

# Installation and maintenance sheet (Locks LR128 E)

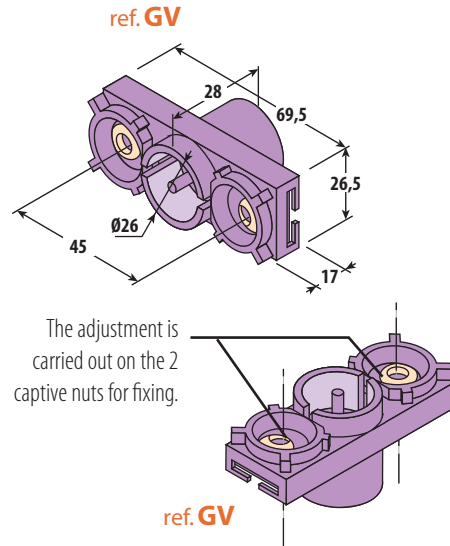
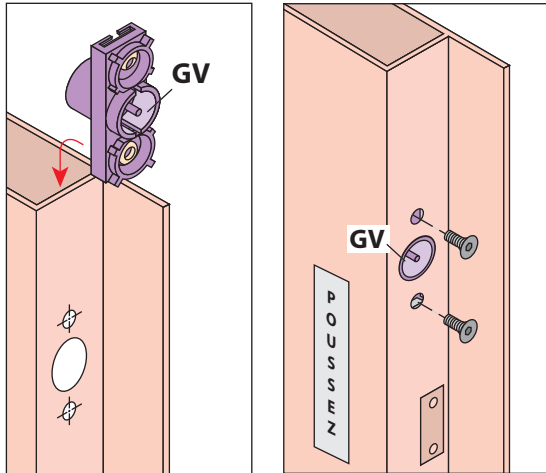
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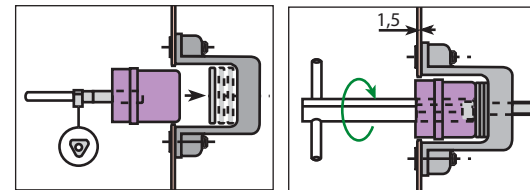
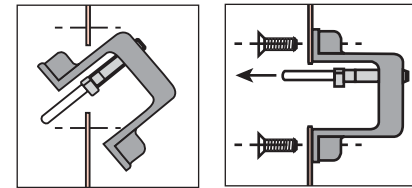
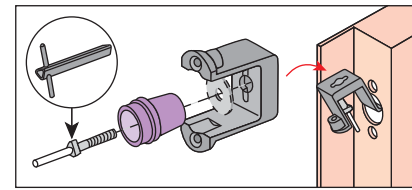
# Locks LR128 E

