Splice Boxes SR.TFO* Stainless Steel

Marking

Splice boxes, Stainless Steel SR.TFO*
ATEX certificate: CML 20 ATEX 3156X / BASEEFA 14 ATEX 0368U ATEX marking: Ex II 2 GD Ex op pr IIC T* Gb Ex tb IIIC T** °C Db T5/T95 °C @ Ta +55 °C T6/T80 °C @ Ta +40 °C
IECEx certificate: IECEx CML 20.0094X / IECEx BAS 14.0169U UKCA certificate: CML 21 UKEX 3892X

The *-marked letters of the type code are placeholders for versions of the device.

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Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the device. The trained and qualified personnel must have read and understood the instruction manual.

Reference to Further Documentation

Observe directives, standards, and national laws applicable to the intended use and the operating location.

The corresponding datasheets, manuals, declarations of conformity, EU-type examination certificates, certificates, and control drawings if applicable (see datasheet) are an integral part of this document. You can find this information under www.pepperl-fuchs.com.

In order to access this documentation, enter the product name, i. e. the type code, or the item number of the product in the search field of the website.

For specific device information such as the year of construction, scan the QR code on the device. As an alternative, enter the serial number in the serial number search at www.pepperl-fuchs.com.

Intended Use

The device is only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability.

The enclosures of the SR* series are made of stainless steel.

The device can be used indoor.

The device can be used outdoor.

The device can be used in Zone 1.

The device can be used in Zone 21.

The device can be used in Zone 2.

The device can be used in Zone 22.

The device is designed for wall mounting.

The device is designed for mounting to a steel framework.

Use suitable fixing material for mounting.

Mount the enclosure at the fixing points provided.

Improper Use

Do not mount the device on the ceiling.

Protection of the personnel and the plant is not ensured if the device is not used according to its intended use.

Mounting and Installation

Observe the installation instructions according to IEC/EN 60079-14.

Observe directives, standards, and national laws applicable to the intended use and the operating location.

Examples for such regulations are regulations regarding electricity, grounding, installation as well as hygiene and safety.

If you intend to install the device or enclosure in areas that may be exposed to aggressive substances, ensure that the stated surface materials are compatible with these substances. If required, contact Pepperl+Fuchs for further information.

Ensure that the device provides and maintains a degree of protection of at least IP66 according to IEC/EN 60079-0.

Observe the requirements according to IEC/EN 60079-31regarding excessive dust deposits.

To ensure compliance with the temperature class, ensure that there is adequate free air space around the enclosure.

Ensure that there are no external heat sources around the enclosure.

Safety-relevant markings are found on the nameplate supplied. Ensure that the nameplate is present and legible. Take the ambient conditions into account.

Additional warning markings may be affixed next to the nameplate.

The permitted ambient temperatures of the built-in components must not be exceeded.

Ensure that the enclosure is not damaged, distorted, or corroded.

Ensure that all seals are clean, undamaged, and correctly fitted.

Tighten all screws of the enclosure/enclosure cover with the appropriate torque.

Close all unused enclosure holes with the appropriate stopping plugs.

Only use stopping plugs that are suitably certified for the application.

Only use the supplied fixing material for mounting the fiber optic cables.

Ensure that all fasteners are present.

Ensure that all fasteners are fully tightened.

If mounting the enclosure on concrete use expansion anchors. When mounting the enclosure to a steel framework use vibration resistant mounting material.

Ensure that the enclosure is mounted on a flat surface. This prevents the deformation of the enclosure and ensures the safe sealing function of the cover seal.

If external connections are present, ensure that the connections are in good condition, and are not damaged or corroded.

In order to prevent condensation in the enclosure, use suitably certified breather drains.

Installation Sequence

Only store fusion splices within the splice tray.

Mount the fiber optics only with the supplied splice holders and heat-shrink splice protectors.

Mount the splice tray securely using the provided mounting stud.

