



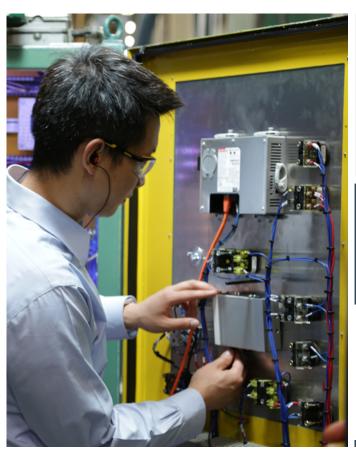




## **COMPONENT HOLDER MODULES**

Din rail mounted empty holder modules

For Component & Printed Circuit Boards





## THE ERGONOMIC SOLUTION TO FIT YOUR ELECTRONIC COMPONENT & CIRCUITS INTO CONTROL PANEL

The TE Connectivity empty modules are designed to ease the mounting and the connection of component and Printed Circuit Boards with the equipement located within the control cabinet. They provide Din Rail mount housing as well as reliable screwclamp connections.

#### **Design Reliability**

#### Reliability

- Closed modules offer IP20 & circuit protection.
- Closed end plate ensures dust protection when needed.
- End plates with openings on the side allow good thermal dissipation for longer circuit life.
- Screw clamp terminals use reliable and high quality ENTRELEC design .
- Connection to the PCB is acheived through 2 soldering points to provide high mechanical resistance and PCB's stability.
- Terminals are firmly locked by plastic retention shapes to prevent PCB stress during tightenening.

#### Flexible to use

Modular and scalable concept to match many projects from prototyping, single circuits to multi circuits configuration, component holder, standard and SMT printed circuit board.

#### **Design flexibility**

- Closed modules allow PCB to be mounted perpendicular to mounting rail for space saving.
- Open modules allow PCB mounting horizontal to mounting rail for easy access to components (replacement/ test maintenance).
- Several size of side plates to obtain either a compact design or to fit large components.
- The body incorporate 4 holes on top to fit an indicator, potentiometer ...
- 11 000 series modules are equipped with side removable walls to fit 2x HE14 connectors for extra pluggable connection points.
- Optional pre-punched ready to be used PCB's allow user to make prototyping easily.
- Mounting foot adapted DIN1 & DIN3 mounting rails.

#### For all your needs

Fit many functions in the control panel: Protection, Control, Data, Signal, Supply, Interface...

By design our modules allow to fit a large scope of devices within the control panels from single components to relays, surge protections, complex analog or digital conditioners etc.

#### Closed modules:

- Two sizes to fit PCB surface of 13.5 & 35 cm<sup>2</sup>
- 8 or 12 screw clamps connections of 2.5 mm<sup>2</sup>
- 4 colours (grey, orange, blue, black)
- Spacing from 22.5 mm (0.88") and 35 mm (1.37").

#### Open modules:

- 3 width of 50, 71 & 100 mm
- Compatible with PCB from 10.7 mm to 500 mm long.



#### Component/PCB holder

- Diodes (rectifiers)
- Varistors, transils,gas discharge tubes... (Transient/surge suppression)
- Resistor (voltage dropping)
- Potentiometers (voltage regulation)
- SMT or Standard PCB's, or without PCB.



## Control & Actuator modules

- Alarm/survey modules
- Micro-controllers
- Monitoring devices (Voltage/current/ phase control...).



### Prototyping

a wide range of functions.

**Closed modules** 

 Our prepunched boards allow soldering of components and wire to prototype a circuit. Boards are pre-equipped with all connections soldering points and cut at the right dimension of each module.



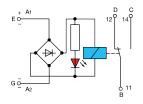
The TE closed component holders are adapted to create modular

With up to 12 connections and various plates thickness they offer the best configuration to mount signal and power components for

finished products that can mounted side by side on the rail.

#### Relay modules

- 10000 series allows ratings up to 250 VAC& DC, 10A, contact configuration: up to 2xSPDT.
- 11 000 series have same ratings than above with higher number of connections (12) allowing to fit more relay circuits.



(ex: 4 relays with 1 SPDT contact)



## Digital & Analog conditionners

- Voltage/current converters (0-10V, 1-5V, 4-20mA)
- Thermocouples & RTD's (temperature measurement)
- RS422/RS485 converters.



