

## Description

The 3120 switch serves for switching devices and machinery on or off. It is available in a range of design versions and meets the requirements of the relevant standard IEC/EN 61058 for switches for appliances. Type 3120 is also available as a circuit breaker for equipment protection in accordance with IEC/EN 60934 (see data sheet thermal circuit breaker 3120-F).

### Product characteristics:

- rocker or push button actuation
- single pole and double pole versions
- convenient snap-in mounting
- international approvals

### Optional:

- illumination
- water splash protection
- push-in terminals



### Upon request:

Switch with undervoltage release module:  
This version protects the user against bodily harm as an inadvertent start-up of machinery after a power failure is reliably excluded.

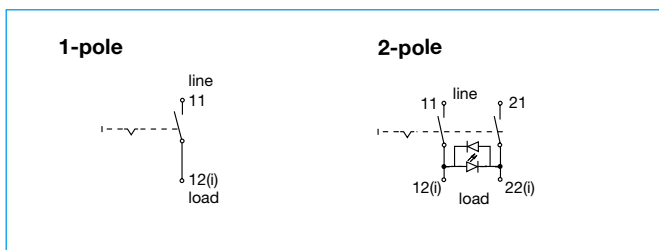
## Typical applications

Medical and laboratory equipment, apparatus and machine construction, professional tools, household and garden appliances, offices machines, audio equipment, machine tools

## Approvals

Approval authority	Standard	Voltage rating	Current rating	Approval logos
VDE	IEC/EN 61058	AC 240 V DC 50 V	16 (4) A 16 A:	
CQC	GB 17701	AC 240 V DC 50 V	0.1 - 20 A	

## Schematic diagrams



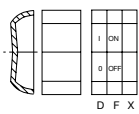
## Technical data

Voltage ratings	AC 240 V, DC 50 V	
<b>Interrupting capacity:</b>		
AC 240 V:	16 (4) A	25,000 switching cycles
DC 50 V:	16 A	50,000 switching cycles
Ambient temperature	0...55 °C	
Insulation coordination (IEC 60664)	2.5 kV /2 reinforced insulation at operating area	
<b>Dielectric strength</b>		
Operating area	test voltage AC 3,000 V	
Pole to pole (2-pole)	test voltage AC 1,500 V	
Insulation resistance	> 100 MΩ (DC 500 V)	
<b>Degree of protection (IEC 60529)</b>		
Operating area	IP40 with water splash cover IP54 or IP66	
Terminal area	IP00 with water splash cover IP64	
<b>Environmental tests (IEC 60068)</b>		
Vibration	8 g (57-500 Hz), ± 0.61 mm (10-57 Hz)	
Shock	30 g (11 ms)	
Corrosion	96 hours at 5 % salt mist	
Humidity	240 hrs in 95 % RH	
Mass	approx. 33 g (2-pole) approx. 27 g (1-pole) approx. 42 g (2-pole with PT terminals)	

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1

**Order numbering code**

<b>Type No.</b>	
3120 switch with rocker actuation	
<b>Mounting</b>	
F3	snap-in, mounting cut-out 50.5 x 21.5 mm
F5	snap-in, mounting cut-out 44.5 x 22 mm
<b>Number of poles</b>	
0	2-pole
6	1-pole
<b>Style</b>	
1	standard
3	with actuator guard
4	with water splash protection (IP54)
<b>Terminal design</b>	
PT	push-in terminals
N7	blade terminals 6.3 x 0.8
G7	as N7, terminals 11 and 21 with additional flat head screws M3.5
<b>Version</b>	
Q1	switch only
<b>Actuator style</b>	
W	rocker
<b>Rocker colour/illumination</b>	
01.	black opaque without illumination
02.	white opaque without illumination
14. R	red translucent with LED illumination
19. G	green translucent with LED illumination
<b>Marking</b>	
D F Q X	 <p>Q: 0 and 1 moulded in</p>
<b>Illumination voltage range</b> (= operating voltage)	
1	DC 12 V
2	DC 24 V
3	AC 115 V
4	AC 230 V
<b>Current rating</b>	
16 A:	
3120 - F 5 0 4 - N7 Q1 - W01Q - 16 A ordering example	

