



Description

The AZ 200 pulse-echo based non-contact safety interlock is designed for use with movable machine guards/access gates which must be closed for operator safety.

The AZ 200 consists of an interlock switch and actuator unit with door handle and optional emergency exit handle. The actuator is always inserted into its housing, protecting the actuator and the operator against damage and injury. Utilizing pulse-echo sensor technology, the actuator and interlock can have an offset of ± 5 mm and the actuator still engages the interlock. A sensor stimulates a coil in the actuator, which in turns sends a signal back to the sensor. The pulse-echo technology provides diagnostic information and detects and indicates any misalignment at an early stage. Two different actuator designs accommodate both sliding or hinged guards.

The AZ 200 interlock is a dual channel design with two short-circuit proof, safe PNP outputs, each of which can switch up to 250 mA. It features one electronic diagnostic output that can signal errors before the safety outputs are switched off, thus enabling a controlled shutdown of the machine.

With continuous internal function tests, the monitoring of the safety outputs and the use of door detection sensors, up to 31 AZ 200 safety interlocks with one diagnostic output can be wired in series without detriment to the safety performance level/control category (PL_e to EN ISO 13849-1/Category 4 to EN 954-1).

Typical Applications

The AZ 200 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 panels and other movable guards. The AZ 200 is suitable for both sliding guards and hinged guards.

Features & Benefits

- **Tamper resistant** ... frequency-matched switch and actuator required for operation.
- **Non-contact sensing** ... for long term reliability.
- **Dual purpose handle** ... modern, ergonomic design—no additional door handles are needed.
- **Integral LED diagnostics** ... indicates operating states
- **Integral self-monitoring and door detection sensors** ... satisfy requirements of Safety PL_e to EN ISO 13849-1, Control Category 4 to EN 954-1. **See Note on next page.*
- **One-hand emergency release** ... hazardous area can be left quickly and safely.
- **Switch and actuator do not protrude into door opening** ... no risk of injury or damage from a protruding actuator.
- **Dual PNP 250 mA safety outputs** ... for application versatility.
- **Designed for “daisy chaining”** ... up to 31 devices, max 200 m, can be wired in series without detriment to safety performance level.

AVAILABLE AZ200 MODELS

Part Number	Description
Screw Terminals	
AZ200SK-T1P2P	Door detection sensor, diagnostic output, 2 PNP safety outputs
AZ200SK-TSD2P	Door detection sensor, serial diagnostic output*, 2 PNP safety outputs
M23 x1 quick connect, 8+1 pin	
AZ200ST1-T1P2P	Door detection sensor, diagnostic output, 2 PNP safety outputs
AZ200ST1-TSD2P	Door detection sensor, serial diagnostic output*, 2 PNP safety outputs
M12x1 quick connect, 8 pin	
AZ200ST2-T1P2P	Door detection sensor, diagnostic output, 2 PNP safety outputs
AZ200ST2-TSD2P	Door detection sensor, serial diagnostic output*, 2 PNP safety outputs

* Sensors with Serial Diagnostic output are for use with various field bus protocols, see page 204 for SD Gateways.

ACTUATORS

Part Number	Description
AZ/AZM200-B1-LT	Sliding Guard Actuator, approach from left
AZ/AZM200-B1-LTP0	Sliding Guard Actuator, approach from left with inside emergency door release
AZ/AZM200-B1-RT	Sliding Guard Actuator, approach from right
AZ/AZM200-B1-RTP0	Sliding Guard Actuator, approach from right with inside emergency door release
AZ/AZM200-B30-LTAG1	Door Handle Actuator, hinged on left
AZ/AZM200-B30-LTAG1P1	Door Handle Actuator, hinged on left with inside emergency door release
AZ/AZM200-B30-RTAG1	Door Handle Actuator, hinged on right
AZ/AZM200-B30-RTAG1P1	Door Handle Actuator, hinged on right with inside emergency door release

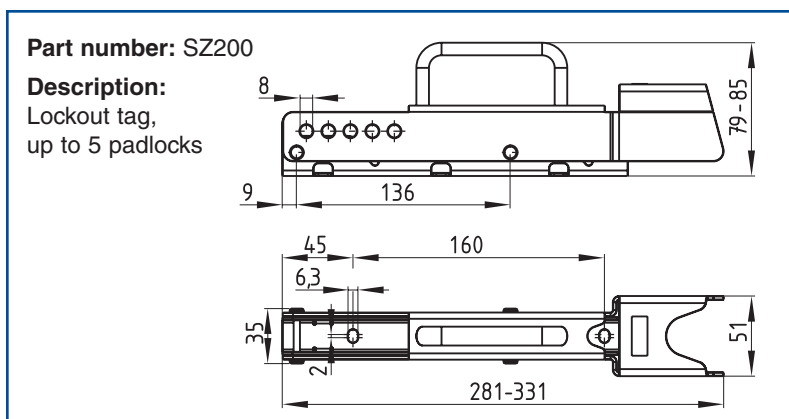
Note: For appropriate connector cable for ST models, please see page 94.

For ST1 models, order cable starting with A-K8+1-M23...

For ST2 models, order cable starting with A-K8P-M12...

SERIES AZ 200 AVAILABLE KEYS AND DIMENSIONS

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Safety Control Module Requirements

Dual-channel safety inputs, suitable for PNP semiconductor outputs. See page 320 for recommended SCHMERSAL safety control modules.

*Note: A safety control module may be required for reset function and/or feedback monitoring functions, as well as increased output current requirements.

NOTE: For complete technical data, diagnostics and wiring examples, please see page 166 of the “Pulse-Echo Based Non-Contact Safety Sensors” section.