#### **Surge arrestors & Filters**

- · Signal & Data protection
- Filters (RC network, capacitors...).



#### **Power supplies/rectifiers**

- For small compact power supplies.
- Specific thick end plate allow to fit small transformers.



# **\***

#### **Component holder**

- · Adapted to mount:
- Large number of components
- Large components (power resistors, heat sink...)
- Can match PLC configurations from 4.8 up to 16 relay boards.

# Opened modules

The TE opened style component holders are adapted to multicircuit configurations. The System consist of an extruded profiles holder equipped with 2 end section feet for Din rail mounting. Profile is delivered in 3 sizes of width, 500 mm length and can be cut to the usage.



#### **Connection interfaces**

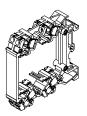
- These functions are used to make interconnection between equipments or to change of connection technology (Ex: from DIN or SUB-D connectors to screw clamp connections).
- When used with pluggable connections or connectors the connection interfaces allow quick circuit disconnection.
- Our modules allow multi-circuit configurations up to 64 poles.

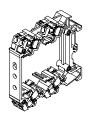


#### Multi channel relay modules

- Can match PLC configurations from 4.8 up to 16 relay boards.
- Open style allow quick relay replacement when used with a relay/socket configuration.







#### Closed modules series 10000

- For PCB surface of 13.5 cm<sup>2</sup>
- 8 screw clamp terminals
- Heat dissipation 2W
- Spacing 18 mm (0.71") 23 mm (0.91") and 28 mm (1.10").

#### Ordering details

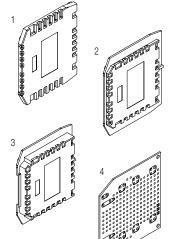
Description	Color	Туре	Part Number		Weight (1 pce) g
Standard body equipped with	Grey □	EBS8A.G	1SNA114533R0000	25	20
8 screw-clamp terminals. NO drilling	Orange 🔲	EBS8A.OR	1SNA103305R0200	25	20
	Blue 🔲	EBS8A.BL	1SNA124533R0200	25	20
	Black 🔳	EBS8A.BK	1SNA104071R2300	25	20
Body equipped with 8 screw-clamp terminals and 4 drillings on top	Grey □	EBP8A.G	1SNA113214R1700	25	20

Main technical data

Mo	unt	ına I	เทรา	truct	tion

Connection c	Connection capacity		UL-CSA	Rail	<b>u</b>	G32, TH 35-7.5, TH 35-15
1 conductor	Rigid: Solid/Stranded	0.5 4 mm <sup>2</sup>	20-12 AWG	Wire stripping		7.5 mm
Per clamp	Flexible without ferrule	0.5 2.5 mm <sup>2</sup>	20-14 AWG	length	<del></del>	0.412 in
	Flexible with non insulated ferrule	0.5 2.5 mm <sup>2</sup>	20-14 AWG		•	
	Flexible with insulated ferrule	0.5 2.5 mm <sup>2</sup>	20-14 AWG		Ī	•
	Rated current of clamp	16 A		Tool		Flat screwdriver
	Rated Voltage V AC	250 V				Ø 3.5 mm
	V DC	300 V			(W)	Ø 0.138 in
	Protection	IP20				
Material	Insulating material	Polyamide		Torque	$\stackrel{\frown}{\sim}$	0.6 Nm ± 0.1
specifications	Flammability	V0			((),	5.31 lb.in ± 0.885
Ambient	Service	-40°C to +100°C	)			
temperature (Min/max)	Storage	-55°C to +110°C	)			

