

# SERIES AZ335

## Tamper-Resistant Movable Machine Guard Safety Interlock Switch



### Description

The AZ335 Series is designed for use with movable machine guards/access gates which must be closed for operator safety. Their positive-opening NC contacts provide a significantly higher level of safety than conventional spring-driven switches whose contacts can weld or stick shut. And the switch's tamper-resistant design prevents bypassing with simple tools, bent wires or other readily available means. Their rugged metal housing and IP67 rating make them ideal for interlocking safety guards in industrial and hostile environments.

### Operation

The AZ335 electromechanical safety interlock switch consists of a rugged switch mechanism and a geometrically-unique actuating key. The key is mounted to the movable guard. Upon opening of the guard, the NC contact(s) are forced to open through a direct (non-resilient) mechanical linkage with the actuating key. These positive-break NC contacts assure circuit interruption (and machine stoppage) upon removal of the actuator key. (The NO contacts close upon key removal.)

When the guard is closed, the actuating key forces the NC contact(s) to close, and the NO contacts to re-open.

### Typical Applications



The AZ335 is intended for use as a safety interlock switch on movable machine guards which, when open, expose the operator/maintenance personnel to machine hazards. Typical applications are the interlocking of protective gratings, access doors/panels, perimeter access gates, hinged covers and other movable guards on textile machinery, packaging equipment, machine tools, assembly machinery, robot work cells and food/chemical processing equipment.

### Features & Benefits

- **Rugged, corrosion-resistant die-cast aluminum housing** ... tolerates the most hostile environments.
- **“Positive-break” NC contacts** ... assure circuit interruption upon actuator key removal.
- **Highly tamper-resistant** ... difficult to defeat with simple tools, tape, bent wires, etc. Reduces liability exposure.
- **Watertight design** ... meets IP67 washdown requirements.
- **Eight optional key entry locations** ... depending upon mounting of rotatable mounting head.
- **High-strength, stainless-steel actuator key** ... tolerant to mechanical abuse without damage.
- **Tapered key entry ports** ... tolerant to key misalignment.
- **Meets rigid safety agency standards** ... IEC, BG, VDE, UL and CSA.
- **Lockout accessory** ... prevents key entry and switch actuation.
- **Optional M12x1 quick-connect** ... please consult factory.

### AVAILABLE STANDARD MODELS

(Includes 1/2" NPT Adapter. Actuator keys sold separately)

Part Number	Contacts (with key inserted)
AZ335-11ZK	1 NO & 1 NC
AZ335-02ZK	2 NC
AZ335-12ZRK	1 NO & 2 NC
AZ335-03ZRK	3 NC

**Note:** Available with optional M12x1 quick-connect. Please consult factory.

### OPTIONAL ACTUATOR KEYS

Part Number	Description
AZ335/355-B1	Straight actuator key.
AZ335/355-B1-2245	Standard actuator key with rubber grommeted mounting holes.
AZ335/355-B5	Right angle actuator key.
AZ335/355-B6	Adjustable short-radius actuator key.
AZ335/355-B5-Flex	Floating standard actuator key (tolerant to x and y axis misalignment of ±5mm).
AZ335/355-B6-Flex	Floating standard short-radius actuator key (tolerant to x and y axis misalignment of ±5mm).

### ACCESSORIES

Part Number	Description
AZ335/355-1990	Key entry port covers (two-part package).
SZ16/335	Lockout device (prevents key entry and switch actuation). Accepts up to six padlocks.
Suffix “-G24” Available on AZ335-11zk only)	Factory installed 24VDC LED indicator kit. (Includes windowed coverplate to display green “Supply Voltage On” LED and yellow “Switch Off” LED)
Suffix “-ST”	Optional M12x1 quick-connect (AZ335-11 and AZ335-02 models only)
AZ335/355-B30-XX	Safety door handle assembly (Please see page 82)

