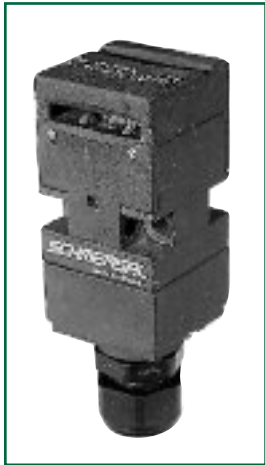
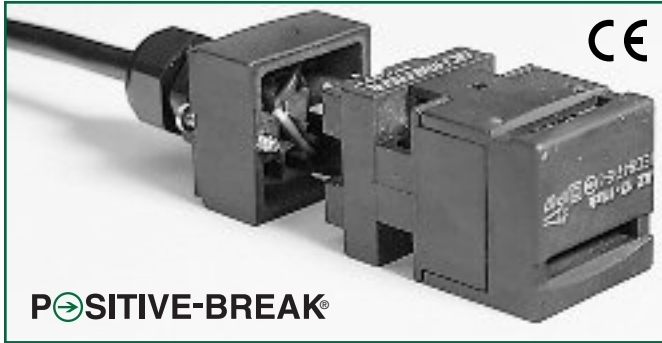


SERIES AZ17

Compact Tamper-Resistant Movable Machine Guard Safety Interlock Switch



Description

The compact Series AZ17 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 their tamper-resistant design prevents bypassing with simple tools, bent wires or other readily available means. Their IP67 rating makes them ideal for interlocking safety guards in hostile environments.

Operation

The AZ17 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 contact closes upon key removal.)

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

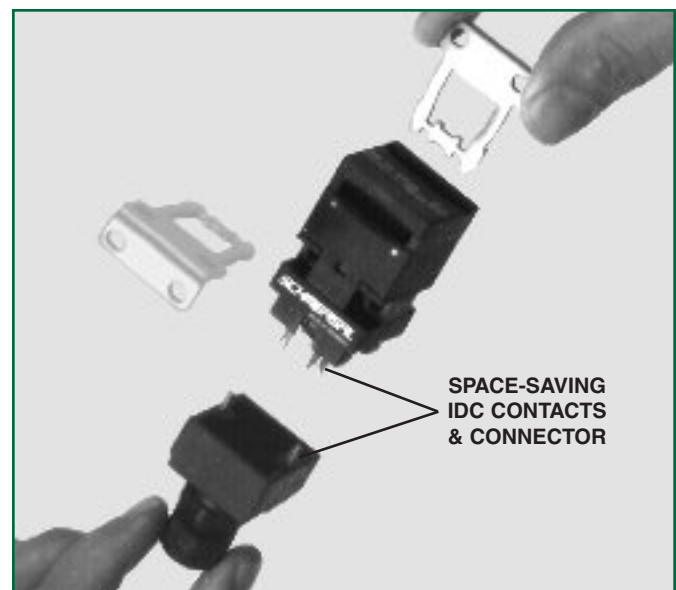
Typical Applications



The AZ17 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/gates, hinged covers, access panels and other movable guards.

Features & Benefits

- **Compact design** ... only 1¼" x 1¼" x 3". Ideal where space is limited.
- **Insulation Displacement Connector (IDC)** ... facilitates fast, easy installation.
- **Watertight design** ... meets IP67 washdown requirements.
- **Eight optional key entry locations** ... depending upon mounting arrangement.
- **Highly tamper-resistant** ... difficult to defeat with simple tools, tape, bent wires, etc. Reduces liability exposure.
- **"Positive-break" NC contacts** ... assure interruption of safety circuit upon actuator key removal.
- **High-strength, stainless-steel actuator key** ... tolerant to mechanical abuse without damage.
- **Rugged, corrosion-resistant, high-impact glass-fibre reinforced housing** ... tolerates the most hostile environments.
- **"Padlockable" key for added security during maintenance.**
- **Meets rigid IEC, BG, VDE, UL & CSA standards.**
- **Three styles of actuator key** ... accommodates a wide variety of movable guards.



Note: Available with optional M12x1 quick-connect.

