



Features & Benefits

- “Positive-Break” NC contacts ... won’t stick or weld shut.
- Watertight design ... meets IP65 washdown requirements.
- Rugged, corrosion-resistant housing ... tolerates hostile environments.
- Five popular actuator styles ... for application versatility.
- Four 90° actuator mounting positions ... provide installation flexibility.
- Safety-system approved ... for use in machine guarding applications.
- Designed to meet the Performance Level requirements of EN ISO 13849-1 and Safety Control Categories of EN 954-1.

Description

The Z332 Series limit switches are designed for use with movable machine guards/access gates which must be closed for operator safety ... and for any other presence/position sensing application normally addressed with conventional limit switches. Their positive-opening NC contacts provide a higher level of safety and/or reliability than conventional spring-driven switches whose contacts can weld or stick shut.

Each is available with a choice of five standard actuators ... rounded plunger, roller plunger, roller rocking lever, rod rocking lever and adjustable roller rocking lever ... mountable in any one of four 90° positions. All rocking levers are positively-locked to the shaft, and are adjustable throughout 360° in 10° increments.

Their rugged metal housing and IP65 rating make them ideal alternatives to conventional limit switches.

PART NUMBER INFORMATION

Z1332-11Y2		
①Operating Head	S R 4VH 4V7H 4V10H	Rounded plunger Roller plunger Roller rocking lever Roller rocking lever* Rod rocking lever*
②Connection	<blank> -ST	M20 threaded opening M12x1, 4 pin connector

\*Not for use in safety applications  
Note: See page 254, 255 for specific part numbers for available models.

Typical Applications

The Z332 Series may be used in any presence/position sensing application normally addressed with conventional limit switches. Featuring positive-break NC contacts, they are approved for use in safety systems. For safety applications the switch must be mounted such that the actuating element of the machine displaces the switch actuator far enough to exceed the positive-break point.

# Z332 TECHNICAL DATA

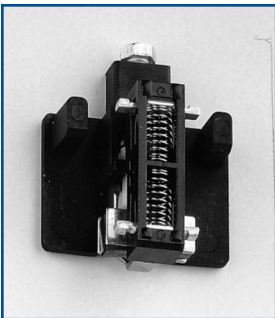
## MECHANICAL SPECIFICATIONS

<b>Housing</b>	Diecast aluminum with enamel finish	
<b>Operating Temperature</b>	-22°F to +195°F (-30°C to +90°C)	
<b>Mechanical Life</b>	1 million operations	
<b>Minimum Cam Speed (Referenced to Plunger)</b>	1 mm/minute	
<b>Maximum Operating Rate</b>	5000 operations/hour	
<b>Bounce Time</b>	2 ms	
<b>Changeover Time</b>	1.5 ms for minimum cam speed	
<b>Degree of Protection</b>	IP65	
<b>Conformity to Standards</b>	IEC 947-5-1 EN 60947-5-1 EN ISO 13849-1 EN 954-1	CE BG-GS-ET-15 DIN EN 50041 CSA

## ELECTRICAL SPECIFICATIONS

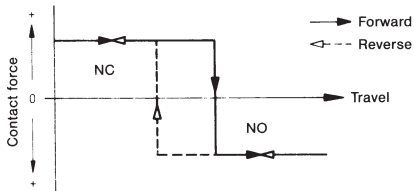
<b>Contacts</b>	<b>Fine silver</b>
<b>Contact Configuration</b>	Double-pole, double-break with electrically-separated contact bridges
<b>Contact Gap</b>	2 × 0.05 in. immediately after switching 2 × 0.19 in. with full travel of actuator
<b>Contact Rating</b>	2.5A/250VAC
<b>Switching Action</b>	Z332 Series: Snap-action with positive-break NC contacts
<b>Short Circuit Protection</b>	Fuse: 20A (time delay) 25A (no time delay) 6A (time delay) as positive-break position switch
<b>Rated Insulation Voltage</b>	250VAC
<b>Rated Impulse Withstand Voltage</b>	6kV
<b>Type Terminals</b>	Screw terminals, maximum 2.5mm (AWG13) wire

### Contact System



Magnetic storage snap-action system

## SNAP ACTION CONTACT SYSTEMS

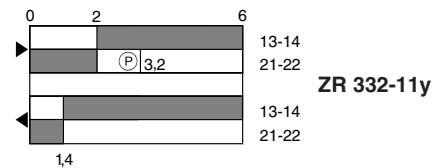
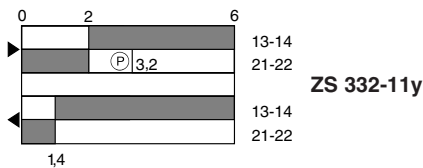