# AZ335 TECHNICAL DATA

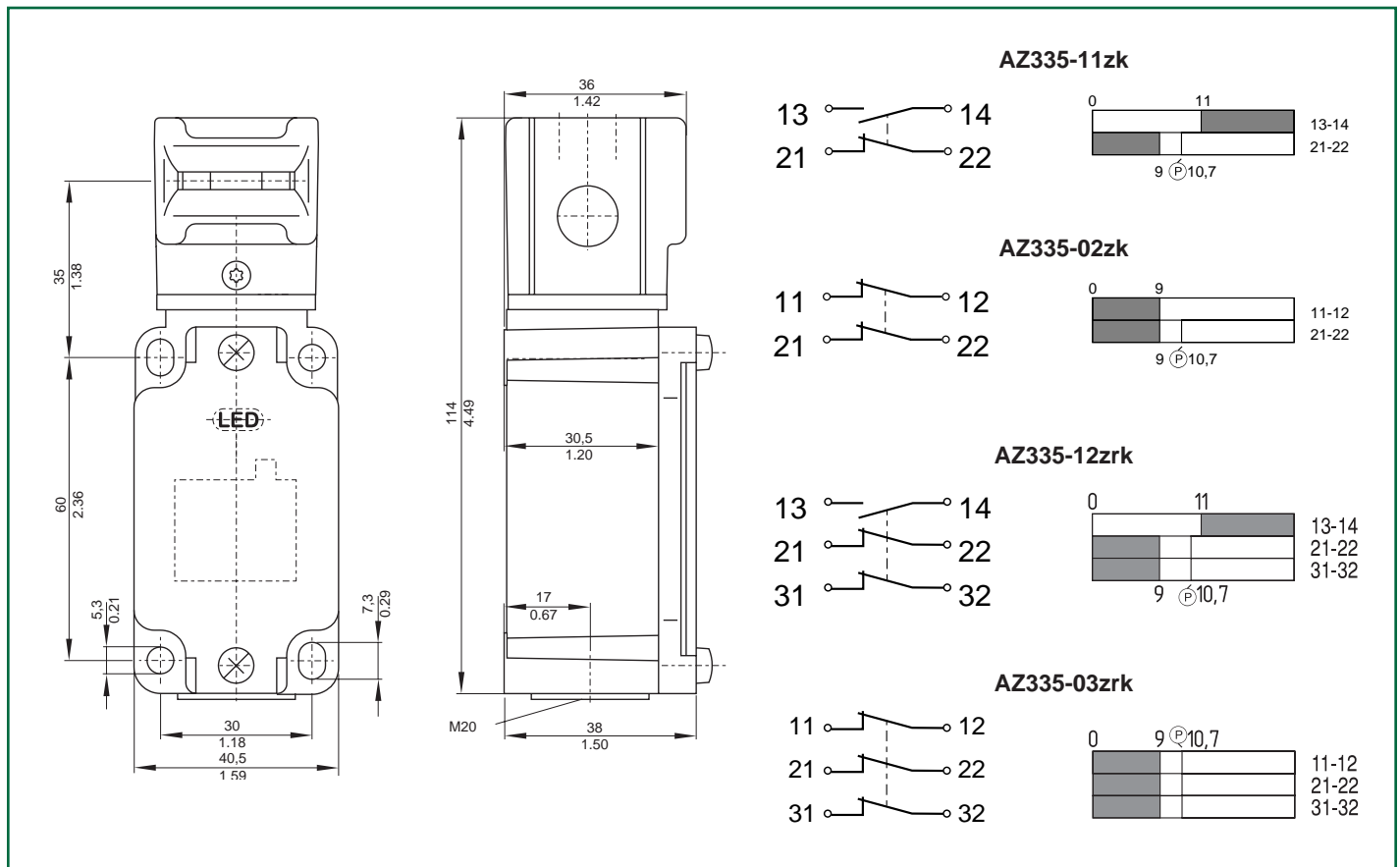
## MECHANICAL SPECIFICATIONS

<b>Housing</b>	Diecast aluminum with baked enamel finish
<b>Actuator Key</b>	Stainless steel (defeat-resistant design)
<b>Degree of Protection</b>	IP67
<b>Travel for Positive-Break</b>	10.7 mm (0.4 inches)
<b>Closing Force</b>	Approx. 15 N (3.4 pounds)
<b>Operating Temperature</b>	-22°F to +195°F
<b>Mechanical Life</b>	> 10 <sup>7</sup> operations
<b>Key Holding Force</b>	30 N (7 pounds) ("R" models only)
<b>Conformity to Standards</b>	IEC 947-5-1 EN 60947-5-1 DIN VDE 0660-200 BG-GS-ET-15 UL & CSA
<b>Minimum Closing Radius</b>	B1 & B5 keys: 150mm B6, B5-Flex & B6-Flex keys: 100mm

