



## 83893 plastic solenoid locking switch 838932 2-pole Part number 83893202



- Monitoring of moving guards for machines with a stopping time which is greater than the time taken to access the danger zone
- Locked by removing the voltage, unlocked by applying voltage to the electromagnet
- Plastic heads and bodies
- Heads have 4 possible positions at 90°
- Positive opening contacts

### Part numbers

|            | Type          | Type of contacts        | Action      |
|------------|---------------|-------------------------|-------------|
| 83 893 202 | 838932 2-pole | NC+NO break before make | Slow action |

### Specifications

#### Environment

|                                                           |                                                                            |
|-----------------------------------------------------------|----------------------------------------------------------------------------|
| Conforming to standards Products                          | IEC 947-5-1, EN 60 947-5-1, UL 508, CSA C22-2 no.14, JIS C4520 (See P.3/4) |
| Conforming to standards Machine assemblies                | IEC 204-1, EN 60 204-1, EN 1088, EN 292                                    |
| Certifications                                            | UL, CSA                                                                    |
| Protective treatment in normal operation                  | "TC"                                                                       |
| Temperature Use (°C)                                      | -25 → +70                                                                  |
| Storage temperature (°C)                                  | -40 → +70                                                                  |
| Vibration resistance according to IEC/EN 60068-2-6        |                                                                            |
| Schok resistance according to IEC 28-2-27                 |                                                                            |
| Degree of protection according to IEC 529 and IEC 947-5-1 | IP 67                                                                      |
| Cable entry                                               | Cable gland 11                                                             |

#### Electrical characteristics

|                                                                  |                                                                                                                         |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Assigned working characteristics                                 | AC 15 B300 Ue = 240 V, Ie = 1.5 A or Ue = 120 V, Ie = 3A, DC 13 Q300 Ue = 250 V, Ie = 0.27 A or Ue = 125 V, Ie = 0.55 A |
| Assigned insulation voltage according to IEC 947-5-1             | Ui = 500 V                                                                                                              |
| Assigned insulation voltage according to UL 508, CSA C22-2 no.14 | Ui = 300 V                                                                                                              |
| Assigned impulse voltage according to IEC 947-5-1                | Uimp = 4 KV                                                                                                             |
| Thermal rating according to IEC 947-5-1                          | Ithe = 6 A                                                                                                              |
| Electric shock protection Class 2 according to IEC 536           | ■                                                                                                                       |
| Resistance between terminals according to IEC 954-5-4            | ≤ 30 mΩ                                                                                                                 |
| Protection against short circuits                                | Cartridge fuse 10 A gG (gl)                                                                                             |
| Connection Screw clamp terminals                                 | ■                                                                                                                       |
| Clamping capacity with or without ferrule                        | min. 1 x 0,5 mm <sup>2</sup> , max. 1,5 mm <sup>2</sup>                                                                 |
| Electrical life according to IEC 947-5-1 appendix C              |                                                                                                                         |

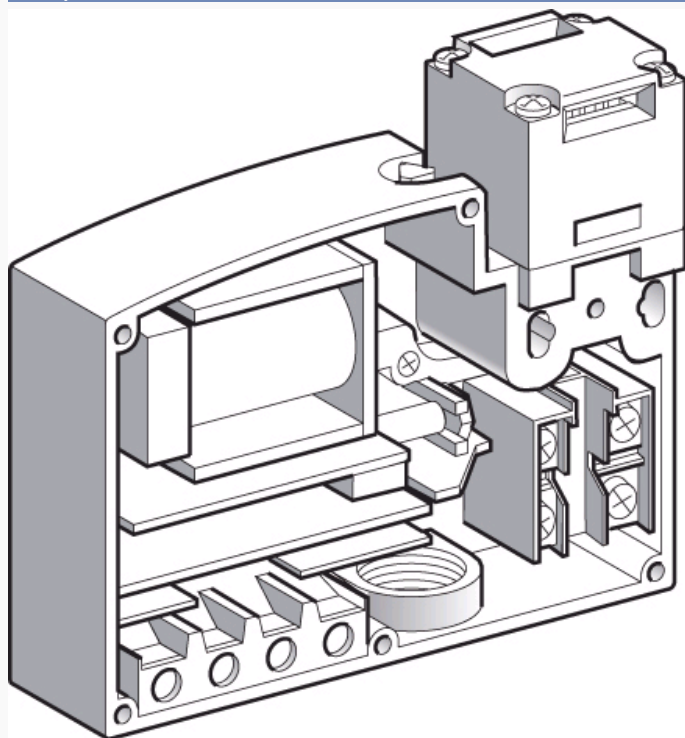
|                                                         |                 |
|---------------------------------------------------------|-----------------|
| Electromagnet supply voltage (50/60 Hz in AC)           | 120 V AC/DC     |
| Maximum actuation speed                                 | 0,5 m/s         |
| Minimum actuation speed                                 | 0,01 m/s        |
| Resistance to removal of key                            | 500 N           |
| Mechanical life (operating cycles)                      | 10 <sup>6</sup> |
| Minimum operating frequency (operating cycles per hour) | 600             |
| Minimum positive opening force                          | 15 N            |
| Cable entry according to NFC 68 300                     | 1 PG 11         |
| Weight (g)                                              | 360             |