AZ17 AVAILABLE MODELS AND ACCESSORIES

AVAILABLE STANDARD MODELS (Actuator key must be ordered separately)

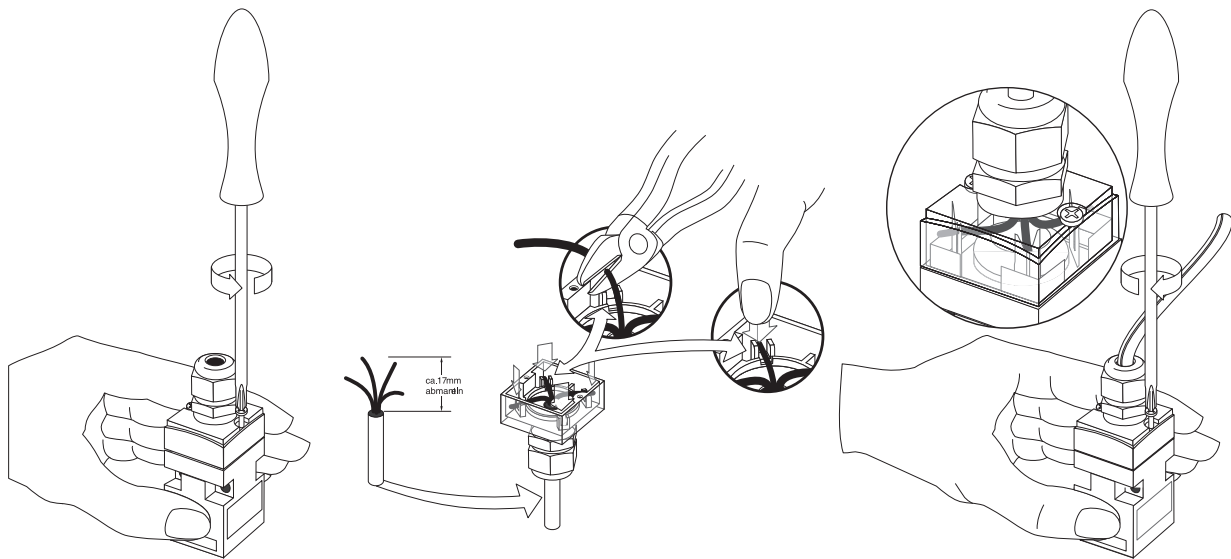
Part Number	Contacts (with actuator key inserted)
AZ17-11zk	1 NO & 1 NC
AZ17-11zrk	1 NO & 1 NC
AZ17-02zk	2 NC
AZ17-02zrk	2 NC
Solenoid-latching models available. (Model AZM170)	
Individually-coded key models available (Model AZ17zi) (For extra security in "high-risk" applications)	

Note: Pre-wired (5 meter length) cable entry models available. Add suffix "2243" for front of unit cable entry or suffix "2243-1" for rear cable entry.

Note: Optional "quick-connect" ... add suffix "ST" (e.g. AZ17-11zk-ST).

ACTUATOR KEYS & ACCESSORIES

Part Number	Description
AZ17/170-B1	Standard key (7.87" minimum closing radius)
AZ17/170-B5	Right-angle key (7.87" minimum closing radius)
AZ17-B6	Flexible, close-radius key (1.97" minimum closing radius)
AZ17/170-B11	Elongated standard straight key (7.87" minimum closing radius)
AZ17/170-B15	Elongated right-angle key (7.87" minimum closing radius)
AZ17/170-B1-2245	Standard straight key with vibration-resistant mounting (7.87" minimum closing radius)
MS AZ 17-P (See installation on Page 10)	Adjustable mounting kit for parallel mounting. AZ17-B6 key required.
MS AZ 17-R/P (See installation on Page 10)	Adjustable mounting kit for parallel or perpendicular mounting. AZ17-B6 key required.
Suffix "-ST"	Optional M12x1 quick-connect



