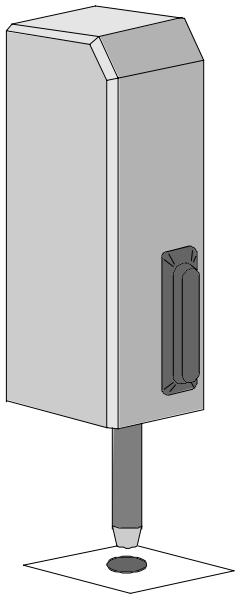
ELKA

BARRIER SYSTEMS
SLIDE GATE OPENERS
SWING GATE OPENERS
GARAGE DOOR OPENERS
LOCKING DEVICES
RADIO REMOTE CONTROL

Installation and operating instructions



Motor lock M315

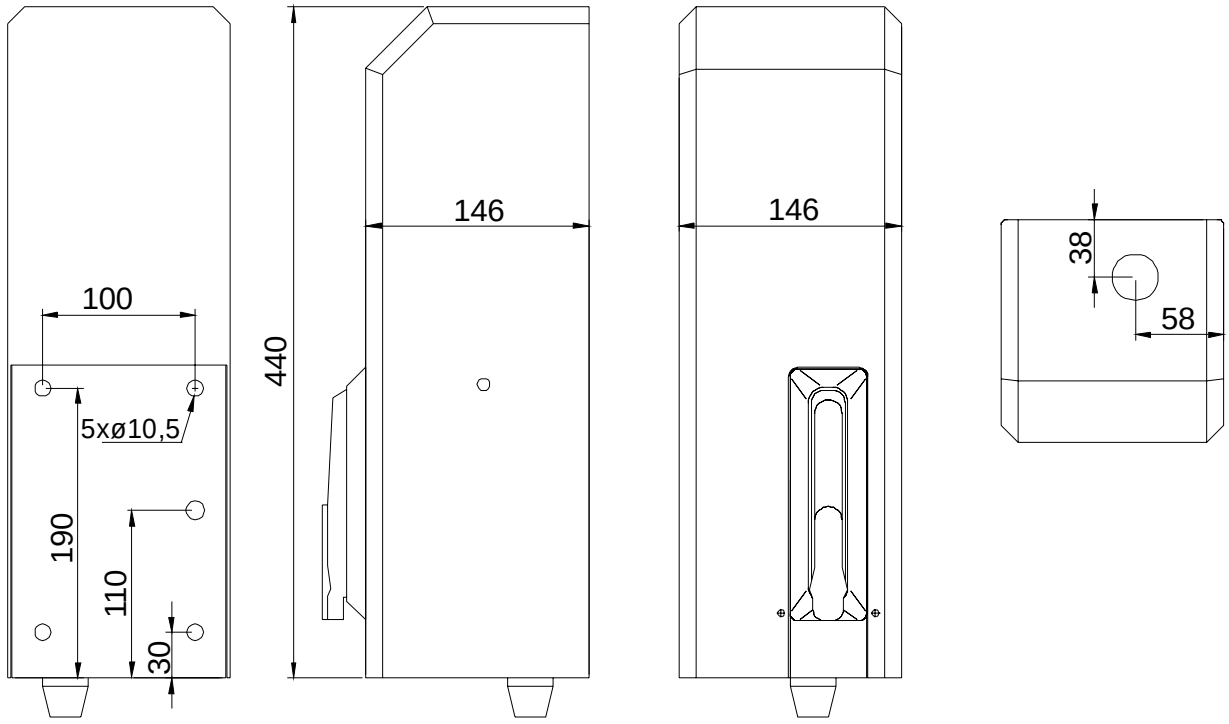
1. Usage

Motor lock with max. 150 mm stroke and controller MO 90 for the universal use with all gate controllers with warning light connection (potential free, 24V or 230V) and pre-warning time (min. 3.0s).
To lock even especially heavy swing gates and slide gates in the positions OPEN and CLOSE.

