

Certificate of Acceptance

OFFICIAL
PA05/01179

Supplier:
Passcomm Limited

Issue : 5
Valid From : 08/09/2021

External Optical Fibre Joint Closure

Product Description

An externally-rated, dome-ended, polymer, mechanically re-enterable joint closure for protecting optical fibre joints at the lineside.

Fibre cables enter through sealable ports in the base and fibres are routed and managed into splicing trays where they can be fusion spliced to fibres from other cables.

The dome can be quickly removed by uncoupling a mechanical, water-tight collar to reveal the fibres and splice trays inside.

Product Image



Domed GCO2



Flat GCO2-F

Scope of Acceptance

Full Acceptance

GCO2 fibre joint closures are accepted for use across Network Rail's estate for managing and splicing optical fibres.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager.

Reviewed by:

Authorised by:



Aamir Malik
Product Acceptance Coordinator



Fraser Allan
Network Technical Head of Telecoms

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Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section. Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

Supplier

- 1) Supply only products as set out in this certificate.

User

- 1) Fibre joint closures are to be protected in an underground chamber, in a troughing joint bay, in a cabinet, or in building as appropriate.
- 2) A padlock is to be fitted to lock the dome to the base where risk assessment indicates that the risk of unauthorised intrusion into the joint closure is unacceptable.
- 3) CF-BC6-RSK-CC-01 Round port seal kit for buffered (900-micron nylon-coated) 12-fibre cables that is primarily for use with a GCO2-F that's externally attached to a Signalling location case as an alternative to the rejected MCA 8144 'soap dish' joint. Can also be used for other applications involving buffered fibre cables.

Product Configuration

Hardware

Part No.	Description	Catalogue No.
	Round-domed Joint Closures	
FIST GCO2-BC6	Fist GCO2 fibre joint closure, 6 round ports, 1 oval port, maximum capacity of 28 SOSA2 sub-assemblies. No SOSA2 sub-assemblies, splice trays or splice protectors included.	087/003935
FIST-GCO2-RSK-CC	Fist GCO2 fibre joint closure, 6 round ports, 1 oval port, maximum capacity of 28 SOSA2 sub-assemblies. No SOSA2 sub-assemblies, splice trays or splice protectors included. For use with small, buffered fibre cables.	087/004541
FIST GCO2-BD	Fist GCO2 fibre joint closure, 6 round ports, 1 oval port, maximum capacity of 42 SOSA2 or 36 CF-SOSA2-3R12 ribbon splicing sub-assemblies. No SOSA2 sub-assemblies, splice trays or splice protectors included.	087/004604
FIST GCO2-BE	Fist GCO2 fibre joint closure, 8 round ports, 2 oval ports, maximum capacity of 56 SOSA2 sub-assemblies. No SOSA2 sub-assemblies, splice trays or splice protectors included.	087/004605
FIST GCO2-BF8	Fist GCO2 fibre joint closure, 8 round ports, 2 oval ports, maximum capacity of 64 SOSA2 sub-assemblies. No SOSA2 sub-assemblies, splice trays or splice protectors included.	087/004606

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Part No.	Description	Catalogue No.
CF-BC6-24-6-DJ-T	24-fibre <u>Straight</u> Joint Dome-ended Closure, 4 fibres per tube. Complete 24-fibre joint kit including SOSA2 sub-assemblies, splice trays or splice protectors	087/004460
CF-BC6-24-6-DJ-S	24-fibre <u>Spur</u> Joint Dome-ended Closure, 4 fibres per tube – Complete joint kit including SOSA2 sub-assemblies, splice trays or splice protectors	087/004461
	Splicing Tray Sub-assemblies	
FIST-SOSA2-4-SE-S	4-tray single <u>element</u> sub-assembly: unit containing 4off single-tube splice trays mounted on a FIST Universal Management System	087/004361
FIST-SOSA2-2-SE-S	2-tray single <u>element</u> sub-assembly: unit containing 8off single-tube splice trays mounted on a FIST Universal Management System	087/076293
FIST-SOSA2-4-SC-S	4-tray single <u>circuit</u> sub-assembly: unit containing 4off single fibre-pair splice trays mounted on a FIST Universal Management System	087/004365
FIST-SOSA2-8-SC-S	8-tray single <u>circuit</u> sub-assembly: unit containing 4off single fibre-pair splice trays mounted on a FIST Universal Management System	087/004360
CF-SOSA2-3R12	2 Ribbon splice tray to splice up to three 12-fibre ribbons.	087/004607
	Splice Protectors	
SMOUV-1120-02	Single fibre splice protectors for use in single element sub-assemblies	087/003942
SMOUV-1120-R2/12-02	Splice protectors for use with 12 fibre ribbons. One splice protector is required per fibre ribbon.	087/004608
	Flat-domed GCO2 Joint Closures	
FIST-GCO2-FC	Flat FIST joint closure with a 'flat' dome that can take upto 8 SOSA2 splicing trays. NB, can be externally attached to Signalling location cases as an alternative to the rejected MCA 8144 'soap dish' joint.	087/004357
FIST-GCO2-FD	Flat FIST joint closure with a 'flat' dome that can take upto 12 SOSA2 splicing trays. NB, can be externally attached to Signalling location cases as an alternative to the rejected MCA 8144 'soap dish' joint.	087/004609
	Port Sealing Kits	
FIST-GCO2-RSK-LTS	Round port seal kit for loose tube fibre cables eg 24, 48	087/003937
CF-BC6-24-6-DJ-T	Port seal kit for 24 Fibre Straight Joint Dome-ended Closure, 4 fibres per tube	087/004460
CF-BC6-24-6-DJ-S	Port seal kit for 24 Fibre Spur Joint Dome-ended Closure, 4 fibres per tube	087/004461
CF-BC6-OSK-DJ	Oval Port Seal Kit for 24 Fibre Closure	087/004462
CF-BC6-RSK-DJ	Round Port Seal Kit for 24 Fibre Closure	087/004463
KIT0007-24SA	Additional items for Oval Port Seal for 24 Fibre DISAC Cable	087/004464
KIT0007-24SARSK	Additional items for Round Port Seal for 24 Fibre DISAC Cable	087/004465

