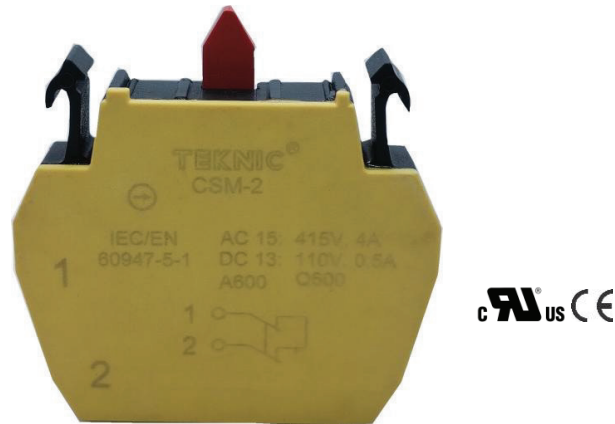


Model No.: **CSM-2**  
Description: **Self Monitored Clip on Contact element.**



Self-Monitoring or constantly monitoring Contact Blocks (CMS-2) incorporate a contact design that continuously verifies the secure attachment of the contact block to the actuator. The assembly includes a Constant-Monitoring Normally Open (CM-NO) contact that is mechanically held closed when the contact block is correctly installed on the actuator. This CM-NO contact is wired in series with the Normally Closed (NC) contact.

The NC contact functions as a standard operator contact during normal operation. However, if the contact block becomes detached from the actuator, the CM-NO contact opens, triggering an emergency stop command. While the CMS-2 enhances system safety, it does not replace a safety relay, which remains responsible for monitoring contact state changes and ensuring proper safety circuit operation.

The primary purpose of the CMS-2 is to improve system reliability by detecting contact block separation. A detached contact block can create a hazardous condition because the emergency stop actuator may be operated without actuating the associated contacts, preventing the machine or process from stopping as intended.

Contact block separation can occur for several reasons, including:

#### **Improper Installation**

- Contact block or retaining latch not reinstalled following maintenance
- Mounting screws improperly tightened (over-tightened or under-tightened)
- Contact block or latch not fully engaged or secured in place

#### **Physical Damage**

- Damage to the actuator, contact block, or mounting components

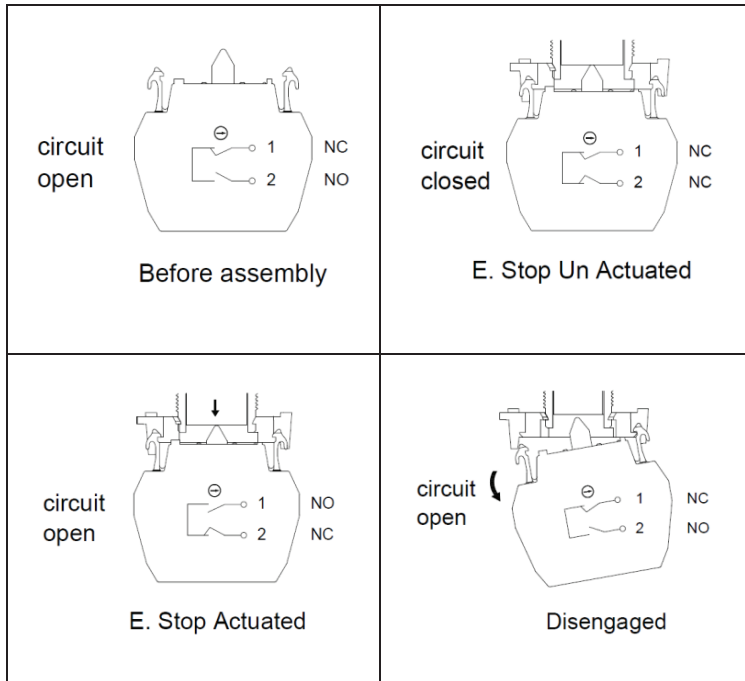
#### **Excessive Vibration**

- Continuous or severe vibration causing loosening or disengagement of components

