

Installation and maintenance sheet

(Locks LR180)

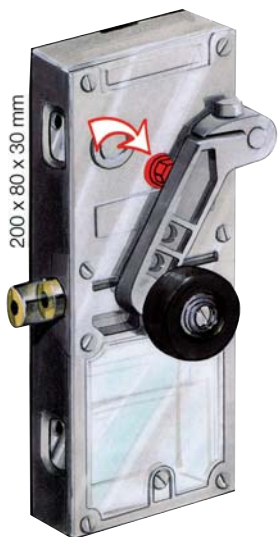
Including :

Adjusting pin length :	page 1
Additional free travel of the unlocking level :	page 1
Installation - Adjusting GVR lock-keeper :	page 1
Installation - Adjusting GV or GV/F lock-keeper :	page 1
Place and shunt adjustment - Holds of shunt :	page 2
Place and draw contact adjustment in the lock :	page 2
Place and unlocking level adjustment - Round rubber level :	page 2
Mechanical lock - Instructions - Contacts wiring (pre-wiring) :	page 3
Electrical lock - wiring (pre-wiring) - Technical data :	page 4
Electrical lock - Technical data :	page 5
Electrical lock (24 / 48 V ac) with positive safety – technical characteristics	page 5a
RCD 180 : inter. Positiv for positiv lock LR128 or LR180 E.	page 5b
Locks LR180 (Using - Sealing - Maintenance) :	page 6
Types of fixings - Dimensions :	page 7
Examination certificate EC type :	page ...

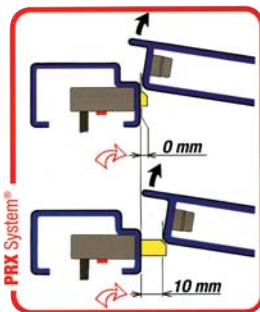
Locks LR180

(Mounting process and adjustments)

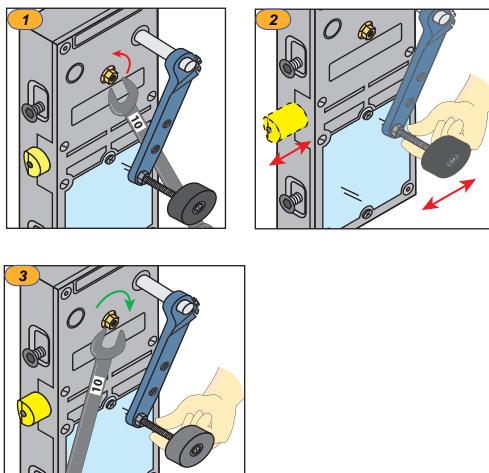
Length pin adjustment



The pin length can be adjusted from the external side of the lock.



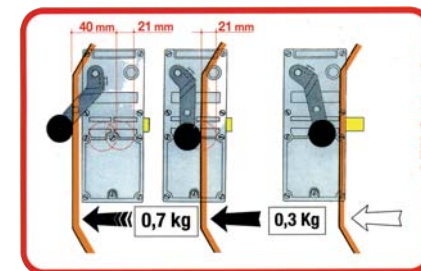
Pin adjusting steps



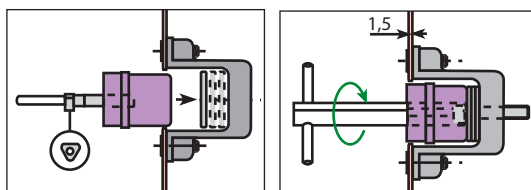
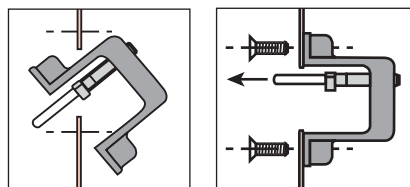
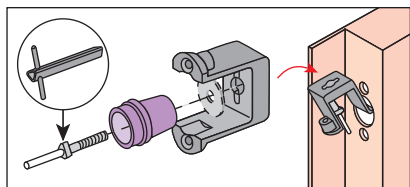
Free travel of the unlocking lever



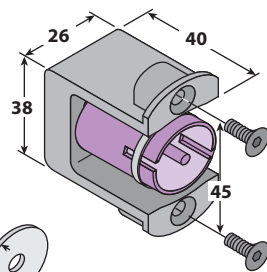
The unlocking travel of the lever is 21 mm, with an additional 40 mm free travel.



Lock-keeper GVR installation



ref. GVR

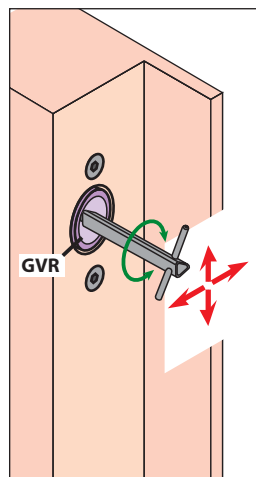


ref. LL6

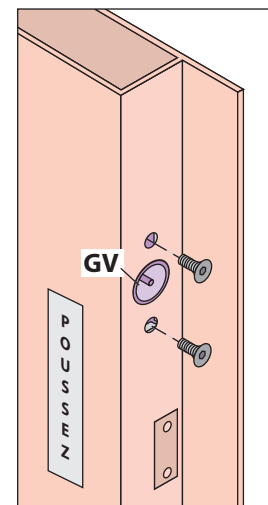
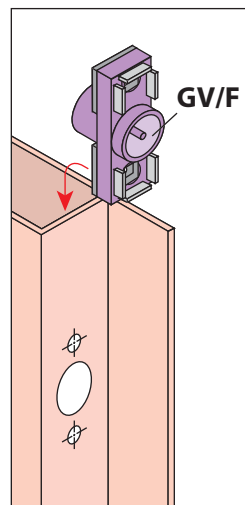
Ø26

