

## Description



Microswitches of MK series have been developed in order to add new features to traditional and tested microswitches of Pizzato Elettrica.

These products have been designed with shapes and fixing perfectly interchangeable with the previous ones and with various additional functions useful to extend the application field.

The main innovation of this series is the tripping device modern and evolved, with qualitative features higher than solutions present on the market.

The electrical contact on new microswitch has been realized with higher reliability technology, thanks to the double and redundant shape, and has the possibility to carry out operations with positive opening. The housing of the new microswitch provides the possibility to seat gaskets in order to seal the device against fine dusts or liquids up to IP65 degree. Fastening terminals of conductors are more practical and allow the fixing of different diameter cables or the possibility to choose different bends of faston contacts. For high quantity it's possible to supply the microswitch only with the contact NO or NC, in order to minimize purchase costs.

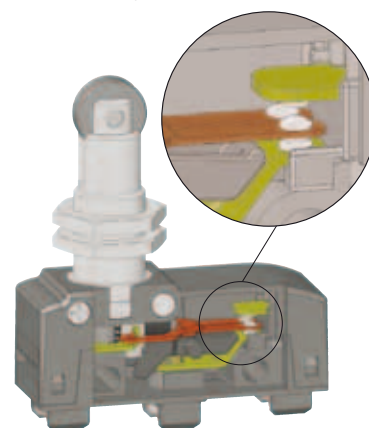
## Contact block reliability

In the following table we refer to the typical microswitch contact structure (type A) normally used in the industry, compared with the innovative solution that Pizzato Elettrica uses in new MK series microswitches: movable contact with single interruption and double contacts (type B). As you can see from the table below, this last structure (type B) offers half of the contact resistance (R) than the simple mobile contact (type A) and a lower probability of failure (fe).

In fact, defined x the probability of a commutation failure of a single interruption, it results that in the type A the failure probability  $fe=x$ , in the type B the probability  $fe \cong x^2$ . This means that if in a certain situation the probability of a single interruption failure x is equal, for instance, to  $1 \times 10^{-4}$  (1 failed interruption every 10,000) we will have:

- for type A one failed commutation every 10,000.
- for type B one failed commutation every 100,000,000

Type	Diagram	Description	Contact resistance R	Failure probability fe
A C u s t o m a r y microswitch		mobile contact, single interruption	$R=R_c$	$fe=x$
B Pizzato MK series microswitch		contacts with single interruption and double contacts	$R=R_c/2$	$fe \cong x^2$

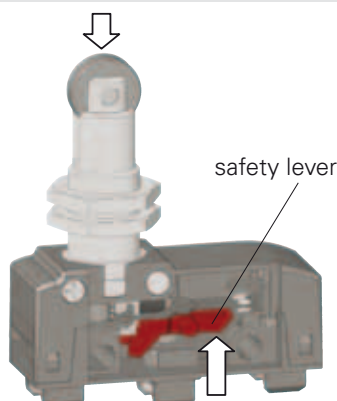


## Extended temperature range

# -40°C

For the new MK series versions with extended temperature range are available on request. Differently from standard MK microswitches with temperature range from +85 °C to -25 °C, these special versions can be used in places where the ambient temperature changes from +85 °C to -40 °C. They can be installed inside cold stores, sterilizers or other equipment with very low ambient temperature. Special materials that have been used to realize these versions, maintain unchanged their features also in these conditions, widening the installation possibilities.

## Microswitches for safety applications



All microswitches that have the symbol  $\ominus$  beside the code are with positive opening, therefore suitable for safety applications. These microswitches are provided with a rigid connection between button and NC contacts, which are opened by force through a strong/sturdy internal safety lever.

The positive opening has been realised in conformity with the standard EN 60947 5 1, enclosure K, therefore these microswitches are suitable for the installation for people's protection.

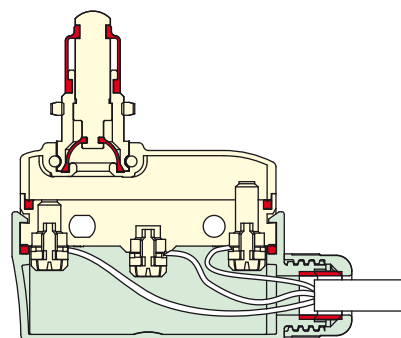
## Protection degree IP65

By installing microswitches MK ●●2●●● with terminal covers VF MKC●22 or terminal covers VF MKC●23, it's possible to obtain a microswitch fully dust proof and waterproof. Thanks to special rubber gaskets anti-oil, we achieve the protection degree IP65. For application with high presence of dirtiness, are available also versions with double gasket in the button (internal + external). ex. MK ●●2●12 or MK ●●2●13.

■ Gaskets

□ Microswitch:  
MKV12D12

□ Terminal cover:  
VF MKCV22



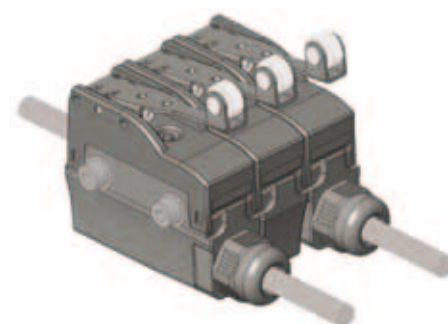
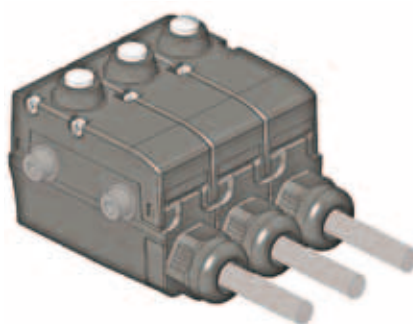
## Clamping screw plates for different diameter cables (MK V●)



These clamping screw plates have a particular “roofing tile” structure and are connected loosely to the clamping screw. In this way, during the wires fixing, the clamping screw plate is able to suit to cables of different diameter (see picture) and tends to tighten the wires toward the screw instead of permitting them to escape towards the outside.

## Stackable terminal covers with wiretrap cable gland

New terminal covers supplied with wiretrap cable gland are provided for the protection degree up to IP65. These terminal covers are snap-in assembled and they have small dimensions in the microswitch profile, it's possible to install them also on microswitches fixed side by side. See page 154.