### Accessories

| Symbol | Accessories                    | Code       |
|--------|--------------------------------|------------|
|        | Straight key                   | 79 214 581 |
|        | Key with wide fixing bar       | 79 214 582 |
|        | Short key with wide fixing bar | 79 214 585 |
|        | Angled key                     | 79 214 584 |



## Principles

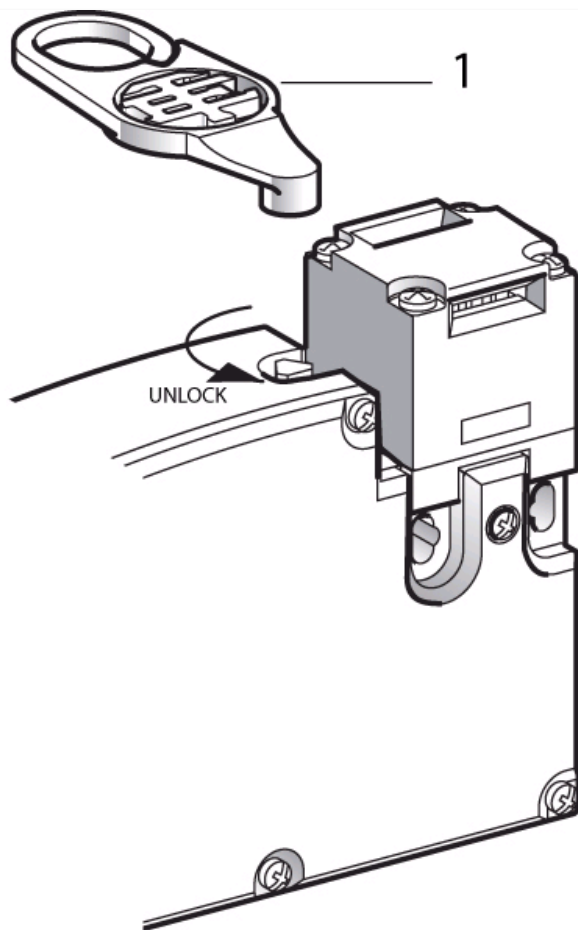


**Type 83 893 2 safety switches are fitted with an electromagnet for locking/unlocking the guard.**

With the guard locked, the force required to remove the key is **50 daN**.

In addition to the 2-pole contact element actuated by the key, type 83 893 2 limit switches also have a positive break type **"NC"** contact element, **actuated by the electromagnet**. The **"NC"** contact is integrated in the machine safety circuit.