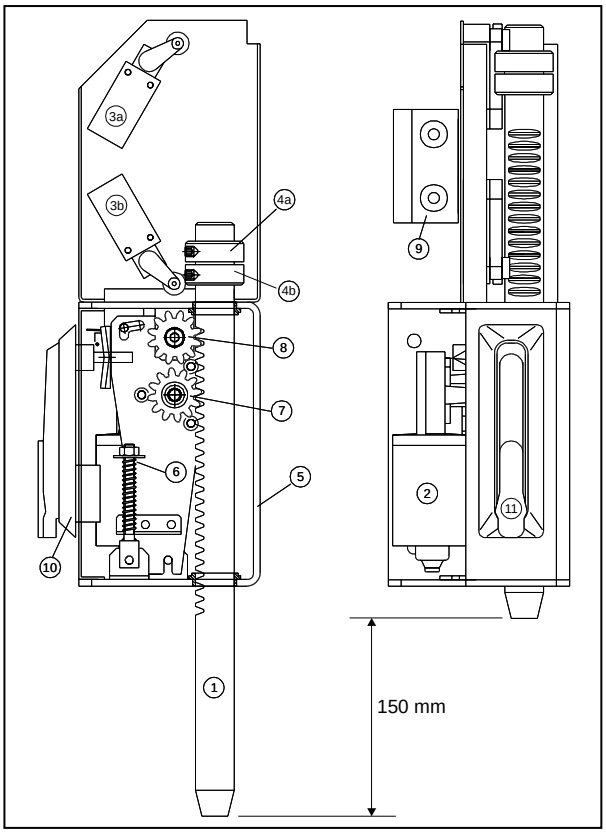
2. Technical data

Mains supply	230 V
Internal voltage	24 V
Running-time	2,5 s
Degree of protection	IP 54
Reversing on obstacle	yes, adjustable
Floor bolt ø	30 mm (stainless steel)
Range of movement	150 mm
Controller	MO 90
Control box	230x140x95mm (IP 65)
Input signal	potential free or 24 V or 230 V
Running time max.	3 s
Stop-contact	yes
Weight	13.0 Kg

3. Measurements



4. Installation



1	Floor bolt
2	Motor
3	a) Limit switch „OPEN“
	b) Limit switch „CLOSED“
4	a) Actuator for limit switch „OPEN“
	b) Actuator for limit switch „CLOSED“
5	Main support
6	Adjustment for reversing on obstacle
7	Motor-pinion
8	Pinion for emergency release
9	Junction box
10	Activity for emergency release
11	Stand. type cylinder (DIN 18252) for emergency release

Find the right position for the motor lock at the gate. Make sure, that the gate is robust enough for a safety mounting of the motor lock.

If need, reinforce the gate with a special mounting plate. For the measurements of this plate see page 2.

Mount the motor lock with the 4 fixing points at the gate. Use one 10 mm nut at each fixing point to keep distance to the gate.

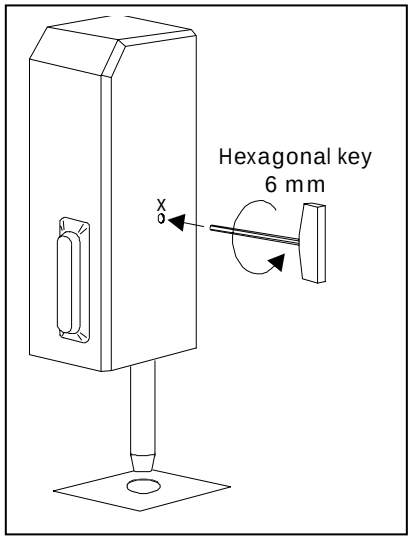
With the actuator (4b), for the limit switch “CLOSED” (3b), you can adjust the stroke of the floor bolt (max. 150 mm).
The actuator (4a), for the limit switch “OPEN” (3a), **must not** be displaced. The floor bolt (1) has **always** to running-in complete into the lock. Make sure, that the gate can be moved absolutely, when the bolt is in the position “OPEN”.
When the floor bolt is hitting an obstacle during closing, the motor activates a micro-switch and the motor lock reopens. The bolt will stay opened till a new signal from the gate controller.
With the hexagon-nut (6) you can adjust the compression force of the floor bolt (max. 15 kg is allowed).

5. Emergency release

While a disturbance or a power failure the motor lock can be opened by hand.

