

# SCHMERSAL Tech Briefs:

## One Giant Leap for Safety: AZM400



### Overview

The AZM400 is a safety rated motorized bolt lock with an integrated radio frequency identification (RFID) based electronic safety sensor.

### Operating Principle

The Aluminum die-cast body contains the RFID sensor and a motor-driven locking bolt, which fits into the hole of the actuator block with the matching RFID target. Once locked, the solenoid bolt provides a locking force of 10,000 N. The motorized AZM400 is a bi-stable system, thus in the event of a power failure the switch maintains the last locked status of the interlock.

In addition, the AZM400 uses RFID to detect the actuator and indicate a closed guard. This non-contact operating principle limits wear on components, tolerates misalignment, and offers the option of individual coding.

### Intelligent locking

The AZM400 can detect if the locking bolt has been blocked from reaching a "locked" state. Before reporting a fault the switch will make a second autonomous attempt at locking, therefore reducing the number of error messages and protecting the device and machine against damage.

### Safety Classification

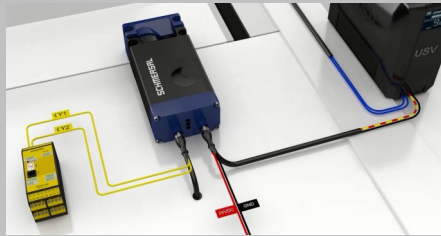
The AZM400 series is compliant with North American and International standards such as cULus and CE. It's two-channel input signal meets PLe/Category4 (ISO 13849) or SIL3 (IEC 61508) for both its interlock and guard locking function. It is a Type 4 interlock per ISO 14119, with a high coding level with the individual coding option (I1 or I2).

### Available Features and Options

- Visual diagnostics via 3 LEDs
- 1 or 2 auxiliary outputs for enhanced diagnostics
- M12 connector
- Manual override or emergency release knob for bolt retraction
- Electronic release via auxiliary power supply
- Individual coding options
  - I1: one time teaching process
  - I2: Re-teaching possible, 10 minute delay

### Electric Manual Release (ST2...E)

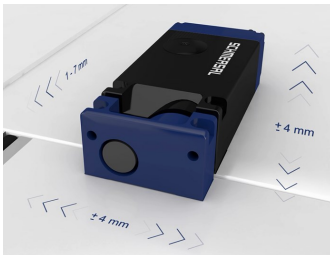
The AZM400 is power-to-lock and power-to-unlock. It is available with an optional electric manual release making it possible to release the device in the event of a power failure or if the main supply is switched off. This version has an additional diagnostic output and is fitted with an additional 5-pole M12 connector to allow for connection to an auxiliary voltage supply.



### Features



Motor driven locking bolt extends and retracts in switch



Actuator alignment tolerances:  
Hole dia. is 8 mm wider than bolt  
1 mm - 7 mm offset from switch



Emergency release knob (T) manually retracts bolt



3 Color LED Display  
Green: Power, not actuated  
Yellow: Actuation  
Red: (Flashing) Diagnostic error

### Ordering Details

**AZM400Z-ST-①-1P2P-②**  
**AZM400Z-ST2-①-2P2P-②-E**

- ① Actuator Coding  
*blank* Standard version (no coding)  
 I1 Individual coding (single)  
 I2 Individual coding (repeatable)

- ② Manual release  
*blank* Manual release  
 T Emergency release knob

Regularly stocked models:

AZM400Z-ST-1P2P  
 AZM400Z-ST-1P2P-T

AZM400Z-ST2-2P2P-E  
 AZM400Z-ST2-2P2P-T-E

AZM400Z-ST-I2-1P2P  
 AZM400Z-ST-I2-1P2P-T

AZM400Z-ST2-I2-2P2P-E

### Accessories

#### Actuators

**AZM400-B1** Standard Actuator

#### Mounting bracket

**MS-AZM400** Metal spacers

#### Manual override key

**AZM KEY** Triangle key (M5)

#### Connector cables

Main cable (M12, 8 pole)  
**A-K8P-M12-S-G-5M-BK-2-X-A-4**  
**A-K8P-M12-S-G-10M-BK-2-X-A-4**

Second cable for ST2 (M12, 5 pole)  
**A-K5P-M12-S-G-5M-BK-2-X-A-4**  
**A-K5P-M12-S-G-10M-BK-2-X-A-4**

#### Compatible Safety Controllers

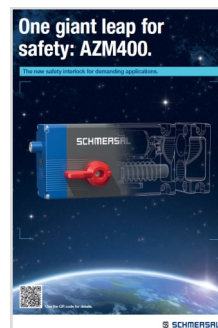
SRB-301MA      **SRB-301MC**  
**SRB-301ST-24**    **SRB-301LCB**  
 SRB-504ST      SRB-211ST  
**SRB-324ST**      SRB-031MC

*Bold part numbers are regularly stocked*

### Applications

- Machine Tools
- Packaging machinery
- Robot cells
- Printing machines
- Injection molding
- CNC Machines
- Assembly Equipment

### Available Literature



AZM400 Brochure, 10 pages

### Contact

#### Schmersal USA

660 White Plains Road  
 Suite 160  
 Tarrytown, NY 10591  
 Tel: 914-347-4775  
 Fax: 914-347-1567  
 E-mail: salesusa@schmersal.com

#### Schmersal Canada

15 Regan Road  
 Unit # 3  
 Brampton, ON L7A 1E3  
 Tel: 905-495-7540  
 Fax: 905-495-7543  
 E-Mail: salescanada@schmersal.com