Lock-keeper GVR adjustment

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

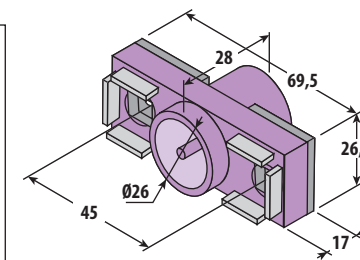


GV or GV/F lock-keeper installation

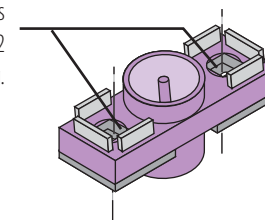


ref. GV

ref. GV/F



The adjustment is carried out on the 2 captive nuts for fixing.

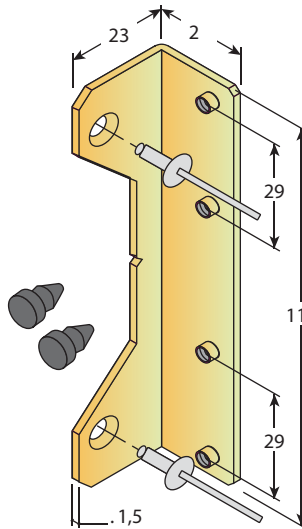
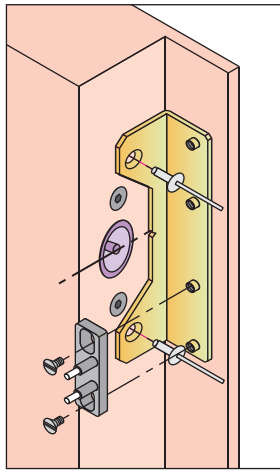


Locks LR180

(Mounting process and adjustments)

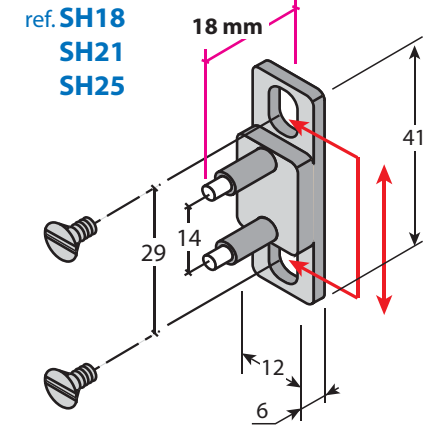
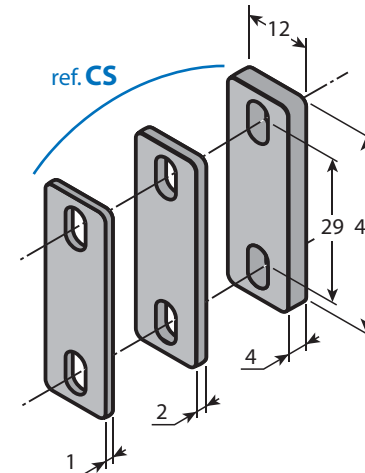
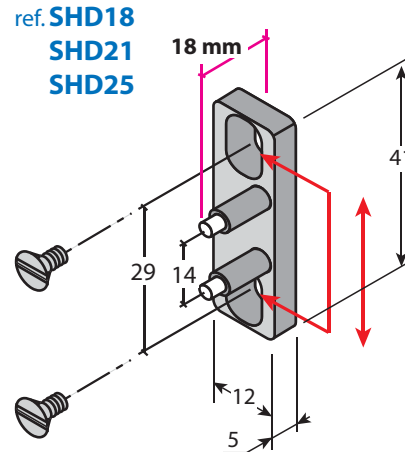
The position of the shunt support "SHY" on the landing door

Position of the shunt on the shunt support

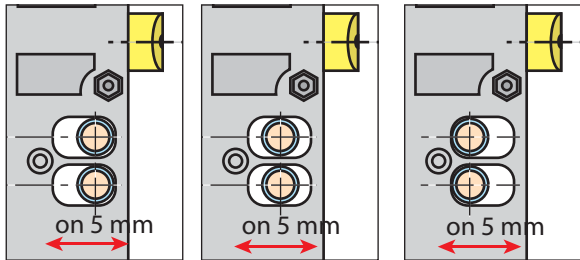


The adjustment of the shunt position

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

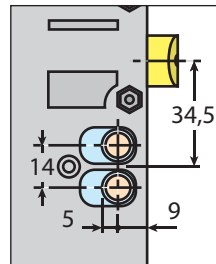


The adjustment of the draw contact position in the lock



By removing it from its anchoring stud after removing the transparent cover.