SELECTED ACTUATOR KEYS

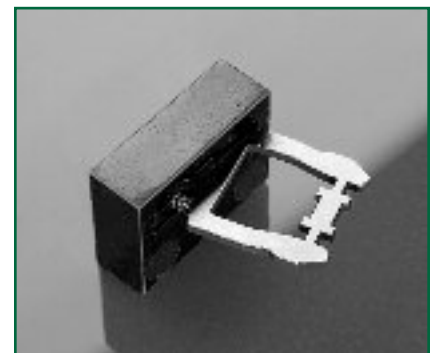
AZ17/170-B1



AZ17/170-B5



AZ17-B6



AZ17 TECHNICAL DATA

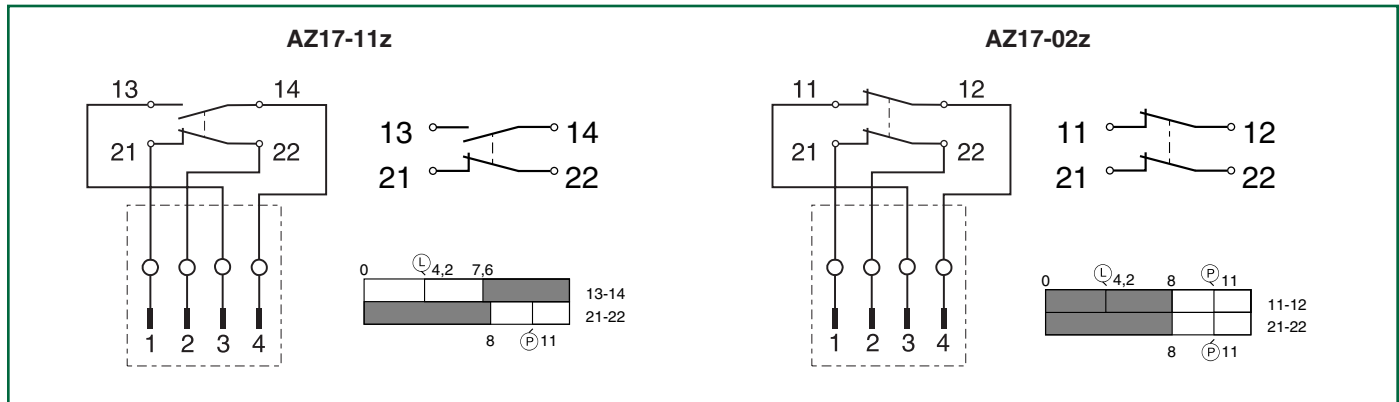
MECHANICAL SPECIFICATIONS

Housing	Glass-fibre reinforced, self-extinguishing thermoplastic
Actuator Key	Stainless steel, 1.4301
Degree of Protection	IP67
Holding Force	zk models: 1.2 pounds zrk models: 7 pounds
Travel for Positive-Break	8 mm (0.315 inches)
Closing Force	Approx. 12N (2.7 pounds)
Operating Temperature	-22°F to +175°F
Mechanical Life	> 10 ⁶ operations
Conformity to Standards	IEC 947-5-1 EN 60947-5-1 DIN VDE 0660-200 BG-GS-ET, pr EN 1088 UL & CSA
Minimum Closing Radius	1.97" (with AZ17-B6 actuator key) 7.87" (with B1, B5, B11 and B15 actuator key)

