

## Electric Bolt Lock - Industrial

## Type 60,61

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### Applications

robust and secure locking of -  
machine guards • stops • security doors • grills&gates  
general industrial interlocking applications  
access and platform lifts for DDA

### Function

- energise-to-lock (Type 60) or spring-to-lock (Type 61)
- adjustable bolt position switch
- integral manual override
- dc or ac supply
- 15mm bolt stroke

### Standard features

- coil insulation class F, maximum voltage 250V
- flange mounting, installation in any attitude
- slam-shut/lock when closed
- right-angle design (for reduced dimension on axis of bolt travel)
- flat-ended bolt or chamfered for slam-shut operation
- high performance, corrosion resistant, maintenance-free bearings

### Options on request

- enclosed, weatherproof and IP65
- up to 20mm stroke with coil over-voltage
- special fascia plates and door-proving switches
- different bolt lengths
- alternative switch arrangements
- bowden cable manual override

### Standards

- solenoid designed and tested to VDE 0580
- ISO 9001
- EN81 for DDA lifts
- CE marked - Type 61 forced contact switch version



Fig. 1 Type 61



Fig. 2 Type 61 with fascia plate & keeper plate incorporating DPS

Type 60, 61			
Operating mode- Duty rating ED		S1 100%	
Stroke s (mm)		Magnetic force $F_M$ (N)	Spring return force (N)
	0	30	9
	15	3.3	2.8
Rated Power $P_{20}$	Stroke (W)	14	
Weight (kg)	(kg)	1	
Radial bolt load, max allowable	(N)	3000*	

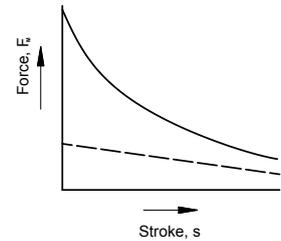


Fig. 3 Force characteristic

### Table Notes

0mm is completion of energised stroke

Force figures  $F_M$  are gross. For net values deduct spring force

\* The bolt will not withdraw if a side-load is present

### Table Basis

The terms used are defined in Technical Explanation GXX

Magnetic forces  $F_M$  stated are based on

- 24V 100% duty coil
- 35°C ambient temperature
- working in the Hot condition
- armature in horizontal attitude
- 90% of the rated Voltage
- heat-insulated mounting

Duty Rating ED, % of energised time/cycle:  $\frac{t(\text{on})}{t(\text{on}) + t(\text{off})} \times 100$

100% : continuous duty

Rated Power  $P_{20}$  stated with coil at 20°C

Values given may vary by up to  $\pm 10\%$  owing to inherent and manufacturing tolerances

Shotbolts Type 60,61 incorporate solenoid GFCX040X00E23. For solenoid performance and other details refer to data sheet 'GFC'.

### Supply Voltage

Standard voltages available: 12V, 24V DC and 205V DC (for rectified 230V 50/60Hz)

Other voltages upon request

### Safety

The customer is responsible for ensuring that devices are suitable for their application and that, even if they should fail, safety in use is not compromised. We supply Technical Explanation documents to help users understand our products and assistance is always available from our technical department.