Splice the fibers by doing the following:

1. Remove the cable insulation and multifiber loose buffers using a suitable tool.
2. Fasten the multifiber to the lower part of the splice tray using cable ties as required (detailed in the options suggested overleaf)
3. Make optical fiber splices in accordance with the instructions of the optical fiber splicing machine.
4. Lay the optical fibers inside the splice cassette in accordance with 60079-14.
5. Place the splice protector into the splice protector holder.
6. Repeat for the remaining optical fibers.
7. Make sure that the optical fibers are firmly secured within the splice tray.
8. Close the cover to the upper splice tray.

Note

Make the cable entries only with appropriately approved Ex eb, tb glands and make sure that this equipment is suitable for use with the gas group IIC.
Make sure the IP rating of the glands is suitable for the intended area of installation.

Requirements for Cable Glands

Only use cable glands that are suitably certified for the application.

Only use cable glands with a temperature range appropriate to the application.

For cable glands only use incoming cable diameters of the appropriate size.

Use seals that are suitable for the specified application.

Ensure that the degree of protection is not violated by the cable glands.

Install cables and cable glands in a way that they are not exposed to mechanical hazards.

The cables and connection lines must be free from mechanical stress. Use appropriate strain relief, which must be fitted outside of the enclosure.

Ensure that all cable glands are in good condition and are securely tightened.

Close all unused cable glands with the appropriate sealing plugs.

Observe the specific ambient conditions of sealing plugs.

Tighten all cable glands with the appropriate torque.

Ground metal cable glands.

Requirements for Internal Components

Observe the minimum bending radius of the fiber optic cables.

Observe the instruction manual and the certificate of the installed apparatus.

Refer to the corresponding technical data of the installed components for the actual type of protection or any possible restrictions.

Contact Pepperl+Fuchs before installing additional components. Pepperl+Fuchs will check whether these components are listed in the certificate. The maximum power dissipation of this installation solution must be within the permitted limits.

Do not install fuse terminals, relays, miniature circuit breakers, contactors etc. in the enclosure.

Operation, Maintenance, Repair

Observe the requirements according to IEC/EN 60079-14 during operation.

Observe IEC/EN 60079-17 for maintenance and inspection.

Observe the requirements according to IEC/EN 60079-19 for repair and overhaul.

Before opening the enclosure make sure that the built-in components are de-energized.

Check the wear on the device and the device components at specific intervals. The interval between checks depends on the operating conditions and loads that occur.

Avoid electrostatic charges which could result in electrostatic discharges while installing, operating, or maintaining the device.

If cleaning is necessary while the device is located in a hazardous area, in order to avoid electrostatic charging only use a clean damp cloth.

Ensure that all fiber optic cables are securely mounted.

Ensure that external ground connections exist, are in good condition, and are not damaged or corroded.

Before assembly, check that the seal and sealing surface are clean and in good condition to ensure the degree of protection.

If there is a defect, the device must be repaired by Pepperl+Fuchs.

Alternatively the device can be repaired by a qualified electrician in compliance with IEC/EN 60079-19.

Delivery, Transport, Disposal

Check the packaging and contents for damage.

Check if you have received every item and if the items received are the ones you ordered.

The device, built-in components, packaging, and any batteries contained within must be disposed in compliance with the applicable laws and guidelines of the respective country.