## Principles

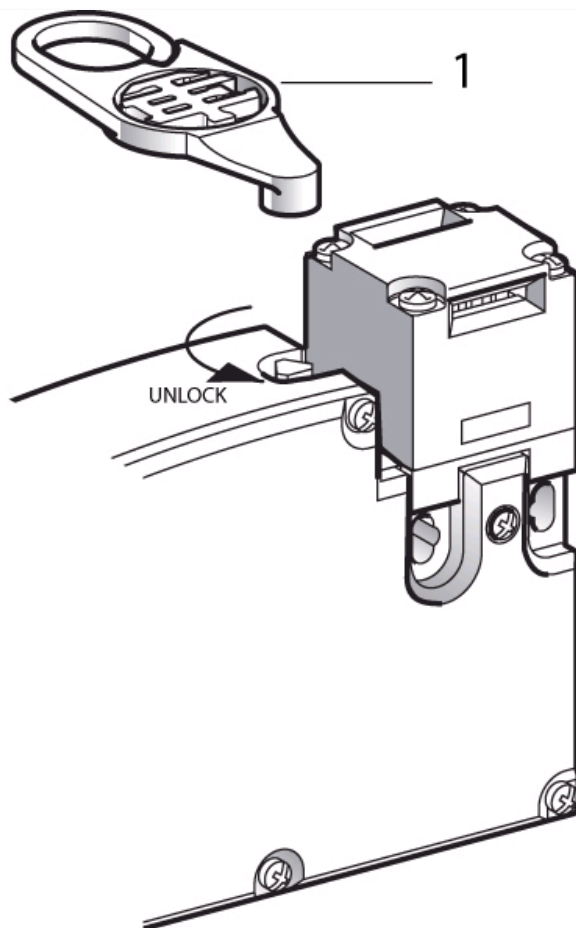


**Type 83 893 2 safety switches are supplied with a tool (1) which can be used to unlock the moving guard, bypassing the electromagnet.**

Unlocking using a tool is recommended in the following cases :

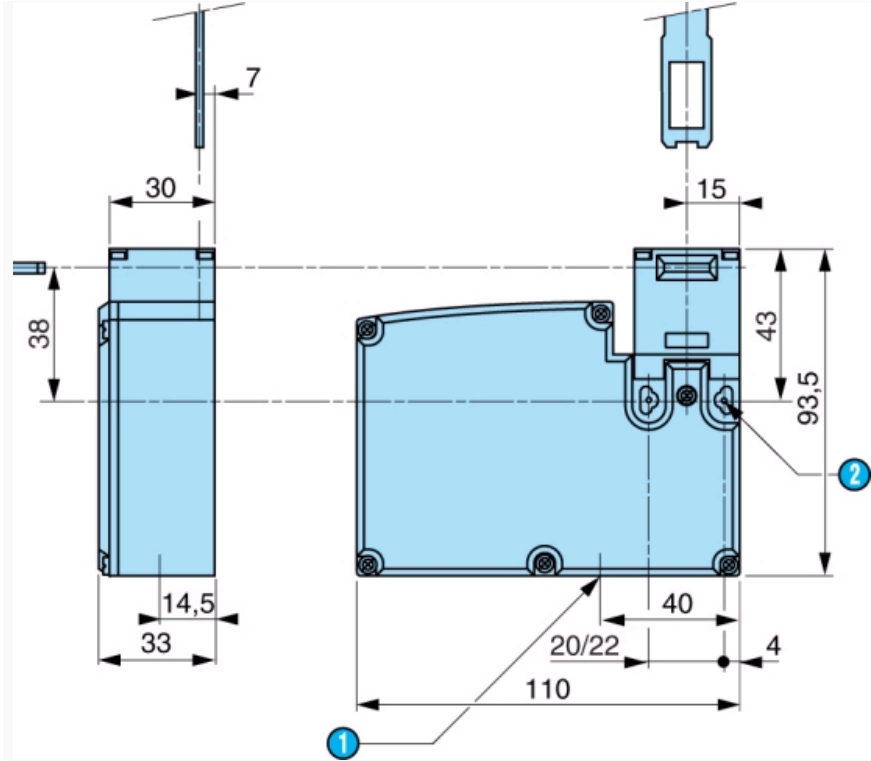
- machine maintenance (if the tool is in the "UNLOCK" position and then removed, this will prevent the machine from restarting accidentally, therefore ensuring the safety of maintenance personnel).
- mains failure
- problem with unlocking (locking cannot be released : fail-safe condition). Unlocking by applying power to the electromagnet always takes priority over unlocking using a tool. The "NC" contact is integrated in the machine safety circuit.

#### Principles

**Power supply for the electromagnet on 83 89 3 2**

The electromagnet for type 83 893 2 safety switches is supplied by an electronic circuit which increases its service life. As the 24 V version is protected by a **bridge rectifier**, an A.C. or D.C. supply can therefore be used. The 120 V and 230 V versions are A.C. only. It is also protected against voltage surges.