All the main technical data provided are "manufacturer" values



#### Accessories

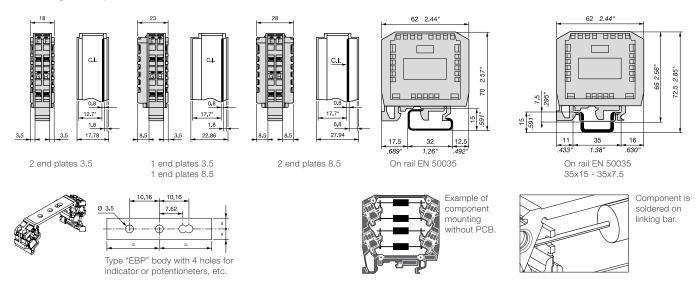
Description	Color	Туре	Part Number	Pkg Qty	Weight (1 pce) g
1 End plate without airing holes.	Grey □	PFN3.G	1SNA114289R2400	10	5
Thickness 3.5 mm 0.138 in		DEN. 0		0.5	1
2 End plate with airing holes	Grey L	PFN1.G	1SNA113091R0000	25	4.1
Thickness 3.5 mm 0.138 in	Orange _	PFN1.OR	1SNA103259R1300	10	4.1
	Blue 📘	PFN1.BL	1SNA123091R0200	25	4.1
	Black	PFN1.BK	1SNA107007R2700	10	4.1
3 End plate with airing holes	Grey □	PFN2.G	1SNA113095R0400	25	5.4
Thickness 8.5 mm 0.335 in	Orange _	PFN2.OR	1SNA103260R1000	10	5.4
	Black <b>B</b>	PNF2.BK	1SNA107008R0000	10	5.4
4 Prepunched printed circuit board		CI 115	1SNA174021R1600	10	10

Series 10 000

#### **Product dimensions**

Component holder spacing is determined by required internal volume for component packaging.

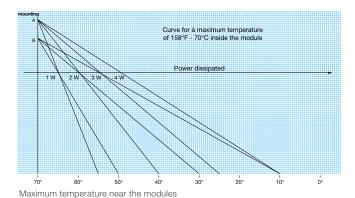
\*: Max. height of components



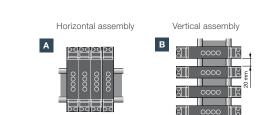
#### **Mounting instructions**

Thermal characteristics of modules

• For maximum reliability, the mounting method must be determined according to the power dissipated in the interface module, and the ambient temperature around the modules.



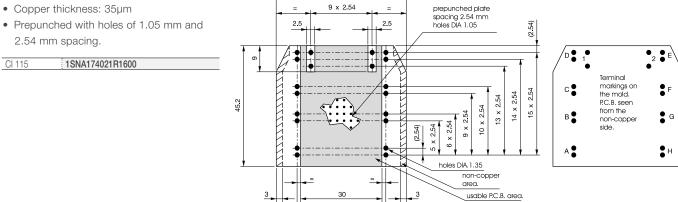
• Inversely, knowing the type of mounting, A or B, and the power dissipated, the curve (left) determines the maximum recommended ambient temperature.



The characteristics shown on the left are given as a guide and may be modified without notice

#### Mechanical characteristics of prepunched circuit board

- Material: Epoxy resin UL94 V0
- Copper thickness: 35µm
- Prepunched with holes of 1.05 mm and 2.54 mm spacing.



13 x 2.54

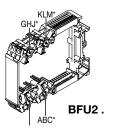
48.3

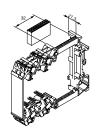
9 x 2.54

5









#### Closed modules series 11000

- For PCB surface of 35 cm²
- 12 screw clamp terminals
- Heat dissipation 4W
- Spacing 22.5 mm (.88") & 35 mm (1.37").

#### Ordering details

Description	Color	Туре	Part Number	Pkg Qty	Weight (1 pce) g
Standard body equipped with	Grey [	BFU2 S12.G	1SNA116522R0700	10	45
12 screw-clamp terminals	Orange	BFU2 S12.OR	1SNA103598R2000	10	45
	Blue	BFU2 S12.BL	1SNA126522R0100	10	45
	Black	BFU2 S12.BK	1SNA104077R0000	10	45
Standard body equipped with 6 screw-clamp terminals (DEFGHJ)	Grey [	BFU2 S6.G	1SNA116523R0000	10	34
Body equipped with 12 screw-clamp terminals and opened spaces on both side to receive 1 or 2 plug-in connectors type HE14 (up to 22 points,not supplied) or 6 poles PCB connectors (see accessories section)		BFU2 S12.G.CP	1SNA116689R2700	10	42.8