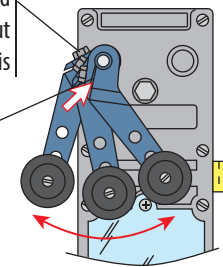
ref. CAI180



The position of the lever on the lock

The adjustment of the lever's position on the lock is carried out by the lever retaining nut on the axis

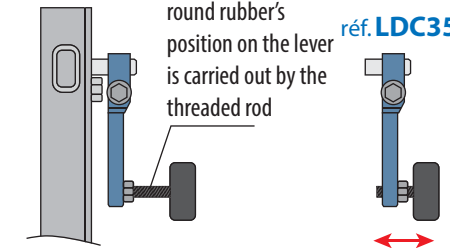
Important :
Verify the presence of the washer on the screw after each maintenance



The adjustment of the round rubber on the lever

The adjustment of the round rubber's position on the lever is carried out by the threaded rod

ref. LDC35



Using

The lock LR180 L* (lateral). This is the most commonly used lock. However, as you have seen on this page, the lock can be supplied with another unlocking mode. (cf. "Dimensions" paragraph).

Sealing

Lock LR180 is provided in standard version with a IP41 protection index. On request, the lateral and electrical unlocking versions can be provided with IP54 waterproof.



Maintenance

It's an autolubrified lock, No maintenance is necessary. Only the pin adjustment can be readjusted later (compared to the evolution of the door frame).

Never open a lock LR180. The access to contacts is only possible by the removing of the transparent cover.

Locks LR180

(Mounting process and adjustments)

The installation of the lock following the supplied instructions

Serr. non identifiées pour portes battantes

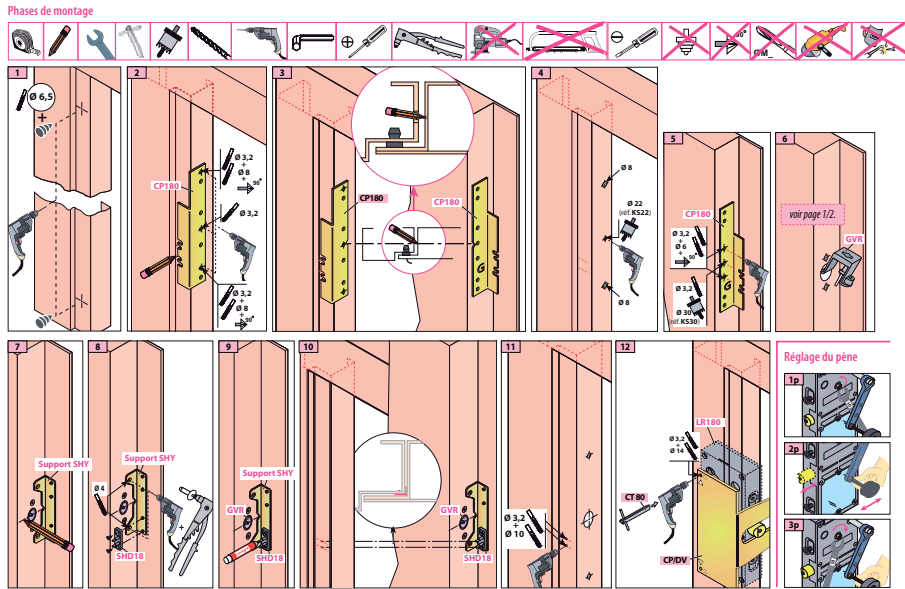
Kit NI 3/3

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FICHE INSTALLATION PRODUIT

RS 6.6 97/07/06

Pour porte palières battantes

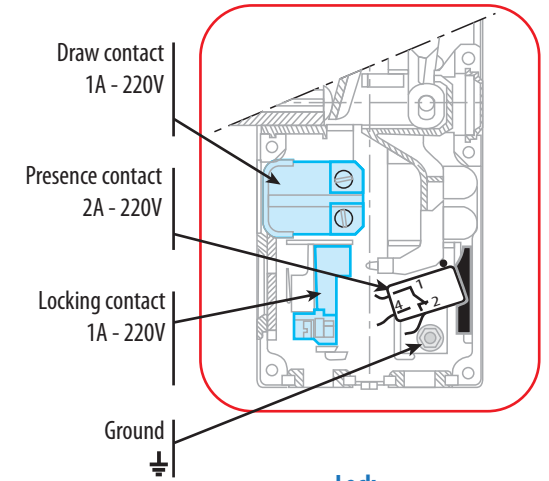
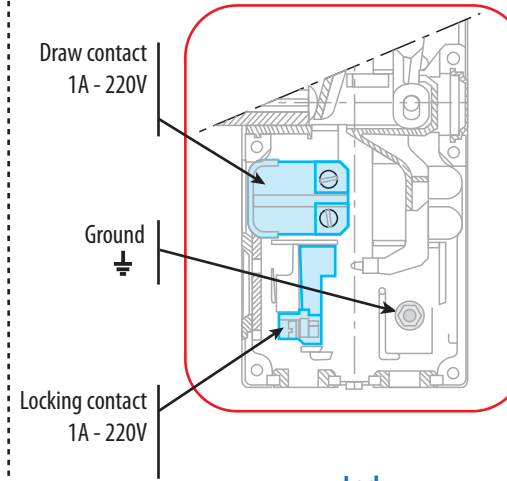


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Wiring of the contacts for mechanical locks.

