Medium Multi-Function Joint - MMJ

Prysmian Part Numbers: *See page 3*

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. 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.

Features and Benefits

• 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 24 single circuit splice trays. Each single circuit splice tray has two storage sections providing a total of 48 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 four optical splitters.

• The joint is for use with heat shrink splice protectors of either 1.3mm in diameter and 30mm in length or 2.2mm in diameter and 45mm in length. 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. See page 3 for more information.

• 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 pressure test valve for flash testing and earthing.

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: -

12 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

Additional Items

• Single Entry Gland Kit

• Multi Way Entry Gland Kits

• Oval Port Entry Kit

• Silicone Grease

• Emergency Port Cable Entry

• Optical Splitters

• Splice Protectors

• Mounting Bracket / Support Tool

Technical Data

- 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):   5 to 8.5 (4 Way), 3x2mm flat cable (8 Way), 5 to 9 (2 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: 4 optical splitters of 4mm x 4mm x 60mm

- Max Loop Storage Capacity: 3.4m of flexible type cable elements – up to 24 elements

  2.8m of loose tube elements – up to 12 elements 2.0mm

- 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

Logistics

- Packing Dimensions (mm):   (l) 480 x (w) 250 x (d) 210
- Packed Weight (Kg):   2.4
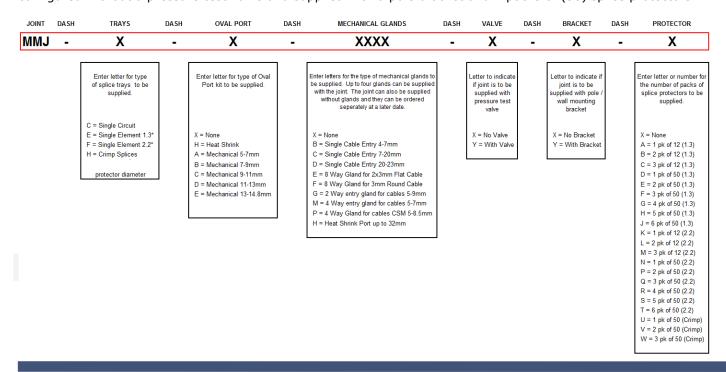- Net Weight (Kg):   1.9

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 calculator below. This enables the user to configure a part number so that the joint is supplied with the required input and output cable kits and 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 where E =single element and C= single circuit.
- Next a dash is used as a separator.
- The next letter denotes the type of oval port kit the joint is to be supplied with.
- 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 (so XXXX) or two circular for example which would be written CCXX.
- Next a dash is used as a separator.
- The next letter denotes whether a pressure test valve is required with X for no and Y for yes.
- Next a dash is used as a separator.
- The next letter denotes whether a pole/wall mounting bracket is required with X for no and Y for yes.
- Next a dash is used as a separator.
- The final letter denotes whether splice protectors are required with X for no, A for 1 pack of 12, B for 2 packs of 12 etc.

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.

JOINT	DASH	TRAYS	DASH	OVAL PORT	DASH	MECHANICAL GLANDS	DASH	VALVE	DASH	BRACKET	DASH	PROTECTOR
MMJ	**-**	**X**	**-**	**X**	**-**	**XXXX**	**-**	**X**	**-**	**X**	**-**	**X**

Enter letter for type of splice trays to be supplied.	Enter letter for type of Oval Port kit to be supplied.	Enter letters for the type of mechanical glands to be supplied. Up to four glands can be supplied with the joint. The joint can also be supplied without glands and they can be ordered seperately at a later date.	Letter to indicate if joint is to be supplied with pressure test valve	Letter to indicate if joint is to be supplied with pole / wall mounting bracket	Enter letter or number for the number of packs of splice protectors to be supplied.
C = Single Circuit E = Single Element 1.3* F = Single Element 2.2* H = Crimp Splices protector diameter	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	X = None B = Single Cable Entry 4-7mm C = Single Cable Entry 7-20mm D = Single Cable Entry 20-23mm E = 8 Way Gland for 2x3mm Flat Cable F = 8 Way Gland for 3mm Round Cable G = 2 Way entry gland for cables 5-9mm M = 4 Way entry gland for cables 5-7mm P = 4 Way Gland for cables CSM 5-8.5mm H = Heat Shrink Port up to 32mm	X = No Valve Y = With Valve	X = No Bracket Y = With Bracket	X = None A = 1 pk of 12 (1.3) B = 2 pk of 12 (1.3) C = 3 pk of 12 (1.3) D = 1 pk of 50 (1.3) E = 2 pk of 50 (1.3) F = 3 pk of 50 (1.3) G = 4 pk of 50 (1.3) H = 5 pk of 50 (1.3) J = 6 pk 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)

Oval Port Entry Kits

MMJ - Oval Port Heat Shrink Entry Kit

The CMJ Oval Port Heat Shrink Entry Kit is used to install a loop of cable into the oval port of the CMJ. 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 heat shrink sleeve.

Prysmian Part No. – XJTSC01756

MMJ - Oval Port Mechanical Entry Kit

The CMJ Oval Port Mechanical Entry Kit is used to install a loop of cable into the oval port of the CMJ. 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.

Prysmian Part No.	Gland Type	Sealing Type	Min Cable Ø	Max Cable Ø
XJTSC02028	Oval	Mechanical	5.0	7.0
XJTSC02029	Oval	Mechanical	7.1	9.0
XJTSC02030	Oval	Mechanical	9.1	11.0
XJTSC02031	Oval	Mechanical	11.1	13.0
XJTSC01896	Oval	Mechanical	13.1	14.8

Circular Port Entry Glands

Circular port entry glands are used to install cables into one of the 4 circular ports of the CMJ 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.

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

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.	
EMERGENCY PORT KIT	**XKTSC00401**	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	**XSPSG00002 (1X4)** **XSPSG00003 (1X8)** **XSPSG00004 (1X16)** **XSPSG00005 (1X32)**	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	**XKTSC01284 (Pk OF 12)** **XPESC00057 (Pk of 50)**	Splice protectors are used to protect the fibre splice. They are 1.3mm in diameter and 30mm in length.	
SPLICE PROTECTORS 2.2	**XKTSC00050 (Pk OF 12)** **XPESC00053 (Pk of 50)**	Splice protectors are used to protect the fibre splice. They are 2.2mm in diameter and 45mm in length.	
SPLICE PROTECTORS Crimp	**XKTSC00079 (Pk of 12)** **XKTSC00078 (Pk of 50)**	Splice protectors are used to protect the fibre splice. They are 1.3mm x 3.2mm and 30mm in length.	
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.	
POLE / WALL MOUNTING BRACKET	**XJTSC00136**	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	**XJTSC00075**	The Support Tool allows the user to support the Joint within a portable workbench. The bracket is designed to fit most commercially available workbenches.	

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