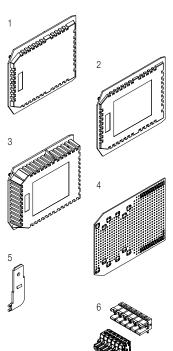
#### Main technical data

#### Mounting instruction

Connection capacity		UL-CSA	Rail	<b>'</b>	G32, TH 35-7.5, TH 35-15	
Rigid: Solid/Stranded	0.5 4 mm <sup>2</sup>	20-12 AWG	Wire stripping		7.5 mm	
Flexible without ferrule	0.5 2.5 mm <sup>2</sup>	20-14 AWG	length	++	0.412 in	
Flexible with non insulated ferrule	0.5 2.5 mm <sup>2</sup>	20-14 AWG			: :	
Flexible with insulated ferrule	0.5 2.5 mm <sup>2</sup>	20-14 AWG				
Flexible	0.3 2.5 mm <sup>2</sup>	22 14 AWG			•	
Rated current of clamp	16 A		Tool		Flat screwdriver	
Rated Voltage V AC	250 V				Ø 3.5 mm	
V DC	300 V			<b>(</b>	Ø 0.138 in	
Protection	IP20					
Insulating material	Polyamide		Torque	<b>/</b>	0.6 Nm ± 0.1	
Flammability	V0	•		(( ),	5.31 lb.in ± 0.885	
Service	-40°C to +100°C	)			•	
Storage	-55°C to +110°C	)				
F.F.F.F.F.F	Texible without ferrule Texible with non insulated ferrule Texible with insulated ferrule Texible Texi	Pexible without ferrule	Pexible without ferrule	Pervice   Perv	Clexible without ferrule	

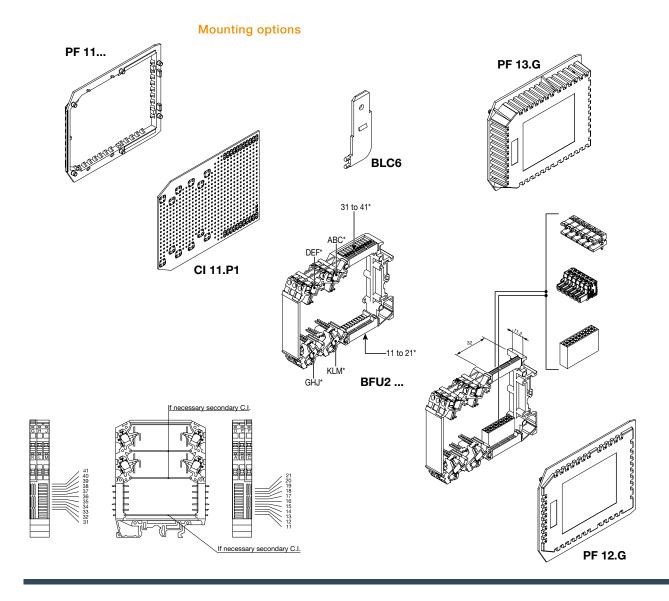
All the main technical data provided are "manufacturer" values

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C€	RoHS													
CF :	: RoHS :	:	:		:	:	:	:	:	:	:	:	:	:



#### Accessories

De	escription	Color	Туре	Part Number	Pkg Qty	Weight (1 pce) g
1	Left end plate with airing holes.	Grey □	PF11.G	1SNA116519R1400	10	11
	Thickness 3 mm 0.118 in	Orange <a>_</a>	PF11.OR	1SNA103595R1500	10	11
		Blue 🔲	PF11.BL	1SNA126519R1600	10	11
		Black	PF11.BK	1SNA103786R2400	10	11
2	Right end plate with airing holes.	Grey 🔲	PF12.G	1SNA116520R1100	10	10
	Thickness 3 mm 0.118 in	Orange <a>_</a>	PF12.OR	1SNA103596R1600	10	10
		Blue 🔲	PF12.BL	1SNA126520R1300	10	10
		Black 🔳	PF12.BK	1SNA103782R2000	10	10
3	Right end plate with airing holes.	Grey 🔲	PF13.G	1SNA116718R2300	10	20
	Thickness 15 mm 0.59 in	Orange <a>_</a>	PF13.OR	1SNA103762R0300	5	20
		Blue 🔲	PF13.BL	1SNA126718R2500	5	20
4	Prepunched printed circuit board		CI 11P1	1SNA175207R0700	10	10
5	Quick-connect tab series 250 6.3 x 0.8 mm		BLC6	1SNA174445R2400	10	1
6	6 pôles PCB connector & socket	Socket	CPET/6H	1SNA094206R2100	40	2.1
	(2 max per module)	Connector	CPFT2/6	1SNA094306R2500	40	9.6

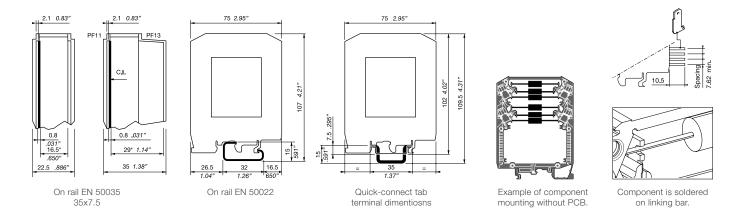


Series 11 000

#### **Product dimensions**

Component holder spacing is determined by required internal volume for component packaging.