## ELECTRICAL SPECIFICATIONS

<b>Contacts</b>	Fine silver
<b>Contact Configuration</b>	Double-pole, double-break with electrically separated contact bridges
<b>Contact Gap</b>	2 × 1.25mm (minimum)
<b>Contact Rating</b>	4A (230VAC) 25A/230VAC (with optional M12x1 quick-connect)
<b>Switching Action</b>	Slow-action, positive-break NC contacts
<b>Short Circuit Protection</b>	Fuse 6A (time-delay)
<b>Rated Insulation Voltage</b>	500VAC
<b>Rated Impulse Withstand Voltage</b>	6kV
<b>Type Terminals</b>	Screw terminals with self-lifting clamps for up to 13 AWG flexible stranded wire (2.5mm <sup>2</sup> )

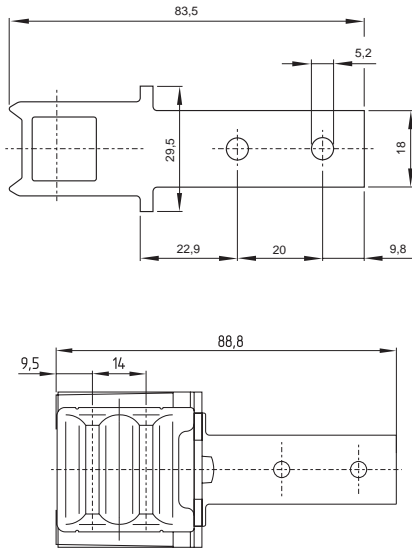
## DIMENSIONS & CONTACT SCHEMATICS



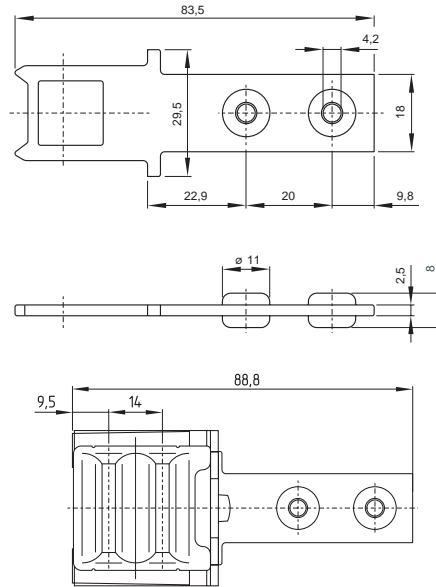
# AZ335 INDIVIDUALLY-CODED ACTUATOR KEY SPECIFICATIONS

## ACTUATOR KEYS

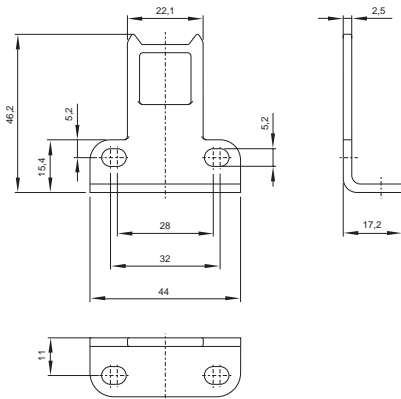
**AZ335/355-B1**



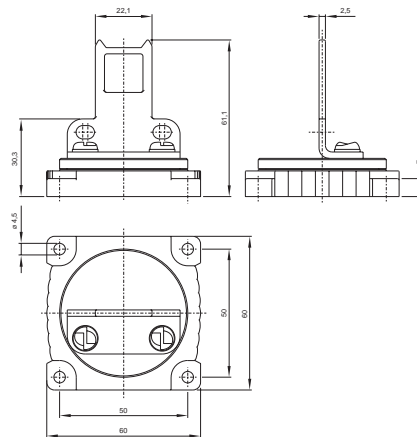
**AZ335/355-B1-2245**



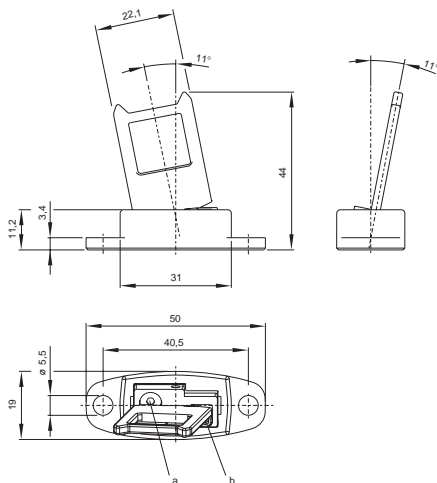
**AZ335/355-B5**



**AZ335/355-B5-Flex**



**AZ335/355-B6**



**AZ335/355-B6-Flex**