## (Mounting process and adjustments)

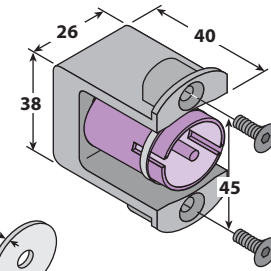
### Installation of the GV lock-keeper



### Installation of the GVR lock-keeper



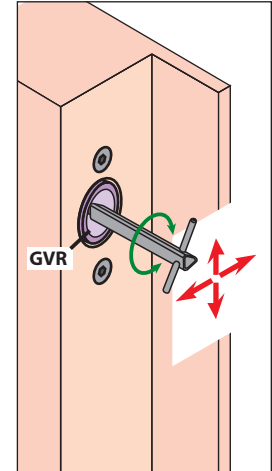
ref. GVR



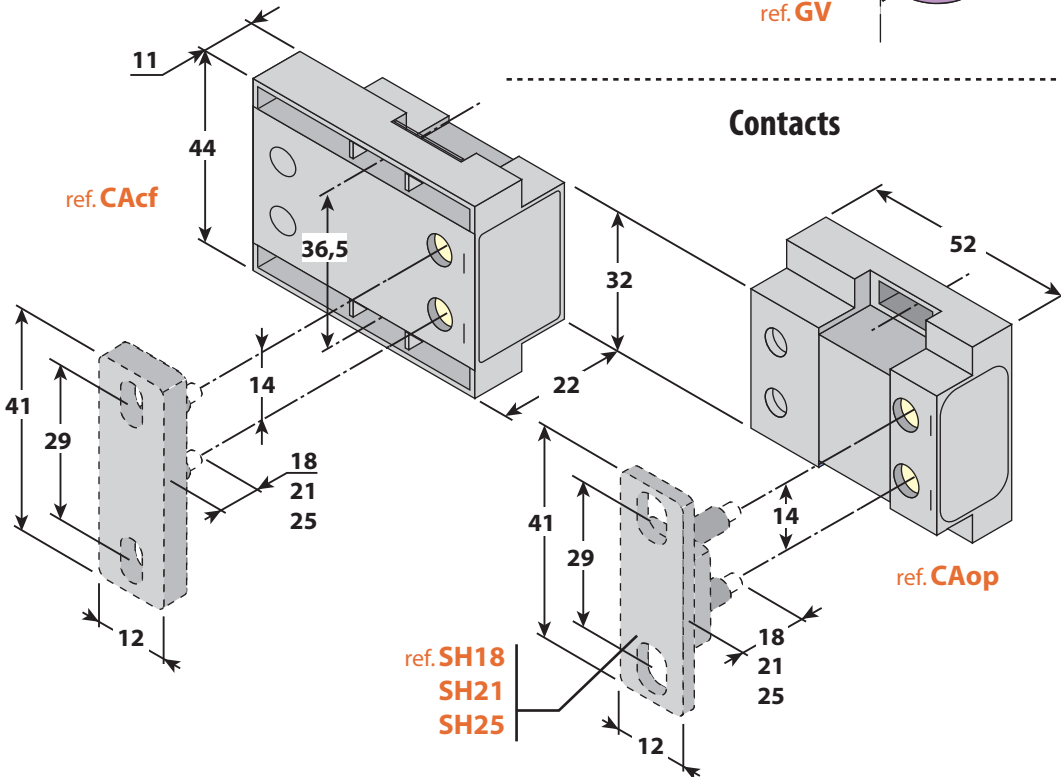
ref. LL6

### GVR lock-keeper adjustment

The GVR lock-keeper adjustment is possible with a triangular key.