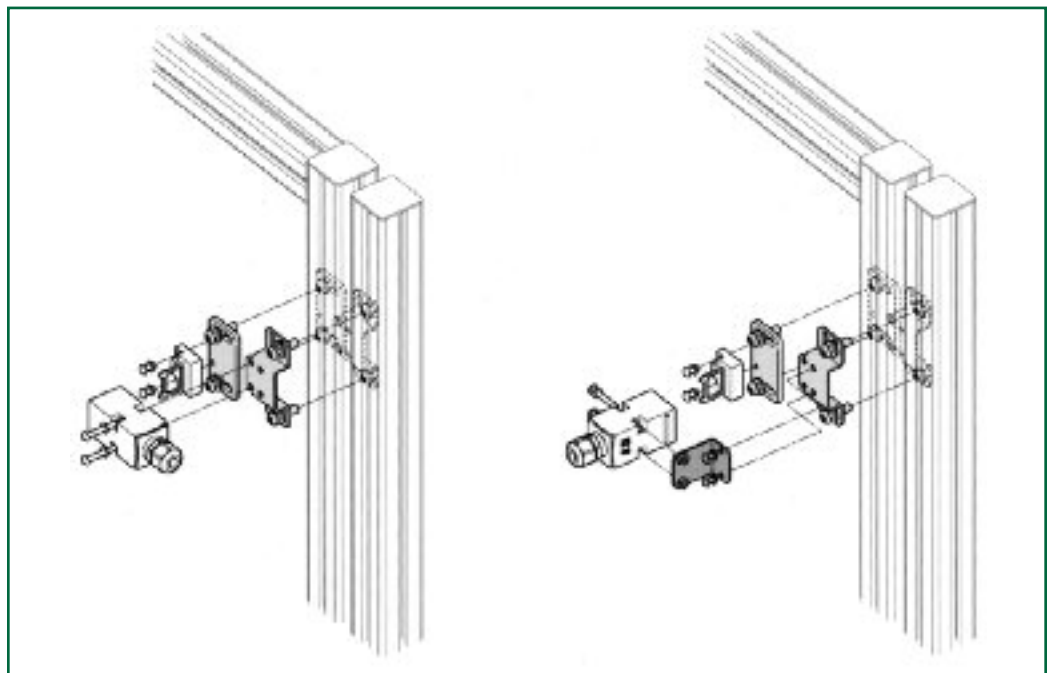
ELECTRICAL SPECIFICATIONS

Contacts	Fine silver
Contact Configuration	Double-pole, double-break with electrically separated contact bridges
Contact Rating	4A/230VAC 2.5A/230VA (with "ST" quick-connect)
Switching Action	Slow-action, positive-break NC contacts
Short Circuit Protection	6A (time-delay)
Rated Isolation Voltage	250V
Type Terminals	Insulation displacement contacts & connector for 18AWG flexible stranded wire (0.75 mm ²)

SWITCHING DIAGRAMS & CONTACT SCHEMATICS



MS AZ 17 ADJUSTABLE MOUNTING KIT



AZ17 TECHNICAL DATA

DIMENSIONS

Switching Symbols (Colors identify -2243 factory prewired models)

AZ17-02z	AZ17-11z

Connections

AZ17-02z	AZ17-11z

same polarity; type four enclosure

(Remove outer sleeve from cable)

mm
inch

ACTUATOR KEYS

AZ17/170-B1

AZ17/170-B5

AZ17/170-B11

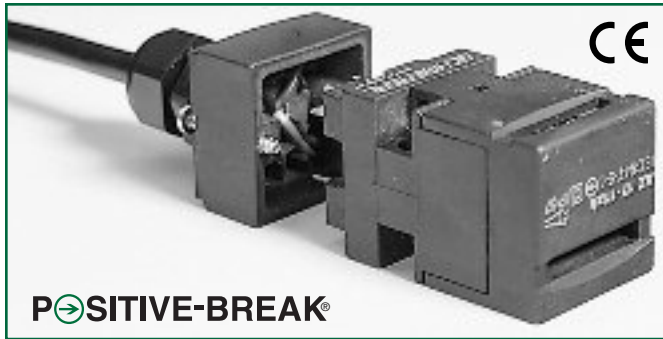
AZ17/170-B15

AZ17-B6

AZ17/170-B1-2245

SERIES AZ17zi

Individually-Coded Movable Machine Guard Safety Interlock Switch



INDIVIDUALLY-CODED
ACTUATOR KEYS
(15,000 CODES)

Features & Benefits

- **Highly tamper-resistant actuating mechanism** ... difficult to defeat with simple tools, tape, bent wires, etc. Reduces liability exposure.
- **Individually-coded actuator key (15,000 codes)** ... provides extra security in high-risk applications.
- **Compact design** ... only 1¼" x 1¼" x 3". Ideal where space is limited.
- **Non-removable actuating head** ... heightens tamper-resistance.
- **Four optional key entry locations** ... provide installation flexibility.
- **"Positive-Break" NC contacts** ... assure circuit interruption upon actuator key removal.
- **Watertight design** ... meets IP67 washdown requirements.
- **High-strength, stainless-steel actuator key** ... tolerates mechanical abuse without damage.
- **Rugged, corrosion-resistant housing** ... tolerates the most hostile environments.
- **Wide selection of accessories** ... to meet diverse application requirements.
- **Padlockable key** ... for added security during equipment maintenance.
- **Meets rigid safety agency standards** ... BG, UL and CSA.

