83893 plastic solenoid locking switch 838932 2-pole Part number 83893201

- 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
83 893 201	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 (^{0}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^2 , max. 1,5 mm^2
Electrical life according to IEC 947-5-1 appendix C	

Electromagnet supply voltage (50/60 Hz in AC)	24 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)	10^6
Minimun 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

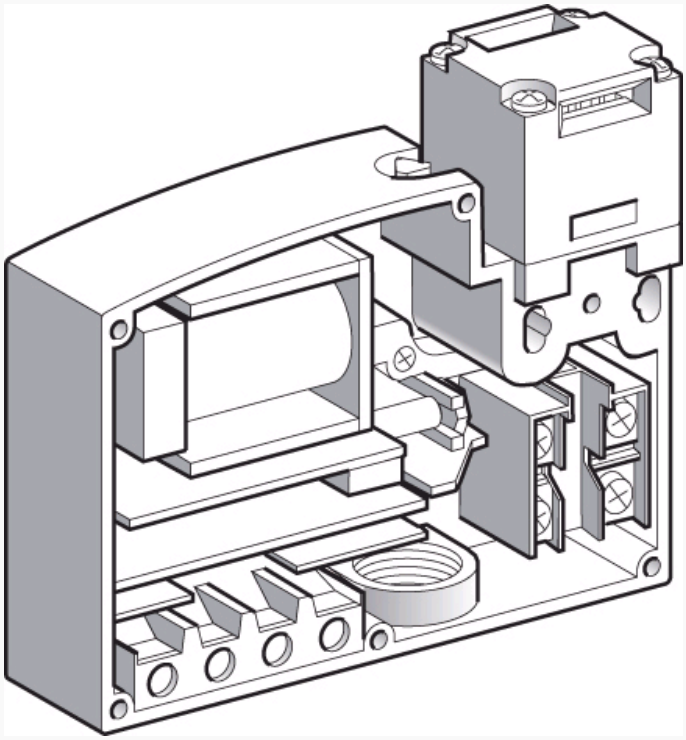
Accessories

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

Unless otherwise specified, the characteristics given are applicable to all or part of the product range selected

	Flexible key	79 214 583

Principles

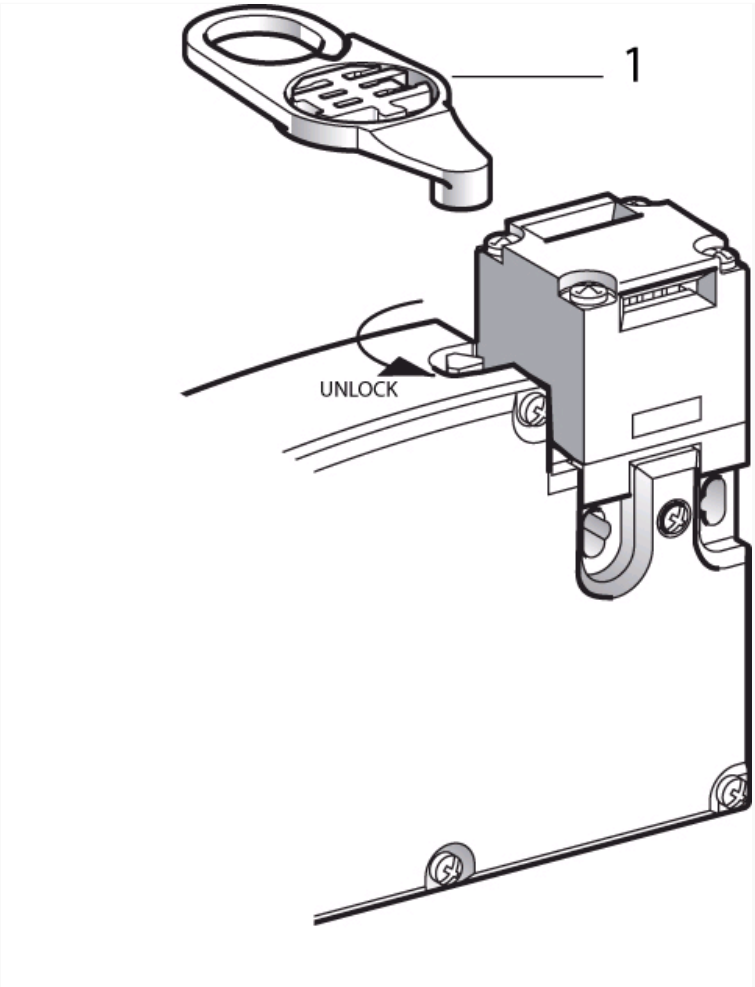


Type 83 893 2 safety switches are fitted with an electromagnet for locking/unlocking the guard.