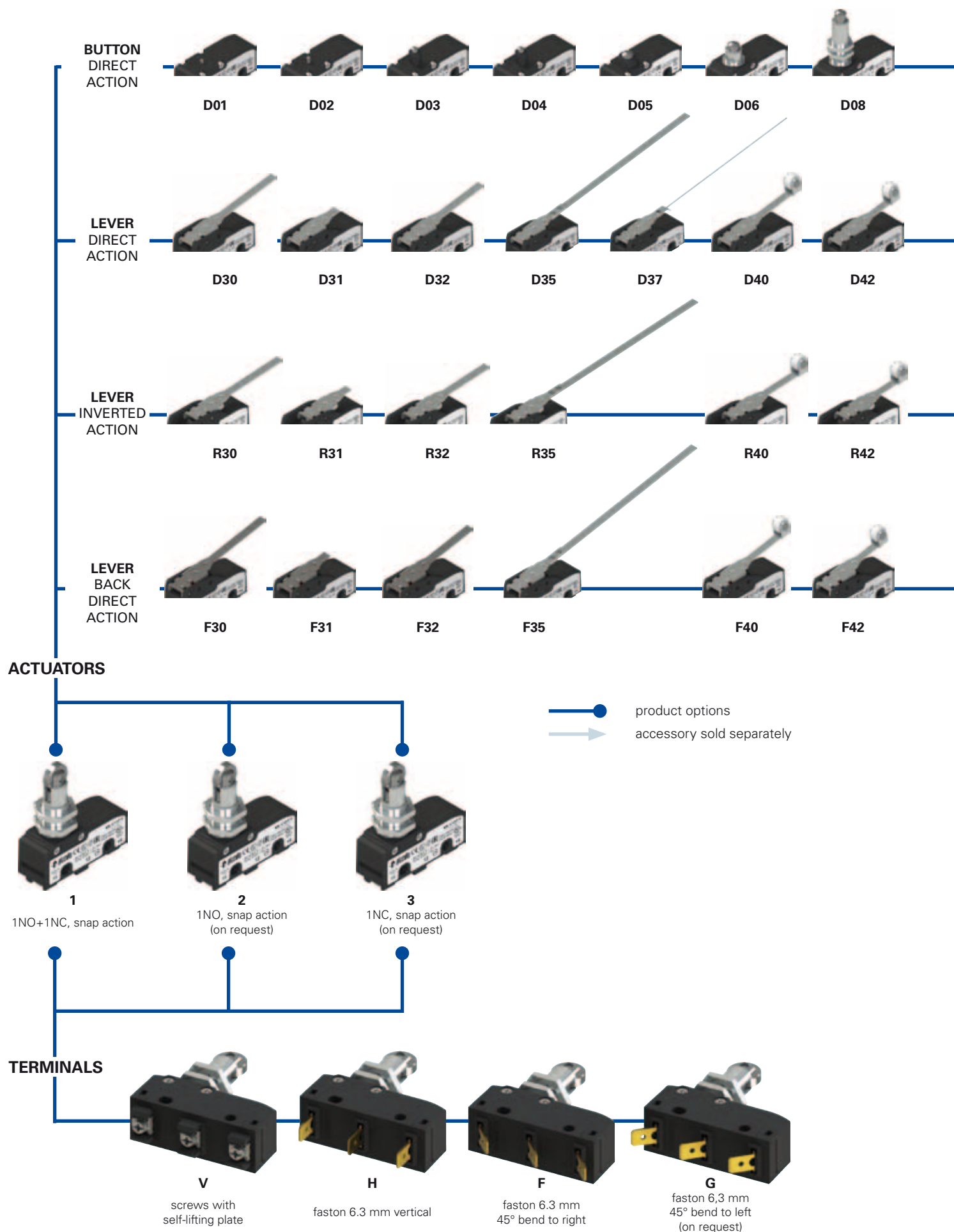


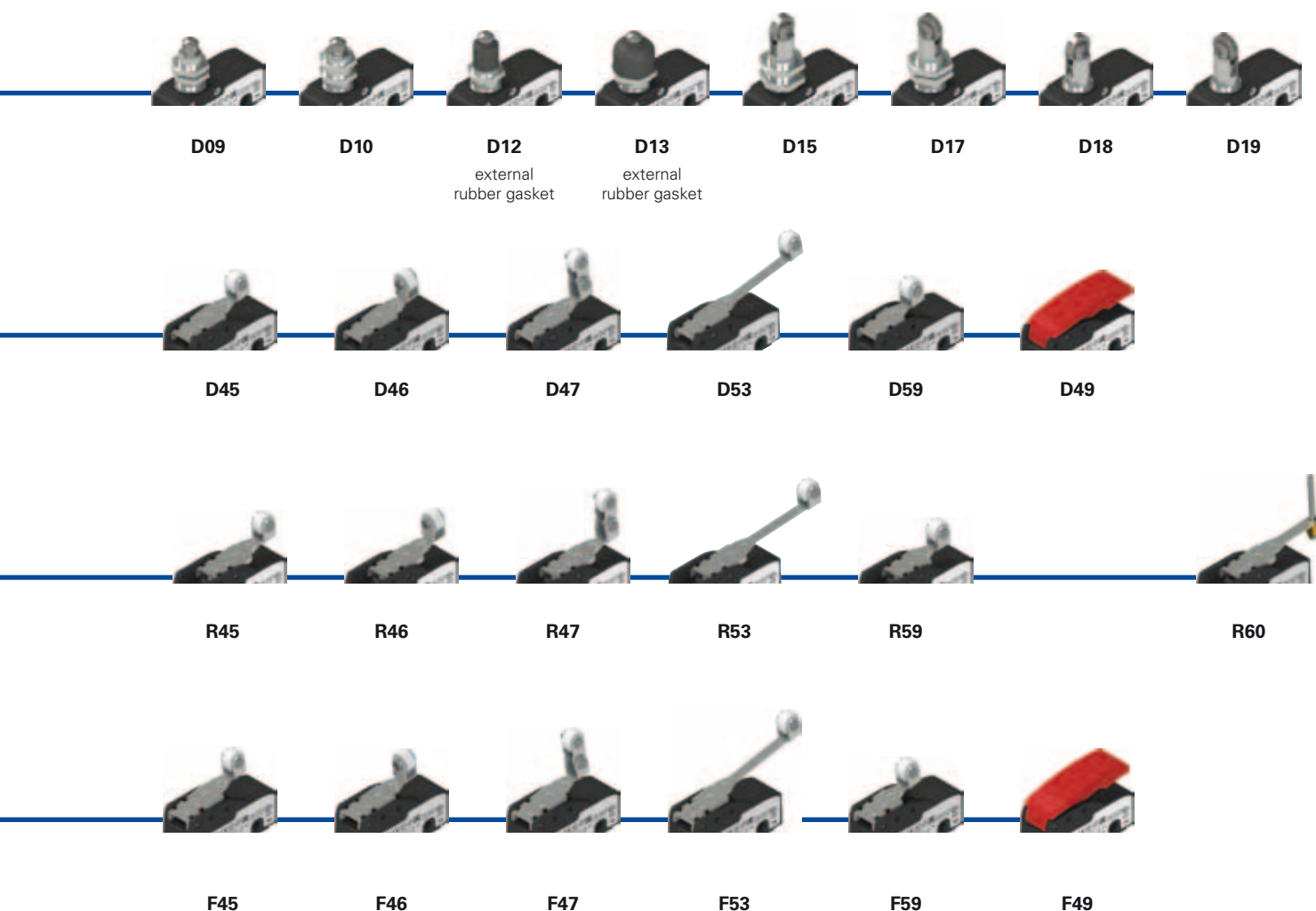
## Orientable actuators



Thanks to the new patented lateral fixing system, it's possible to rotate the roller of microswitches MK ●●●15 and MK ●●●17 in 90° steps.

The lateral fixing allows to disconnect the actuator from the body also when the actuator is already fixed to the racket. The flexibility of the product allows also to unify items on stock for applications that require roller both longitudinal or transversal.



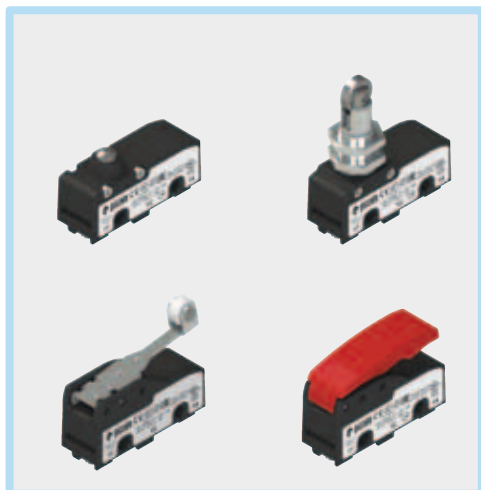


## Code structure

**Attention!** The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

article options  
**MK V12D40-GR16T6**

<b>Terminal type</b>		<b>Ambient temperature</b>	
<b>V</b>	screws with self-lifting plate		-25°C ... +85°C (standard)
<b>H</b>	vertical faston	<b>T6</b>	-40°C ... +85°C
<b>F</b>	faston, bent 45° to right	<b>Rollers</b>	
<b>G</b>	faston, bent 45° to left (on request)		standard roller
<b>Contact blocks</b>		<b>R16</b>	metal roller Ø 9.5x4 mm (only for actuators 40, 42, 45, 47, 53, 59)
<b>1</b>	1NO+1NC, snap action in deviation	<b>R10</b>	large plastic roller Ø 9.8x8.4 mm (only for actuators 40, 42, 45, 53)
<b>2</b>	1NO, snap action (on request)	<b>Contact type</b>	
<b>3</b>	1NC, snap action (on request)		silver contacts (standard)
<b>Maximum protection degree</b>		<b>G</b>	silver contacts with 1 µm gold coating
<b>1</b>	IP40 (with terminal cover)	<b>Actuator</b>	
<b>2</b>	IP65 (with terminal cover)	<b>01</b>	pin
<b>Actuation type</b>		<b>02</b>	pin
<b>D</b>	direct action	<b>03</b>	narrow button
<b>R</b>	inverted action	<b>..</b>	.....
<b>F</b>	back direct action		



### Main features

- Technopolymer housing
- High reliability contacts
- Protection degree up to IP65
- 4 terminal types available
- 47 actuators available
- Versions with positive opening ⊕
- Versions with gold-plated silver contacts