Description

The compact Series AZ17zi are designed for use with movable machine guards which must be closed for operator safety. Their tamper-resistant design, and positive-opening NC contacts, provide a significantly higher level of safety than conventional spring-driven switches whose contacts can weld/stick shut. Their IP67 rating makes them ideal for interlocking safety guards in hostile environments.

Operation

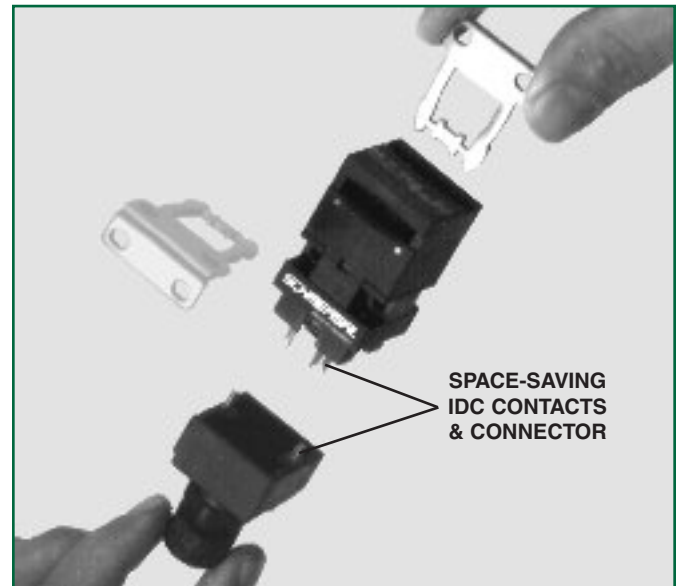
The AZ17zi is a two-piece, electromechanical safety interlock switch. It consists of a rugged switch mechanism and an individually-coded, geometrically-unique actuating key. The key must be directly hard-mounted to the movable guard. Upon opening of the guard, the normally-closed (NC) contact(s) are forced to open through a direct (non-resilient) mechanical linkage with the actuating key. The 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 contacts to re-close, and any NO contacts to re-open. The tamper-resistant design prevents bypassing with simple tools, bent wires or other readily available means.

Typical Applications



The AZ17zi is intended for use as a safety interlock on movable machine guards which, when open, expose the operator/maintenance personnel to machine hazards. Typical applications are the interlocking of protective gratings, hinged covers, access panels and other movable guards.



AZ17zi AVAILABLE MODELS AND ACCESSORIES

AVAILABLE MODELS (Includes Individually-Coded Actuator Key and 1/2" NPT Plastic Adapter)

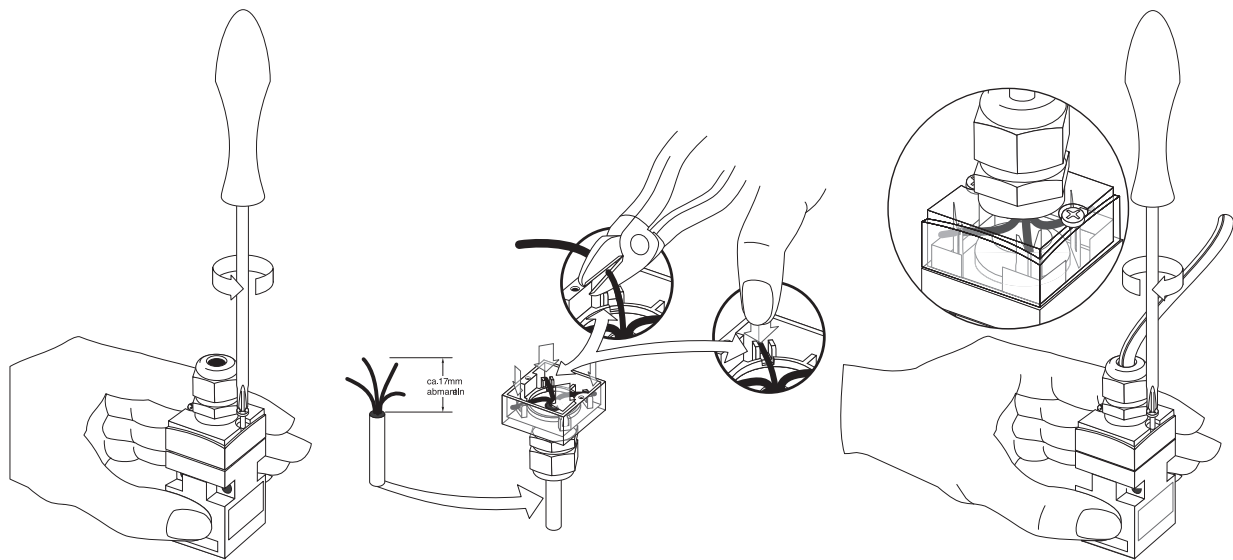
Part Number	Description	Contacts (with actuator key inserted)
AZ17-11zi-B1	Standard unit	1 NO & 1 NC
AZ17-11zi-B5		
AZ17-11zi-B6R		
AZ17-11zi-B6L		
AZ17-02zi-B1	Standard unit	2 NC
AZ17-02zi-B5		
AZ17-02zi-B6R		
AZ17-02zi-B6L		

