

**FRVKDOO**

11.03.2022

**Active illuminated safety emergency-stop  
with position indication active/inactive**



**General Data**

Type reference	FRVKDOO
Description	Emergency-stop, active/inactive (without diagnostic device)
Approvals	CE, cURus, TÜV_Süd, UKCA
Contact type	2 NC
Degree of protection	IP65 / IP67
Connection type	Faston terminals 2.8 x 0.8 mm
Contact material	AgNi
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 NC	< 50 mOhm (new state)
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	DC13
Rated insulation voltage $U_i$	250 V	250 V
Rated operating voltage $U_e$	35 V	35 V
Rated operating current $I_e$	5 A	2 A
Breaking capacity	10 $I_e$	1,1 $I_e$
Continuous thermal current	5 A	2.5 A

**Technical Data - Lamp**

Lamp socket	none, with integrated 3 mm LED
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
Overvoltage category	II
Pollution degree	2
Material group	I

### Note

O = NC contact; I = NO contact  
 - with switching position indicator  
 - the diagnostic unit is not scope of delivery

Use partially or all-insulated Faston clamps for the version with Faston terminals

Illumination, status indication active/inactive: acc. to ISO 13850:2015(E), EN ISO 13850:2015(D), DIN EN ISO 13850:2016-05

Mushroom head "grey": "inactive", no emergency-stop  
 Mushroom head "red": "active" emergency-stop

LED data:  
 Type: Opto Devices

Typical data at IF=20mA:  
 Luminous intensity: min. 10000 mcd, typ. 13000 mcd  
 Beam angle: typ. 15°  
 Dominant wave length: 618...624 nm, typ. 621 nm

Rated voltage: 24 V DC ± 10%  
 Rated current: 17.8 mA (15.6...19.95mA)  
 Typical luminous intensity at IF=18mA: min. 9000 mcd, typ. 11700 mcd  
 Cut-off voltage LED: max. 70 V  
 Average lifetime: abt. 80.000...100.000 h

Safety instructions:

- The emergency-stop may only be used in lighting conditions in which a clear and unambiguous perceptibility of the red illuminated (active) mushroom head is guaranteed; e.g. indoors or in covered places without direct sunlight (normal industrial environment)
- Before using the emergency-stop a safety review of the entire system is required.
- Depending on the designer's risk assessment, the illumination of the emergency-stop has to be monitored by means of a "diagnostic unit", and in case of a failure one has to react in accordance with the risk evaluation.
- The illumination of the emergency-stop has to be checked regularly as to its clear perceptibility. The emergency-stop has to be exchanged in case the clear perceptibility is no longer given.
- Observe the operating instructions

Standard compliant applications:

- pluggable operator stations
- wireless operator stations
- pluggable system components (system components which are stationary available but only temporarily in operation)



**Data acc. to UL**

Rating	Pilot duty B300; 24Vdc/3A
Category	NISD2/8
Torque	1.3 ... 1.9 Nm (head nut)

**Data acc. to UL 60947-5-1/ CSA-C22.2 No. 60947-5-1**

Ratings	B300, 24Vdc/3A
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