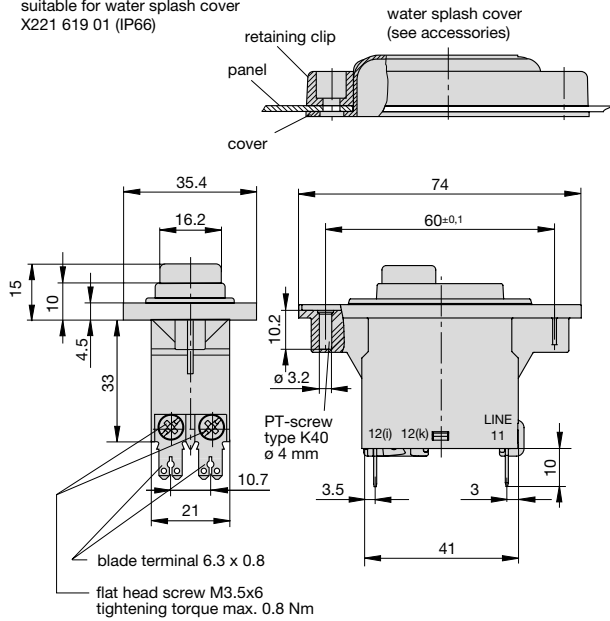
**Order numbering code**

<b>Type No.</b>	
3120 switch with push button actuation	
<b>Mounting</b>	
F2	flange mounting, mounting cut-out 50.5 x 26 mm, suitable for water splash cover X221 619 01 (IP66)
F3	snap-in, mounting cut-out 50.5 x 21.5 mm
<b>Number of poles</b>	
0	2-pole
6	1-pole
<b>Style</b>	
F	frame with 2 push buttons
<b>Terminal design</b>	
PT	push-in terminals
N7	blade terminals 6.3 x 0.8
G7	as N7, terminals 11 and 21 with additional flat head screws M3.5
<b>Version</b>	
Q1	switch only
<b>Actuator style</b>	
S	two push buttons
<b>Colour of push button/illumination</b>	
GRX	green/red without illumination
GRXG	green translucent with LED illumination/red opaque without illumination
<b>Illumination voltage range</b> (= operating voltage)	
1	DC 12 V
2	DC 24 V
3	AC 115 V
4	AC 230 V
<b>Current rating</b>	
16 A	
3120 - F 2 0 F - N7 Q1 - SGRX - 16 A ordering example	

**Dimensions**

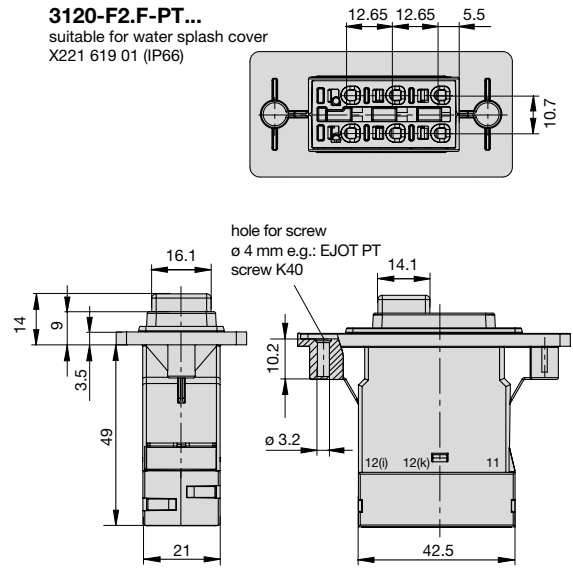
**3120-F2.F-...**

suitable for water splash cover  
X221 619 01 (IP66)



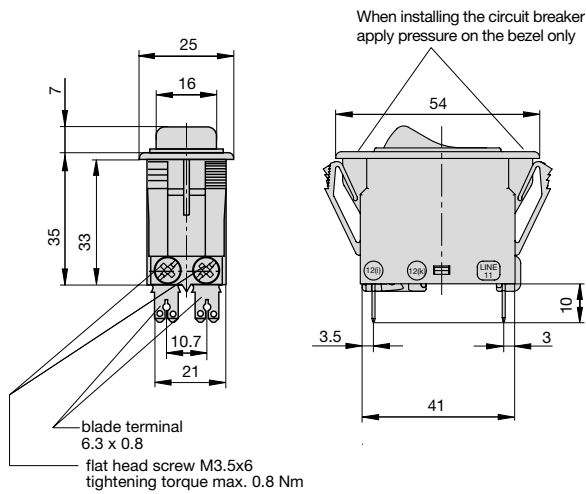
**3120-F2.F-PT...**

suitable for water splash cover  
X221 619 01 (IP66)