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.

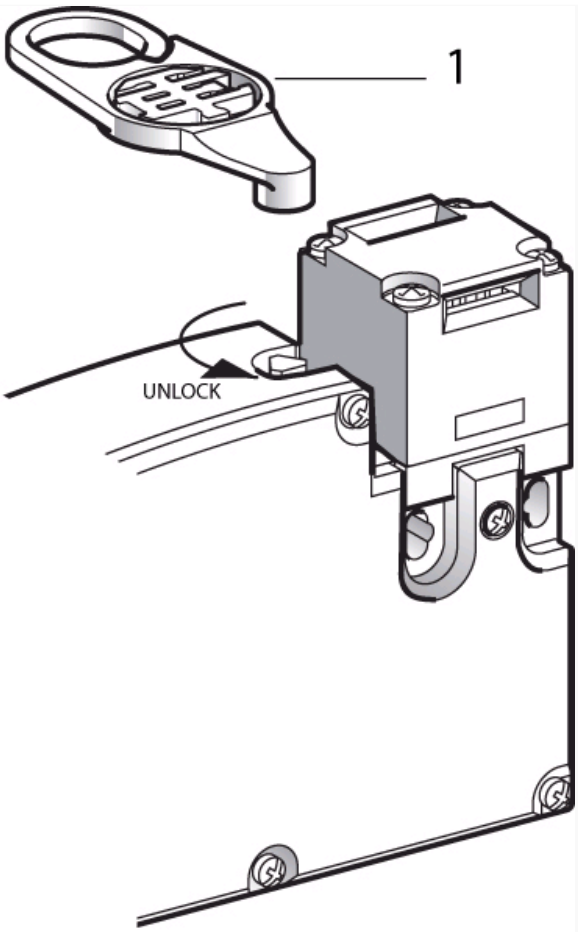
Principles



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

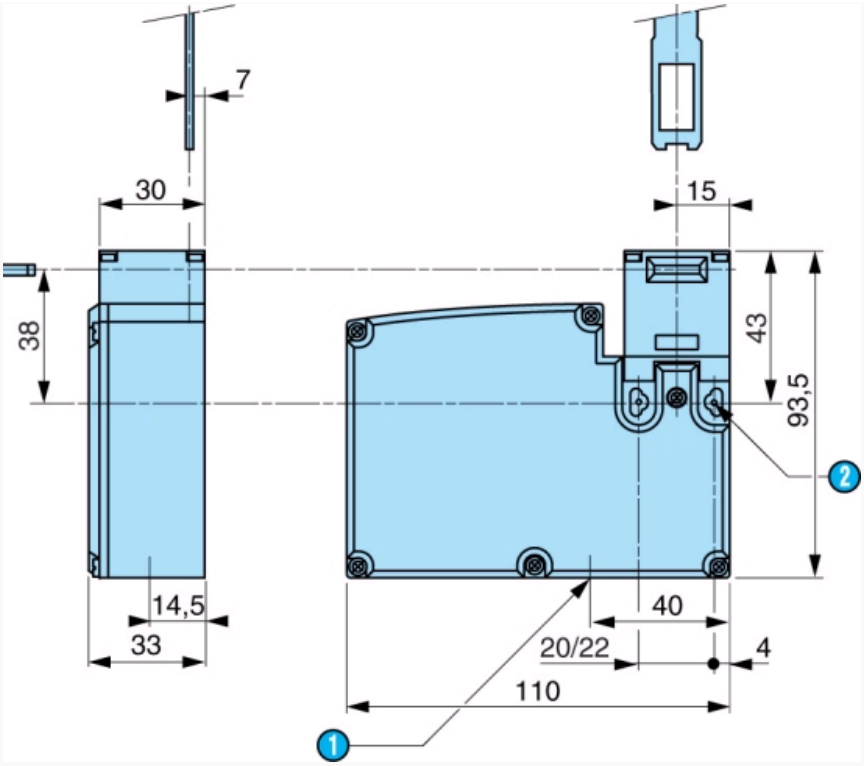


Power supply for the electromagnet on 83 893 2
The electromagnet for type 83 893 2 safety switches is supplied by an electronic circuit which increases its service life. As the 24 V version is protected by a **bridge rectifier**, an A.C. or D.C. supply can therefore be used. The 120 V and 230 V versions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

