



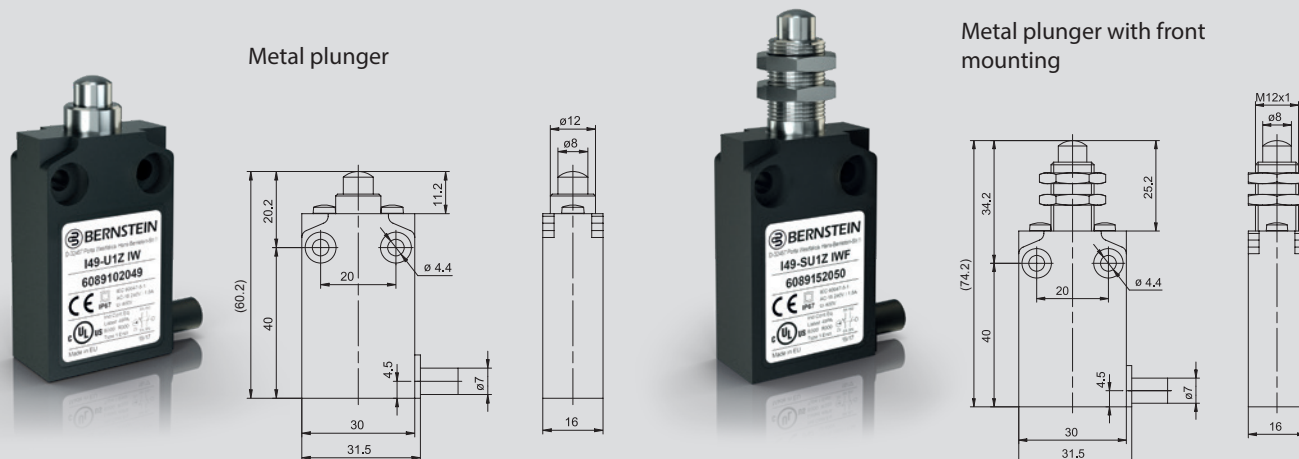
## Double Insulated Position Switch I49

Ultra-flat, extremely flexible, easy to install, with an IP 67 protection class

# Detecting hazardous situations safely with the I49 position switches

I49 mechanical position switches are used to signal specific occurrences, usually associated with the completion of a step in a process. The automation industry uses this system to trigger a new work process or signal. Actuating a switch mechanically allows information to be sent to a machine or installation. This may be a safety function so that the machine switches to the safe status automatically. These products can be used across all industries and environments.

The position switches have an IP67 protection class allowing them to be installed in rough conditions. All position switches in the I49 series have positive opening NC contacts according to IEC 60947-5-1. The I49 is a type 1 switch according to ISO 14119. With a suitable system layout, the switch can be used up to performance level e.



Article number	Designation	Actuator	Contact type	Switching operation	Features
6089152048	I49-SU1Z IW	Metal plunger	1NC / 1NO	Snap action	
6089102049	I49-U1Z IW	Metal plunger	1NC / 1NO	Slow action	
6089152050	I49-SU1Z IWF	Metal plunger	1NC / 1NO	Snap action	Front mounting
6089102051	I49-U1Z IWF	Metal plunger	1NC / 1NO	Slow action	Front mounting
6089152058	I49-SU1Z IW Z	Metal plunger	1NC / 1NO	Snap action	Vertical cable outlet
6089102059	I49-U1Z IW Z	Metal plunger	1NC / 1NO	Slow action	Vertical cable outlet
6089152062	I49-SU1Z IWF Z	Metal plunger	1NC / 1NO	Snap action	Front mounting / Vertical cable outlet
6089102063	I49-U1Z IWF Z	Metal plunger	1NC / 1NO	Slow action	Front mounting / Vertical cable outlet
6089802070	I49-A2Z IW Z	Metal plunger	2NC	Slow action	Vertical cable outlet
6089852069	I49-A2Z IWF Z	Metal plunger	2NC	Slow action	Front mounting / Vertical cable outlet
6089202075	I49-U2Z IW Z	Metal plunger	2NC / 2NO	Slow action	Vertical cable outlet
6089452074	I49-U2Z IWF Z	Metal plunger	2NC / 2NO	Slow action	Front mounting / Vertical cable outlet

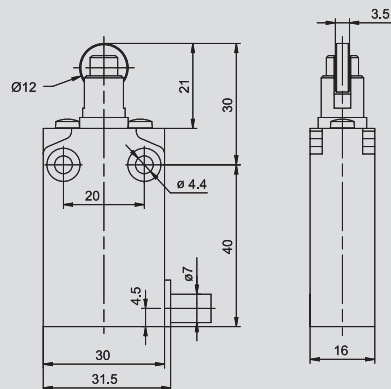
# Advantages

Where space is restricted and high ingress protection is required most position switches are flawed. This does not apply to the I49 switches from BERNSTEIN. With very slim dimensions and overall IP67 protection they are a perfect solution for either position indication or safety applications.

