KRONENBERG

Door Interlock CL(F)MO

Operating instructions

kronenberg-gmbh.de

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Legal Notices

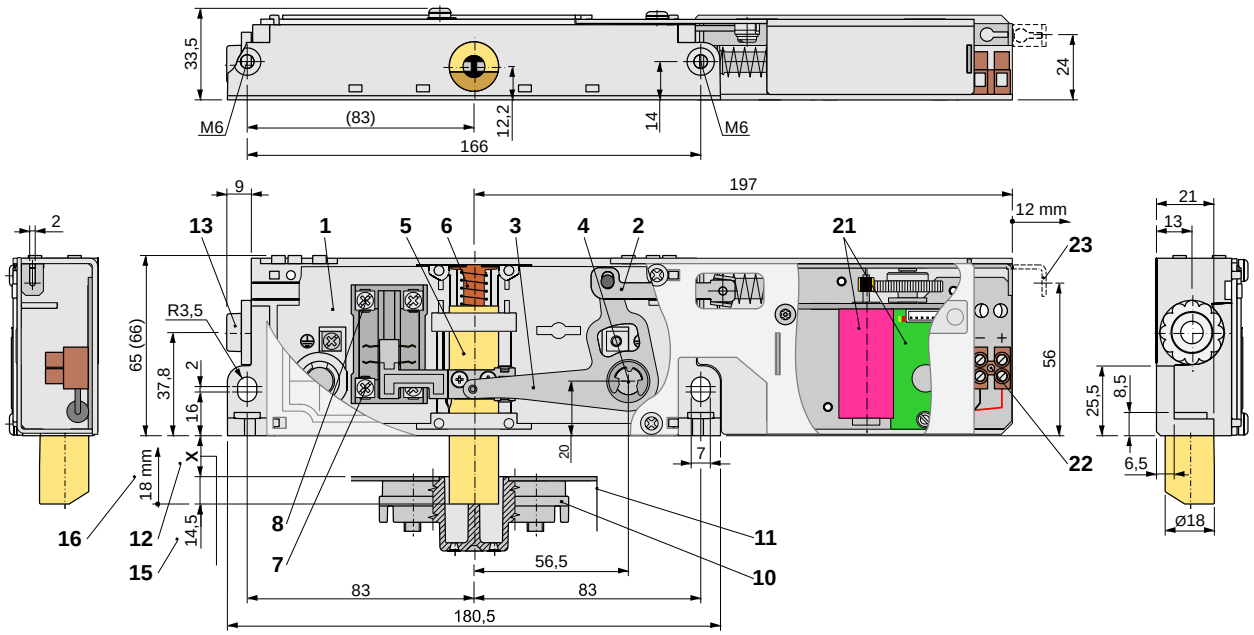
Intended use:

Interlocking device with sliding bolt (and faulty closure device at version CLFMO),
with motor operation for immediate locking of landing doors for lifts.
It must be ensured that the landing door can only be unlocked when the car is in the corresponding unlocking zone.

Applicable documents:

- Type approval certificate EU-DL 811 resp. EU-DL 812
- Declaration of Conformity

Dimensions, parts description:



1	housing	10	latch plate
2	pull rod	11	door leaf / door edge
3	bolt lever	12	X-dimension according to specification
4	bolt lever axis with triangle	13	cable entry
5	latch bolt (locking device)	15	immersion depth (nominal dimension)
6	back pressure spring	16	bolt stroke
7	switch for locking mechanism	21	motor with electronics
8	auxiliary switch	22	electrical connection motor drive
		23	unlocking lever and connection pull rope

Mode of operation:

By applying a regulated DC voltage of 24 V to the terminals [22] of the motor electronics the latch bolt [5] is attracted and is held in its end position (green LED lights up).
The switch for locking mechanism [7] (positively driven contact) is thus opened and the safety circuit interrupted. The door is unlocked and can be opened.
The bolt can remain attracted for an unlimited period of time (100 % duty cycle).
The DC voltage is monitored by the motor electronics [21]. If a drop of the input voltage is detected, the motor current is switched off and the motor brake activated for a short time (red LED flickers).
The latch bolt [5] thus drops down damped into the latch plate [10], the switch for locking mechanism [7] is closed and the lift car can move on.