Dimensions (mm)

Product

83 893 2

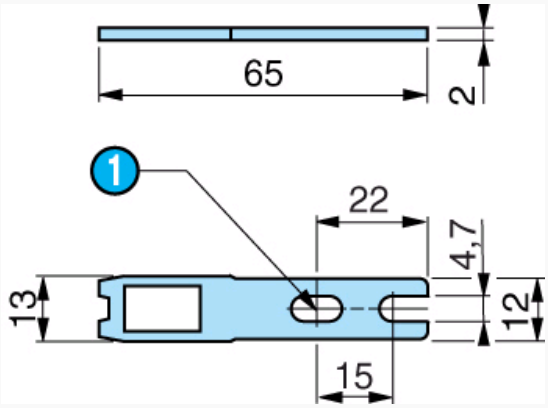


Nº	Legend
1	1 threaded hole for cable gland 11
2	2 slots Ø 4.3 x 8.3 fixing centres 22 ; 2 holes Ø 4.3 fixing centres 20

Dimensions (mm)

Actuators

Straight key
79 214 581

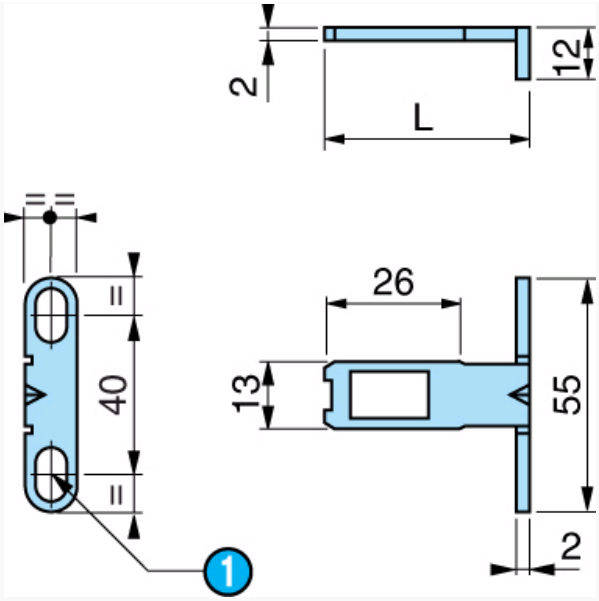


Nº	Legend
1	2 slots Ø 4.7 x 10

Dimensions (mm)

Actuators

Key with wide fixing bar
79 214 582 / 585



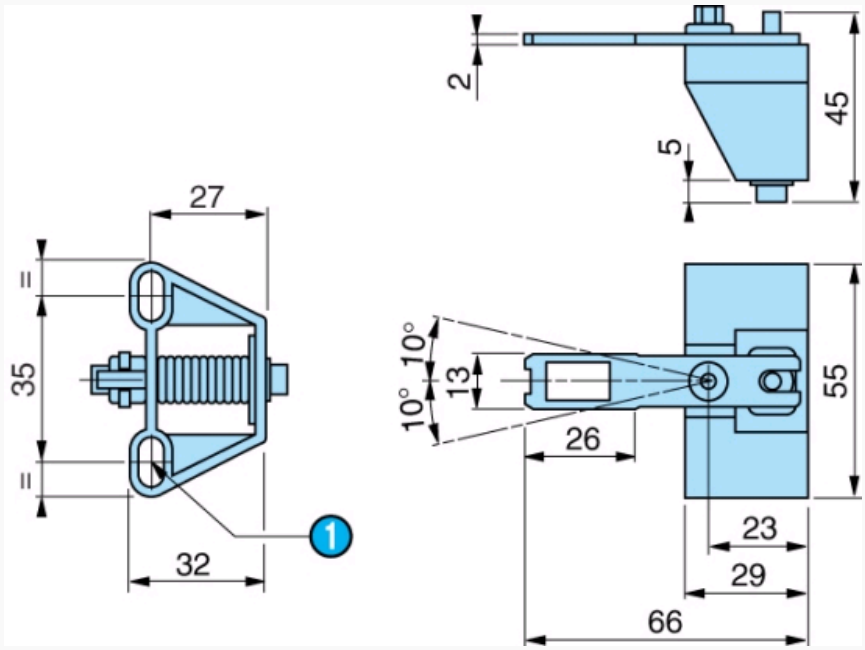
Type 79 214 582 : L = 40 mm Type 79 214 585 : L = 29 mm