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Part No.	Description	Catalogue No.
CF-BE8-OSK-DJ-R	Oval port seal kit for high capacity fibre cables eg 432	087/004610
CF-BE8-RSK-DJ-R	Round port seal kit for high capacity fibre cables eg 432	087/004611
CF-BC6-RSK-CC-01	Round port seal kit for buffered (900-micron nylon-coated) 12-fibre cables that is primarily for use with a GCO2-F that's externally attached to a Signalling location case as an alternative to the rejected MCA 8144 'soap dish' joint. Can be used for other applications involving buffered fibre cables.	087/004542

DISAF Kits		
CF-SAF-OSK	Additional items for Oval Port Seal for 24 or 48 Fibre DISAF Cable	087/004612
CF-SAF-RSK	Additional items for Round Port Seal for 24 or 48 Fibre DISAF Cable	087/004613
	Note: the following catalogue numbers from certificate, Issue 3, were duplicate items and have been removed for clarity. 087/004352 087/004353 087/004354 087/004355 087/004356 087/003938	

Assessed Documentation

Reference	Title	Doc. Rev.	Date
RUD 5303	Tyco Electronics technical specification for Optical Fibre Closure System FIST-GCO2	1	01/12/2000
-	Tyco Electronics FIST-GCO2 Data sheet for Generic Closure Organizer 2	1	-
-	Tyco FIST-GCO2 Ordering Guide	1.6	10/05/2002
CU4159-000 FIST-GCO2-BF8-NN	Tyco FIST-GCO2-BF8 data sheet for largest capacity GCO2 closure	1	03/03/2020
PS-318885.3-EU	Commscope FIST-GCO2 Generic Closure Organizer 2 Data sheet	1	2015
-	Tyco Electronics FIST Splice Only Sub-Assembly (SOSA2) splicing organizer trays data sheet	1	10/05/2002
337550-000 FIST-SOSA2-2R12-S	Commscope FIST-GCO2 Splice Only Sub-Assembly (SOSA2) splicing organizer trays for ribbon splicing data sheet	1	16/01/2020
CJ9789-000 FIST-GCO2-FC6-NN	Commscope Flat FIST-GCO2 Generic Closure Organizer 2 Data sheet	1	17/01/2020
103897-000 SMOUV-1120-02	Commscope Heat-shrink single-fibre fusion splice protector data sheet	1	16/01/2020
757849-000 SMOUV-1120-R2/12-02	Commscope Heat-shrink 12-fibre ribbon fusion splice protector data sheet	1	16/01/2020

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Reference	Title	Doc. Rev.	Date
725724-000 FIST-GCO2-RSK-LTS	Commscope Round port sealing kit for FIST-GCO2 with loose-tube fibre cables	1	08/01/2020
091476-000 FIST-GCO2-OSK-LTS	Commscope Oval port sealing kit for FIST-GCO2 with loose-tube fibre cables	1	16/01/2020

Manuals and Training Materials

Reference	Title	Doc. Rev.	Date.
TEL02.11	NR Training standard training course "Fibre Cable Jointing and Testing" that is available through Oracle and run by Linbrooke NRTS	-	-
	NB: owing to NTRS confidentiality agreements with Network Rail the course material is only available to course attendees so reference numbers etc are not available here.		

Certificate History

Issue	Date	Issue History
1	09/09/2002	First accepted for use.
2	10/10/2008	Re-issued to add additional parts.
3	20/09/2011	GCO2-F 'flat' dome-ended joint closure added.
4	27/04/2020	Larger GCO2's, ribbon splice protectors, and ribbon splicing trays added for splicing high-capacity Spider Web Ribbon fibre cables
5	08/09/2021	CF-BC6-RSK-CC-01 port sealing kit for use where a flat GCO2-F joint closures is externally attached to Signalling location cases as an alternative to the rejected MCA 8144 'soap dish' joint.

Contact Details

Supplier

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Applicant

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General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Product Acceptance, the Professional Head or nominated delegate. Any alterations made by a other persons will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date via the NR sponsoring applicant.

2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Network Rail Design for Reliability Standard(DFR) NR-L2-RSE-0005 and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Product Acceptance:
 - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
 - b. Of any intended change to the accepted product; changes include:
 - i. a change to the product configuration (to the actual product or its application);
 - ii. a variation to or addition of manufacturing locations or processes;
 - iii. a change in the name or ownership of the manufacturing company;
 - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Product Acceptance or National Supply Chain (NSC) at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to Network Rail Product Acceptance.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement, where the specification and/or Product Acceptance Certificates specify quality assurance classifications for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Product Acceptance.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Product Acceptance.
- 4) Inform Network Rail Product Acceptance in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

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4) Compliance

Railways and Other Guided Systems (ROGS) Regulations

- 1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations
- 2) As required in Railway Group Standard RIS-8270-RST, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:
 - a. All rail vehicle types that have access rights over the area affected by the change
 - b. Infrastructure managed by others
 - c. Neighbours.

Railway Interoperability Regulations

- 3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.
- 4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail and Road) is required before the equipment is to be used in revenue earning service.

5) Supply Chain Arrangements

- 1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.
- 2) Products may be purchased by Network Rail or its agents, suppliers or contractors.
- 3) Suppliers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers