878</b>	8 Way	8	Flat drop 2.0 x3.0 with messenger		Eight flat drop cables with a messenger wire
<b>XJTSC02960</b>	8 Way	8	Flat drop 2.0 x3.0 without messenger		Eight flat drop cables without a messenger wire

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## Additional Items Cont.

### Oval Port Cable Entry Glands

The closure is supplied with one oval port suitable for cables with a diameter range of 5.0mm to 14.8mm using mechanical seals, with heat shrink sealing the closure can be used with a diameter range of 7.0mm to 21.0mm. See below the full list of part numbers and diameters available.



Part Number	Gland Type	Sealing type	Min Cable Ø	Max Cable Ø
<a href="#">XJTSC02028A</a>	Oval	Mechanical	5.0	7.0
<a href="#">XJTSC02029A</a>	Oval	Mechanical	7.1	9.0
<a href="#">XJTSC02030A</a>	Oval	Mechanical	9.1	11.0
<a href="#">XJTSC02031A</a>	Oval	Mechanical	11.1	13.0
<a href="#">XJTSC01896A</a>	Oval	Mechanical	13.1	14.8
<a href="#">XJTSC01756</a>	Oval	Heat shrink	7.0	21.0

Item	Prysmian Part No.	Description	Image
POLE / WALL MOUNTING BRACKET	<a href="#">XJTSC00136</a>	The Pole / Wall Mounting Bracket is a universal bracket fitted to the clamp of the joint. It is used to mount the closure to a pole, wall, or wall of a footway box and allows storage in the horizontal or vertical position. Can be supplied with the joint or available as an upgrade kit.	
SUPPORT TOOL	<a href="#">XJTSC00075</a>	The Support Tool allows the user to support the Joint within a portable workbench. The bracket is designed to fit most commercially available workbenches.	
FLAT MOUNTING BRACKET	<a href="#">XJTSC03020</a>	The Pole / Wall Mounting Bracket is a universal bracket fitted to the clamp of the joint. It is used to mount the closure to a pole, wall, or wall of a footway box and allows storage in the horizontal or vertical position. Can be supplied with the joint or available as an upgrade kit.	
HEATSHRINK ENTRY	<a href="#">XJTSC02608</a>	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.	

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## Additional Items Cont.

Item	Prysmian Part No.	Description	Image
EXTERNAL TUBE FIXATION BRACKET	<b>XJTSC02955</b>	The External tube fixation bracket is used to offer additional retention and support to cables and tubes entering the joint. The bracket fits the outside of the joint base and is made of Stainless Steel.	
EMERGENCY PORT KIT	<b>XKTSC00401</b>	The Emergency Port Entry Kit is used to install an additional cable into one of the two small circular ports of the joint. The kit comprises of a cable heat shrink, aluminium foil and a alcohol wipe.	
SPLITTERS	<b>XSPSG00002 (1x4)</b> <b>XSPSG00003 (1x8)</b> <b>XSPSG00004 (1x16)</b> <b>XSPSG00005 (1x32)</b>	A range of optical splitters are available to install into the joint. The splitters have 2 metre input and output legs with 900 micron G657A1 fibre. For full technical information on the splitters refer to data sheet AC005.	
SPLICE PROTECTORS 1.3	<b>XKTSC01284 (Pack of 12)</b> <b>XPESC00057 (Pack of 50)</b>	Splice protectors are used to protect the fibre splice. They are 1.3mm in diameter and 30mm in length.	
SPLICE PROTECTORS 2.2	<b>XKTSC00050 (Pack of 12)</b> <b>XPESC00053 (Pack of 50)</b>	Splice protectors are used to protect the fibre splice. They are 2.2mm in diameter and 45mm in length.	
SPLICE PROTECTORS Crimp	<b>XKTSC00079 (Pack of 12)</b> <b>XKTSC00078 (Pack of 50)</b>	Splice protectors are used to protect the fibre splice. They are 1.3mm x 3.2mm and 30mm in length.	
GLAND SPANNER	<b>XJTSC02320</b>	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.	
SILICONE GREASE	<b>XBFSC00260 (Pack of 5)</b>	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.	
GLAND REMOVAL TOOL	<b>XJTSC02964 (Pack of 10)</b>	The Gland removal tool can be used to remove circular port entry glands from the joint base.	

Please contact your local sales office listed on [www.prysmiangroup.com](http://www.prysmiangroup.com)

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