

### Features & Benefits

- **Tamper-resistant** ... integral actuation shaft prevents bypassing.
- **“Positive-break” NC contacts** ... ensure circuit interruption upon only 3° of guard displacement.
- **Watertight design** ... meets IP67 washdown and immersion requirements.
- **Rugged, corrosion-resistant housing** ... tolerates the most hostile environments.
- **Meets rigid safety agency standards** ... IEC, BG, UL and CSA.
- **Four 90° actuator head positions** ... provide installation flexibility.
- **Optional LED indicators** ... provide visual display of supply voltage and switch operation.

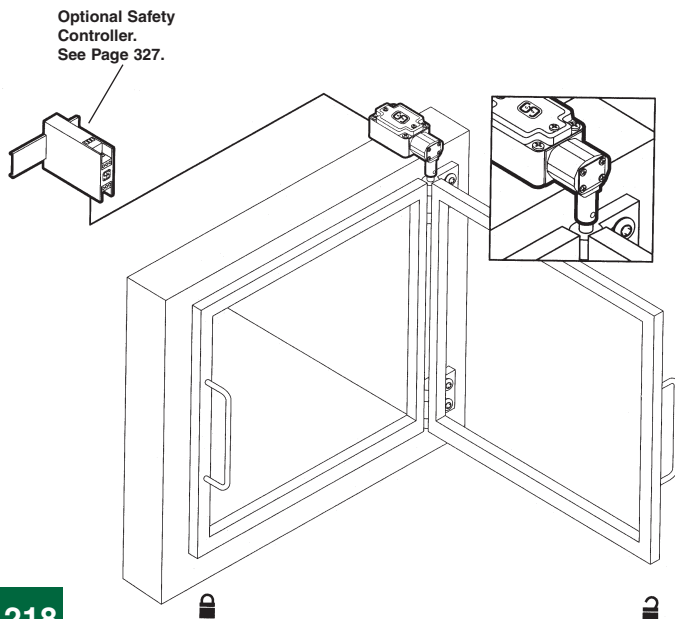
### Description

The TVS335 Series are designed for use with hinged movable machine guards which must be closed for operator safety. Their tamper-resistant design and positive-opening NC contacts provide a significantly higher level of safety than conventional, spring-driven limit switches often used to monitor hinged-guard position. Their IP67 rating make them ideal for interlocking safety guards in hostile environments.

### Operation



The TVS335 is a single-piece, electromechanical safety interlock switch which is designed to mount to a hinged machine guard. After opening the guard only 3°, the unit's positive-break, normally-closed contacts are forced to open by a direct (non-resilient) actuating mechanism. These positive-break contacts ensure circuit interruption (and machine stoppage).



### AVAILABLE STANDARD MODELS

Part Number	Contacts (Guard Closed)	Description*
TV8S-335-11Z	1 NO & 1 NC	Hinged safety interlock switch with 8mm diameter shaft bore hole
TV8S-335-02Z	2 NC	
TV10S-335-11Z	1 NO & 1 NC	Hinged safety interlock switch with 10mm diameter shaft bore hole
TV10S-335-02Z	2 NC	
TV8S-335-11ZG24	1 NO & 1 NC	Hinged safety interlock switch with 8 mm diameter shaft bore and integral LED indicators for supply voltage (green) and switch operation (yellow)
TV8S-335-02ZG24	2 NC	
TV10S-335-11ZG24	1 NO & 1 NC	Hinged safety interlock switch with 10 mm diameter shaft bore and integral LED indicators for supply voltage (green) and switch operation (yellow)
TV10S-335-02ZG24	2 NC	

\*The actuator head may be rotated into any one of four 90° positions.