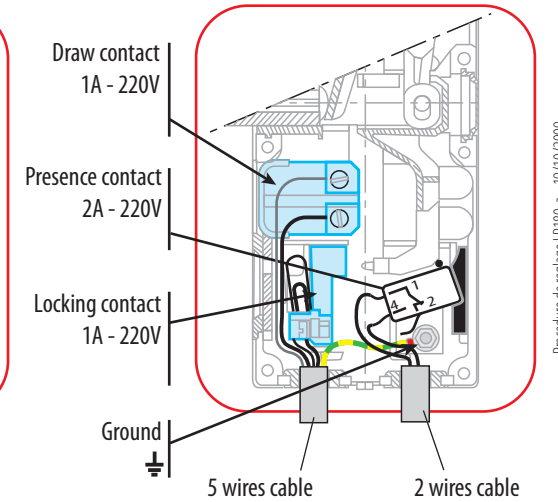
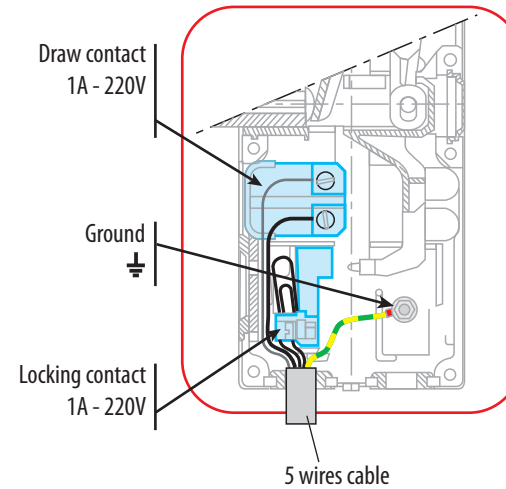
Locks without pre-wiring

Lock without pre-wiring and with presence contact



Lock with simple pre-wiring (LR180.../c)

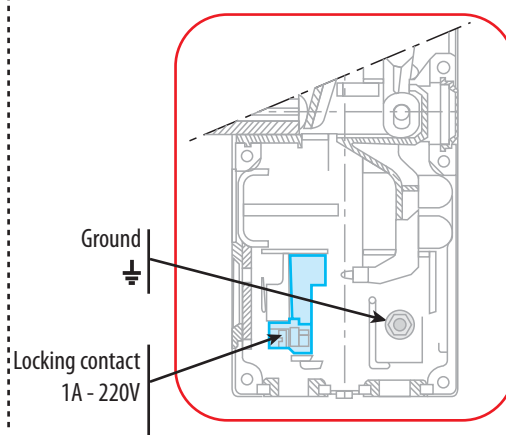
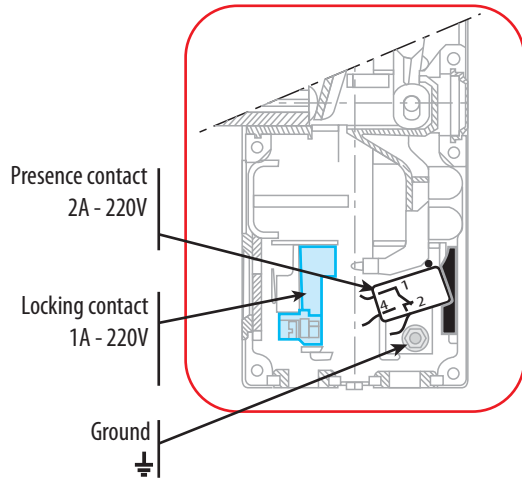
Lock with double pre-wiring (LR180 .../c)



Procédure de réglage LR180-a - 19/10/2009

Lock without pre-wiring (-CAX) +CPX

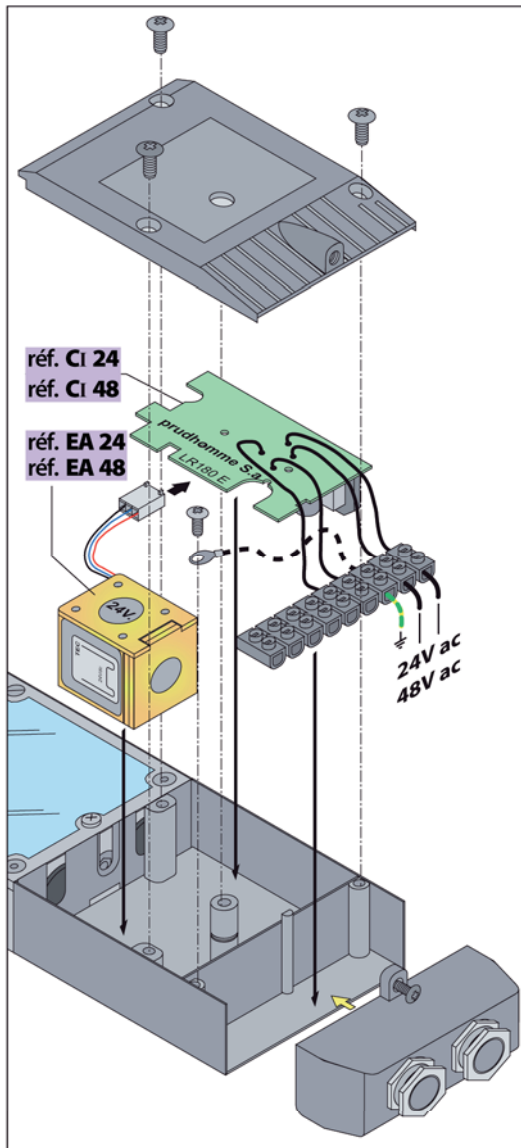
Lock without pre-wiring (-CAX)