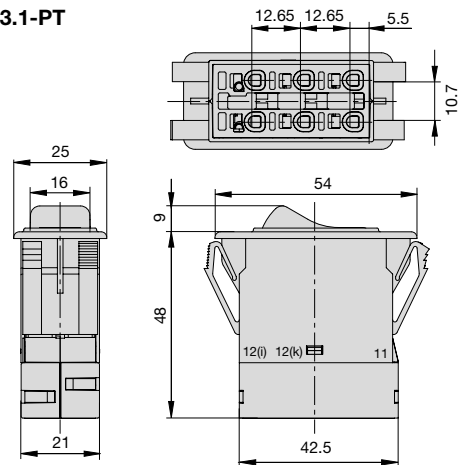
**3120-F3.1**

standard



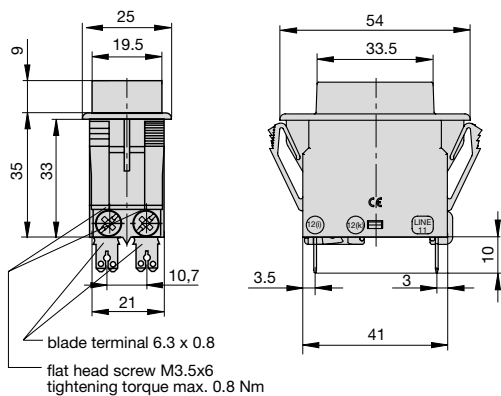
**3120-F3.1-PT**

standard



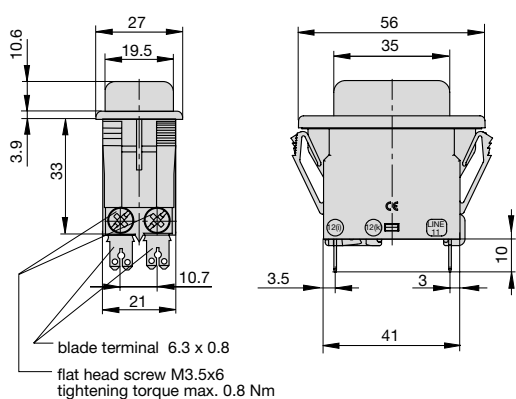
**3120-F 3.3**

with actuator guard



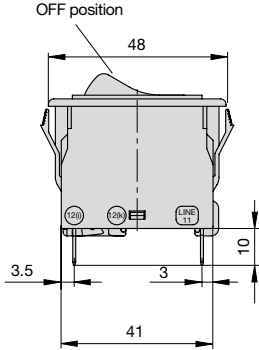
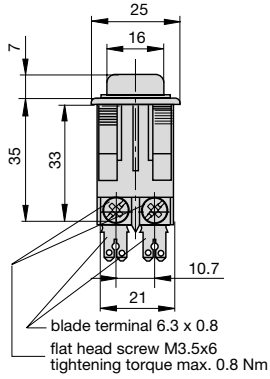
**3120-F 3.4**

with water splash protection (IP54)

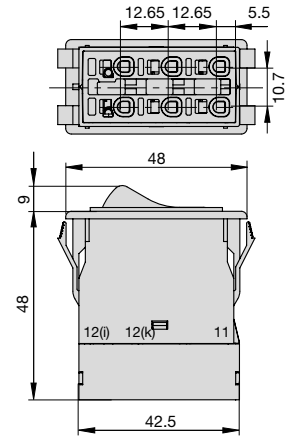
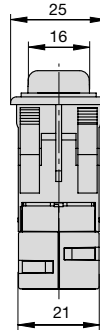


**Dimensions**

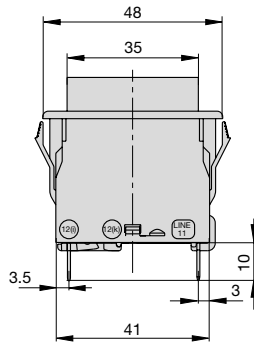
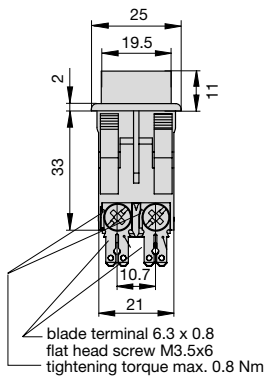
**3120-F 5.1**  
standard



