

## Type LLV050...



### Accessories

mating piece with pin signalling

**We reserve the right to make changes to the product design. Please note ordering data!**

### Example of order

LLV050215  
24 VDC, 100% duty cycle  
de-energised locking

### Technical specification

Insulation class B to  
DIN VDE 0580 (July 2000)  
100% duty cycle  
Class of protection to IEC 60529: IP 40

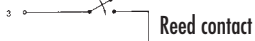
### Parameters specific to product

starting force/locking bolt  $F_S = 4 \text{ N}$   
holding force/locking bolt  $F_H = 1 \text{ N}/14 \text{ N}$   
restoring force/locking bolt  $F_R = 3 \text{ N}$   
response time  $t_1 = 55 \text{ ms}$   
release time  $t_2 = 40 \text{ ms}$

Switch positions shown in de-energised state.



Solenoid

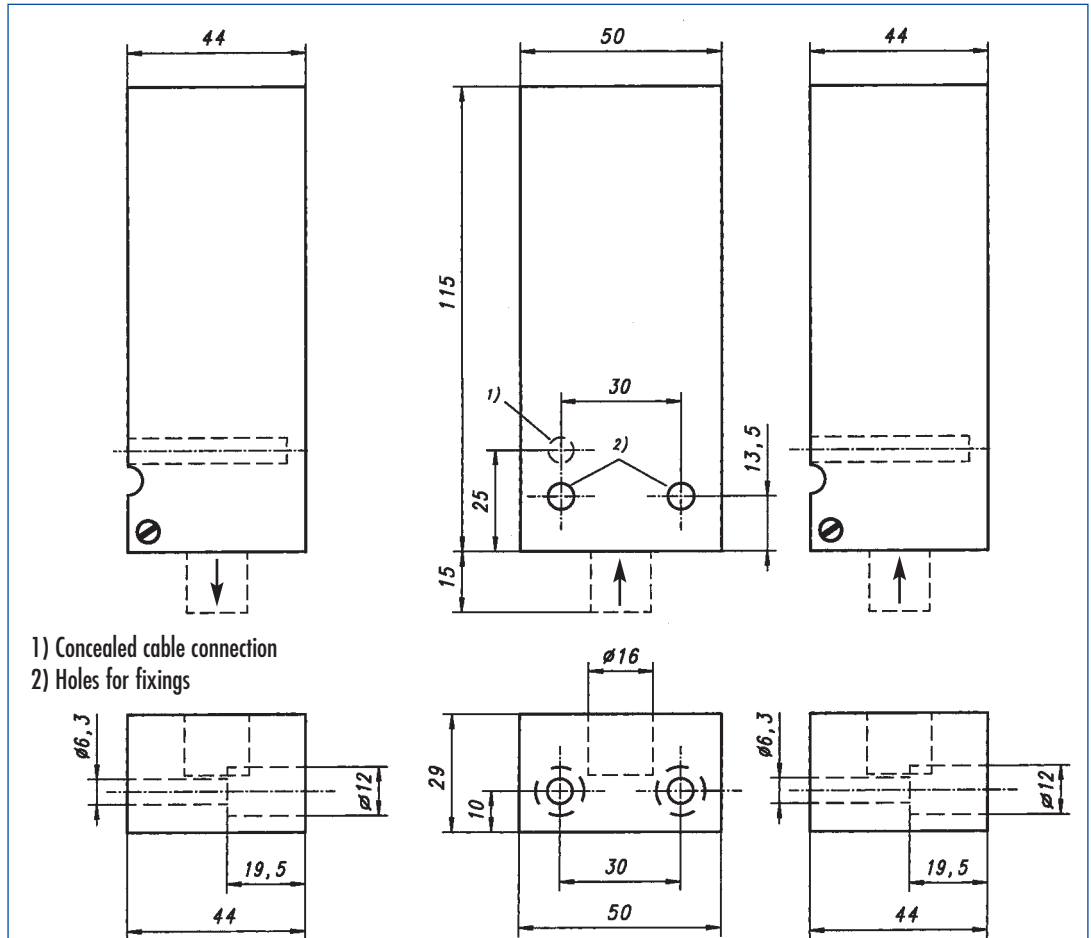


Reed contact



Microswitch for remote inquiry

Electrical connection is accessible after removing cover.  
Connection via side with fixings!