- Terminal covers with wiretrap cable gland

### Markings and quality marks:



IMO approval:	CA02.05772
UL approval:	E131787
CCC approval:	2013010305604291
EAC approval:	RU C-IT DM94.B.01024

### Technical data

#### Housing

Housing made of glass fiber reinforced technopolymer, self-extinguishing and shock-proof.

Protection degree acc. to EN 60529:	IP00 without terminal cover
	IP20 (with terminal cover VF C01, VF C03)
	IP40 (with terminal cover VF MKC•1•, VF C02)
	IP65 (with terminal cover VF MKC•22 + MK V•2••• or VF MKC•23 + MK H•2•••)

#### General data

Ambient temperature:	-25°C ... +85°C
Max. actuation frequency:	3600 operating cycles/hour
Mechanical endurance:	10 million operating cycles <sup>1</sup>
Safety parameters:	
B <sub>10d</sub> :	20,000,000 for NC contacts
Tightening torques for installation:	see pages 235-246

(1) One operation cycle means two movements, one to close and one to open contacts, as defined in EN 60947-5-1.

#### Cable cross section (flexible copper strands)

MK series:	min.	1 x 0.34 mm <sup>2</sup>	(1 x AWG 22)
	max.	2 x 1.5 mm <sup>2</sup>	(2 x AWG 16)

#### In conformity with standards:

IEC 60947-5-1, EN 60947-5-1, IEC 60529, EN 60529, EN 60947-1, IEC 60947-1.

#### Approvals:

UL 508, CSA 22.2 No.14, EN 60947-1, EN 60947-5-1.

#### In conformity with the requirements of:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and EMC Directive 2004/108/EC.

#### Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1.

### Installation for safety applications:

Use only microswitches marked with the symbol ⊕ aside the product code. Always connect the safety circuit to the **NC contacts** (normally closed contacts) as stated in **standard EN 60947-5-1, encl. K, par. 2**. Actuate the switch **at least up to the positive opening travel (CAP)** stated aside the article code. Actuate the switch **at least with the positive opening force (FAP)** stated aside the article code.