Technical Data

General	
Types and variants	SR.TFO* - see type code table
Electrical specifications	
Mechanical specifications	
Dimensions	see data table
Enclosure cover	fully detachable
Degree of protection	IP66
Mass	see data table
Mounting	4 Mounting bracket for wall mounting included in the scope of delivery
Cable entry	thru-holes direct through body
Material	
Enclosure	1.5 mm AISI 316L, (1.4404) stainless steel
Gland plate	optional 3 mm or 6 mm AISI 316L (1.4404) stainless steel
Finish	brushed
Cover seal	silicone
Cover fixing	stainless steel A4 (V4A) hexagonal head screws , see data table
Grounding	M6 internal/external brass nickel-plated grounding bolt M6 internal stainless steel grounding bolt welded to lid M6 internal stainless steel grounding bolt welded to enclosure body
Fiber optic splice tray	
Number	see data table
Dimensions	142 mm x 92 mm x 8 mm
Quantity of splice connections per tray	12
Type of splices	fusion with 60 mm heatshrink protectors
Fiber optic splicing protection holders per tray	2 for heatshrink splice protectors 60 mm, 6 splices each
Fiber optic strain relief per tray	optional 2 each for 12 fibers with 0.9 mm or 1.1 mm insulation
Fiber optic cables min. bending radius	35 mm
Fiber optic cables frequency range	10 ... 10000 MHz
Standards	DIN 47662 and Telecom standards
Ambient conditions	
Ambient temperature	-40 ... 55 °C (-40 ... 131 °F) -50 °C (-58 °F) on request
Conformity	
Degree of protection	EN60529
CE marking	0102

Type Code / Model Number

1		2		3		4		5		6		7		8	9
SR	**.**	***	**.**	**	**.**	**	**.**	**	**.**	*	**.**	*	**-**	*	****
SR	.	TFO	.	26	.	26	.	09	.	B	.	0	-	S	0002

Example: SR.TFO.26.426.09.B.0-S0002
FO splice box stainless steel, size 26x26x9 cm, landscape orientation with face B at bottom, no gland plate, two splice trays

1	Enclosure type
SR	stainless steel

2	Type of solution
TFO	fiber optice splice box (Ex op pr)

3	Height [cm]
n	see dimensions data table

4	Width [cm]
n	see dimensions data table

5	Depth [cm]
n	see dimensions data table

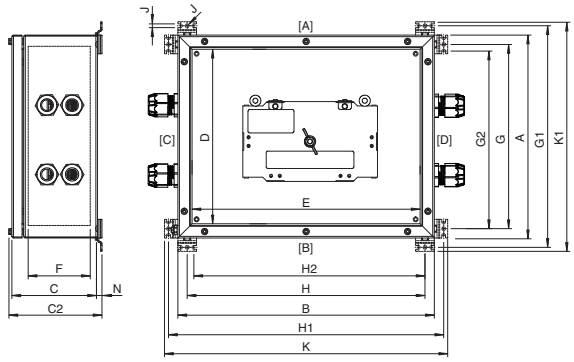
6	Cable entry face orientation
B	landscape, face [B] at bottom
D	portrait, face [D] at bottom

7	Gland plates
0	none
1	one gland plate at bottom face

8	Variant
S	standard product
C	configured product
Y	engineered product

9	Variant number
xxxx	consecutive item number

Dimensions and Enclosure Details



Type	External dimensions [mm]						Internal dimensions [mm]			Cover screws		
	A	B	C	C2	K	K1	D	E	F	Mx	qty.	Torque [Nm]
SR.TFO.26.26.09.B.*	260	260	87	101	310	310	206	206	51.5	M6	4	3 - 3.5
SR.TFO.26.26.16.B.*	260	260	160	174	310	310	206	206	124.5	M6	4	3 - 3.5
SR.TFO.31.31.09.B.*	310	310	87	101	360	360	256	256	51.5	M6	4	3 - 3.5
SR.TFO.31.31.16.B.*	310	310	160	174	360	360	256	256	124.5	M6	4	3 - 3.5

Values might differ slightly due to manufacturing tolerances

Mounting Dimensions and Details

Type	Mounting [mm]								
	G	G1	G2	H	H1	H2	J	N	screws qty.
SR.TFO.26.26.09.B.*	225	295	212.5	225	295	212.5	7	8.5	4 (B)
SR.TFO.26.26.16.B.*	225	295	212.5	225	295	212.5	7	8.5	4 (B)
SR.TFO.31.31.09.B.*	275	345	262.5	275	345	262.5	7	8.5	4 (B)
SR.TFO.31.31.16.B.*	275	345	262.5	275	345	262.5	7	8.5	4 (B)

screws qty.: Quantity of screws for direct mounting, (B) = optional mounting brackets enclosed

