

CMJ – COMPACT MULTI-FUNCTION JOINT®



PRODUCT DESCRIPTION

The Compact Multi-Function Joint (CMJ) 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 144 fibres. The splice trays can be factory fitted or supplied separately and each tray can accommodate up to 12 spliced fibres. The single element 2.2 tray also can 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.

For installation instructions please scan the QR Code



DESIGN & CONSTRUCTION

- A compact closure for the splicing of optical cables.
- Supplied with 12 single element trays each able to accommodate 12 splices providing a maximum capacity of 144 fibres, or 12 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 96 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 for single fibre and 4.8mm diameter for ribbon splicing. 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 several cables into one circular port.
- 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.

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Main characteristics

Kit Contents

The CMJ is supplied with: -

01 x Base
01 x Cap
01 x Clamp
01 x O Seal
01 x Fibre routing manifold
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

Logistics

Packing Dimensions (mm):

· (l) 310 x (w) 230 x (d) 165

*Packed Weight (Kg):

· 1.90

*Net Weight (Kg):

· 1.56

· *weights do not include 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:	12 Single Element 12 single Circuit Double Trays (each tray has two storage area so 24 trays total)
· Maximum fibre capacity of Joint:	144 Single Element 96 Single Circuit
· Splitter capacity:	4 optical splitters of 4mm x 4mm x 60mm 2 optical splitters of 7mm x 4mm x 60mm
· Required space envelope (mm):	(l) 310 x (w) 230 x (d) 165
· Operating temperature:	-40oC to + 70oC (5 to 95% RH)
· 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 CMJ 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 an 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 CMJ.
- 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 the type and quantity.

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

In the above example the CMJ 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 TRAY DASH OVAL DASH PORT 1 PORT 2 PORT 3 PORT 4 DASH VALVE DASH BRACKET DASH SPLICE PROTECTOR

CMJ - F - H - C C C X - P - X - N

Compact Multi-Function Joint SE2.2 Heat Shrink Single Cable Entry 7-20mm Single Cable Entry 7-20mm Single Cable Entry 7-20mm No Circular Port Pressure Relief Valve NONE 2.2mm ± 45 (50 Pack)

<p>Select Joint Type to be Supplied</p> <p>CMJ MMJ</p>	<p>Select Splice Trays to be supplied.</p> <p>X = No Trays E = SE 1.3 F = SE 2.2 C = SC 1.3 H = CRIMP R = Ribbon</p>	<p>Select Oval Port kit to be supplied.</p> <p>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</p>	<p>Select 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 separately at a later date.</p> <p>X = None B = Single Cable Entry 4-7mm C = Single Cable Entry 7-20mm D = Single Cable Entry 20-23mm G = 2 Way Gland for Cables 5-9mm A = 3 Way Gland Aramid/CSM 8.5-10mm J = 4 Way Gland for SST Oval Cables 8.5 x 5.0mm M = 4 Way Gland for cables 5-7mm Aramid P = 4 Way Gland for cables CSM 7-8.5mm L = 4 Way Gland 2.5-4.2mm S = 4 Way Gland ULW 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 = 8 Way Gland for 2.0 x 3.0mm Flat Cables With Messenger K = 8 Way Gland for 2.0 x 3.0mm Flat Cables Without Messenger F = 8 Way Gland for 3mm Round Cables N = 8 Way Gland for 2.0-3.0mm Round Cables Q = 8 Way Gland for 2.5-4.2mm Round Cables H = Heat Shrink Port up to 32mm</p>	<p>Select type of valve to be supplied.</p> <p>X = No Valve Y = Flash Test Valve P = Pressure Relief Valve</p>	<p>Select type of bracket to be supplied.</p> <p>X = No Bracket Y = With Bracket F = Flat Bracket</p>	<p>Select number of packs of splice protectors to be supplied.</p> <p>X = None A = 1 pk of 12 (1.3) B = 2 pks of 12 (1.3) C = 3 pks of 12 (1.3) D = 1 pk of 50 (1.3) E = 2 pks of 50 (1.3) F = 3 pks of 50 (1.3) G = 4 pks of 50 (1.3) H = 5 pks of 50 (1.3) J = 6 pks 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 Crimp V = 2 pk of Crimp W = 3 pk of Crimp Y = 1pk of 12 Ribbon Z = 1pk of 50 Ribbon</p>
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Additional items

Mechanical Cable Entry Glands

A range of mechanical cable entry glands can be used with the CMJ. 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 CMJ base. The glands can be installed onto the cable and then simply pushed into the base of the joint. The kit contains all 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 CMJ 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	CMJ Part No. Reference
XJTSC01754	Single	1	7.1	20.0	Single cable with aramid or CSM	C

For more single way kits configurations please refer to OP080 datasheet.