Locks LR180

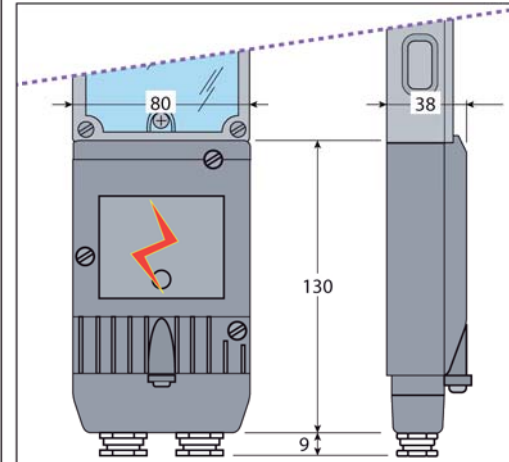
(Mounting process and adjustments)

LR180 E : Electrical safety (24 / 48 V ac) with positive lock - Wiring - Technical data.



Wiring

1	Noir / Black	} Préliminaire à arrachement Preliminary draw contact
2	Noir / Black	
3	Orange / Orange	} Verrouillage Lock contact
4	Orange / Orange	
5	Violet / Purple	} Contact de présence Presence contact
6	Violet / Purple	
7	vert/jaune Green/Yellow	} Alimentation (ac) Supply (ac)
8	Bleu / Blue	
9	Marron / Brown	



Operating conditions and preliminary checks before commissioning :

Like the LR180 E lock, the LR180-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 LR180 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.

Operation

Nominal voltage	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 à +70°C
Storage temperature	-40°C à +80°C
Unlocking time	≈ 300 ms
Admissible frequency	50 / 60 Hz
Maxi cycle	120 / heure
Weight	1,37 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
(4 Amp. minimum)
- 48 Volts / 3 Amperes
(2,8 Amp. minimum)

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 tom 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.



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.
 - 150 VA minimum pour du 24 Volts alternatif,
 - 180 VA minimum pour du 48 Volts alternatif).

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.



- **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. . .).

Locks LR180

(Mounting process and adjustments)

LR180 E : Electrical safety (24 / 48 V ac) with positive lock - Technical data.

AWG (gauge)	Sect. (mm ²)	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 (mm²)

Dia. : diameter of core (mm)

Ω : Résistance théorique en ohms par mètre de câble à 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 LR180 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 OVERTEMPERATURE SAFETY DEVICE

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

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

* retained inopportune of the pin, non-respect of functions conditions.



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 2A - 220 V

- 1 presence contact 2A - 220 V

- 1 draw contact 2A - 220 V

option : safety module ref MS02 (24 V) 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 LR180

(Procedures of assembly and adjustments)

LR180 E :

Electrical lock (24 / 48 V ac) with positive safety – technical characteristics

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.

Anomalies	Verifications
<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 : - to check the polarity of connection - to check the alimentation tension - to check the presence of alimentation of transmitter.</p>