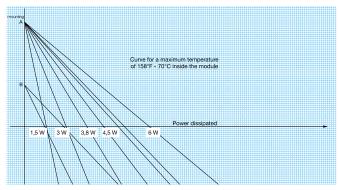
\*: Max. height of components



#### **Mounting instructions**

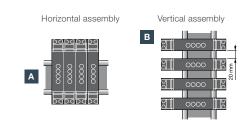
Thermal characteristics of modules

• For maximum reliability, the mounting method must be determined according to the power dissipated in the interface module, and the ambient temperature around the modules.



Maximum temperature near the modules

 Inversely, knowing the type of mounting, A or B, and the power dissipated, the curve (left) determines the maximum recommended ambient temperature.



The characteristics shown on the left are given as a guide and may be modified without notice

#### Mechanical characteristics of prepunched circuit board

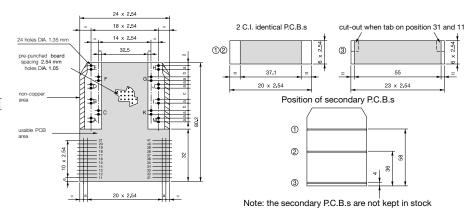
• Material: Epoxy resin UL94 V0

Copper thickness: 35µmPCB thickness: 0.8 mm

• FOD thickness, 0.6 min

• Prepunched with holes of 1.05 mm and 2.54 mm spacing.

Cl 11.P1 1SNA175207R0700

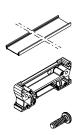




#### Opened extruded modules series 20000

- Modular in width and in length (3 widths availabe)
- For PCB surface up to 250 cm<sup>2</sup>
- PCB length from 10.7 to 500 mm (thickness: 1.6 mm)
- Mounting on TH35 rail.

#### Ordering details



Description		Color	Туре	Part Number	Pkg	Weight
					Qty	(1 pce) g
Body SE for PCB width:	50 mm 1.96 in	Grey 🔲	SE50	1SNA400751R1600	1	267
	71 mm <i>2.76 in</i>		SE71	1SNA400809R0000	1	427
	100 mm 3.94 in		SE100	1SNA400808R0000	1	572
End plate & mounting foot	50 mm 1.96 in	Grey 🔲	AFSE 50	1SNA400750R2100	10	2.34
AFSE for PCB width:	71 mm <i>2.76 in</i>		AFSE71-6	1SNA400804R0000	20	4.8
			AFSE71-11	1SNA400805R0000	20	8.2
	100 mm 3.94 in		AFSE100-11	1SNA400806R0000	20	6.6
				1SNA400807R0000	20	11
Screw for foot			VTCBLZ 2.9x9.5	1SNA921013R0000	100	0.6

Main 1	techn	ioal (	data
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#### Mounting instruction

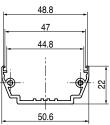
Connection capacity		IEC	UL-CSA	Rail	:	TH 35-7.5 TH35-15		
Material specifications	Insulating material Flammability UL Flammability NF F 16 101	Polyamide V0 I2F2		Tool	: (0, 10)	Posidrive screwdriver PZ1 Type		
Ambient temperature (Min/max) IEC 60068-2-1	Service Storage Installing	-20°C to +80°C 20°C to +80°C -5°C to +40°C	-4 to +176°F	Torque		0.3 Nm ± 0.1 2.65 lb.in ± 0.885		