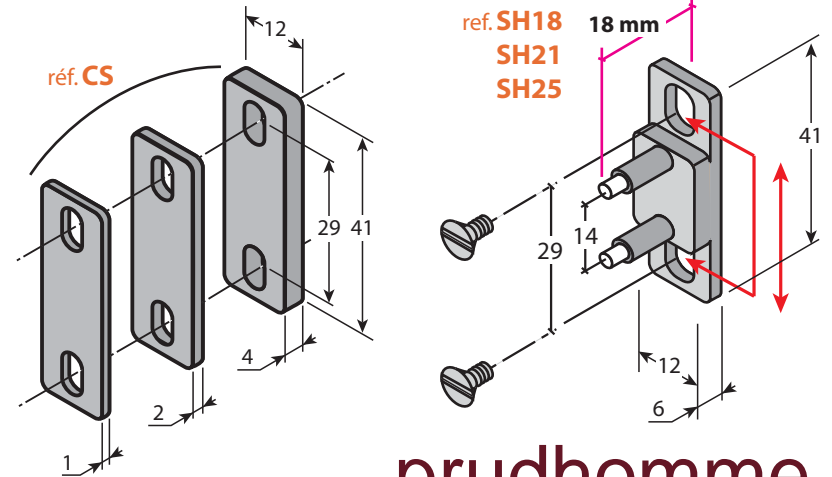


### Contacts



### The adjustment of the shunt position

The two oblong holes enable to adjust the shunt position on the landing door



# Locks LR128 E

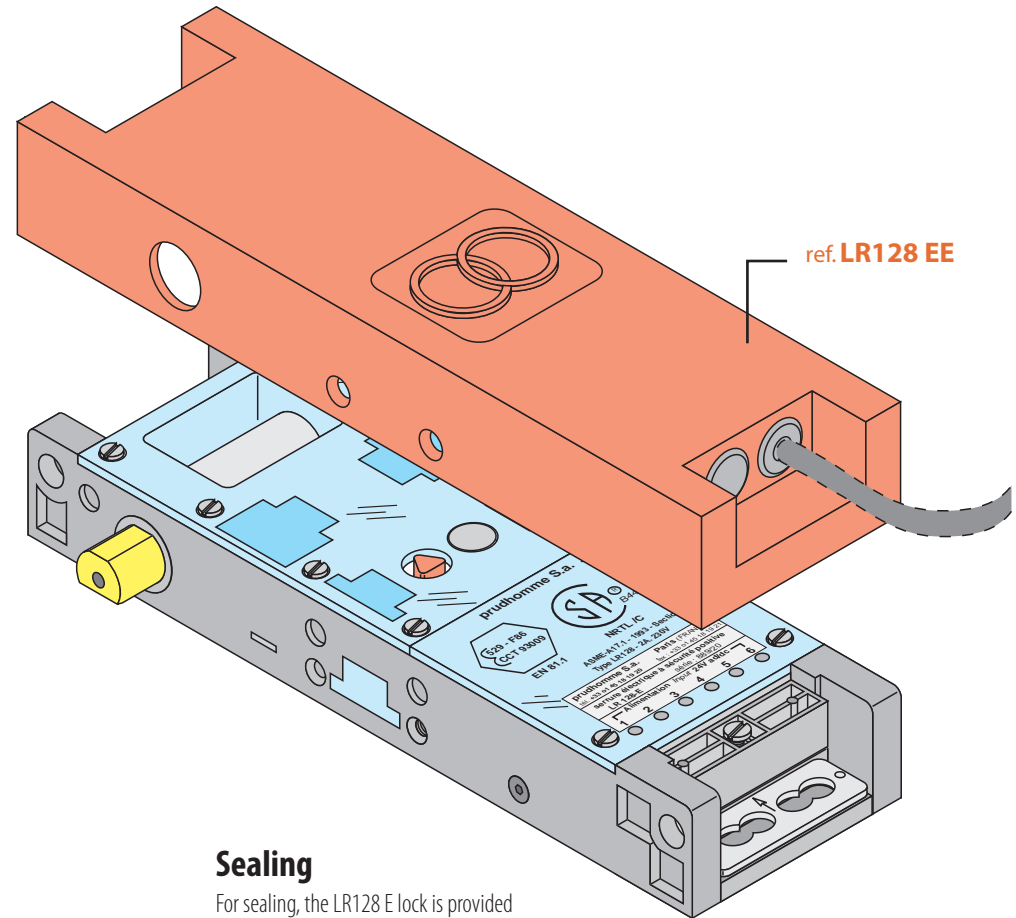
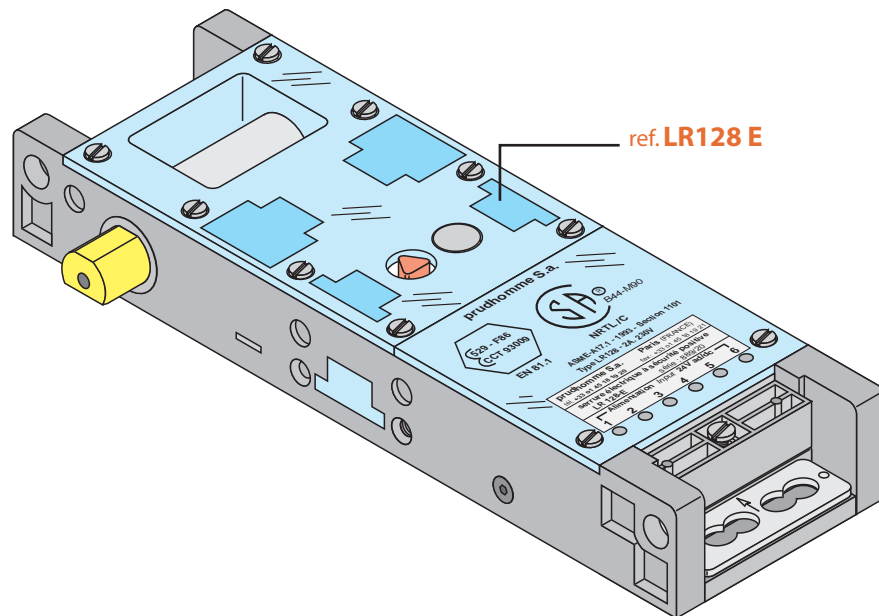
## (Mounting process and adjustments)

### Maintenance - Sealing



#### Maintenance

- Remove the transparent cover for cleaning and greasing of the moving parts.
- Periodicity according to the environment.
- Greasing with the petroleum (vaseline) oil.