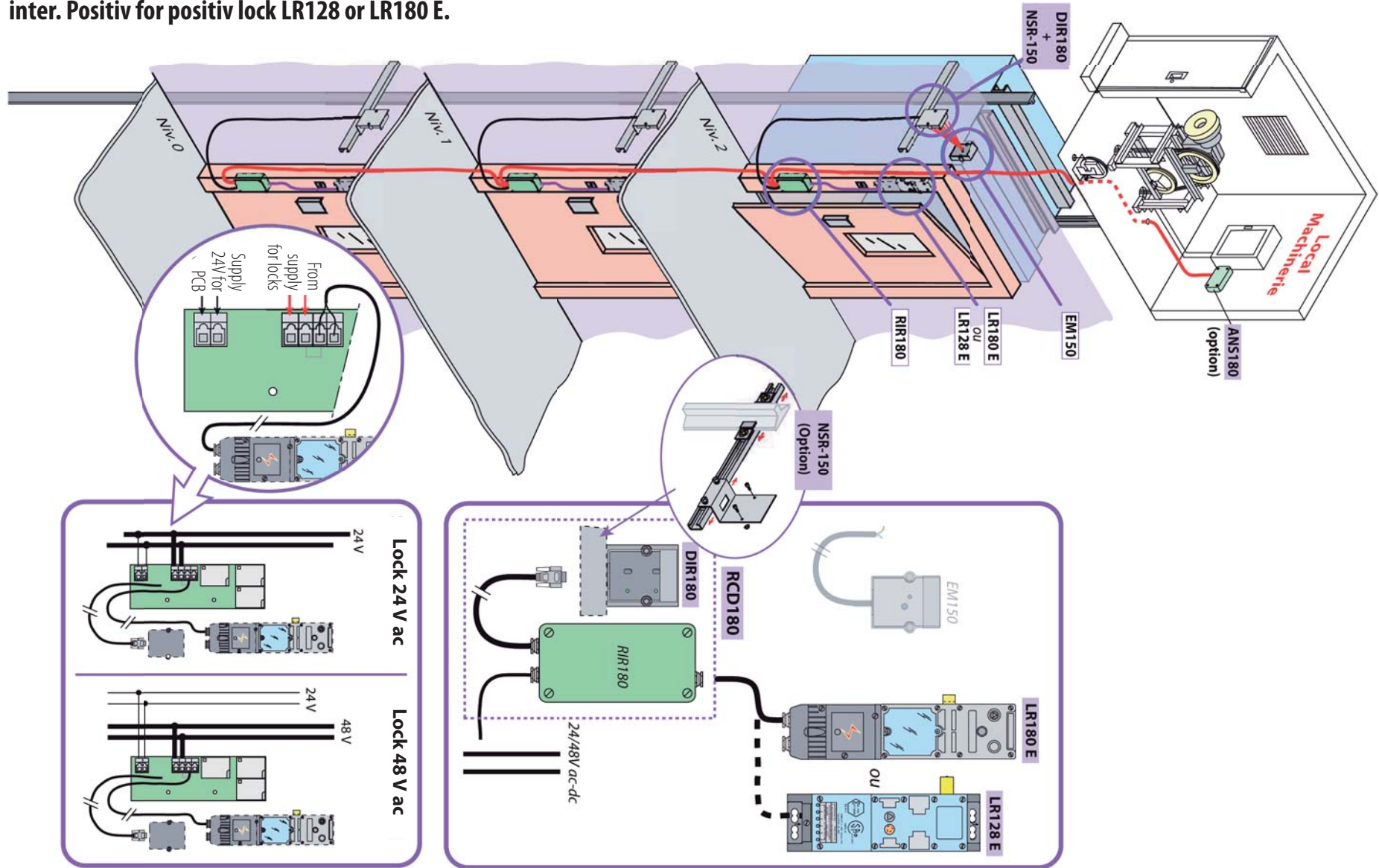
Procédure de réglage LR180-a - 27/10/2009

Locks LR180

(Procedures of assembly and adjustments)

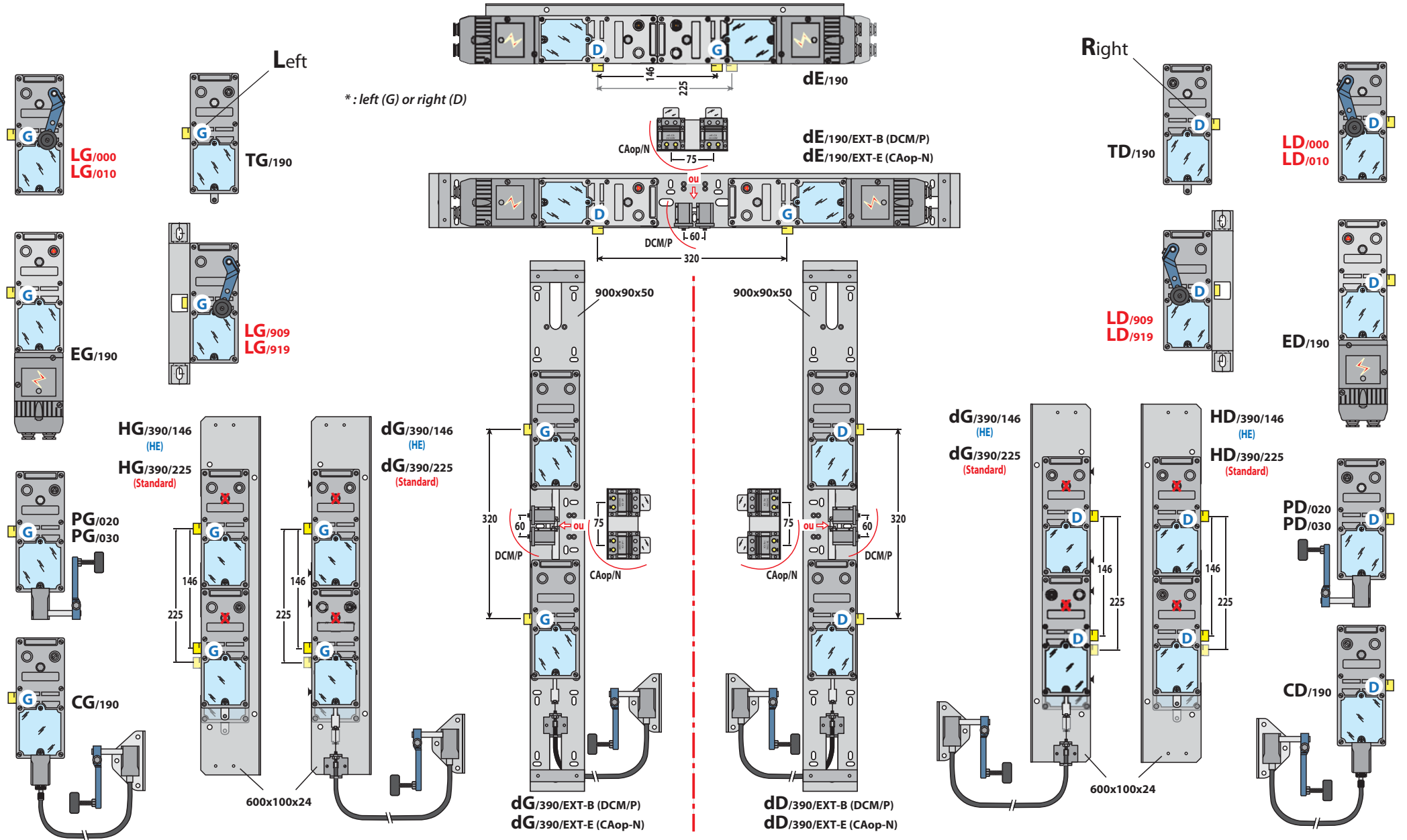
RCD 180 :