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 CMJ 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. This 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	CMJ Part No. Reference
XJTSC03437	2 Way	2	5.0	9.0	Two cables with CSM	G

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 CMJ 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	CMJ Part No. Reference
XJTSC03151	3 Way	3	7.0	9.5	Three cables with aramid or CSM	
XJTSC03320	3 Way	3	8.5	10.0	Three cavles with aramid or CSM	A

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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 CMJ 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	CMJ Part No. Reference
XJTSC02767	4 Way	4	4.0	6.0	Four cables with CSM	T
XJTSC03287	4 Way	4	6.0	7.0	Four Prysmian ULW cables up to 96f	S
XJTSC02352	4 Way	4	Oval cables 8.5 x 5.0		Four oval cables with GRP strength members	J
XJTSC02572	4 Way	4	5.0	8.5	Four cables with CSM	

For more 4 ways kits configurations please refer to OP080 datasheet.

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 CMJ 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	CMJ Part No. Reference
XJTSC03049	8 Way	8	2.5	4.2	Eight cables with aramid	Q
XJTSC01878	8 Way	8	Flat drop 2.0 x 3.0 with messenger		Eight flat drop cables with a messenger wire	E
XJTSC02960	8 Way	8	Flat drop 2.0 x 3.0 without messenger		Eight flat drop cables without a messenger wire	K

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Additional items

Splicing modules

Splicing modules are available to be installed into the CMJ. Single element (SE) 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.



Typical weight of a pack of trays 145g.

Prysmian Part No.	Tray Type	Splice protector	No. of trays	Fibers per tray	Fiber capacity	Tray positions used
XJTSC02144	SE 12 1.3 Grey	1.3mm x 30mm	4	12	48	4
XJTSC03127	SE 12 1.3 Blue	1.3mm x 30mm	4	12	48	4
XJTSC03129	SE 12 1.3 Green	1.3mm x 30mm	4	12	48	4
XJTSC03131	SE 12 1.3 Red	1.3mm x 30mm	4	12	48	4
XJTSC02262	SE 12 2.2 Grey	2.2mm x 45mm	4	12	48	4
XJTSC03126	SE 12 2.2 Blue	2.2mm x 45mm	4	12	48	4
XJTSC03128	SE 12 2.2 Green	2.2mm x 45mm	4	12	48	4
XJTSC03130	SE 12 2.2 Red	2.2mm x 45mm	4	12	48	4
XJTSC02468	SE Crimp Grey	Crimp	4	12	48	4
XJTSC03159	SE Crimp Blue	Crimp	4	12	48	4
XJTSC03161	SE Crimp Green	Crimp	4	12	48	4
XJTSC03160	SE Crimp Red	Crimp	4	12	48	4
XJTSC02145	SC 4 1.3 Grey*	1.3mm x 30mm	8	4	32	4
XJTSC02584	SE 16 2.2 Grey	2.2mm x 45mm	4	16	64	4
XJTSC02261	SE 24 1.3 Grey	1.3mm x 30mm	4	24	96	4
XJTSC02468	SE 36 1.3 Grey	1.3mm x 30mm	4	36	144	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.

** Splice and splitter trays have 6 splice positions and two splitter bay.

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Additional items

Splitting modules

Splitter modules can be installed into the CMJ. 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 few 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.

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Additional items

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
XJTSC02028A	Oval	Mechanical	5.0	7.0
XJTSC02029A	Oval	Mechanical	7.1	9.0
XJTSC02030A	Oval	Mechanical	9.1	11.0
XJTSC02031A	Oval	Mechanical	11.1	13.0
XJTSC01896A	Oval	Mechanical	13.1	14.8
XJTSC01756	Oval	Heat shrink	7.0	21.0

Item	Prysmian Part No.	Description	Image
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.	
FLAT MOUNTING BRACKET	XJTSC03020	The Flat Mounting Bracket can be used to secure a CMJ to a wall or pole. It allows mounting in the horizontal or vertical position. The Flat bracket allows the closure to sit closer to the Wall or Pole than pole / wall mounting bracket. It can be supplied with the joint or available as an upgrade kit.	
HEAT SHRINK ENTRY	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.	

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Additional items

Item	Prysmian Part No.	Description	Image
CMJ/MMJ CABLE RESTRAINT BRACKET MINI	XJTSC03766	The Mini External tube fixation bracket is used to offer additional retention and support to cables and tubes entering the joint at a lower position and height. The bracket fits the outside of the joint base and is made of Stainless Steel.	
EXTERNAL TUBE FIXATION BRACKET	XJTSC02955	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	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 an alcohol wipe.	
SPLITTERS	XSPSG0002 (1x4) XSPSG0003 (1x8) XSPSG0004 (1x16) XSPSG0005 (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 (Pack of 12) XPESC00057 (Pack 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 (Pack of 12) XPESC00053 (Pack 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 (Pack of 12) XKTSC00078 (Pack 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.	
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 later.	
GLAND REMOVAL TOOL	XJTSC02964 (Pack of 10)	The Gland removal tool can be used to remove circular port entry glands from the joint base.	

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