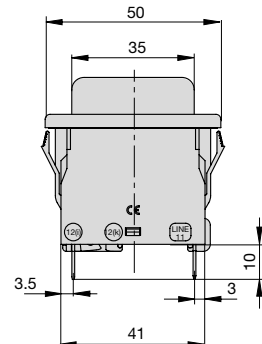
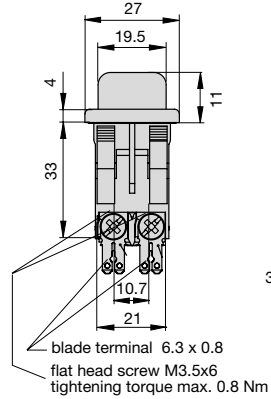
**3120-F5.1-PT**  
standard



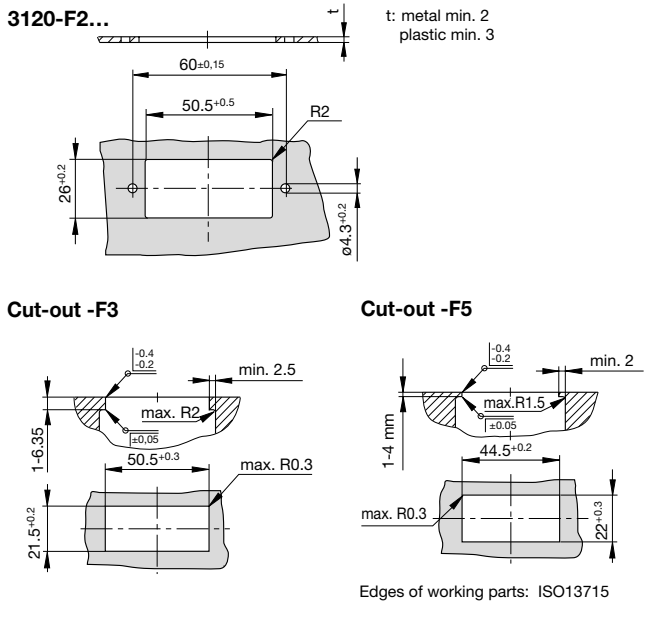
**3120-F5.3**  
with actuator guard



**3120-F5.4**  
with water splash protection (IP54)



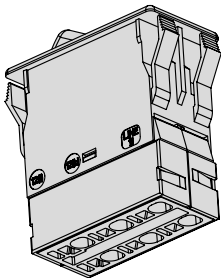
## Cut-out dimensions



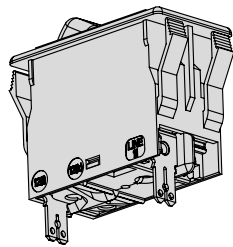
## Terminal types

### 1-pole version

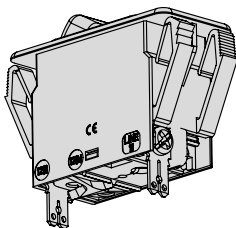
3120-F561-PT



3120-F561-N7

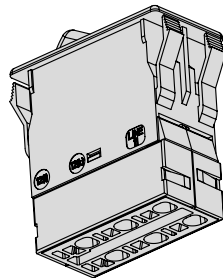


3120-F361-G7

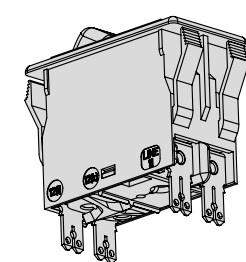


### 2-pole version

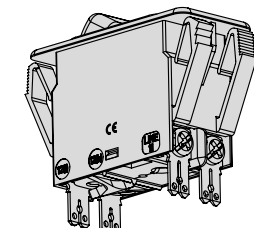
3120-F501-PT



3120-F501-N7

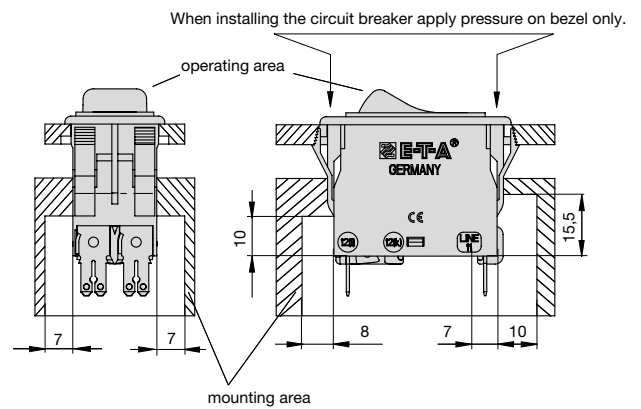


3120-F301-G7

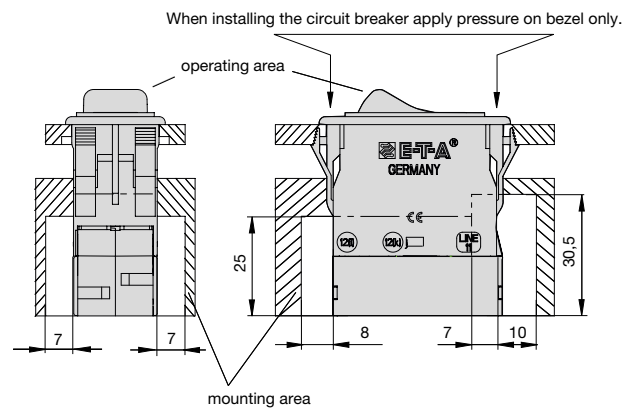