#### **Standards and Compliance**

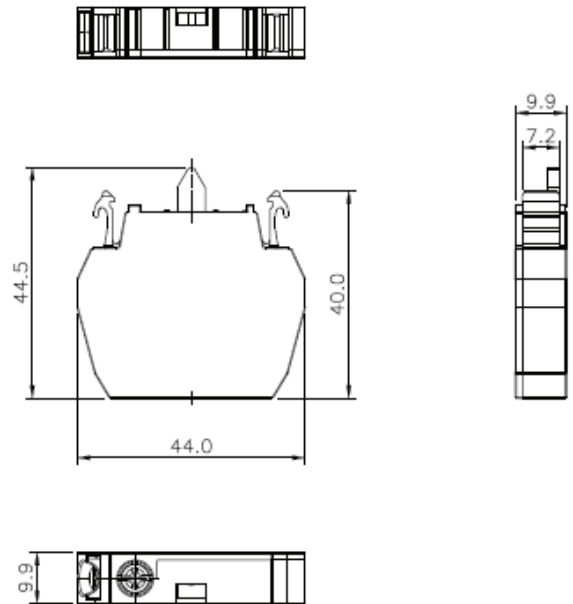
- ISO 13850 – Safety of machinery, emergency stop function
- IEC 60947-5-1/5-5 – Low-voltage switch gear and control gear, including monitored contacts
- EN/IEC 60204-1 – Electrical equipment of machines
- These standards require redundancy and self-monitoring in emergency stop circuits.

By detecting these conditions, CMS-2 provide an additional layer of protection and help maintain the integrity of emergency stop systems.



Overall Dimensions with sketch (LXBXH)


Mm :44.50X44X9.9



### Mechanical Characteristics:

Terminal marking		: 1  2
Diagram		NO - NC - NO
Terminal Torque	Nm	: 0.5 screw head compatible with posidrive or Philips screw driver
Contact material		: Fixed Contact- Brass- Silver tips. Moving Contact- PB - Silver tips
Operation		: Slow Action
Operating torque	Nm	: NA
Operating force	N	: 5
Positive operation		: All functions incorporating a NC contact are positive opening operation
Conforming to IEC/EN 60947-5-1 Appendix K		
Operating travel	mm	: 7

**Mechanical Characteristics :(Contd.)**

Mechanical life		: 1 Million Cycles
Ambient	☒C	: -25°C to +70 °C
Storage	☒C	: -25°C to +40 °C
Weight	gms	:16
Operating force	N	: 5
Connections	Terminal type	: M3.5 Captive clamp connection
Terminal Capacity	mm <sup>2</sup>	: Maximum 2X1.5mm <sup>2</sup> or 1X 2.5mm <sup>2</sup> : Minimum 1X0.5mm <sup>2</sup> (solid/stranded)
	Wire peeling length	: 10mm
Contacts:		: Slow action double breaking
Degree of protection		: IP20 for Terminals
Degree of Pollution		: 3
Applicable standards		: IEC/EN 60947-5-1
Product Certification		: 

**Electrical Characteristics of contacts:**

Electrical life time (AC15)	1A	: 1 million cycles
	2A	: 0.5 million cycles
	3A	: 0.25 million cycles
Make & Break Capacity		: AC 15: 440V, 4A : DC13 :110V, 0.5A
Rated insulation voltage (Ui)	V	: 500 V(As per IEC 60947-5-1)
Rated thermal current	A	: 10 A (As per IEC 60947-5-1)
Frequency	Hz	50-60
Low power application		: 5V.5mA
Short circuit protection		: 10A HRC cartridge fuse, rated for resistive loading at 1000A prospective current
Fuse rating (Type gG)		: 500
Dielectric Test	kV	: 2.5KV , 1sec
Polymeric parts		: UL-Recognized material
Rated Impulse Withstand	kV	: 4
Contact resistance	mΩ	: <25