- Ultra-flat design
- Highly flexible deployment
- Reliability
- Simple and quick installation
- Two mounting levels
- Side and straight cable outlet



Metal roller plunger



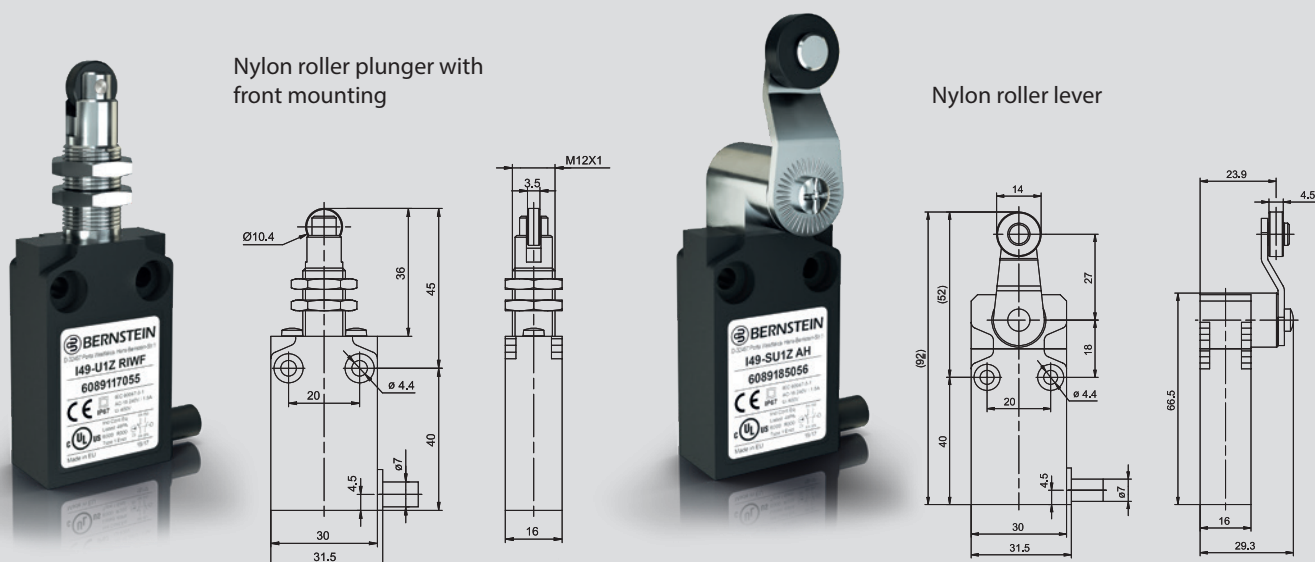
Article number	Designation	Actuator	Contact type	Switching operation	Features
6089167052	I49-SU1Z RIW	Metal roller plunger	1NC / 1NO	Snap action	
6089117053	I49-U1Z RIW	Metal roller plunger	1NC / 1NO	Slow action	
6089167060	I49-SU1Z RIW Z	Metal roller plunger	1NC / 1NO	Snap action	Vertical cable outlet
6089117061	I49-U1Z RIW Z	Metal roller plunger	1NC / 1NO	Slow action	Vertical cable outlet
6089817071	I49-A2Z RIW Z	Metal roller plunger	2NC	Slow action	Vertical cable outlet
6089217076	I49-U2Z RIW Z	Metal roller plunger	2NC / 2NO	Slow action	Vertical cable outlet

