FRVKDOO_C113 15.02.2024

Emergency-stop with 5-pole M12 connector, AIDA
and status indication active/inactive

General Data

Type reference	FRVKDOO_C113
Description	Emergency-stop, active/inactive (without diagnostic unit), with integrated 5-pole M12 connector
Approvals	CE, UKCA
Contact type	2 NC
Degree of protection	IP65 / IP67 (in the front); IP65 / IP67 (on the rear with plugged-in M12 connector)
Connection type	5-pole M12, A coded
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	-	DC13
Rated insulation voltage Ui	-	-
Rated operating voltage Ue	-	24 V
Rated operating current Ie	-	2 A
Breaking capacity	-	-
Continuous thermal current	-	2 A

Technical Data - Lamp

Lamp socket	none, with integrated 3 mm LED
Definition	Pin5: LED+, Pin3: LED-

Additional data

Mounting aperture	22.3 mm
Tightening torque (mounting nut)	1.0 ... 1.7 Nm
Release	twist release, left or right
Mounting position	any
Standards	EN 60947-5-1, EN 60947-5-5, EN ISO 13850
Tightening torque (M12-connector)	max. 0.4 Nm
Ld	20% (NC)
B10d [cycles]	250,000
Overvoltage category	II
Pollution degree	2
Material group	I

Note

O = NC contact
- with switching position indicator
- the diagnostic unit is not scope of delivery

Conditional short circuit Iq: 1000 A
Rated impulse withstand voltage Uimp: 2.5 KV at contact element
Short circuit means (recommendation): safety fuse 2A gG

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

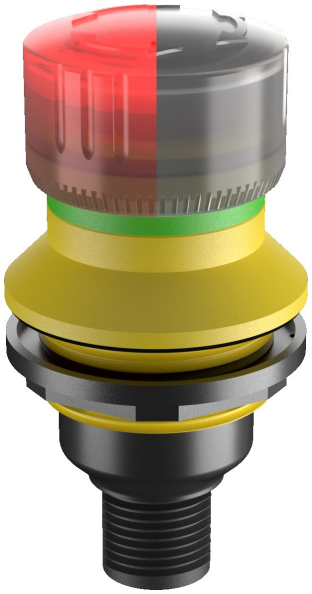
Safety instructions / mounting instructions
- The emergency-stop must only be used when lighting conditions ensure a clear and distinct visibility of the red illuminated (active) mushroom, e.g. in interiors or roofed places without direct sunlight (normal industrial environment).
- Before using the emergency-stop 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.
- the M12 connector must not be connected or disconnected under load
- the single connector pin may be loaded with max. 2 A
- not suitable for use under water
- there may not be any mechanical load on the M12 connector, ensure that there is sufficient stain relief!

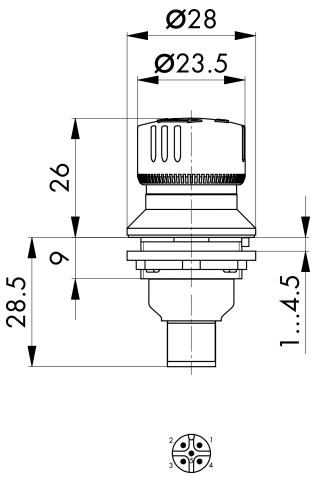
- observe the operating instructions
- depending on the usage the LED connected to the common pin must be considered in the overall system There is no electrical isolation from the normally closed contact!
- observe the operating instructions

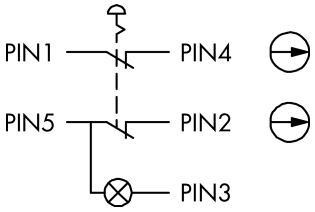
- voltage of +24 V ± 10% must be applied at pin 5 to operate the "active/inactive" LED.

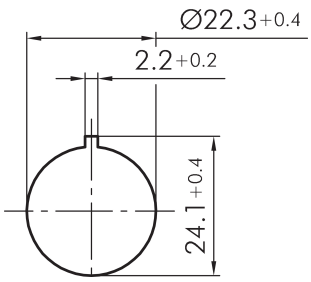
Standard compliant applications:
- pluggable operator stations
- wireless operator stations
- pluggable system components (system components which are stationary available but only temporarily in operation)

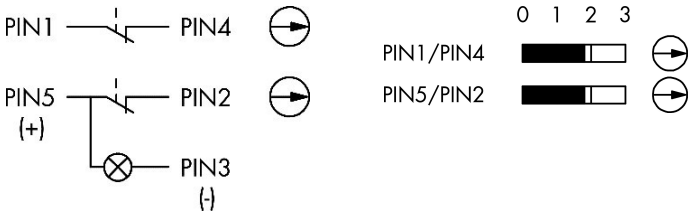
Pin assignment:
Pin 1 Pin 2 Pin 3 Pin 4 Pin 5 Type
NC1 NC2 LED - NC1 COM (NC2, LED +) 2 NC (AIDA)











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