inter. Positiv for positiv lock LR128 or LR180 E.



Locks LR180

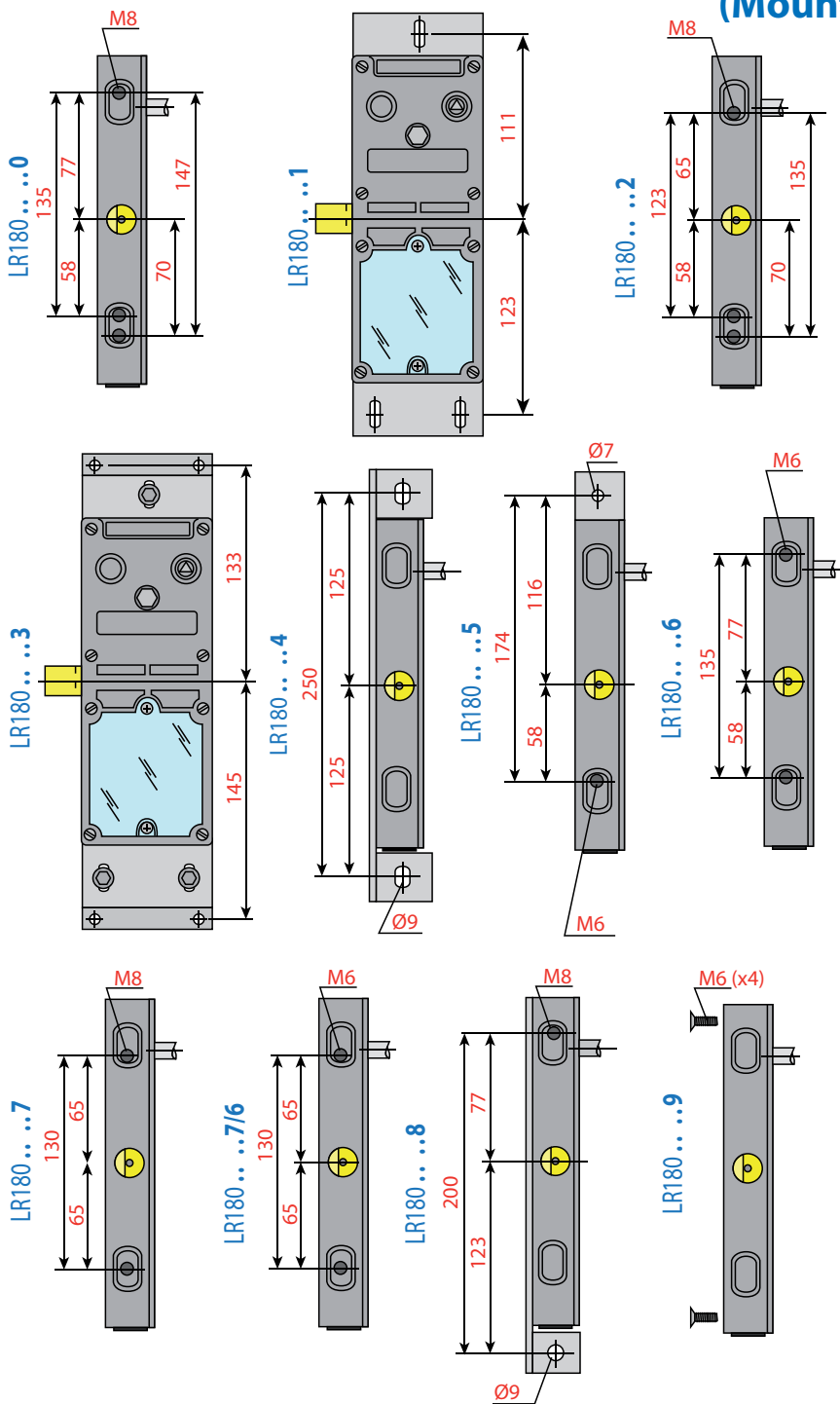
(Mounting process and adjustments)