## Installation drawing

### 3120 with blade terminals



### 3120 with push-in terminals

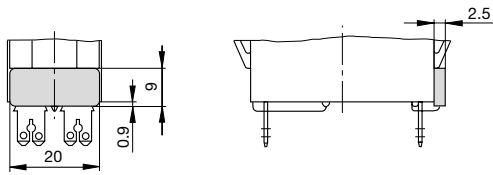


## Cable cross sections PT terminals

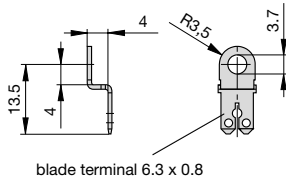
cable	cross section with direct push-in wiring
rigid	1...4 mm <sup>2</sup> (stripping length: 10 mm)
flexible with wire end ferrule (with or without plastic sleeve)	0.5...2.5 mm <sup>2</sup>
cable	cross section when opening the push-in terminals
rigid	0.5...4 mm <sup>2</sup> (stripping length: 10 mm)
flexible without wire end ferrule	0.5...2.5 mm <sup>2</sup>

**Accessories**

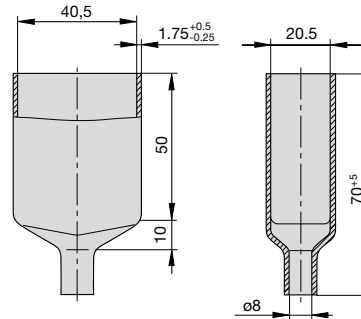
**Insulated cover  
Y 303 068 01**



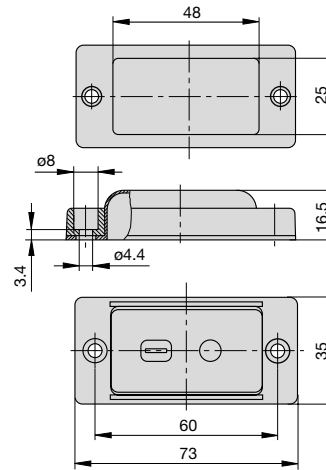
**Terminal adapter  
Y 303 862 01**



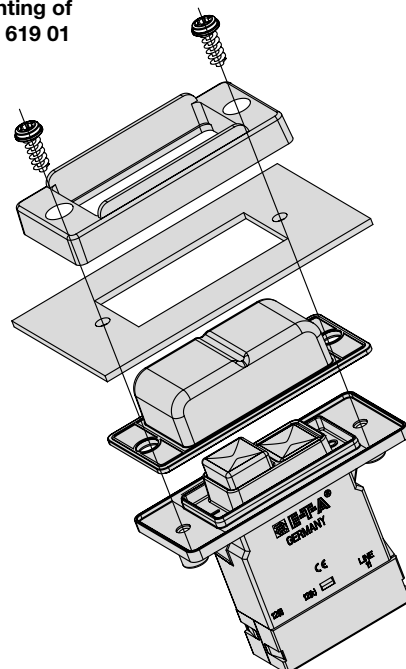
**Rear terminal shroud black (IP64)  
Y 304 275 01**