**Dimensions (mm)****Product****83 893 2**

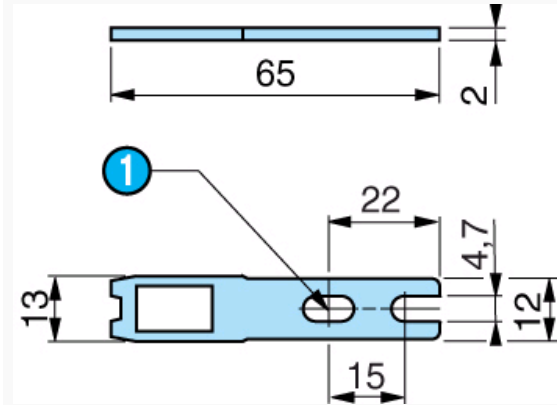


| N° | Legend                                                                   |
|----|--------------------------------------------------------------------------|
| 1  | 1 threaded hole for cable gland 11                                       |
| 2  | 2 slots Ø 4.3 x 8.3 fixing centres 22<br>2 holes Ø 4.3 fixing centres 20 |

Dimensions (mm)

Actuators

Straight key  
79 214 581

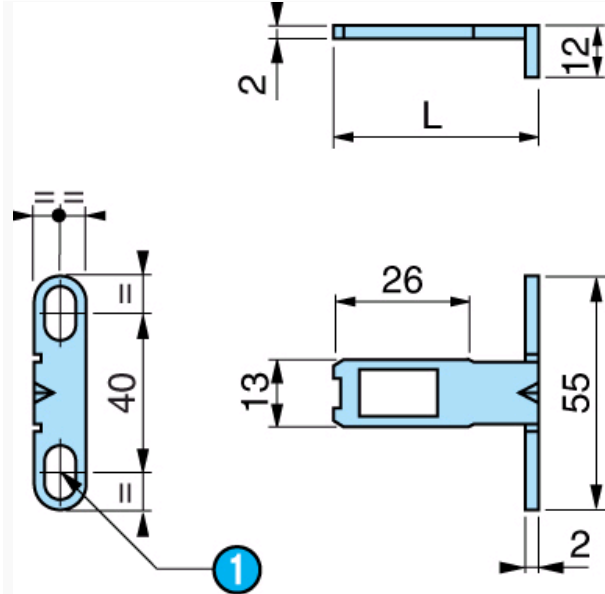


| N° | Legend             |
|----|--------------------|
| 1  | 2 slots Ø 4.7 x 10 |

Dimensions (mm)

Actuators

Key with wide fixing bar  
79 214 582 / 585



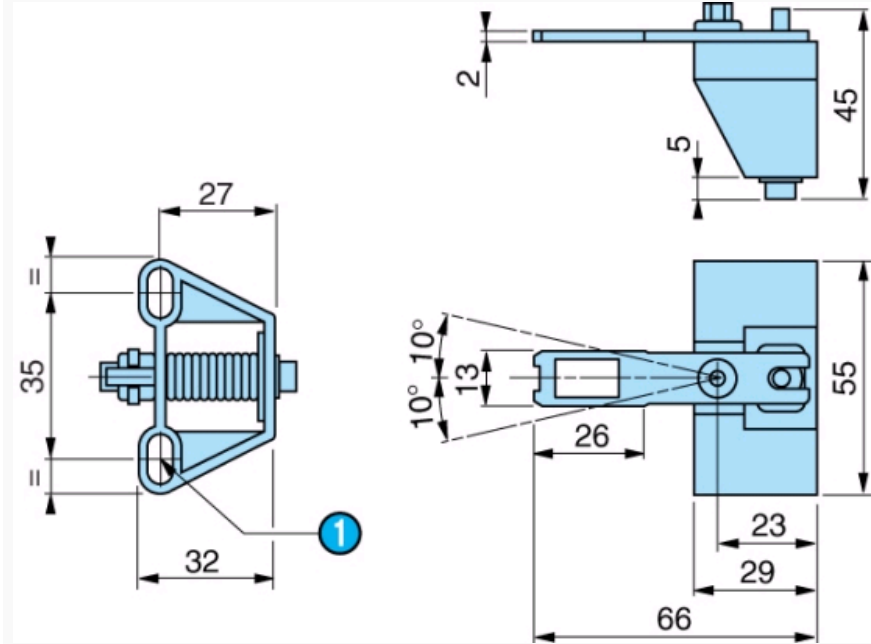
Type 79 214 582 : L = 40 mm Type 79 214 585 : L = 29 mm

| N° | Legend             |
|----|--------------------|
| 1  | 2 slots Ø 4.7 x 10 |

Dimensions (mm)