# Technical Data



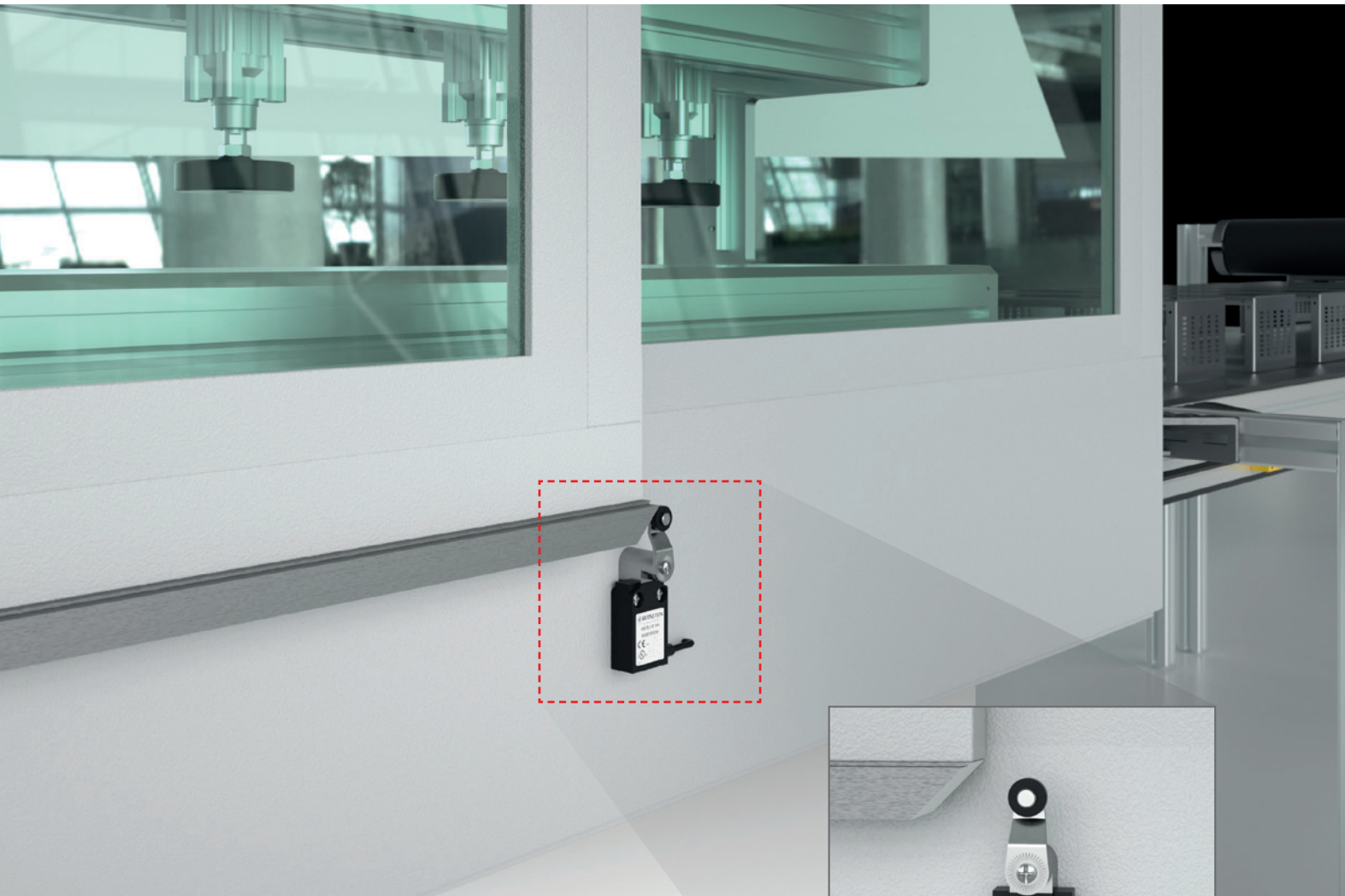
- Rated operating voltage  $U_e$ : 240 V
- Rated insulation voltage  $U_i$ : 400 V AC
- Conv. thermal current  $I_{the}$ : 10 A
- Utilisation category / switching capacity:  
AC-15; 24 V / 10 A ; 240 V / 3 A  
DC-13; 24 V / 2,8 A ; 125 V / 0,22 A ; 250 V / 0,27 A
- Switching frequency max.: ≤ 60/min.
- Mechanical service life: 10 x 10<sup>6</sup> switching cycles

- Admissible ambient temperature: -25 °C to +70 °C
- Protection class: IP67 in accordance with IEC/EN 60529
- Connection: 1 m UL-cable
- Protection class:
- Approvals:



Article number	Designation	Actuator	Contact type	Switching operation	Features
6089167054	I49-SU1Z RIWF	Nylon roller plunger	1NC / 1NO	Snap action	Front mounting
6089117055	I49-U1Z RIWF	Nylon roller plunger	1NC / 1NO	Slow action	Front mounting
6089167064	I49-SU1Z RIWF Z	Nylon roller plunger	1NC / 1NO	Snap action	Front mounting / Vertical cable outlet
6089117065	I49-U1Z RIWF Z	Nylon roller plunger	1NC / 1NO	Slow action	Front mounting / Vertical cable outlet
6089817072	I49-A2Z RIWF Z	Nylon roller plunger	2NC	Slow action	Front mounting / Vertical cable outlet
6089217077	I49-U2Z RIWF Z	Nylon roller plunger	2NC / 2NO	Slow action	Front mounting / Vertical cable outlet
6089185056	I49-SU1Z AH	Nylon roller lever	1NC / 1NO	Snap action	
6089135057	I49-U1Z AH	Nylon roller lever	1NC / 1NO	Slow action	
6089185066	I49-SU1Z AH Z	Nylon roller lever	1NC / 1NO	Snap action	Vertical cable outlet
6089135067	I49-U1Z AH Z	Nylon roller lever	1NC / 1NO	Slow action	Vertical cable outlet
6089835073	I49-A2Z AH Z	Nylon roller lever	2NC	Slow action	Vertical cable outlet
6089235078	I49-U2Z AH Z	Nylon roller lever	2NC / 2NO	Slow action	Vertical cable outlet

# Application examples



- Monitoring of safety gates, hatches or protective hoods
- Position monitoring of moving parts
- Object detection in conveying technology
- End position control of components
- Position monitoring on rolling doors
- Monitoring of sliding doors



**DETECT**

**We make  
safety happen.**



**PROTECT**

**We keep safe  
your visions.**

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