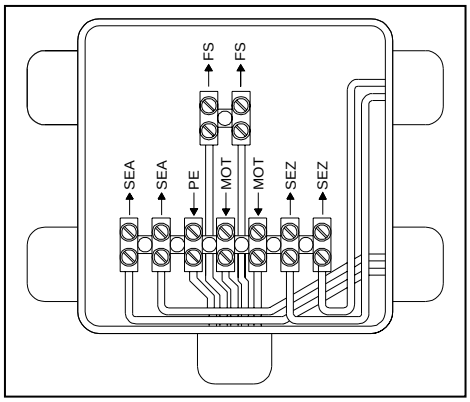
Unlock the emergency release (10) with the standard type cylinder (11) and put the hexagonal key (6mm) through the hood of the motor lock (position X) into the pinion for the emergency release (7).
Pull the lever for the emergency release (10) and turn it ca. 90° anti-clockwise.
Now the floor bolt can be lifted with the hexagonal key (turn it to the left).
After the emergency release turn the lever (10) ca. 90° clockwise, so that the pinion of the motor engages into the floor bolt – may be find the right position by turning the hexagonal key.

When the power supply is available again an no gating signal is given, the floor bolt closes automatically.



6. Connections

The controller should be placed as near to the gate as possible. The control box should be mounted with the entrance for wiring at the bottom.
The lead from the controller to the motor should have at least the cross section 1.5mm².



Connect the controller MO 90 with the junction box in the motor lock like followed (see also chapter 7.).

Junction box		**Controller MO90**	
- Limit switch OPEN „SEA“	->	Terminal 9 and 10	(2x0,5)
- Limit switch CLOSED „SEZ“	->	Terminal 7 and 8	(2x0,5)
- Ground „PE“	->	Terminal 1	(1x0,75)
- Motor „MOT“	->	Terminal 2 and 3	(2x0,75)
- Reversing on obstacle „FS“	->	Terminal 15 and 16	(2x0,5)

Give the main power 230 V to the transformer of the MO90 – N, L1 und PE.

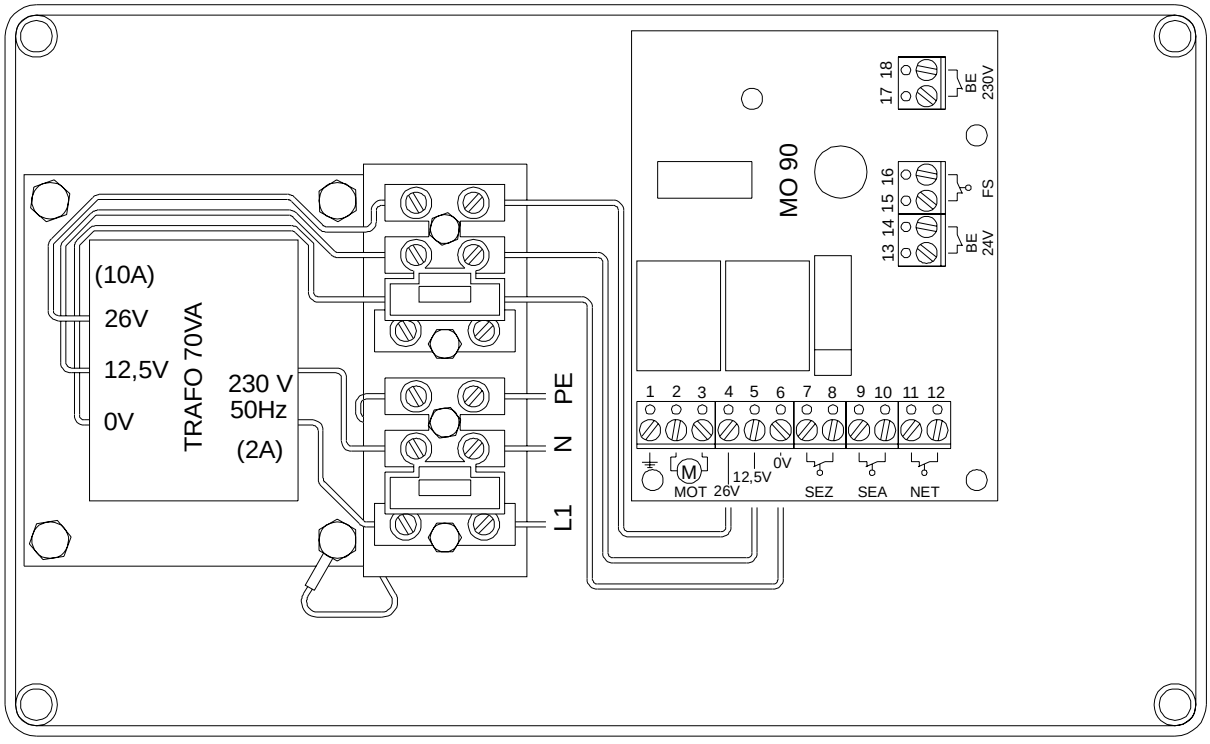
Connect the appropriate gating signal (warning light) from the controller of the opener to the MO90 and make sure, that the pre-warning time (min. 3.0s) is activated.

