

SCHMERSAL Tech Briefs:

AZM300 Solenoid Interlock with RFID



Overview

The AZM300 is a combination of Solenoid latching keyed interlock and RFID Safety Sensor.

One look at the AZM300 and one cannot help but notice the distinctive external cam. This unique design allows the AZM300 to accept the actuator from three sides, providing mounting flexibility for either left- or right-hinged doors, or sliding guards. The solenoid locking force of 1,000 N keeps the guard door securely locked until dangerous conditions, which may exist even after removal of power, have abated.

The AZM300 also has integrated a radio frequency identification (RFID) sensor to detect the actuator and indicate a closed guard. This non-contact operating principle limits wear on components, tolerates misalignments, and offers the option of individual coding; The basic version of the sensor responds to any AZM300 target actuator; The "I1" version only accepts the coded ID number of the specific target actuator which is taught in during the first start-up; The "I2" version allows the teach-in process to be repeated, allowing replacement of a lost or damaged actuator.

The AZM300 features all of the diagnostic advantages of our electronic sensors. With continuous internal function tests and monitoring of the safety outputs, the AZM300 can be wired in series without detriment to the safety levels. Diagnostic LED's on the sensor indicate various errors, misalignment and door open/closed signaling. For more advanced indication, the AZM300 is also available with serial diagnostics.

The AZM300 housing is made of ECOLAB approved materials and is sealed to IP69K standards – a viable solution for use in hygienic or outdoor environments where high temperature and high pressure wash downs are typical.

The AZM300 also offers adjustable latching which provides a holding force of 5 or 11 lbs. The AZM300 actuator includes a dampener pad so that the switch can be used as a door stop for small to medium sized guard doors.

The AZM300 series are cULus and CE approved to meet stringent North American and European Standards, and can be used in the highest level of machine safety circuits, PLe to ISO13849-1 and SIL 3 to IEC61508. They are Type 4 interlocks per ISO 14119, with a high coding level with the individual coding option (I1 or I2).

Emergency Release

Power to unlock models are available with an optional Emergency release. The red release handle can be attached to either side of the unit and provides a manual by-pass of the solenoid lock regardless of the power status.

- N type Emergency Release version is for mounting outside the hazardous area.

- T type Emergency Exit meets the requirements of the ANSI/RIA R15.06 standard for emergency exit from inside the guarded hazardous area.



Features



- Multifunction Actuator
1. Operating key
 2. Dampener for door stop
 3. RFID Sensor target



External cam allows actuator to approach from three directions for mounting options. Same unit can be mounted for left or right hinged doors.



3 color LEDs for signaling:
Green = Power;
Yellow = Status
Red = (Flashing) Diagnostic error

M12, 8 pin connector
Solenoid bypass / manual release

Applications

- Food processing machinery
- Pharmaceutical machinery
- Medical applications
- Outdoor equipment
- Material handling systems
- Packaging machinery
- Chemical processing equipment
- Robot cells
- Folding or brake presses
- Filter presses
- Punching machines
- Printing machines
- Injection molding
- Palletizers
- Packaging equipment

Available Literature



AZM300 Brochure

Ordering Details

AZM300①-②-ST-③-④-⑤

- ① Monitoring
 - Z Guard locking monitored
 - B Actuator (RFID) monitored
- ② Actuator Coding
 - blank Standard version (no coding)
 - I1 Individual coding (single)
 - I2 Individual coding (multiple)
- ③ Outputs
 - 1P2P Diagnostic output
 - SD2P Serial Diagnostic
- ④ Locking
 - blank Power to unlock (spring lock)
 - A Power to lock
- ⑤ Emergency Release (power to unlock)
 - blank Manual release
 - T Emergency Exit (inside mounting)
 - N Emergency Release

Regularly stocked models:

AZM300Z-ST-1P2P	AZM300Z-ST-1P2P-A
AZM300Z-I2-ST-1P2P	AZM300Z-I2-ST-1P2P-A
AZM300Z-ST-SD2P	AZM300Z-ST-SD2P-A
AZM300B-ST-1P2P	AZM300B-ST-1P2P-A

Accessories

Actuator
AZ/AZM300-B1 Standard Actuator

Mounting Plates
MP-AZ/AZM300-1 for sensor
MS-AZ/AZM300-B1 for actuator

Connector cables
M12, 8 pole connectors

101210560	5 m length (IP69K)
103001389	10 m length (IP69K)
103011411	2.5 m length (IP67)
103011412	5 m length (IP67)
103011413	10 m length (IP67)

Compatible Safety Controllers

SRB-E-201LC	SRB-E-322ST
SRB-E-201ST	SRB-E-402ST
SRB-E-301ST	SRB-301MC
SRB-E-212ST	

Bold part numbers are regularly stocked

Contact

Schmersal USA
15 Skyline Drive
Hawthorne, NY 10532

Tel: 914-347-4775
Fax: 914-347-1567
E-mail: salesusa@schmersal.com

Schmersal Canada
29 Centennial Road, Unit 1
Orangeville ON L9W 1R1

Tel: 519-307-7540
Fax: 519-307-7543
E-Mail: salescanada@schmersal.com