⚠ If not expressly indicated in this chapter, for correct installation and utilization of all articles see chapter utilization requirements from page 235 to page 246.

Electrical data		Utilization category			
Thermal current (I <sub>th</sub> ):	16 A	Alternating current: AC15 (50 ... 60 Hz)			
Rated insulation voltage (U <sub>i</sub> ):	250 Vac 300 Vdc	U <sub>e</sub> (V)	250	120	
Rated impulse withstand voltage (U <sub>imp</sub> ):	4 kV	I <sub>e</sub> (A)	6	6	
Conditional short circuit current:	1000 A acc. to EN 60947-5-1	Direct current: DC13			
Protection against short circuits:	type gG fuse 16 A 250 V	U <sub>e</sub> (V)	24	125	250
Pollution degree:	3	I <sub>e</sub> (A)	5	0.6	0.3
Dielectric strength	2000 Vac/min.				



## Characteristics approved by IMQ and CCC

Rated insulation voltage (Ui): 250 Vac  
 Conventional free air thermal current (Ith): 16 A  
 Protection against short circuits: type gG fuse 16 A 250 V  
 Rated impulse withstand voltage (Uimp): 4 kV  
 Conditional short circuit current: 1000 A  
 Protection degree of the housing: IP00  
 Terminals: screw terminals/faston  
 Pollution degree: 3  
 Utilization category: AC15  
 Operating voltage (Ue): 250 Vac (50 Hz)  
 Operating current (Ie): 5 A  
 Forms of the contact element: X; Y; C  
 Positive opening of contacts on contact blocks: 1, 3

In conformity with standards: EN 60947-1, EN 60947-5-1 + A1:2009, fundamental requirements of the Low Voltage Directive 2006/95/EC.

Please contact our technical service for the list of approved products.

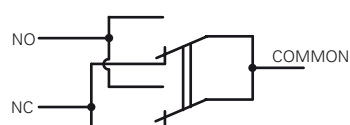
## Characteristics approved by UL

Utilization categories Q300 (69 VA, 125-250 Vdc)  
 A300 (720 VA, 120 ... 300 Vac)

In conformity with standard: UL 508, CSA 22.2 No.14

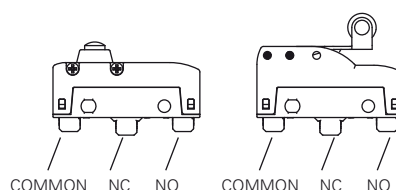
Please contact our technical service for the list of approved products.

## Circuit diagram

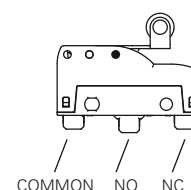


Contacts with single interruption and double contacts

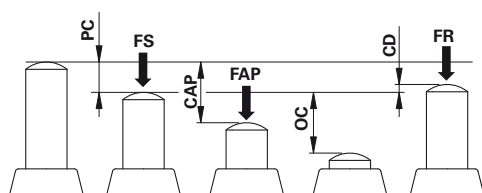
With direct and back direct action (F, D)



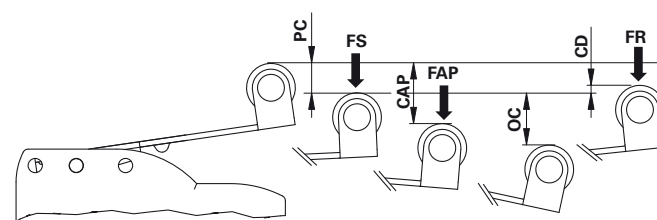
With inverted action (R)



## Actuation forces and travels



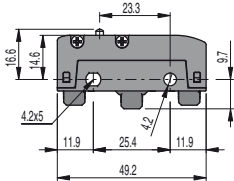
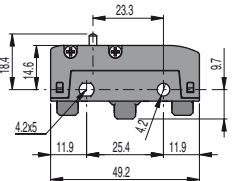
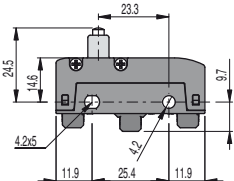
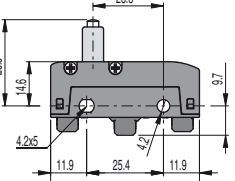
PC pre-travel  
 CAP positive opening travel  
 OC over-travel  
 CD differential travel

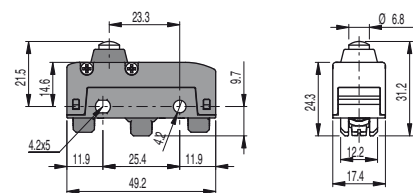


FS operating force  
 FR releasing force  
 FAP positive opening force

## Microswitches with direct action

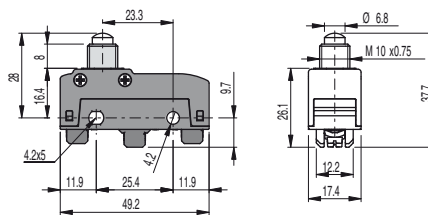
All measures in the drawings are in mm

 <p><b>MK V11D01</b> 1NO+1NC</p> <p>PC 0,5 mm          OC 1,5 mm          CD 0,05 mm</p> <p>FS 4 N          FR 3 N</p> <p>Maximum and Minimum speed page 245 - type 1</p>	 <p><b>MK V11D02</b> 1NO+1NC</p> <p>PC 0,5 mm          OC 2 mm          CD 0,05 mm</p> <p>FS 4 N          FR 3 N</p> <p>Maximum and Minimum speed page 245 - type 1</p>
 <p><b>MK V11D03</b> 1NO+1NC</p> <p>PC 0,5 mm          OC 2 mm          CD 0,05 mm</p> <p>FS 4 N          FR 3 N</p> <p>Maximum and Minimum speed page 245 - type 1</p>	 <p><b>MK V11D04</b> 1NO+1NC</p> <p>PC 0,5 mm          OC 2 mm          CD 0,05 mm</p> <p>FS 4 N          FR 3 N</p> <p>Maximum and Minimum speed page 245 - type 1</p>