The following points must be observed during assembly:

- intended use, permissible installation position and environmental conditions
- correct X-dimension [12]
- for the closing ability suitable bevel of the latch bolt
- sufficiently dimensioned fixation
- emergency release triangle [4] accessible (opening with diameter 14 mm)
- suitable latch plate [10] for the CLFMO with faulty closure device e.g. type BE or BS-V
- sufficiently large opening for the latch bolt [5]
- latch bolt [5] and emergency release [4]+[23] smooth

Settings:

Latch bolt [5] and latch plate [10]:
The distance between the attracted bolt [5] and the latch plate [10] should be 3.5 mm.

Control:

It must be ensured that the motor electronics are only supplied with voltage when the car is in the corresponding unlocking zone.
The motor can be supplied with voltage as long as requested (100 % duty cycle). The voltage of the motor electronics may be switched off after opening the door in normal operation only when the door has been closed again and the latch bolt can freely plunge into the latch plate or bore hole.

Only than it will be ensured that the engine brake that operates only a few seconds after the voltage has been switched off, makes the bolt drop in a damped way.

Closing ability:

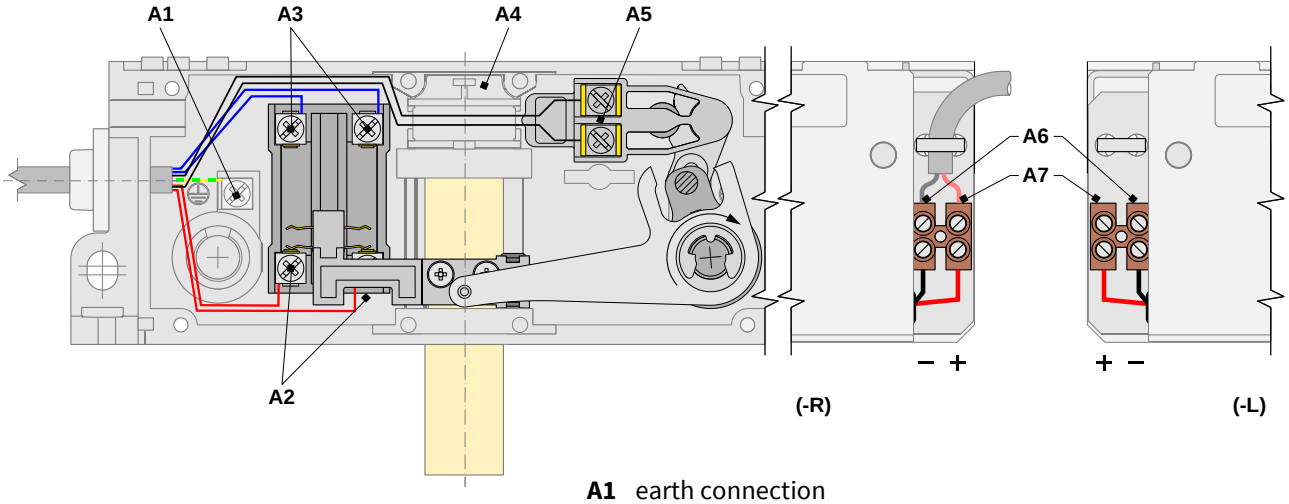
If the latch bolt [5] drops down e.g. due to a power failure at open door, it must still be possible to close the door. Where appropriate make a slight bevel at the door edge [11].

Maintenance:

If the locks are appropriately installed, maintenance is generally not required.
Under harsh operating conditions we recommend an annual examination:

- tighten fastening screws
- check smooth running of the latch bolt [5] and emergency release [4]+[23]
- check adjustment of bolt [5] to latch plate [10] (centering, 3.5 mm distance when attracted)
- remove rough contamination

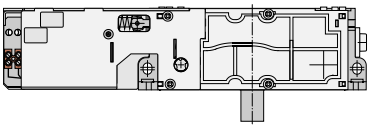
Connection plan:



