

**MAGNET-SCHULTZ**  
SOLENOIDS AND SOLUTIONS

Product  
Group

**60, 61**

**(G FC)**

## **D. C. Right-angle Lock Unit, Types 60, 61** (incorporating solenoid Type G FC)

**Rectifier for A. C. supplies**

**VDE 0580**

Energise to lock – Type 60

Spring to lock – Type 61

- Compact design, with stainless-steel return spring and high-endurance, maintenance-free teflon armature and push-rod bearings
- Continuously-rated for A.C. and D.C. supply voltages up to 250 V. Class F coil insulation
- Connection: free leads or spade connectors
- Protection classification: DIN VDE 0470/EN 60529 electrical connection, IP 00; solenoid, IP 20
- Optional interlock/indication switch
- Bi-stable version also available
- Shotbolt, ratchet and holding-magnet locks are listed in Product Groups:
  - G TC A/W and G TU W – Types 57, 58, 59
  - G TC E – flameproof type
  - G FC (linear as well as right-angle types)
  - G HU Z; G DA and G DC; G MH and G MP
- For use on machine-tool guards and security doors or gates, and for general interlock applications in commerce and industry



Fig. 1

TYPE 61 –  
spring to lock

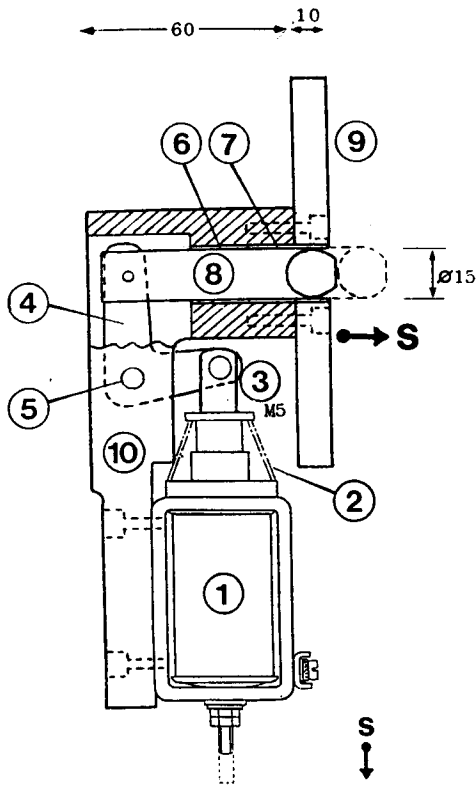


Fig. 2

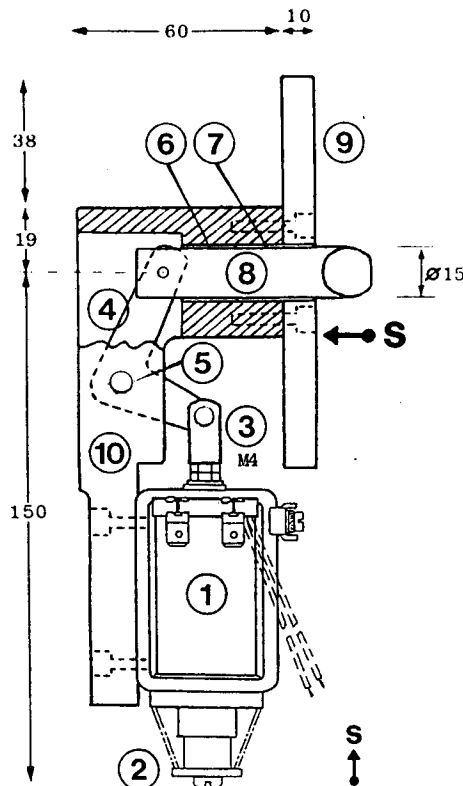
TYPE 60 –  
energise to lock



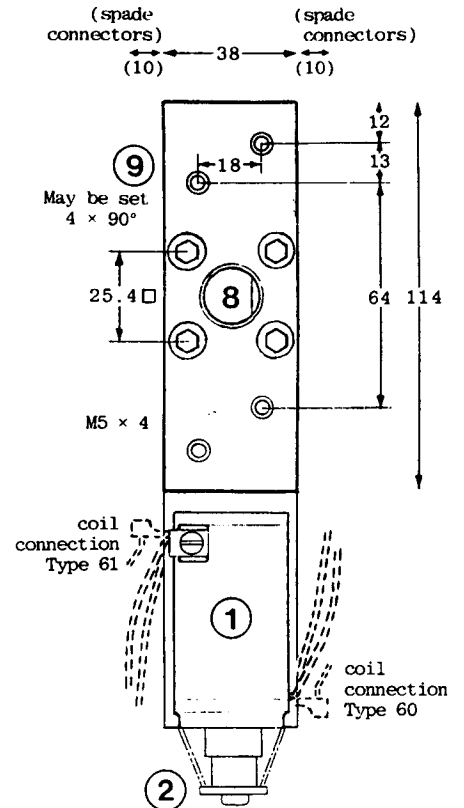
**Dimensional and performance data for right-angle lock, Types 60, 61** *Dimensions in millimetres*



**Fig. 3 Type 60:**  
**Energise to lock**



**Fig. 4 Type 61:**  
**Spring to lock**



**Fig. 5 Mounting-plate**

Right-angle Lock, Types 60, 61		
Duty Rating ED (%)	100	
Throw of bolt s (mm)	0	10 (16)
Magnetic Force $F_M$ (N)	31	9
Spring Force at bolt (N)	9	4.5
Solenoid/bolt lever ratio	1:1.3	
Power consumption (W)	14	

0mm is completion of stroke. 16mm is the maximum.

**Performance Table**

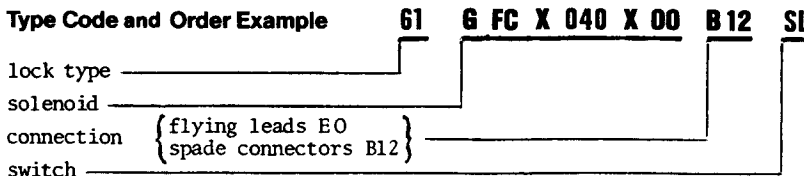
The Magnetic Force ( $F_M$ ) listed is for the hot condition at 90% of the rated voltage; at the rated voltage it will increase by approximately 20%. See Product Group pamphlet G FC.

**Duty Rating :** continuous

**Supply Voltages**

The standard supply voltages are: 24, 97, 195 and 215 V (for rectified 110, 220 and 240 V A.C.)

**Type Code and Order Example**



**Specify also:** voltage (V)

external rectifier, if required  
alternative setting of oblique bolt (see note\* above)  
bolt of plain or non-standard form, as required

ITEM
1 solenoid
2 return-spring attachment SP4
3 fork end M4, M5
4 angle lever
5 lever pivot
6,7 bearings
8 bolt *
9 mounting-plate
10 casting

**Conversion factors**

1 N = 0,102 kp ≈ 0,1 kp  
1 Ncm = 0,102 kpcm ≈ 0,1 kpcm  
1 kp = 1 kg = 2,2 lb.  
1 mm = 0,039 in.  
1 cmkp = 0,856 in. lb.

**\*Note** The standard bolt is bevel-ended, and fitted as shown. Alternatively it can be fitted with its oblique face on the opposite hand; or a plain or otherwise non-standard form of bolt can be supplied. The bolt is adjustable so as either to lie flush with the mounting-plate or to protrude.

**Interlock Switch**

A switch assembly (SL) can be attached (see below) – N/O and N/C contacts; maximum load, 5 amps resistive or 2.75 amps inductive. Operable at either end of the stroke. 250 V max.