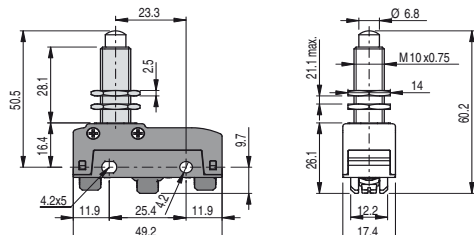
<b>MK V11D05</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 2 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 1



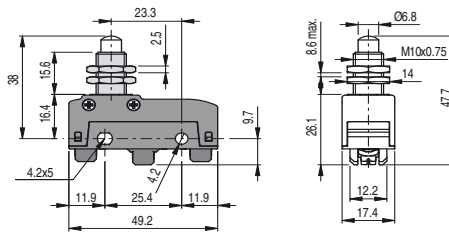
<b>MK V11D06</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 3 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 1



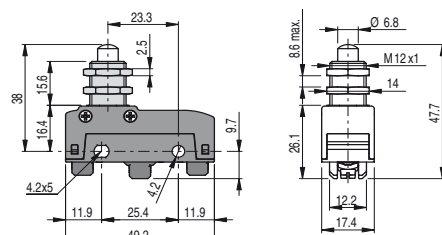
<b>MK V11D08</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 5,5 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 1



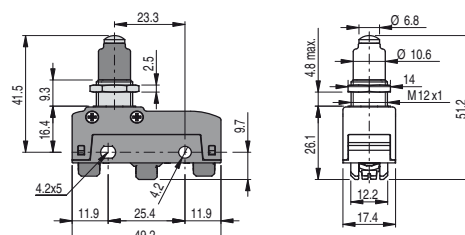
<b>MK V11D09</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 5,5 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 1



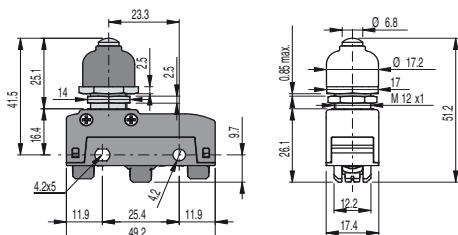
<b>MK V11D10</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 5,5 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 1



<b>MK V11D12</b> → 1NO+1NC	PC 0,5 mm	FS 4,5 N
	OC 5,5 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

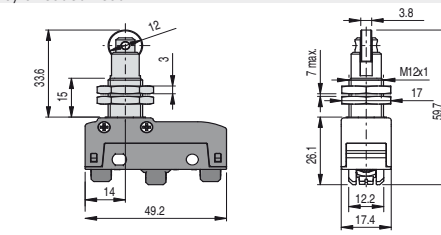
Maximum and Minimum speed page 245 - type 1



<b>MK V11D13</b> → 1NO+1NC	PC 0,6 mm	FS 6 N
	OC 5,4 mm	FR 4 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 1

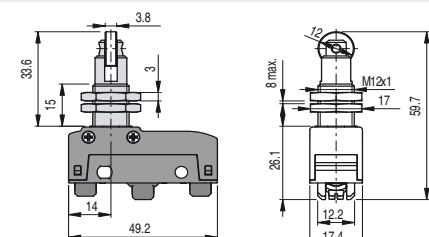
Fixed only by threaded head



<b>MK V11D15</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 5,5 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

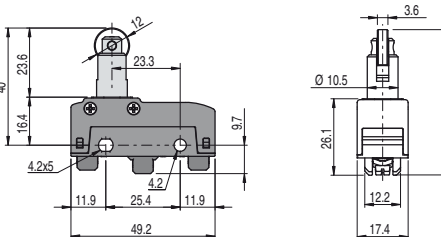
Maximum and Minimum speed page 245 - type 2

Fixed only by threaded head



<b>MK V11D17</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 5,5 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 2



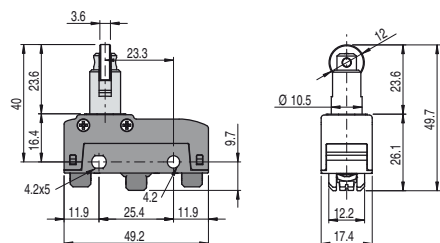
<b>MK V11D18</b> → 1NO+1NC	PC 0,5 mm	FS 4 N
	OC 5,5 mm	FR 3 N
	CD 0,05 mm	FAP 20 N
	CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 2

Items with code on **green** background are stock items

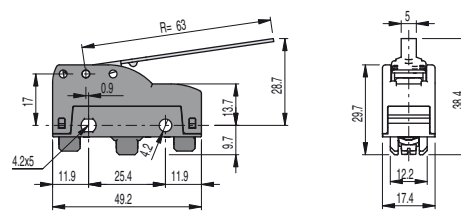
Accessories See page 225

→ The 2D/3D files are available at [www.pizzato.com](http://www.pizzato.com)



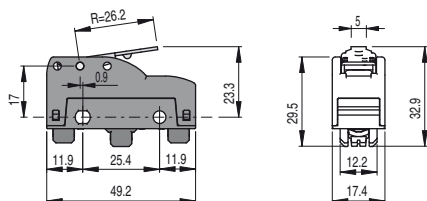
<b>MK V11D19</b>	1NO+1NC	PC 0,5 mm	FS 4 N
		OC 5,5 mm	FR 3 N .
		CD 0,05 mm	FAP 20 N
		CAP 2,2 mm	

Maximum and Minimum speed page 245 - type 2



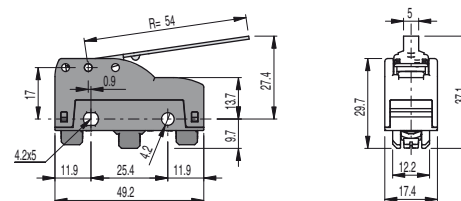
<b>MK V11D30</b>	1NO+1NC	PC 9 mm	FS 0,65 N
		OC 10 mm	FR 0,5 N
		CD 1,1 mm	

Maximum and Minimum speed page 245 - type 3



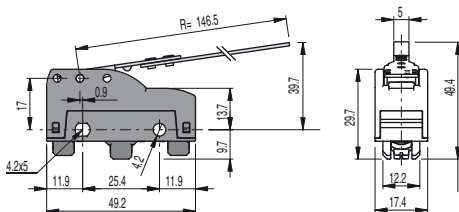
<b>MK V11D31</b>	1NO+1NC	PC 4,54 mm	FS 1,66 N
		OC 3,86 mm	FR 1,32 N
		CD 0,42 mm	

