



### Main data

- Polymer housing with positive opening ☺
- Protection degree IP20 (terminals), IP40 (contacts)
- 11 contact blocks available
- Actuator with plastic or metal push button
- Suitable for foot switches PA, PX series

### Markings and quality marks:



Approval UL: E131787  
 Approval CCC: 2013010305600704  
 Approval GOST: POCC IT.AB24.B04512

### Technical data

#### Housing

Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin  
 Protection degree: IP20 (terminals), IP40 (contacts) according to EN 60529

#### General data

Ambient temperature: from -25°C to +80°C  
 Version for operation in ambient temperature from -40°C to +80° C on request  
 Max actuation frequency: 3600 operations cycles<sup>1</sup>/hour  
 Mechanical endurance: 20 million operations cycles<sup>1</sup>  
 Maximum actuation speed: 0,5 m/s  
 Minimum actuation speed: 1 mm/s (slow action)  
 0,01 mm/s (snap action)  
 Driving torque for installation: see pages 7/1-7/12  
 (1) One operation cycle means two movements, one to close and one to open contacts, as foreseen by EN 60947-5-1 standard.

#### Cross section of the conductors (flexible copper wire)

Contact blocks 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 18, 37, 66, 67: min. 1 x 0,5 mm<sup>2</sup> (1 x AWG 20)  
 max. 2 x 2,5 mm<sup>2</sup> (2 x AWG 14))

#### In conformity with standards:

IEC 60947-5-1, EN 60947-5-1, EN 60947-1, IEC 60204-1, EN 60204-1, EN 1088, EN ISO 12100-1, EN ISO 12100-2, IEC 60529, EN 60529, NFC 63-140, VDE 0660-200, VDE 0113, .

#### Approvals:

UL 508

#### In conformity with requirements requested by:

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

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

IEC 60947-5-1, EN 60947-5-1, VDE 0660-206.

### Installation for safety applications:

Use only switches marked with the symbol ☺. The safety circuit must always be connected with the **NC contacts** (normally closed contacts: 11-12, 21-22 or 31-32) as stated in the **standard EN 60947-5-1, encl. K, par. 2**. The switch must be actuated with **at least up to the positive opening travel** shown in the travels diagrams. The switch must be actuated **at least with the positive opening force**, shown in brackets, underneath each article, near the value of the min. force.

⚠ **If not expressly indicated in this chapter, for the right installation and the correct utilization of all articles see requirements indicated from page 7/1 to page 7/12.**

#### Electrical data

Thermal current (I<sub>th</sub>): 10 A  
 Rated insulation voltage (U<sub>i</sub>): 500 Vac 600 Vdc  
 Rated impulse withstand voltage (U<sub>imp</sub>): 6 kV  
 Conditional short circuit current: 1000 A according to EN 60947-5-1  
 Protection against short circuits: fuse 10 A 500 V type aM  
 Pollution degree: 3

#### Utilization categories

Alternate current: AC15 (50-60 Hz)  

U <sub>e</sub> (V)	250	400	500
I <sub>e</sub> (A)	6	4	1

 Direct current: DC13  

U <sub>e</sub> (V)	24	125	250
I <sub>e</sub> (A)	6	1,1	0,4

### Data type approved by UL

Utilization categories Q300 (69 VA, 125-250 Vdc)  
 A600 (720 VA, 120-600 Vac)  
 Data of the housing type 1, 4X "indoor use only", 12, 13  
 For all contact blocks use 60 or 75 °C copper (Cu) conductor and wire size No. 12-14 AWG. Terminal tightening torque of 7,1 lb in (0,8 Nm).

In conformity with standard: UL 508

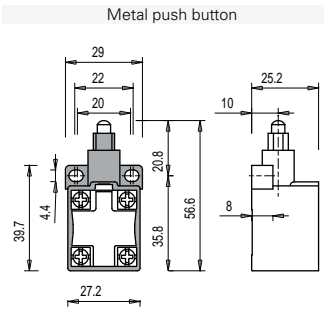
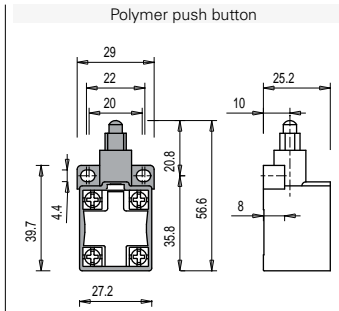
Please contact our technical service for the list of approved products.



### Dimensional drawings

Contacts type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LA** = slow action closer



Contact blocks

Travel diagrams

5	<b>R</b>	<b>VF B501</b> → 1NO+1NC	<b>VF B502</b> → 1NO+1NC	
6	<b>L</b>	<b>VF B601</b> → 1NO+1NC	<b>VF B602</b> → 1NO+1NC	
7	<b>LO</b>	<b>VF B701</b> → 1NO+1NC	<b>VF B702</b> → 1NO+1NC	
9	<b>L</b>	<b>VF B901</b> → 2NC	<b>VF B902</b> → 2NC	
10	<b>L</b>	<b>VF B1001</b> 2NO	<b>VF B1002</b> 2NO	
11	<b>R</b>	<b>VF B1101</b> → 2NC	<b>VF B1102</b> → 2NC	
12	<b>R</b>	<b>VF B1201</b> 2NO	<b>VF B1202</b> 2NO	
13	<b>LV</b>	<b>VF B1301</b> → 2NC	<b>VF B1302</b> → 2NC	
14	<b>LS</b>	<b>VF B1401</b> → 2NC	<b>VF B1402</b> → 2NC	
15	<b>LS</b>	<b>VF B1501</b> 2NO	<b>VF B1502</b> 2NO	
18	<b>LA</b>	<b>VF B1801</b> → 1NO+1NC	<b>VF B1802</b> → 1NO+1NC	
37	<b>L</b>	<b>VF B3701</b> → 1NO+1NC	<b>VF B3702</b> → 1NO+1NC	
66	<b>L</b>	<b>VF B6601</b> → 1NC	<b>VF B6602</b> → 1NC	
67	<b>L</b>	<b>VF B6701</b> 1NO	<b>VF B6702</b> 1NO	
Max speed		0,5 m/s	0,5 m/s	
Min. force		8 N (20 N →)	8 N (20 N →)	

#### Legend

■ Closed contact | □ Opened contact | ⊕ Positive opening travel | ▶ Pushing the switch / ◀ Releasing the switch

### Code structure

article options  
**VF B501-G**

#### Contact blocks

- 5** 1NO+1NC, snap action
- 6** 1NO+1NC, slow action
- 7** 1NO+1NC, slow action overlapped
- 9** 2NC, slow action
- 10** 2NO, slow action
- 11** 2NC, snap action
- 12** 2NO, snap action
- 13** 2NC, slow action shifted and spaced
- 14** 2NC, slow action shifted
- 15** 2NO, slow action shifted
- 18** 1NO+1NC, slow action closer
- 37** 1NO+1NC, snap action
- 66** 1NC, snap action
- 67** 1NO, snap action

#### Contacts type

- silver contacts (standard)
- G** silver contacts gold plated 1 μm

#### Actuators

- 01** with polymer push button
- 02** with metal push button

Accessories See page 6/1

Items with code on the green background are available in stock