OPTIONAL ACCESSORIES

Part Number	Description
MS AZ 17-P (See installation on Page 10)	Adjustable mounting kit for parallel mounting
MS AZ 17-R/P (See installation on Page 10)	Adjustable mounting kit for parallel or perpendicular mounting

Mounting kits require use of the -B6 key

Note: Standard units feature 1.2 pounds of key retention force. For unit with 7 pounds of key retention force, please insert "r" in part number. Example: AZ17-11zri-B1



Azi
15000
CODES

AZ17zi TECHNICAL DATA

MECHANICAL SPECIFICATIONS

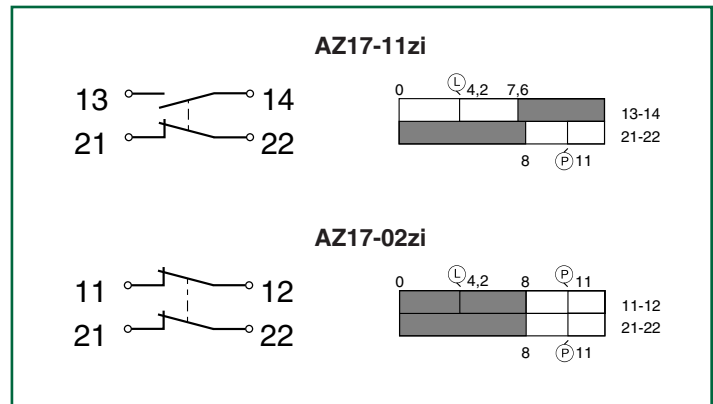
Housing	Glass-fibre reinforced, self-extinguishing thermoplastic
Actuator Key	Stainless steel, 1.4301
Degree of Protection	IP67
Key Retention Force	zi models: 1.2 pounds zir models: 7 pounds
Travel for Positive-Break	8 mm (0.315 inches)
Closing Force	Approx. 12N (2.7 pounds)
Operating Temperature	-22°F to +175°F
Mechanical Life	> 10 ⁶ operations
Conformity to Standards	IEC 947-5-1 EN 60947-5-1 DIN VDE 0660-200 BG-GS-ET, pr EN 1088 UL & CSA
Minimum Closing Radius	1.97" (with B6L or B6R actuator key) 7.87" (with B1 or B5 actuator key)

ELECTRICAL SPECIFICATIONS

Contacts	Fine silver
Contact Configuration	Double-pole, double-break with electrically separated contact bridges
Contact Rating	4A/230VAC
Switching Action	Slow-action, positive-break NC contacts
Short Circuit Protection	6A (time-delay)
Rated Isolation Voltage	250V
Type Terminals	Insulation displacement contacts & connector for 18AWG flexible stranded wire (0.75 mm ²)

Note: Pre-wired (5 meter length) cable entry models available. See optional accessories.

SWITCHING DIAGRAMS & CONTACT SCHEMATICS



MS AZ 17 ADJUSTABLE MOUNTING KIT (Eases installation and facilitates adjustments due to guard misalignment)