**Water splash cover, transparent (IP66)  
for style -F2...  
X 221 619 01**



**Mounting of  
X221 619 01**



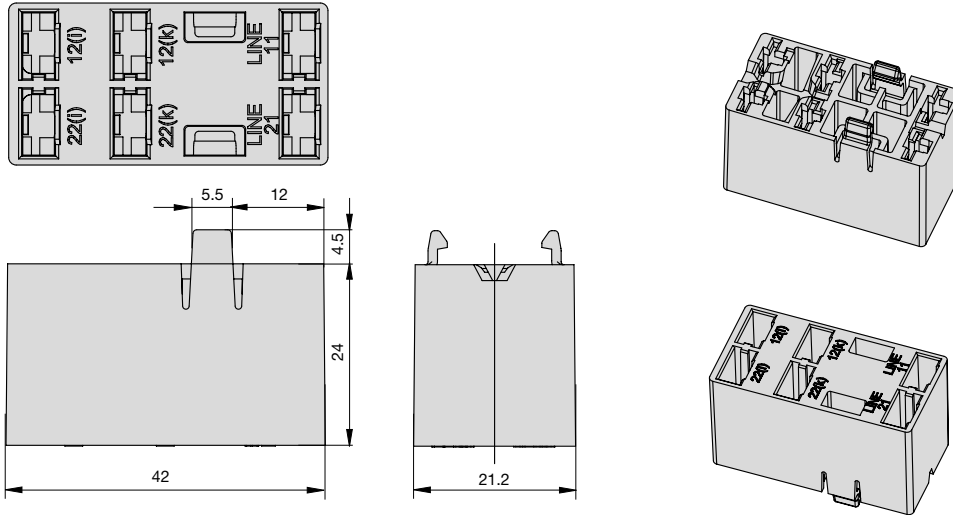
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**Accessories**

**Plug-in connector (for connection types N7 and G7)**

**Y 31214001**

Connecting cables can be pre-wired. Two retaining clips ensure a tight fit.



**Benefits:**

- Reduced installation time and costs for final assembly
- Quick replacement of devices

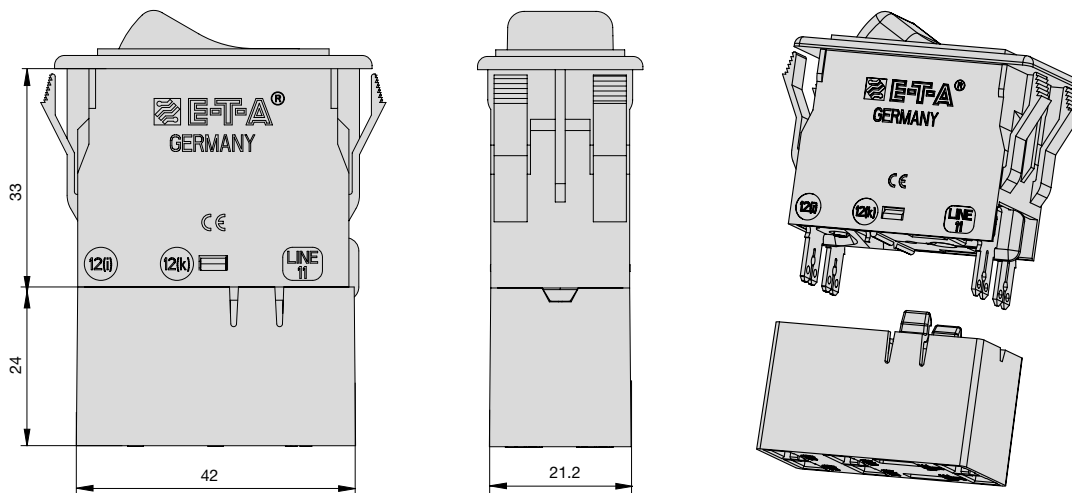
**Note:**

Delivery without receptacles.

Dimensions of receptacles (width 6.3 mm) are in accordance with DIN 46340 part 3, shape A.

Examples of suitable receptacles: Stocko RSB 7916 F6,3-1 / Klauke type 2730 / Vogt type 3832d.67 / TE FASTON Terminals 250 Series / Delphi Packard 58 Series

Plug-in connector mounted on circuit breaker:





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- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.