# TVS335 TECHNICAL DATA

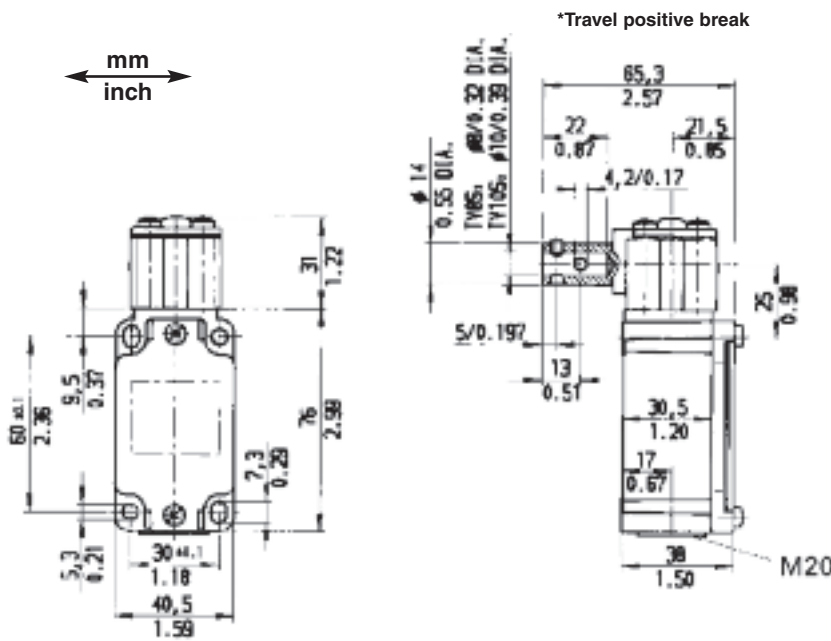
## MECHANICAL SPECIFICATIONS

Housing	Diecast aluminum, enamel finish
Displacement Angle for Contact Opening	3°
Degree of Protection	IP67
Operating Temperature	-22°F to +158°F
Mechanical Life	>10 <sup>6</sup> operations
Operating Rate	5,000 operations/hour (maximum)
Conformity to Standards	IEC 947-5-1 EN 60947-5-1 DIN VDE 0660-200 BG-GS-ET15 UL CSA

## ELECTRICAL SPECIFICATIONS

Contacts	Fine silver
Contact Configuration	Double-pole, double-break with electrically-separated contact bridges
Contact Rating	4A (230VAC) 2.5A (400VDC) 1A (500VAC)
Switching Action	Slow-action, positive-break NC contacts
Short Circuit Protection	Fuse 6A (time-delay)
Rated Insulation Voltage	500VAC
Rated Impulse Withstand Voltage	6kV
Electrical Connections	Screw terminals with self-lifting clamps 13AWG (2.5mm <sup>2</sup> ) maximum wire size

## DIMENSIONS

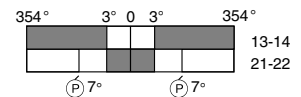
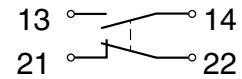


### TV8S/TV10S 335

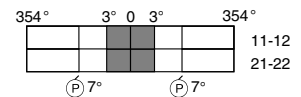
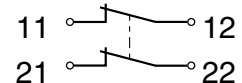
TV8S 335... = bore hole Ø 8 mm  
TV10S 335... = bore hole Ø 10 mm

## SWITCHING DIAGRAMS & CONTACT SCHEMATICS

TV8S 335-11z  
TV10S 335-11z



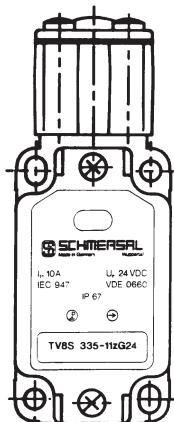
TV8S 335-02z  
TV10S 335-02z



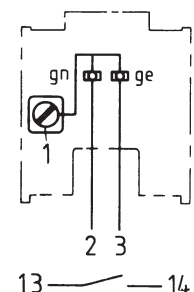
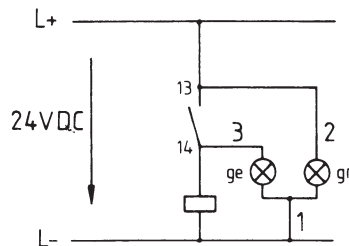
### LED Indicators

Green LED (gn) indicator for supply voltage and yellow LED (ge) indicator for switch operation for 24VDC. The LED's must not be wired, however, in the safety circuit!

Shown here:  
TV8S 335-11zG24



Shown here:  
NO contact (model -11zG24) serves for alarm and signaling purposes.



Protected against wrong polarity connection.  
Protected against transient voltages.