Maximum and Minimum speed page 245 - type 3



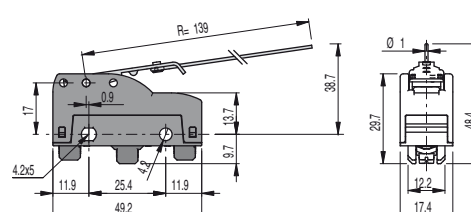
<b>MK V11D32</b>	1NO+1NC	PC 7,7 mm	FS 0,76 N
		OC 8,3 mm	FR 0,58 N
		CD 0,9 mm	

Maximum and Minimum speed page 245 - type 3



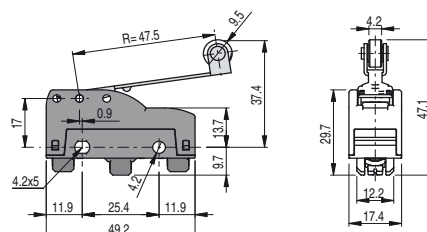
<b>MK V11D35</b>	1NO+1NC	PC 19 mm	FS 0,28 N
		OC 16,7 mm	FR 0,22 N
		CD 2,5 mm	

Maximum and Minimum speed page 245 - type 3



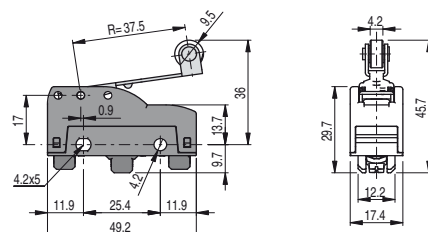
<b>MK V11D37</b>	1NO+1NC	PC 19 mm	FS 0,08 N
		OC 9,5 mm	FR 0,04 N
		CD 2,3 mm	

Maximum and Minimum speed page 245 - type 3



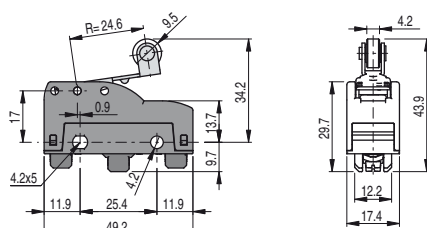
<b>MK V11D40</b>	1NO+1NC	PC 6,7 mm	FS 0,86 N
		OC 7,8 mm	FR 0,66 N
		CD 0,8 mm	

Maximum and Minimum speed page 245 - type 6



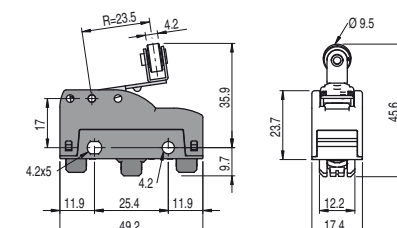
<b>MK V11D42</b>	1NO+1NC	PC 5,3 mm	FS 1,09 N
		OC 5,7 mm	FR 0,84 N
		CD 0,6 mm	

Maximum and Minimum speed page 245 - type 6



<b>MK V11D45</b>	1NO+1NC	PC 3,5 mm	FS 1,66 N
		OC 4,5 mm	FR 1,28 N
		CD 0,4 mm	

Maximum and Minimum speed page 245 - type 6



<b>MK V11D46</b>	1NO+1NC	PC 3,5 mm	FS 1,66 N
		OC 4,5 mm	FR 1,28 N
		CD 0,4 mm	

Maximum and Minimum speed page 245 - type 6

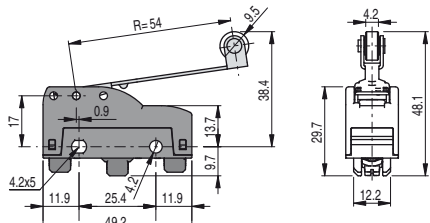
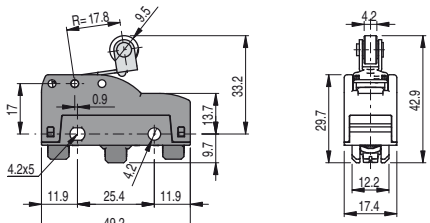
Items with code on **green** background are stock items

Accessories See page 225

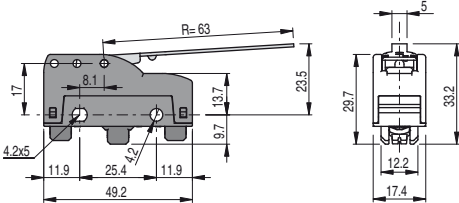
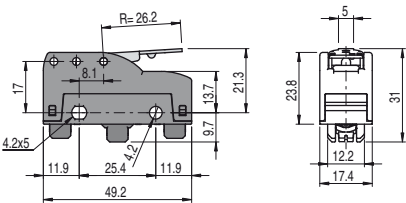
→ The 2D/3D files are available at [www.pizzato.com](http://www.pizzato.com)

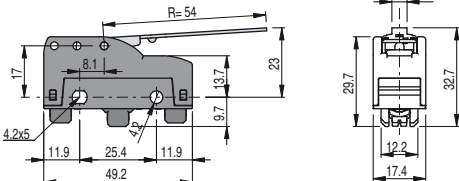
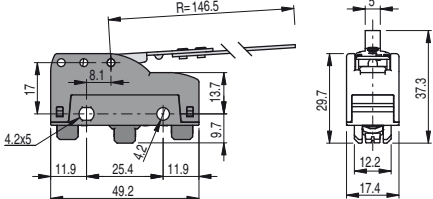


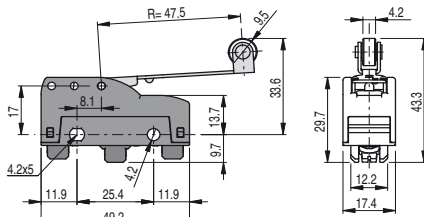
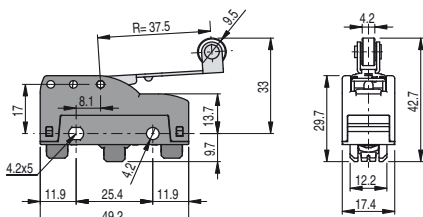
<b>MK V11D47</b>	1NO+1NC	PC 3,5 mm OC 4 mm CD 0,4 mm	FS 1,66 N FR 1,28 N	<b>MK V11D49</b>	1NO+1NC	Hand operated	
Maximum and Minimum speed page 245 - type 6				Maximum and Minimum speed page 245 - type 3			