Actuators

Flexible key  
79 214 583



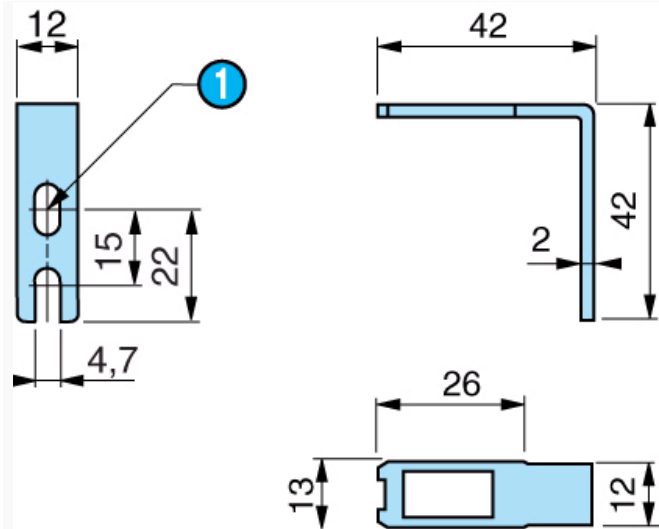
Type 79 214 582 : L = 40 mm Type 79 214 584 : L = 29 mm

| N° | Legend             |
|----|--------------------|
| 1  | 2 slots Ø 4.7 x 10 |

Dimensions (mm)

Actuators

Angled key  
79 214 584

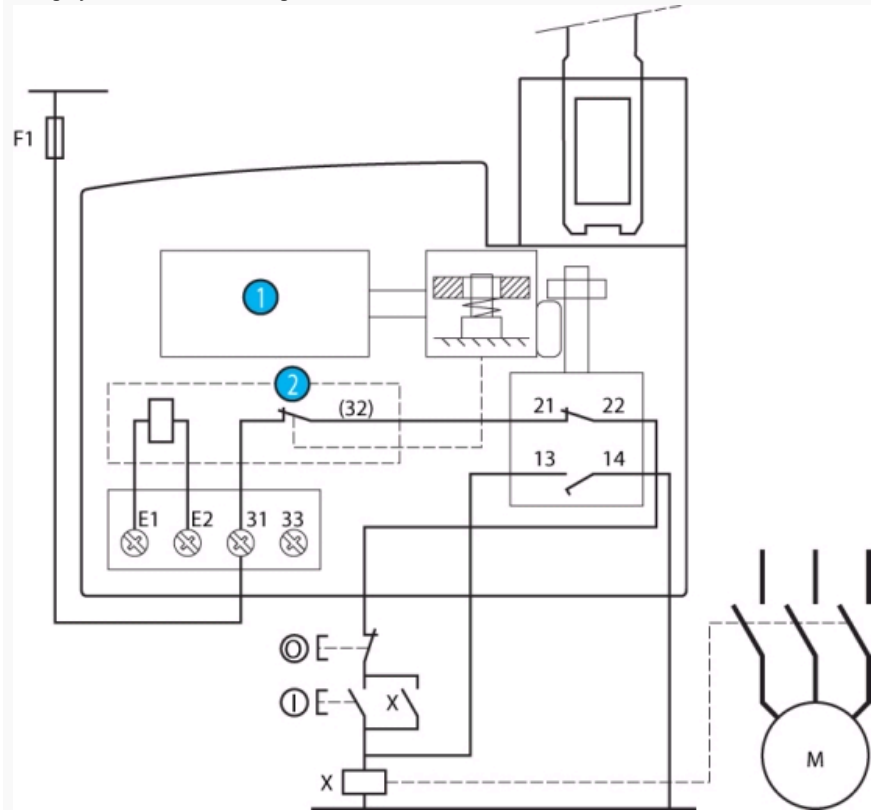


Type 79 214 582 : L = 40 mm Type 79 214 585 : L = 29 mm

| N° | Legend            |
|----|-------------------|
| 1  | 1 slot Ø 4.7 x 10 |

Connections

Category 1 connection according to EN 954-1



Examples of wiring diagrams with a fuse to provide protection against short-circuits in the cable or tampering. Locked by removal of voltage 83 893 2

| N° | Legend                                              |
|----|-----------------------------------------------------|
| 1  | Electromagnet                                       |
| 2  | Auxiliary contact                                   |
|    | E1-E2 : Power supply for electromagnet              |
|    | 13-14 : Safety contact for redundancy or signalling |