

**Emergency-stop**



**General Data**

Type reference	FR(P)VK(Y1)(P)(L)(R)(O)(OO)(OI)(S)(OOO)(OOI)(OII)(Z)(LZ)(P)(L_A U)(_R0)
Description	Emergency-stop head, foolproof
Approvals	CCC, CE, cURus, TÜV_Süd, UKCA
Contact type	1 NC / 2 NC / 3 NC / 1 NC+1 NO / 2 NC+1 NO / 1 NC+2 NO
Degree of protection	IP65 / IP67
Connection type	Faston terminals 2.8 x 0.8 mm / PCB-mount terminals
Contact material	AgNi / AgNi, gold-plated 5µm (_AU)
Max. storage temperature	-40°C ... 80°C
Max. operating temperature	-25°C ... 70°C
Mechanical life	50,000 switching cycles
Electrical life (rated load)	50,000 switching cycles at rated load
Contact resistance NO	< 50 mOhm (new state)
Contact resistance NC	< 50 mOhm (new state)
Bouncing time NO	< 10ms
Bouncing time NC	< 10ms
Positive opening contact	acc. to EN60947-5-1, appendix K

**Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)**

	alternate current	direct current
Utilisation category	AC15 B300	DC13 Q300
Rated insulation voltage Ui	250 V	250 V
Rated operating voltage Ue	240 V / 120 V	250 V / 125 V / 60 V / 24 V
Rated operating current Ie	1.5 A / 3 A	0.27 A / 0.55 A / 1 A / 2 A
Breaking capacity	10Ie	1,1Ie
Continuous thermal current	5 A	-

**Technical Data - Lamp**

Lamp socket	none, with integrated 3 mm LED
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Max. lamp voltage	30 V AC/DC
Max. lamp output	4 mA at 24 V DC)
Definition	X1...anode, X2...cathode

### Additional data

Mounting aperture	22.3 mm
Tightening torque (mounting nut)	1.3 ... 1.9 Nm
Release	twist release, left or right
Mounting position	any
Standards	EN 60947-5-1, EN 60947-5-5, EN ISO 13850
Ld	20% (NC)
B10d [cycles]	250,000
Pollution degree	3

### Note

O = NC contact; I = NO contact  
With switching position indicator

Electrical features for 5µm gold-plating, type addition ...AU  
Switching voltage 20mV ... 42V AC/DC  
Switching current 1mA ... 250mA

Versions with Faston terminals: use partially or all-insulated Faston clamps

Overvoltage category II (2.5kV), pollution degree 2 for:  
- illuminated versions (24 V LED)  
- versions with 3rd contact  
- versions with NO contacts (I, II, OI)

FRVKP... emergency-stop for hygienic areas  
Tightening torque (fixing nut): 1.0 ... 1.7 Nm  
Degree of protection: IP66/IP67/IP69k\*1)  
Approvals: CE, DGUV-Test  
Mechanical life: 20.000 (20°C)  
>6050 (-25°C)  
>6050 (+70°C)  
B10d/Ld: 150.000

\*1) Limitation: nozzle distance > 250 mm. Standard requirement acc. to ISO 20653:2013-02 (IPX9K) 100 – 150 mm

Use in hygienic areas:

- Permanently suitable from -30°C to +50°C and with food contact temporarily up to +70°C
- Migration testing (OML) according to EU regulation no.10/2011 using ethanol (50%) and acetic acid (3%) at 40°C/1h, ethanol (95%) at 40°C/0.5h
- The emergency stop should be installed in a way to exclude a deposit of residues in its active and non-active state

FRVK...Z ...emergency-stop for base-plate mounting  
FRVK...LZ ...emergency-stop for base-plate mounting with height compensation for Shortron  
Approvals: CE  
The relating contact block (PTS...) is being plugged into the neck of the actuator head.  
Spacer sleeves ensure the correct distance between PCB and mounting plate.  
The screws must be secured against loosening.



FRVK..R... ..red LED

FRVK...R0 ...0 ohm series resistor, with protective diode (series-connected)

Attention: The LED must not be operated without series resistor.

(Do not connect terminals X1-X2 directly to voltage)

Observe LED data!

LED cut-off voltage: max. 70 V (with protective diode)

If LED, max: 30 mA

Uf LED, typical: white: 3.2V (20mA) red: 2.0 V (20mA)

FRPVK... FRPVK(Z), FRPVK(O)(OO)(OI)(LOO) FRPVK(OO)(OO)P

Release: pull to release

Max. traction: 160N

Life time: 30.000

B10d/Ld: 170.000/20%

### Data acc. to UL

Rating contact block

Silver: B300, 24 V DC/3 A  
Gold: 42 V DC/100 mA

Lamp rating

LED: 30 V AC/DC (4 mA at 24 V)

NEMA TYPE

4x indoor (front face)