Nº	Legend
1	2 slots Ø 4.7 x 10

Dimensions (mm)

Actuators

Flexible key
79 214 583



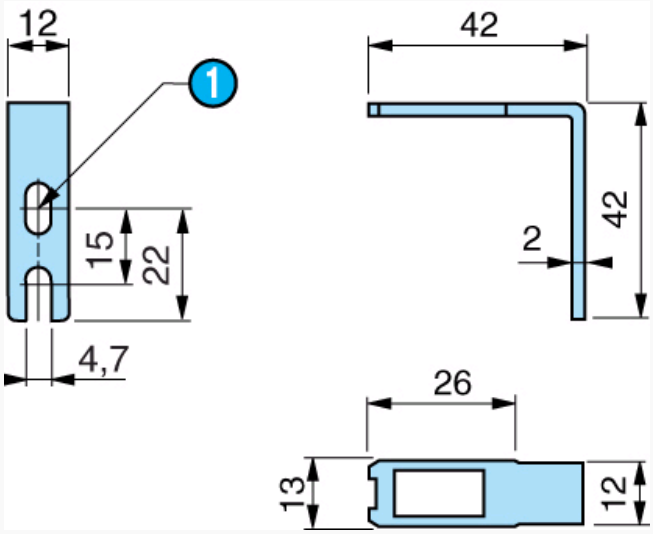
Type 79 214 582 : L = 40 mm Type 79 214 585 : L = 29 mm

Nº	Legend
1	2 slots Ø 4.7 x 10

Dimensions (mm)

Actuators

Angled key
79 214 584

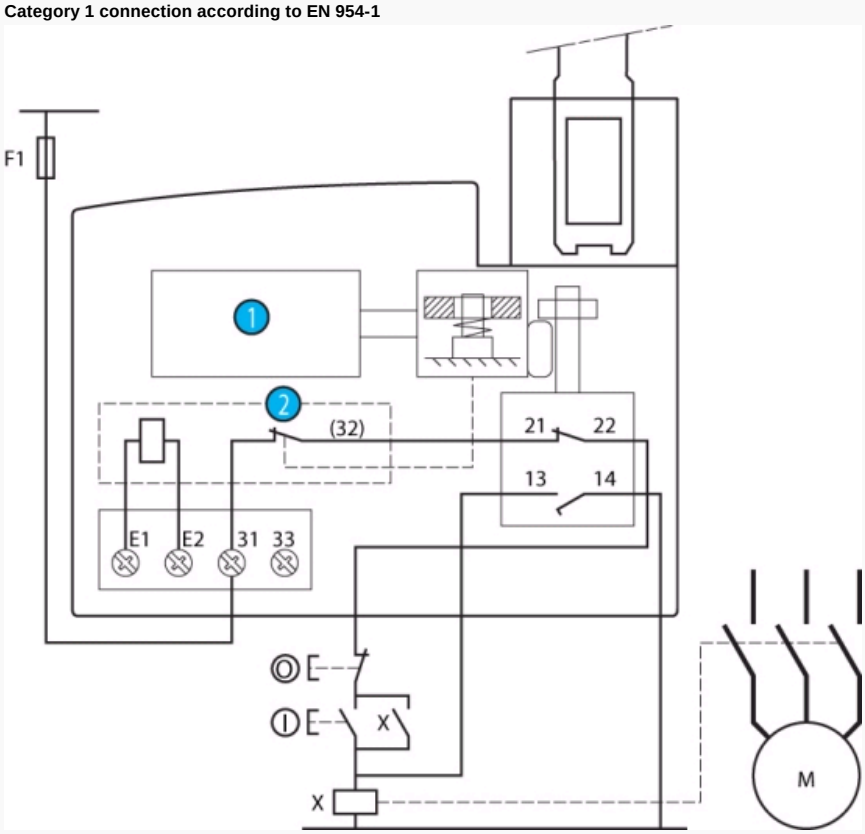


Type 79 214 582 : L = 40 mm Type 79 214 585 : L = 29 mm

Nº	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

Nº	Legend
1	Electromagnet
2	Auxiliary contact
	E1-E2 : Power supply for electromagnet
	13-14 : Safety contact for redundancy or signalling