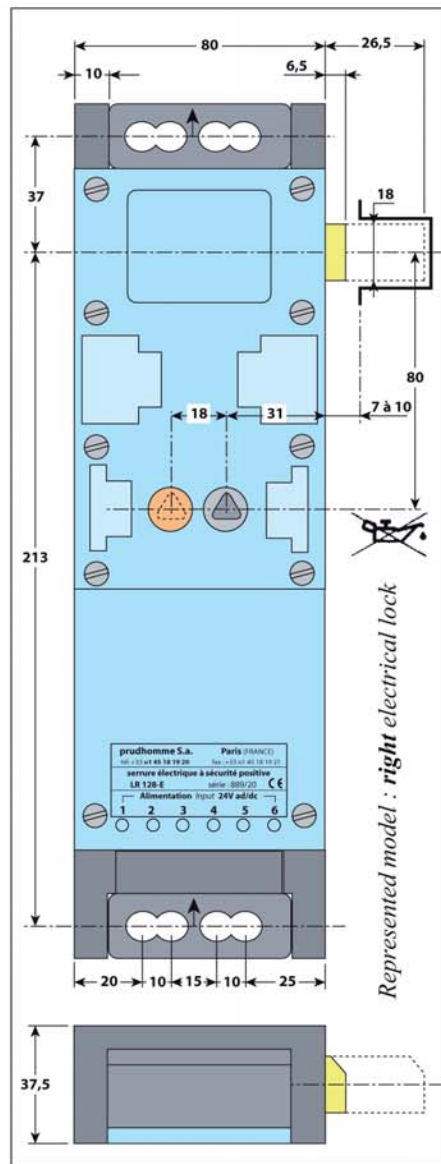
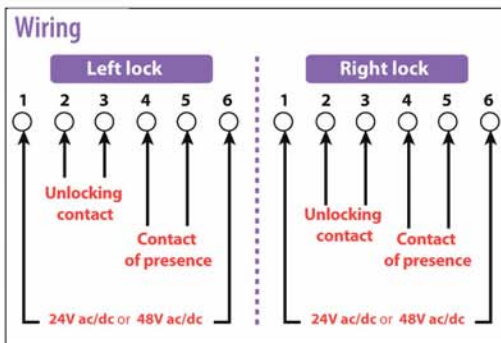
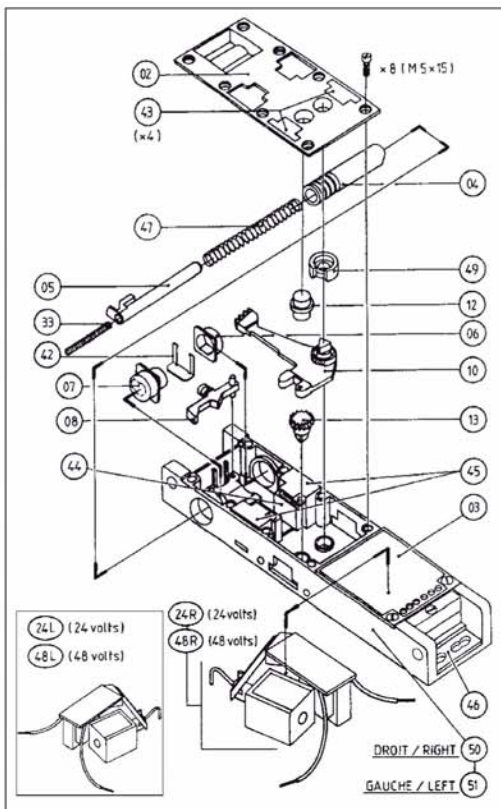
#### Sealing

For sealing, the LR128 E lock is provided with a rubber cover protection against water projections

# Locks LR128 E

## (Mounting process and adjustments)

### LR128 E : Electrical safety (24 / 48 V ac) with positive lock - Wiring - Technical data.



#### Operating conditions and preliminary checks before commissioning :

Like the LR128 EC lock, the LR128-E lock has been created to replace the set "lock + retiring cam" in case, the retiring cam cannot be installed (lift for handicapped people, adjacent opening, etc). The LR128-E lock is conceived to remain in the released position under a permanent current supply.

#### Principle :

The calling coil of an electromagnet, associated to a whole electromechanical, unlock the lock on a maintained electrical current. Once this release has been obtained, the current switch into a low consumption which holds its position indefinitely.

#### Fonctionning :

Nominal voltage (ac/dc)	24 V	48 V
Maximal voltage of utilisation	28 V	55 V
Inrush current	4,5 A	3 A
Holding current	150 mA	50 mA

Maxi ambient temperature	-25°C to + 70°C
Storage temperature	-40°C to + 80°C
Unlocking time	≈ 300 ms
Admissible frequency	50 / 60 Hz
Maxi cycle	120 / hour
Weight	0,8 Kg

#### Mechanical operation :

- If the door is closed and the lock not under power, you should operate the lock using triangular key. While locking and unlocking, the lock must remain lightly and smoothly, and the bolt should move freely.
- If the door is under power, open and close the door to check if (when it is closed, the door should always touch the upright at the same place (to avoid variation in the latch position).
- If there is no catch, or equivalent, position a magnetic catch, for example, between the door and the upright.
- To prevent automatic opening doors jamming, make sure that the door opening signal has been sent at least 1 second after the signal to the lock, (the average opening time for the LR128 E at 20°C is 0.6 second).