All the main technical data provided are "manufacturer" values

CE	RoHS	<i>,11</i> 2.						
CE	RoHS	USR CNR						

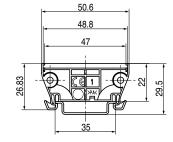
#### **Product dimensions**





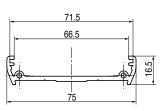
AFSE 50



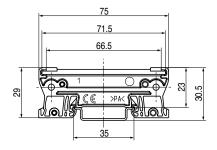


**AFSE 71-6** 

SE 71

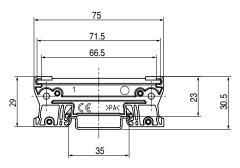






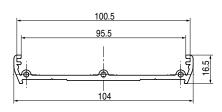
**AFSE 71-11** 



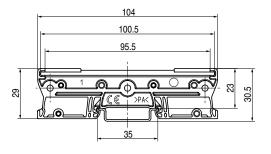


**AFSE 100-6** 

SE 100

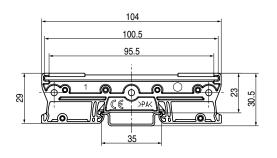




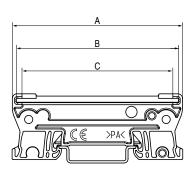


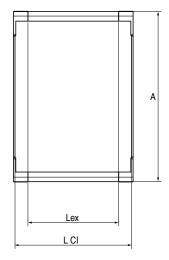
#### AFSE 100-11

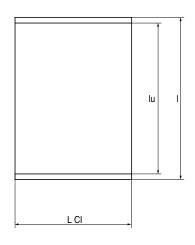




#### **Mounting instructions**







#### Extruded rail length

Lex = L CI - 21.2 (0.4 mm theoretic clearance between P.C.B. and mounted support)

Rail length margin L: + 0.5 .020" + 0.2 .008"

C(1): For component pins less than 3 mm. C(2): For component pins longer than 3 mm \*\* P.C.B. length margin L: 0 .000" + 0.2 -.008"

lu1: For component pins less than 3 mm. lu2: For component pins longer than 3 mm.

Body	SE 50		SE 71		SE 100		
Dimensions	mm	inch	mm	inch	mm	inch	
A (overwhole width)	50	1.96	75	2.95	104	4.1	
B (PCB width)	48.8	1.92	71	2.79	100	3.94	
C (1)	N/A	N/A	66.5	2.62	95.5	3.76	
C (2)	47	1.85	50	1.96	Consult us		
Lex	Lex = L Cl – 9.8 mi (0.4 mm theoritic c PCB and body)		Lex with AFSE71-0 (0.4 mm theoritic of PCB and body)		Lex with AFSE100-6 = L Cl – 11 mm (0.4 mm theoritic clearance between PCE and body)		
			Lex with AFSE71- (0,4 mm theoritic of PCB and body)	11 = L Cl – 21.2 mm elearance between		E100-11 = L CI - 21.2 mm ritic clearance between PCB	

#### P.C.B. length margin

L: 0 + 0.1 / - 0.2 mm

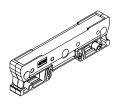
L: .000" + .004" / - .008"

PCB	SE 50		SE 71	SE 71			SE 100		
Dimensions	mm	inch	mm		inch	mm	inch		
L CI	10.7 mm (2 x AFSE50 clip	10.7 mm (2 x AFSE71-6	10.7 mm (2 x AFSE71-6 clipped )			10.7 mm (2 x AFSE100-6 clipped )			
	>10.7 mm (2 x2 x AFSE50	15.78 mm (1 x AFSE71-6	1			15.78 mm (1 x AFSE100-6 + 1 x AFSE100-11 clipped)			
		20.86 mm (2 x AFSE71-	20.86 mm (2 x AFSE71-11 clipped)			20.86 mm (2 x AFSE100-11 clipped )			
		>20.86 mm (2 x AFSE71-6	>20.86 mm (2 x AFSE71-6 + SE71 body)			>20.86 mm (2 x AFSE100-6 + SE100 body)			
	48.8	1.92	71		2.79	100	3.94		
lu1	44.8	1.76	66		2.6	95	3.74		
12 Consult us			Consult us	Consult us			Consult us		

#### **Examples of configurations (SE100)**

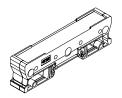
#### L = 10.7 mm

2 x AFSE100-6 clipped



#### L = 15.78 mm

1 x AFSE100-6 + 1 x AFSE100-11 clipped



#### L = 20.86 mm

2 x AFSE100-11 clipped



#### L > 20 86 mm



#### te.com

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TE Connectivity 3 Rue Jean Perrin 69680 CHASSIEU France