Cable Entries, Solutions without External Strain Reliefs

Type	Splice trays qty.	Mass approx. [kg]	Cable entries faces C and D					
			qty.	Cable glands			Stopping plugs	
				qty.	Type	Clamping range [mm]	qty.	Type
SR.TFO.26.26.09.B.0-S0001	1	5.4	3	1	CG.PEDS1.M20.*	6 ... 12	2	SP.PE.M20.*
SR.TFO.26.26.09.B.0-S0002	2	5.4	3	2	CG.PEDS1.M20.*	6 ... 12	1	SP.PE.M20.*
SR.TFO.26.26.09.B.0-S0003	3	5.5	3	3	CG.PEDS1.M20.*	6 ... 12	-	-
SR.TFO.26.26.16.B.0-S0004	4	6.1	8	4	CG.PEDS1.M20.*	6 ... 12	4	SP.PE.M20.*
SR.TFO.26.26.16.B.0-S0005	5	6.1	8	5	CG.PEDS1.M20.*	6 ... 12	3	SP.PE.M20.*
SR.TFO.26.26.16.B.0-S0006	6	6.2	8	6	CG.PEDS1.M20.*	6 ... 12	2	SP.PE.M20.*
SR.TFO.26.26.16.B.0-S0007	7	6.2	8	7	CG.PEDS1.M20.*	6 ... 12	1	SP.PE.M20.*
SR.TFO.26.26.16.B.0-S0008	8	6.3	8	8	CG.PEDS1.M20.*	6 ... 12	-	-

Mass is valid for basic enclosure, it will increase according to enclosure accessories, integrated components and entry devices
Cable glands and stopping plugs standard types: polyamide Ex e cable glands
For other types of cable glands and combinations of different gland sizes please contact Pepperl+Fuchs

Cable Entries, Solutions with External Strain Reliefs

Type	Splice trays qty.	Mass approx. [kg]	Cable entries faces C and D					
			qty.	Cable glands			Stopping plugs	
				qty.	Type	Clamping range [mm]	qty.	Type
SR.TFO.31.31.09.B.0-S0001	1	7.5	3	3 3	CG.PEDS1.M20.* CG.PEDS1.M25.*	6 ... 12 9 ... 17	-	-
SR.TFO.31.31.09.B.0-S0002	2	7.6	3	3 3	CG.PEDS1.M20.* CG.PEDS1.M25.*	6 ... 12 9 ... 17	-	-
SR.TFO.31.31.09.B.0-S0003	3	7.6	3	3 3	CG.PEDS1.M20.* CG.PEDS1.M25.*	6 ... 12 9 ... 17	-	-
SR.TFO.31.31.16.B.0-S0004	4	8.5	6	4	CG.PEDS1.M25.*	9 ... 17	6 2	SP.PE.M20.* SP.PE.M25.*
SR.TFO.31.31.16.B.0-S0005	5	8.6	6	5	CG.PEDS1.M25.*	9 ... 17	6 1	SP.PE.M20.* SP.PE.M25.*
SR.TFO.31.31.16.B.0-S0006	6	8.6	6	6	CG.PEDS1.M25.*	9 ... 17	6	SP.PE.M20.*
SR.TFO.31.31.16.B.0-S0007	7	8.7	8	7	CG.PEDS1.M25.*	9 ... 17	1	SP.PE.M25.*
SR.TFO.31.31.16.B.0-S0008	8	8.7	8	8	CG.PEDS1.M25.*	9 ... 17	-	-

Mass is valid for basic enclosure, it will increase according to enclosure accessories, integrated components and entry devices
Cable glands and stopping plugs standard types: polyamide Ex e cable glands

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