#### Electrical operation (under power) :

The voltage and current must be measured at the lock terminal. When the lock is operating, the reading must be :

- 24 Volts / 5 Amperes  
 (minimum de 4 amperes)  
 - 48 Volts / 3 Amperes  
 (minimum de 2,8 amperes)

To check the value during, it is necessary to proceed as follow:

- Connect a voltmeter and an ammeter to the lock terminals.
- Open the door and tab the lock to make the bolt come out.
- Hold the bolt firmly with your hand in order to prevent its moving.
- Switch on the lock.
- Read the values.

To check the value during, it is necessary to proceed as follow:

The reel of call of an electric-magnet, associated to an electromechanical unit, unlock the lock on a maintained electrical current. Once this established unlocking, its power supply mute to a reel of weak consumption which ensures the maintenance in this position indefinitely.



**Note :** This procedure should not take more than a few seconds

#### Relationship between cross section and length of main cable :

For perfect functioning, increase lifetime and effectiveness of the internal safety devices, it is necessary to ensure that:

- 1/ the relationship between the cross section and the length of cable complies with the following table.
- 2/ the transformer rating must be at least:
  - 150 VA for 24 Volts alternative and
  - 180 VA for 48 Volts alternative.

Lg.24 = maximum authorised in permitted cable at 24 V.  
 Lg.48 = maximum authorised in permitted cable at 48 V.  
 The cable length is the distance between the lock and the transformer (or battery) terminal.

# Locks LR128 E

## (Mounting process and adjustments)

### LR128 E : Electrical safety (24 / 48 V ac) with positive lock - Wiring - Technical data.



- **Note 1** : if the cable is coiled within the control enclosure, the extra length should be accounted for in the cable length.

- **Note 2** : if the lock has a DC supply from a transformer, the output voltage from the rectifier will be less than the voltage from the transformer.

(Input 24 V ac = Output 21.7 V dc) or (Input 48 V ac = Output 43.2 V dc).

- **Note 3** : parasitic resistance should be taken into account (relays contact, reduction in cross section of the wire when stripped, poor contact, etc. ...).

AWG (gauge)	Sect. (mm <sup>2</sup> )	Lg.24 (m)	Lg.48 (m)
	0,75	12	100
18	0,82	13	110
	1,00	16	130
16	2 x 0,75	23	180
	1,50	27	200
15	1,65	31	230
	2 x 1,00	33	240
14	2,08	40	290
	2,50	50	+350
13	2 x 1,50	54	+350

#### Additional information on mains cable

The following table shows typical values for various sizes of copper cores. These values are given for information only, for 1 meter of cable (i.e. for 2 meters of conductor).

AWG	Sect.	Dia	Ω	↓T5	↓T3
	0,75	0,98	0,043	0,213	0,128
18	0,82	1,02	0,039	0,195	0,117
	1,00	1,13	0,032	0,160	0,096
16	1,31	1,29	0,024	0,122	0,073
	1,50	1,38	0,021	0,106	0,063
15	1,65	1,45	0,019	0,096	0,058
14	2,08	1,63	0,015	0,076	0,046
	2,50	1,78	0,013	0,064	0,038
13	2,63	1,83	0,012	0,061	0,036

AWG : American Wire Gauge

Sect : Cross section of Core (mm<sup>2</sup>)

Dia : diameter of core (mm)

Ω : Nominal resistance in Ohm per meter of cable at 20°C

↓T5 : Nominal voltage drop in volt per meter of cable at 5 A.

↓T3 : Nominal voltage drop in volt per meter of cable at 3 A

#### Safety feature :

The LR128 E has two safety devices : overcurrent and temperature

#### EJECTION TIME OF THE OVERCURRENT SAFETY DEVICE

15 seconds	24 V
7 seconds	48 V

#### EJECTION LIMIT OF THE OVER TEMPERATURE SAFETY DEVICE

120° C	Without joule effect
95° C	With joule effect

Automatic reset by removing current in the coil after ambient temperature.



#### NOTICE :

An operating current less than the required minimum (4 A at 24 V and 2,8A at 48 V or an inadequacy rated transformer will prevent the safety devices operating correctly.

If several locks on the same floor to open the same time, the supply rating must be calculated appropriately.

Failure to comply with the above recommendations may invalidate the guarantee.