- Snap-action switching, 1 NO 1 NC
- Change-over, double-gap with four terminals
- Two electrically separated moving contacts
- Plated solid silver contacts
- Positive-break NC contact with snap-action switching
- Reliable change-over, even with slow plunger actuation
- Snap-action system separated from contact system
- Full contact force right up to operating point
- Constant operating position, as independent of contact burning
- Short, constant flight time of only 1.5 ms
- Short bounce time
- High short-circuit resistance
- High vibration resistance of 10 g still only 0.01 mm before operating point
- Wide contact gap of 2 × 1.25 mm immediately after switching point

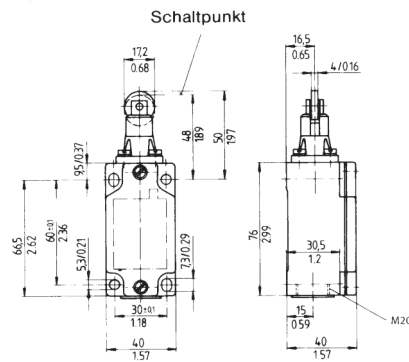
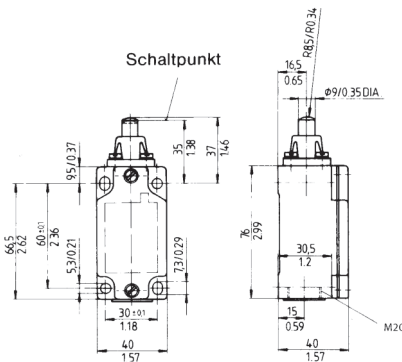
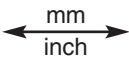
# Z332 TECHNICAL DATA

## Contact function diagrams

Snap action positive break  
1 NO + 1 NC




Dimensions



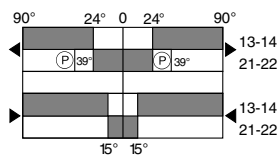
## Types of Actuators

Rounded plunger  
Style S

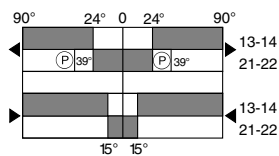
Roller plunger  
Style R

			Actuating Force		Actuating Force	
Part No.		Snap Action positive break	ZS 332-11y	31 N	ZR 332-11y	31 N

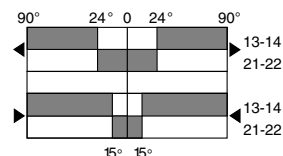
# Z332 TECHNICAL DATA



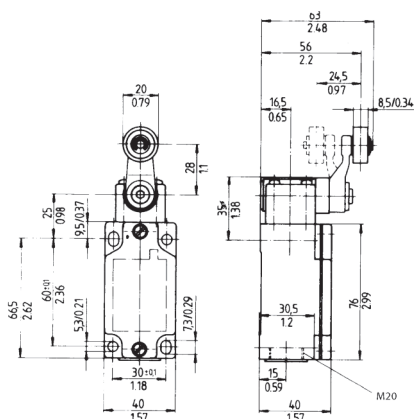
**Z4VH 332-11y**



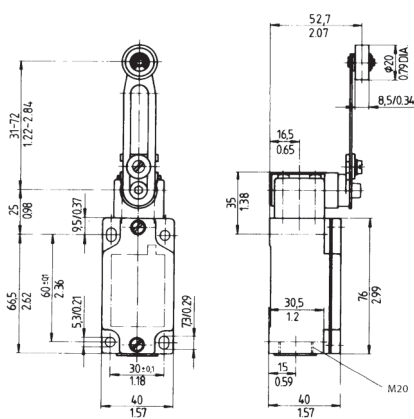
**Z4V7H 332-11y**



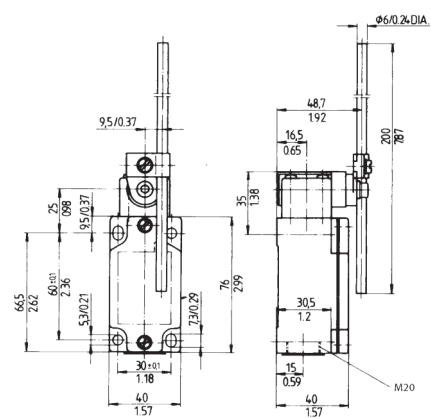
**Z4V10H 332-11z**



**4V operating head with roller rocking lever Style H**



**4V operating head with adjustable roller lever Style 7H\***



**4V operating head with rod rocking lever Style 10H\***

Actuating Force		Actuating Force		Actuating Force	
<b>Z4VH 332-11y</b>	35 Ncm	<b>Z4V7H 332-11y*</b>	35 N	<b>Z4V10H 332-11y*</b>	35 Ncm

\* Not for use in safety applications