a)	potential free **or** 24 V (only one possibility):	Terminal 13 and 14
b)	230 V	Terminal 17 and 18

Notice the direction of the motor:
When the gating signal from the controller of the opener is given to the MO90 the bolt has to open and stay opened during the whole pre-warning and running time. When the gate stops, the bolt closes.
Is this not the case, exchange the motor wires in the junction box or at the terminals on the MO90.

Response:
For a signal indication of the “bold-position”, you can use the free contact (n.o.) of the appropriate limit switch.

7. Controller MO 90



Terminal	Connection		
1	PE	Ground	
2 and 3	24 V	Motor	
4	26,0 V	Internal voltage MO90	
5	12,5 V	Internal voltage MO90	
6	0 V	Internal voltage MO90	
7 and 8	SEZ	Limit switch bolt „CLOSED“	(n.c.)
9 and 10	SEA	Limit switch bolt „OPEN“	(n.c.)
11 and 12	NET	Stop-contact oder jumper	
13 and 14	BE 24V	Input signal for opening: **floating <u>or</u> 24 V**	(n.o.)
15 and 16	FS	Signal for reversing on obstacle	(n.c.)
17 and 18	BE 230V	Input signal for opening: **230 V**	(n.o.)

8. General notes of safety

These operating instructions must be available on site at all times. It should be read thoroughly by all persons who use, or service the appliances. Improper usage or servicing or ignoring the operating instructions can be a source of danger for persons, or result in material damage. If the meaning of any part of these instructions isn't clear, then please contact ELKA Torantriebe GmbH & Co. Betriebs KG before you use the appliance.
This applies to all setup procedures, fault finding, disposal of material, care and servicing of the appliance.
The accident prevention regulations and applicable technical regulations (e.g. safety or electrical) and environment protection regulations of the country in which the appliance is used also apply.
All repairs on the appliances must be carried out by qualified persons. ELKA Torantriebe GmbH & Co. Betriebs KG accepts no liability for damage which is caused by using the appliance for purposes other than those for which it is built.
ELKA Torantriebe GmbH & Co. Betriebs KG cannot recognise every possible source of danger in advance. If the appliance is used other than in the recommended manner, the user must ascertain that no danger for himself or others will result from this use. He should also ascertain that the planned use will have no detrimental effect on the appliance itself. The appliance should only be used when all safety equipment is available and in working order. All faults which could be a source of danger to the user or to third persons must be eliminated immediately. All warning and safety notices on the appliances must be kept legible.
All electrical periphery equipment which is connected to the appliance must have a CE Mark, which ensures that it conforms to the relevant EEC regulations. Neither mechanical nor electrical alterations to the appliance, without explicit agreement of the manufacturer, are allowed. All alterations or extensions to the appliance must be carried out with parts which ELKA Torantriebe GmbH & Co. Betriebs KG have defined as suitable for such alterations, and be carried out by qualified personnel.
Any contravention of these conditions revokes the manufacturer's guarantee and also the CE Mark and the user is alone responsible for the consequences.
Our service department is available to answer all queries about these conditions and, of course, about our appliances.

The operation of the system within CEN countries must also be conformant with the European safety-relevant directives and standards.

We reserve the right to make technical improvements without prior notice.