#### Equipment:

- 3 emergency release triangles (2 on the base of the lock and 1 on the face)

- 1 lock contact 1A – 220 V

- 1 presence contact 1A – 220 V

- 1 draw contact 1A- 220 V

- 1 bridge (ref SH) and 3 supports (ref C.S)

option : safety module ref MS02 (24V) and MS04 (48V)

Only the presence of the lock keeper (placed in front of the pin) authorise the door to lock immediately.

Only the mechanical locking system of the door can operate the electrical lock contact by pin penetration (7mm or 0.275 mini) into the lock keeper.

#### 1. Lock continuously under power :

LOCK	UNLOCKED
DOOR	CAN BE OPENED
LOCK CONTACT	OPEN
PRESENCE CONTACT	CLOSED
CAR READY TO GO	IMPOSSIBLE

#### 2. Lock connected to power :

##### 2.1. Normal operation :

LOCK	LOCKED
DOOR	CLOSED AND LOCKED
LOCK CONTACT	CLOSED
PRESENCE CONTACT	OPEN
CAR READY TO GO	AUTHORISED

##### 2.2. Unusual operation (accidental power failure)

##### 2.2.1. Landing entrance

OPENED LOCK	SAFETY POSITION NO VOLTAGE
LOCK CONTACT	OPEN
PRESENCE CONTACT	OPEN
CAR READY TO GO	IMPOSSIBLE

##### 2.2.2. Landind entrance in position of closing

LOCK	SAFETY POSITION THEN LOCKING
LOCK CONTACT	OPEN THEN CLOSED
PRESENCE CONTACT	OPEN
CAR READY TO GO	IMPOSSIBLE THEN AUTHORISED

##### 2.2.3. Landing entrance closed

LOCK	LOCKED
LOCK CONTACT	CLOSED
PRESENCE CONTACT	OPEN
CAR READY TO GO	IMPOSSIBLE THEN AUTHORISED

#### 3. Lock keeper (defect position)

LOCK	SAFETY POSITION
DOOR	NOT CLOSED CORRECTLY
LOCK CONTACT	OPEN
PRESENCE CONTACT	OPEN
CAR READY TO GO	IMPOSSIBLE

# Locks LR128 E

## (Procedures of assembly and adjustments)

### LR128 E : Electrical safety (24 / 48 V ac) with positive lock - Wiring - Technical data.

#### Device RCD180

**Principle of operation of piloting d' an electric lock by the transmitting EM150 and receiving RCD180 device.**

Transmitter installed on the cabin has a distance approximately 30 cm, send its infra-red signal to the receiver of stage concerned.

So that transmitter sends its coded signal, it is necessary that alimentation passes by a called dry contact "info of came"; contact normally used to control the mobile cam and coming from cupboard of manoeuvre.

When it's fed, a green indicator (led) s' light on transmitter.

When the receiver receives its coded signal, the green led s' also light on this one once the decoded signal.

The DIR180 receiver orders the change d' then; state of the relays of the RIR180 so d' to supply the electrical lock.

Defaults	Checking
<p>If, cabin on the floor, nothing occurs ; that the door s' do not open and that the receiver is lit :</p>	<p>Checks if the alimentation arrives at the lock.</p> <p>If yes : replace the lock If no : checks if the alimentation leale the RIR180 modul</p> <p>If yes : to check the connection of the lock If no : to check if alimentation goes good in the RIR modul</p> <p>If yes : replace the RIR modul If no : to control the line power supply of the locks and RIR180 modules</p>
<p>If, cabine on the floor, the receiver is not lit :</p>	<p>to check that transmitter is well lit and centered about well opposite with the receiver. If transmitter is well lit; be-with-to say that l' infra-red is HS (out service). Therefore, to replace transmitter</p> <p>if transmitter is extinct :  <ul style="list-style-type: none"> <li>- to check the polarity of connection</li> <li>- to check the alimentation tension</li> <li>- to check the presence of alimentation of transmitter.</li> </ul> </p>