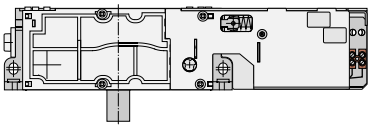
A1 earth connection
A2 connection switch for locking mechanism
A3 connection auxiliary switch
A4 cable duct
A5 connection monitoring switch
of internal triangle-emergency release according to EN 81-21
A6 connection motor electronics 0 V (black)
A7 connection motor electronics 24 V (red)

Operating Directions:

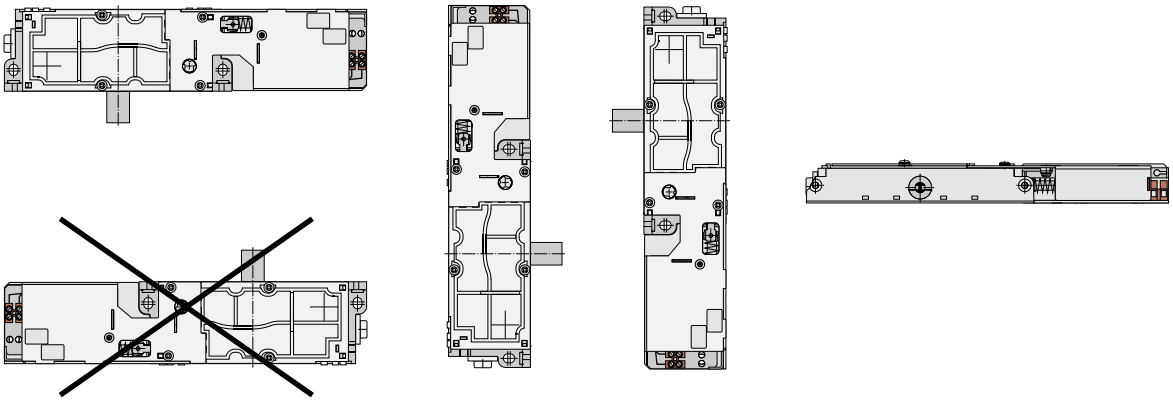
-L (drive on the left side)



-R (drive on the right side)



Customary Positions:



Technical Data:

norms		EN 81-20, EN 81-50, EN 81-21, EN 60947-5-1
certificates		type approval certificate:
		EU-DL 811 (CLFMO) and EU-DL 812 (CLMO)
switching capacity:		Ui = 250 V Ith = 10 A Uimp = 4 kV
	switch for locking mechanism	AC-15: Ue = 230 V Ie = 2 A DC-13: Ue = 200 V Ie = 1 A
	monitoring switch	AC-15: Ue = 230 V Ie = 2 A DC-13: Ue = 200 V Ie = 2 A
	auxiliary switch	AC-15: Ue = 230 V Ie = 2 A DC-13: Ue = 200 V Ie = 1 A
short-circuit capacity		T 10 A F 16 A
contact material		fine silver
motor drive of the latch bolt:		
	operating voltage	24 V DC (-10% / +25%) regulated
	pull-in current / time (typical)	0.85 A / < 0.5 s
	holding current	0.2 A
connection		by screw terminal max. 1.5 mm^2
		cable entry M20x1.5 with clamping gland
level of protection		IP40
ambient air temperature		-10 °C up to +45 °C
weight		950 g to 1100 g (according to version)

Diagnosis at disruption in operation:

Disruption	Status LED		Possible cause	Measure
	red	green		
bolt does not attract	off	off	no voltage or reverse polarity	check input current and polarity
	on	off	voltage too low	check input current, regulated 24 V DC +/-10% necessary
	on	on	inappropriate voltage / too low	
attracted bolt sometimes drops down and then retracts			short voltage drop	determine the cause for the voltage drops and stop it. Check switch, contacts, power supply unit, control, wiring and other consumer-loads.
bolt makes one or several beating sounds when reaching the end position			bolt did not drop down completely, e.g. in faulty closure position. The fixed sequence does not comply, the bolt reaches the final position too soon, the motor continues to rotate and exceeds its breakdown torque.	Normal sequence if the bolt is attracted out of the faulty closure position. If possible ensure that only a completely dropped down bolt is attracted.
bolt makes several bashing sounds when attracting, does not reach the end position	flashes with long interval	on	bolt or mechanism blocks, motor exceeds its breakdown torque	check adjustment and smooth running, remove blockade

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