							
<b>MK V11D53</b>	1NO+1NC	PC 7,7 mm OC 8,9 mm CD 0,9 mm	FS 0,76 N FR 0,58 N	<b>MK V11D59</b>	1NO+1NC	PC 2,5 mm OC 4,5 mm CD 0,2 mm	FS 2,3 N FR 1,77 N
Maximum and Minimum speed page 245 - type 6				Maximum and Minimum speed page 245 - type 6			

**Microswitches with inverted action**

							
<b>MK V11R30</b>	1NO+1NC	PC 4,4 mm OC 14 mm CD 1 mm	FS 0,6 N FR 0,4 N	<b>MK V11R31</b>	1NO+1NC	PC 0,7 mm OC 6,01 mm CD 0,23 mm	FS 1,47 N FR 0,72 N
Maximum and Minimum speed page 245 - type 4				Maximum and Minimum speed page 245 - type 4			

							
<b>MK V11R32</b>	1NO+1NC	PC 3,7 mm OC 11,8 mm CD 0,8 mm	FS 0,7 N FR 0,5 N	<b>MK V11R35</b>	1NO+1NC	PC 14,3 mm OC 25,7 mm CD 3,2 mm	FS 0,3 N FR 0,2 N
Maximum and Minimum speed page 245 - type 4				Maximum and Minimum speed page 245 - type 7			

							
<b>MK V11R40</b>	1NO+1NC	PC 3,4 mm OC 10,3 mm CD 0,7 mm	FS 0,8 N FR 0,5 N	<b>MK V11R42</b>	1NO+1NC	PC 2,7 mm OC 7,9 mm CD 0,5 mm	FS 1,2 N FR 1,7 N
Maximum and Minimum speed page 245 - type 7				Maximum and Minimum speed page 245 - type 7			

Items with code on **green** background are stock items

Accessories See page 225

→ The 2D/3D files are available at [www.pizzato.com](http://www.pizzato.com)

<b>MK V11R45</b> 1NO+1NC PC 1,5 mm OC 5,5 mm CD 0,3 mm FS 1,7 N FR 1 N	<b>MK V11R46</b> 1NO+1NC PC 3,5 mm OC 5,4 mm CD 0,2 mm FS 1,5 N FR 1,45 N
Maximum and Minimum speed page 245 - type 7	Maximum and Minimum speed page 245 - type 7

<p>It switches → ← It does not switch</p>	
<b>MK V11R47</b> 1NO+1NC PC 1,7 mm OC 5,3 mm CD 0,3 mm FS 1,7 N FR 1 N	<b>MK V11R53</b> 1NO+1NC PC 4,3 mm OC 11,6 mm CD 0,8 mm FS 0,8 N FR 0,4 N
Maximum and Minimum speed page 245 - type 7	Maximum and Minimum speed page 245 - type 7

<b>MK V11R59</b> 1NO+1NC PC 1,5 mm OC 3,9 mm CD 0,3 mm FS 2,4 N FR 1,3 N	<b>MK V11R60</b> 1NO+1NC PC 2,7 mm OC 9,2 mm CD 0,5 mm FS 1,2 N FR 0,6 N
Maximum and Minimum speed page 245 - type 7	Maximum and Minimum speed page 245 - type 4

### Microswitches with back direct action

<b>MK V11F30</b> 1NO+1NC PC 2,7 mm OC 12,9 mm CD 0,35 mm FS 0,6 N FR 0,5 N	<b>MK V11F31</b> 1NO+1NC PC 1,63 mm OC 4,64 mm CD 0,17 mm CAP 5,72 mm FS 1,76 N FR 1,08 N FAP 5,78 N
Maximum and Minimum speed page 245 - type 5	Maximum and Minimum speed page 245 - type 5

<b>MK V11F32</b> 1NO+1NC PC 2,5 mm OC 11,5 mm CD 0,3 mm FS 0,7 N FR 0,6 N	<b>MK V11F35</b> 1NO+1NC PC 7,5 mm OC 25,9 mm CD 1,3 mm FS 0,25 N FR 0,2 N
Maximum and Minimum speed page 245 - type 5	Maximum and Minimum speed page 245 - type 5

Accessories See page 225

→ The 2D/3D files are available at [www.pizzato.com](http://www.pizzato.com)

		<b>MK V11F40</b>	1NO+1NC	PC 2,4 mm OC 10,4 mm CD 0,25 mm	FS 0,85 N FR 0,65 N
		<b>MK V11F42</b>	1NO+1NC	PC 1,6 mm OC 8,4 mm CD 0,2 mm CAP 9 mm	FS 1 N FR 0,7 N FAP 4,9 N
Maximum and Minimum speed		page 245 - type 8			

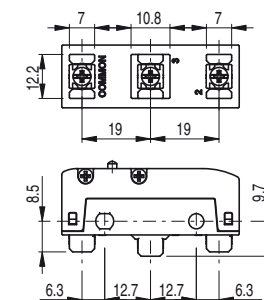
		<b>MK V11F45</b>	1NO+1NC	PC 1,1 mm OC 6,6 mm CD 0,1 mm CAP 6,3 mm	FS 1,3 N FR 0,9 N FAP 6,9 N
		<b>MK V11F46</b>	1NO+1NC	PC 1,1 mm OC 6,6 mm CD 0,1 mm CAP 6,3 mm	FS 1,3 N FR 0,9 N FAP 6,9 N
Maximum and Minimum speed		page 245 - type 8			

		<b>MK V11F47</b>	1NO+1NC	PC 1,1 mm OC 5,6 mm CD 0,1 mm CAP 6,3 mm	FS 1,3 N FR 0,9 N FAP 6,9 N
Maximum and Minimum speed		page 245 - type 8			
		<b>MK V11F49</b>	1NO+1NC	PC 1,5 mm OC 7,5 mm CD 0,2 mm CAP 9 mm	FS 1 N FR 0,7 N FAP 4,8 N
Maximum and Minimum speed		page 245 - type 5			