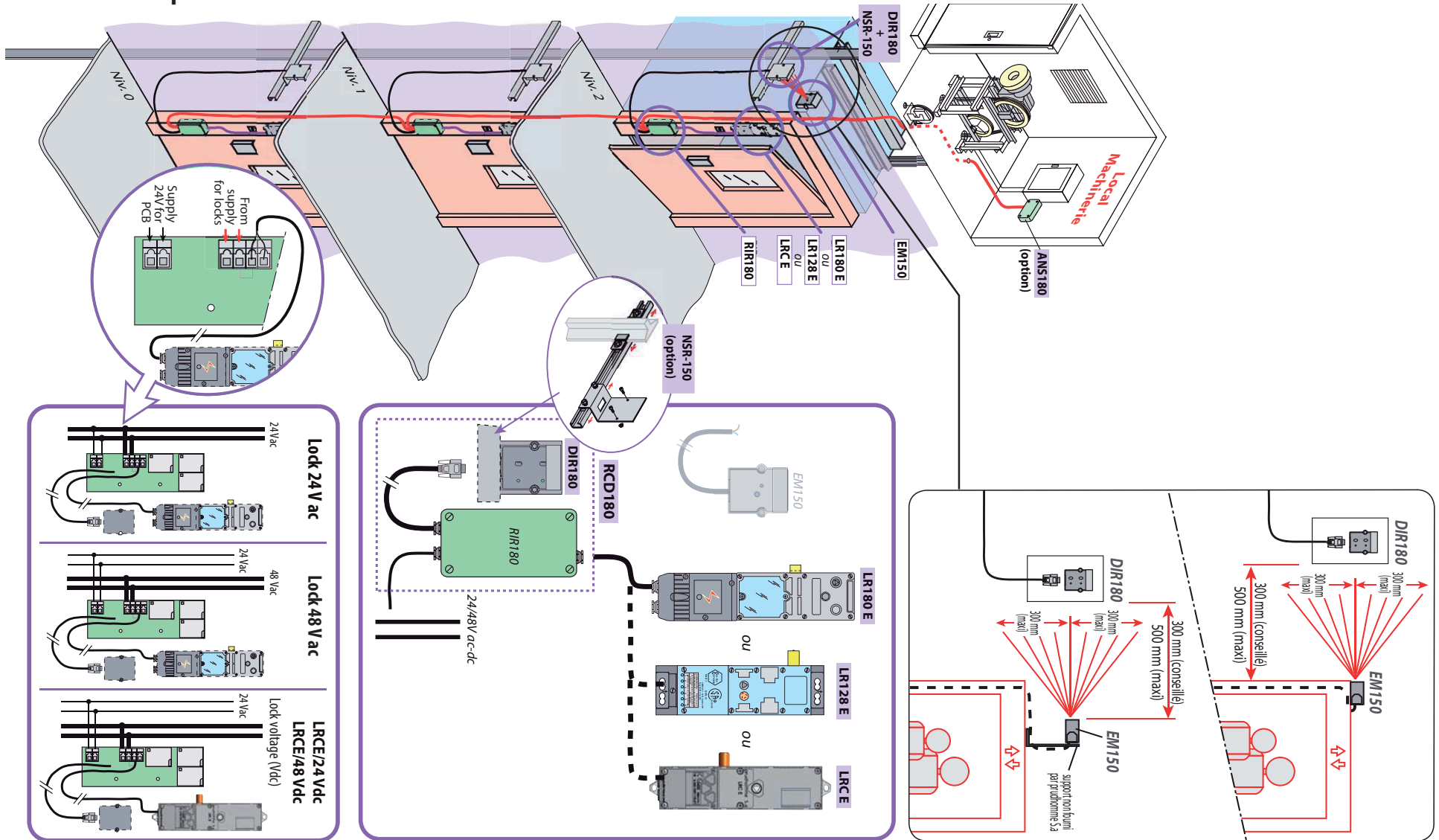
RCD180\_Manuel\_LR128E-page5a-fra

# Locks LR128 E

## (Procedures of assembly and adjustments)

RCD 180 :

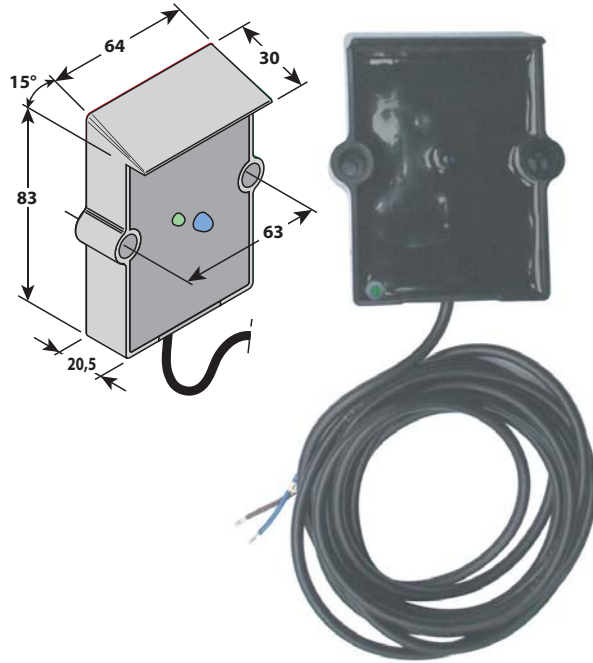
inter. Positiv for positiv lock LR128 or LR180 E.