- 1) Concealed cable connection
- 2) Holes for fixings

### Type LLV050225/17 22503A00 "de-energised unlocking"

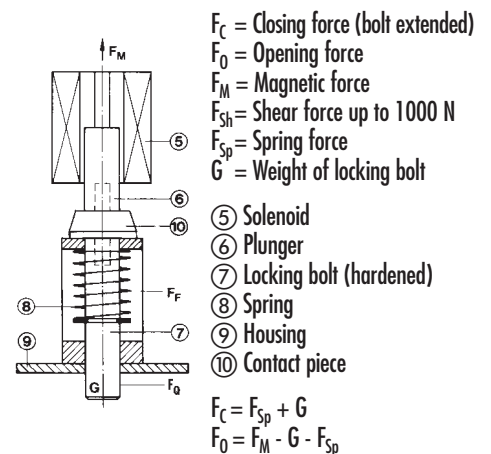
- compact design
- pin signalling "locked"
- mating piece included
- locking only possible with "door closed"

### Type LLV050215/17 21503A00 "de-energised locking"

- compact design
- pin signalling "open"
- mating piece included
- acknowledgement signal "closed"

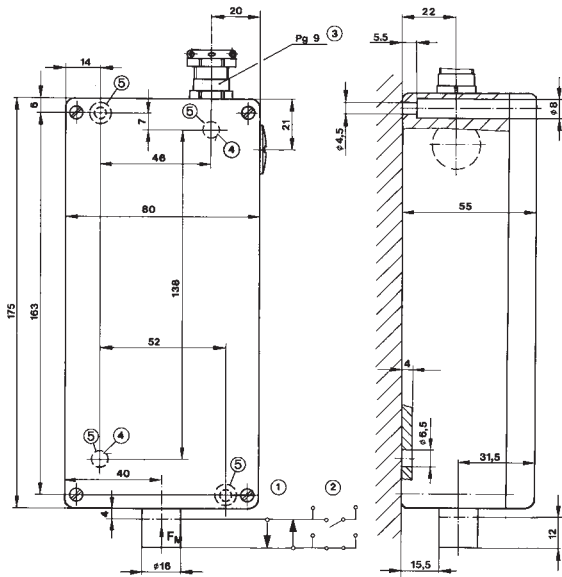
In order to meet the increasingly stringent requirements for building and room security, locking solenoids are being preferred as security elements. Locking solenoids are electromagnetically operated door bolts providing interlocking mechanisms which are used in addition to the existing mechanical locks. Two types of locking solenoids are available to suit different requirements:

1. De-energised unlocking devices (LLV050225/17 22503A00) in which the return movement of the locking bolt is achieved by means of a spring.
  2. De-energised locking devices (LLV050215/17 21503A00) in which the return movement of the locking bolt is achieved by applying an electromagnetic force. The pin signalling provides extra security and enables remote inquiry.
- These locking solenoids are fitted in an (anodised) aluminium housing, have a locking bolt made from rustproof steel, and include LEDs.



Size	Function (de-energised)	Stroke [mm]	Power [Watt]	Locking bolt $\varnothing$ [mm]	Sensor $H_A$ $H_E$	Weight [kg]
LLV050215	locked	15	10.8	16	x x	0.72
LLV050225	unlocked	15	10.8	16	x x	0.72

### Dimensions (mm)



### Locking solenoid

Type LLV055001, de-energised locking

Type LLV055002, de-energised unlocking

- ① Stroke function
- ② Circuit diagram, stroke detection
- ③ with cable grip
- ④ 2 No. sealing rings C 60 x 10, DIN 7603 (supplied)
- ⑤ Fixing options

### Type LLV055...



### Accessories

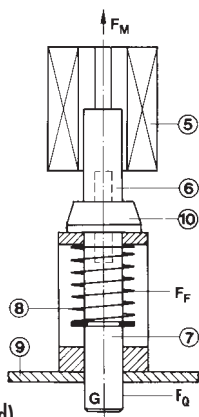
- box strike with sensor
- angle strike (see p. 15)

### Example of operation (de-energised locking)

$$F_C = F_{Sp} + G$$

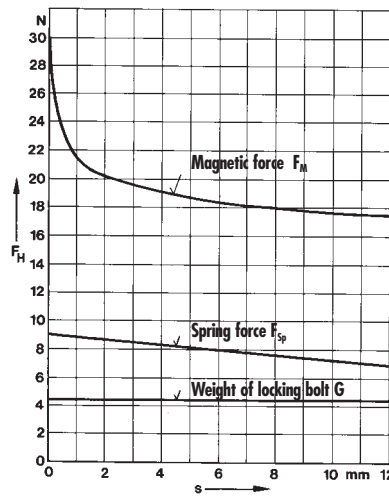
$$F_O = F_M - G - F_{Sp}$$

- ⑤ Solenoid
- ⑥ Anker
- ⑦ Plunger
- ⑧ Spring
- ⑨ Housing
- ⑩ Contact piece



- $F_C$  = Closing force (bolt extended)
- $F_O$  = Opening force
- $F_M$  = Magnetic force
- $F_{Sh}$  = Shear force up to 1500 N
- $F_{Sp}$  = Spring force
- $G$  = Weight of locking bolt