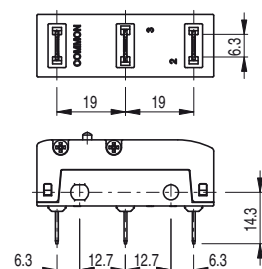
		<b>MK V11F53</b>	1NO+1NC	PC 2,5 mm OC 11,5 mm CD 0,3 mm	FS 0,7 N FR 0,6 N
Maximum and Minimum speed		page 245 - type 8			
		<b>MK V11F59</b>	1NO+1NC	PC 0,8 mm OC 5,2 mm CD 0,08 mm CAP 4,9 mm	FS 1,7 N FR 1,3 N FAP 8,9 N
Maximum and Minimum speed		page 245 - type 8			

## Terminals outline dimensions

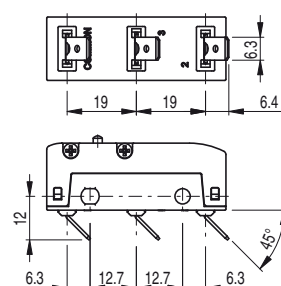
All measures in the drawings are in mm



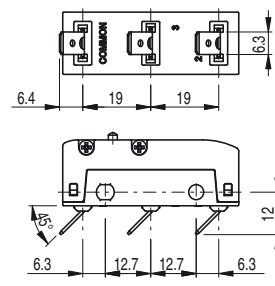
Screw terminals **V** with plate



Vertical faston **H** terminals



Faston terminals **F**, right bending



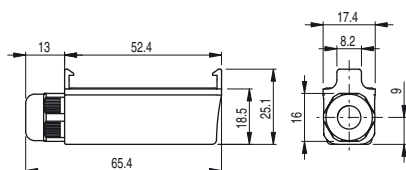
Faston terminals **G**, left bending (on request)

Note: H vertical faston terminals can be bent according to one's installation requirements.

We recommend to bend the faston with an angle not higher than 45° and to carry out this operation no more than 5 times.

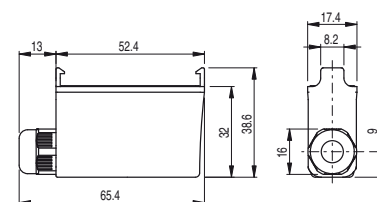
## Protections (terminal covers)

10 pcs. packs



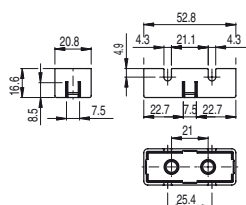
Protective terminal cover for screw terminals snap-in assembled and with wiretrap cable gland. Allows the stacked installation of switches.

Article	Description	Protection degree
VF MKCV11	Protective terminal cover without gasket for multipolar cables from Ø 5 to Ø 7.5 mm	IP40
VF MKCV12	Protective terminal cover without gasket for multipolar cables from Ø 4 to Ø 7.5 mm	IP40
VF MKCV13	Protective terminal cover without gasket for multipolar cables from Ø 2 to Ø 5.5 mm	IP40
VF MKCV22	Protective terminal cover with gasket for multipolar cables from Ø 4 to Ø 7.5 mm	IP65
VF MKCV23	Protective terminal cover with gasket for multipolar cables from Ø 2 to Ø 5.5 mm	IP65

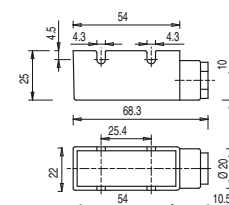
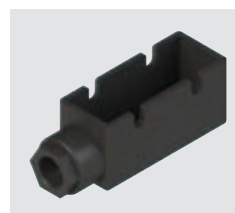


Protective terminal cover for vertical faston terminals with wiretrap cable gland, snap-in attachment. Allows the stacked installation of switches.

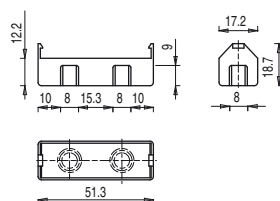
Article	Description	Protection degree
VF MKCH11	Protective terminal cover without gasket for multipolar cables from Ø 5 to Ø 7.5 mm	IP40
VF MKCH12	Protective terminal cover without gasket for multipolar cables from Ø 4 to Ø 7.5 mm	IP40
VF MKCH13	Protective terminal cover without gasket for multipolar cables from Ø 2 to Ø 5.5 mm	IP40
VF MKCH22	Protective terminal cover with gasket for multipolar cables from Ø 4 to Ø 7.5 mm	IP65
VF MKCH23	Protective terminal cover with gasket for multipolar cables from Ø 2 to Ø 5.5 mm	IP65



Article	Description	Protection degree
VF C01	Protective terminal cover for screw terminals	IP20



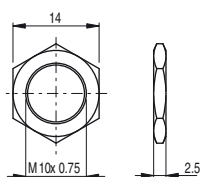
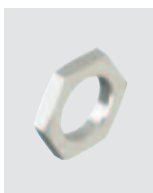
Article	Description	Protection degree
VF C02	Protective terminal cover for screw terminals with cable gland PG9 for multipolar cables from Ø 5 to Ø 7 mm	IP40



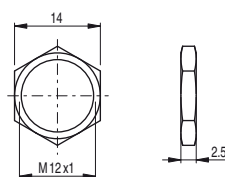
Article	Description	Protection degree
VF C03	Protective terminal cover for screw terminals, snap-in attachment. Allows the stacked installation of switches	IP20

## Accessories

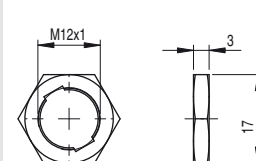
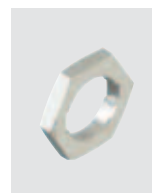
10 pcs. packs



Article	Description
VF AC83	Hexagonal threaded nut for microswitches with actuators D06, D08, D09



Article	Description
VF AC72	Hexagonal threaded nut for microswitches with actuators D10, D12, D13



Article	Description
AC35	Hexagonal threaded nut notched for microswitches with actuators D15, D16

Items with code on **green** background are stock items

Accessories See page 225

The 2D/3D files are available at [www.pizzato.com](http://www.pizzato.com)