# Locks LR128 E

(Procedures of assembly and adjustments)

**EM150**

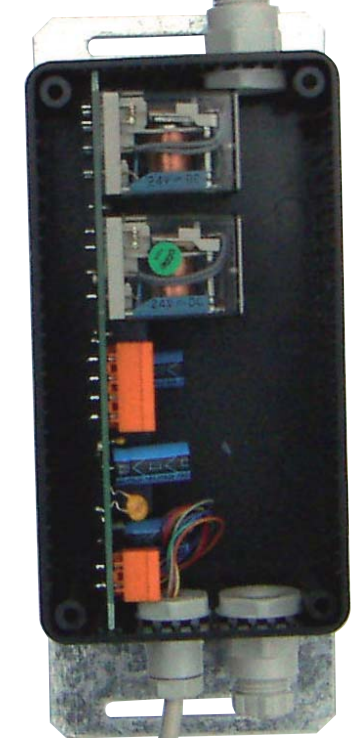
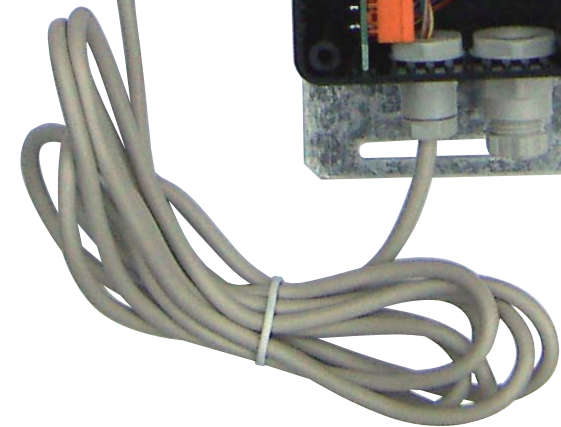
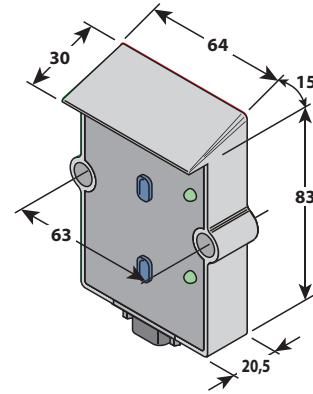


**RCD180**

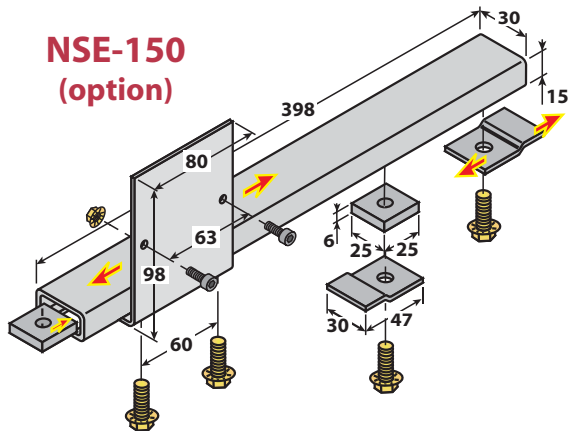
**DIR180**

**RIR180**

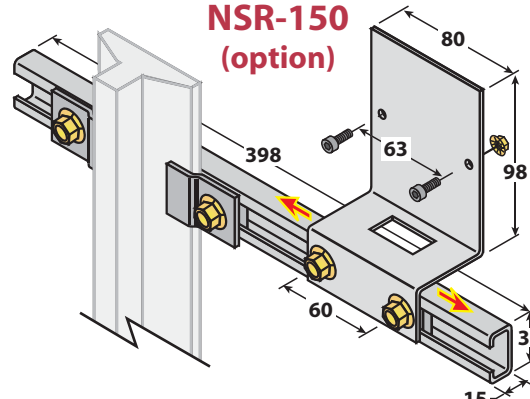
Dimensions : 150 x 80 x 46



**NSE-150**  
(option)



**NSR-150**  
(option)



RCD180\_Manuel-LR128E-pages5c-fra

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