### Determining the opening or closing force taking into account the installation position



### Example of order

LLV055001

24 VDC, 100% duty cycle  
de-energised locking

### Locking solenoid

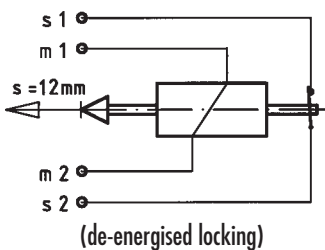
These locking solenoids are preferred as security elements for doors or similar closures in security, fire protection, ventilation and air-conditioning systems as well as for protecting property. The locking function is achieved either by energising the solenoid (working current principle) or by means of a spring with the coil de-energised (closed-circuit principle).

The extended position of the locking bolt is detected by an integral microswitch ( $U_{max}$  250 VDC, or with AC via integral rectifier). The DC linear solenoid, microswitch and connection terminals are fitted in a waterproof aluminium housing. The connecting cable is fed through a sealed cable gland with a cable grip, which can be fitted in one of two positions as required.

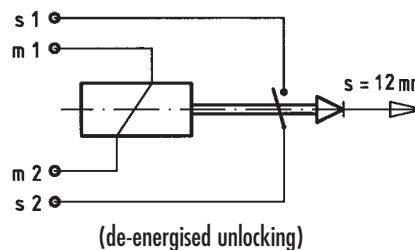
Cable diameter 5-8 mm

The unit can be installed in any position.

### Circuit diagram and pin assignment at plug



### Circuit diagram and pin assignment at plug



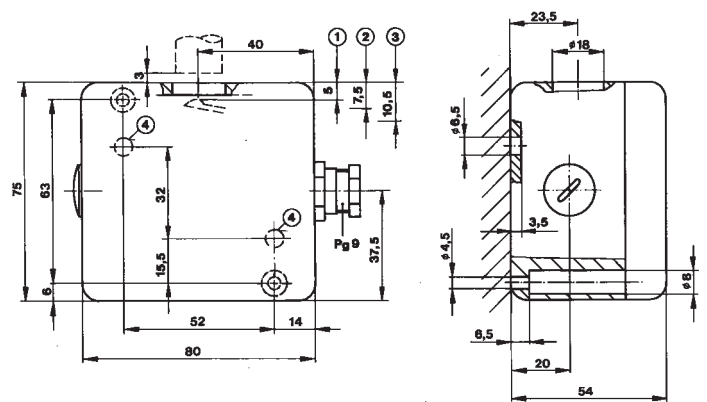
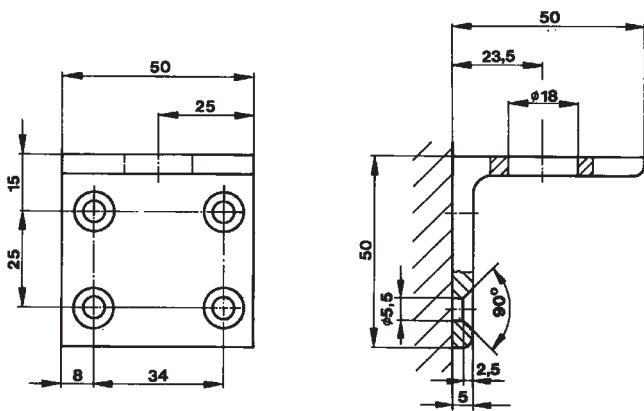
Size	Function (de-energised)	Stroke [mm]	Supply [V]	Power [Watt]	Locking bolt $\varnothing$ [mm]	Sensor $H_A$ $H_E$	Weight [kg]
Typ LLV055001 (17 21504A00)	locked	12	24 DC	17	16	x	1.6
Typ LLV055002 (17 22504A00)	unlocked	12	24 DC	17	16	x	1.6
Typ LLV055003 (17 21704A00)	locked	12	230 AC	17	16	x	1.6
Typ LLV055004 (17 22704A00)	unlocked	12	230 AC	17	16	x	1.6



Type 17 00004A00001



Type 17 00504A00100



The strikes are designed for locking solenoid types LLV05500. and LLV080...

Two different strikes are available.

The box strike with a sensor includes a microswitch with an operating contact. The locked state can therefore be indicated at any point in the system ( $U_{max} = 250$  VDC or AC;  $I_{max} = 0.5$  A).

The box strike with a spring enables a door or similar closure to be engaged when the locking bolt is extended.

- ① Operating contact
- ② Switching point
- ③ End position
- ④ 2 No. sealing rings C 60 x 10, DIN 7603 (supplied)