Locks LR180

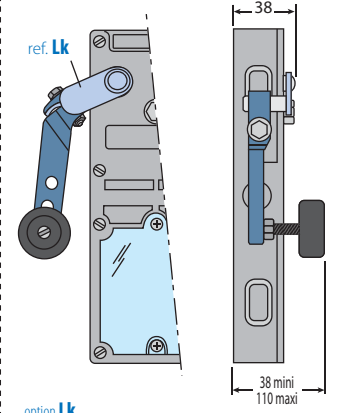
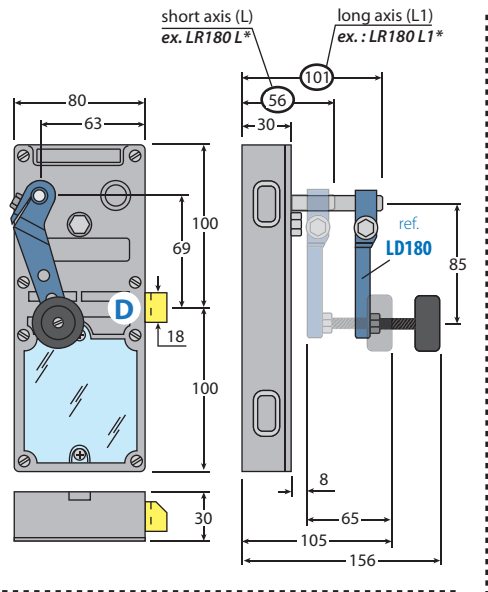
(Mounting process and adjustments)

Various types of fixations

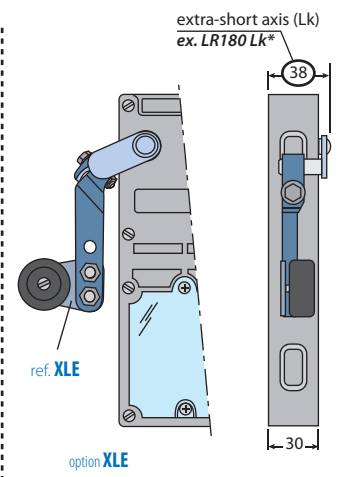


Dimensions

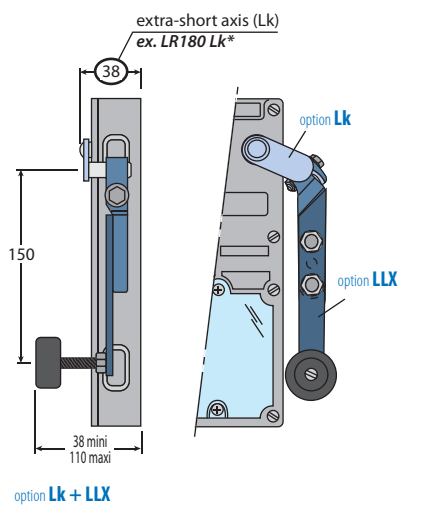
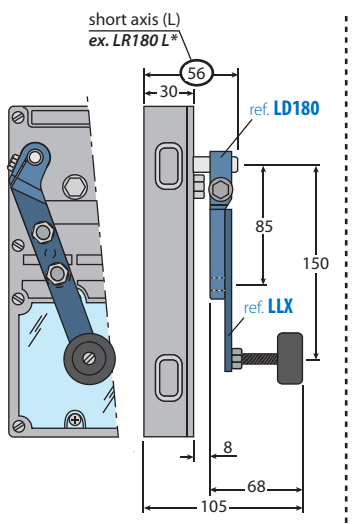
*: left (G) or right (D)



If you have small overall dimensions, the Lk option with an extra-short axis makes it possible to defer the unlocking level to the thickness of the lock.

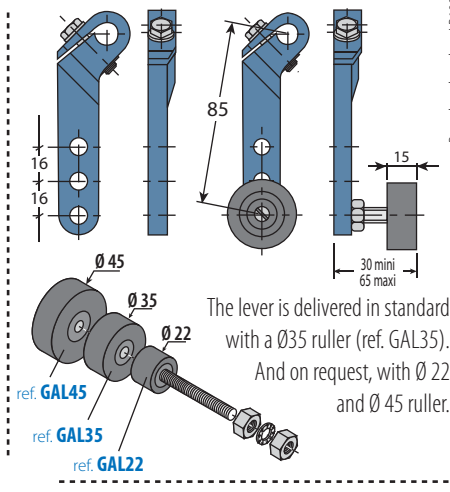


In this configuration, the lever of unlocking and its roller are found precisely in the thickness of the lock (30 mm).



If you have small overall dimensions, doubled by a position of the lock compared to the retiring cam that does not satisfy you, you can take a lock with an extra-flat axis (ref. Lk) for the overall dimensions and add an extension (ref. LLX) to the unlocking lever without moving the retiring cam. This extension enables you to get an overall length of 15 cm and a 3,8 cm thickness.

Levers + rullers



The lever is delivered in standard with a Ø35 ruller (ref. GAL35). And on request, with Ø22 and Ø45 ruller.

According to the position of the lock compared to the retiring cam, we offer the possibility for you to add an extension (ref. LLX) to the lever of unlocking without moving the retiring cam. This extension enables you to lengthen your lever 7 cm.

Procédure de réglage LR180-a - 19/10/2009