### Versions

Other shotbolt types are available – see respective data sheets

Also, special and modified versions, including

- ATEX
- IP54 and IP65 protection
- special finishes
- long strokes

Contact our technical department for assistance

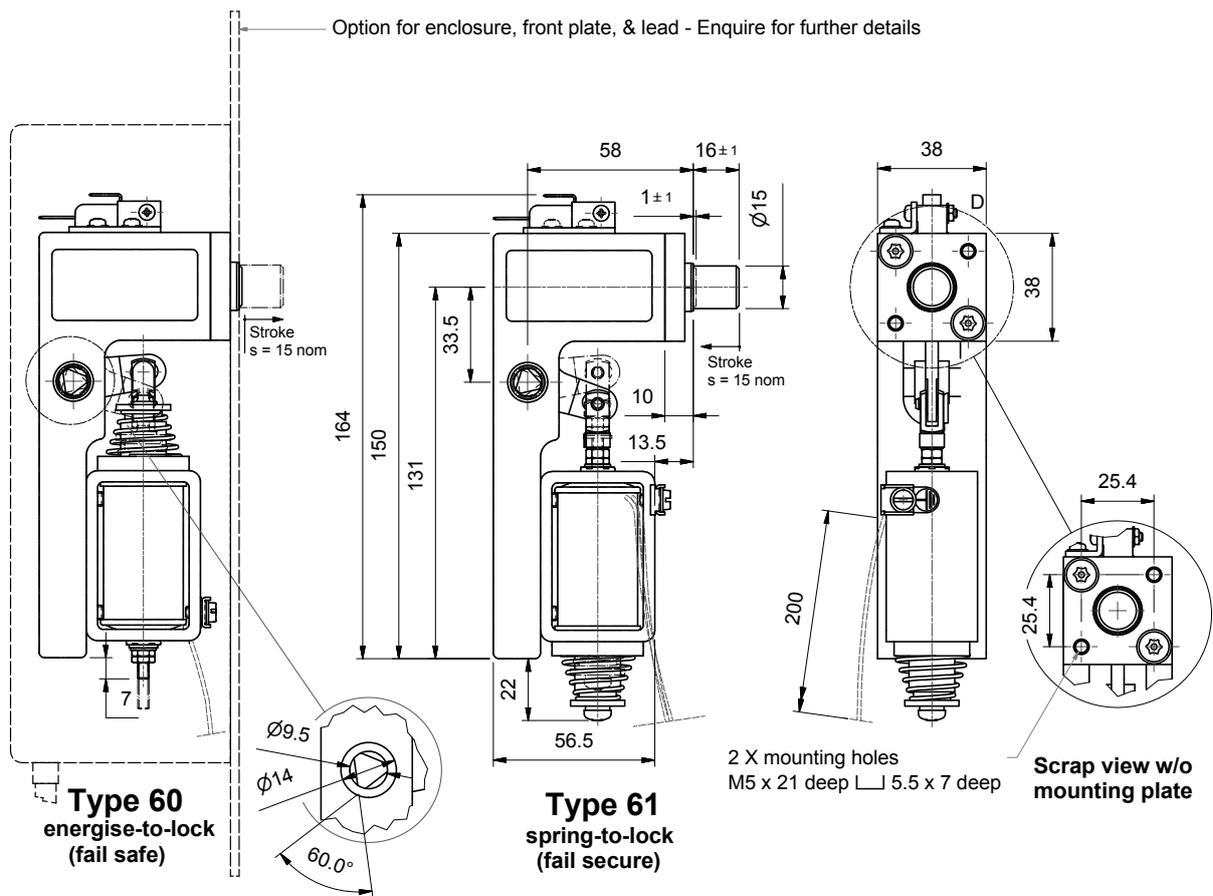


Fig. 4 Dimensions

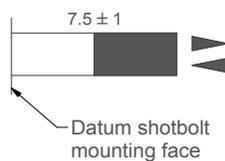


Fig. 5 N/C positive break switch

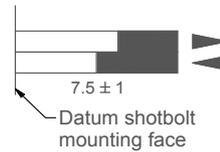
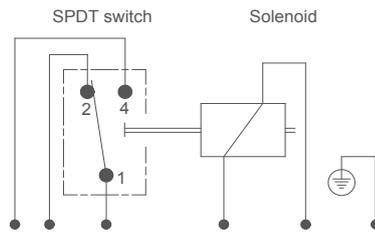
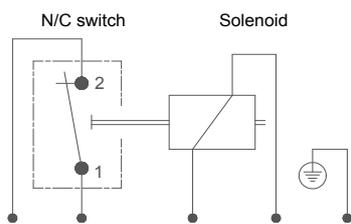


Fig. 6 Snap action change over switch



## Switch

Both Type 60 (energise-to-lock) and Type 61 (spring-to-lock) shotbolts incorporate a switch, with the options of switch type:

- Positive break (forced contact) switch Max 250V AC 10A , 0 - 15V DC 10A, 15 - 30V DC 7A see Fig 5.
- Snap action switch rating 250V AC 5A - see Fig. 6

The switch is set as standard at 7.5±1mm protrusion from the mounting datum. Other switch set positions and types can be provided on request.

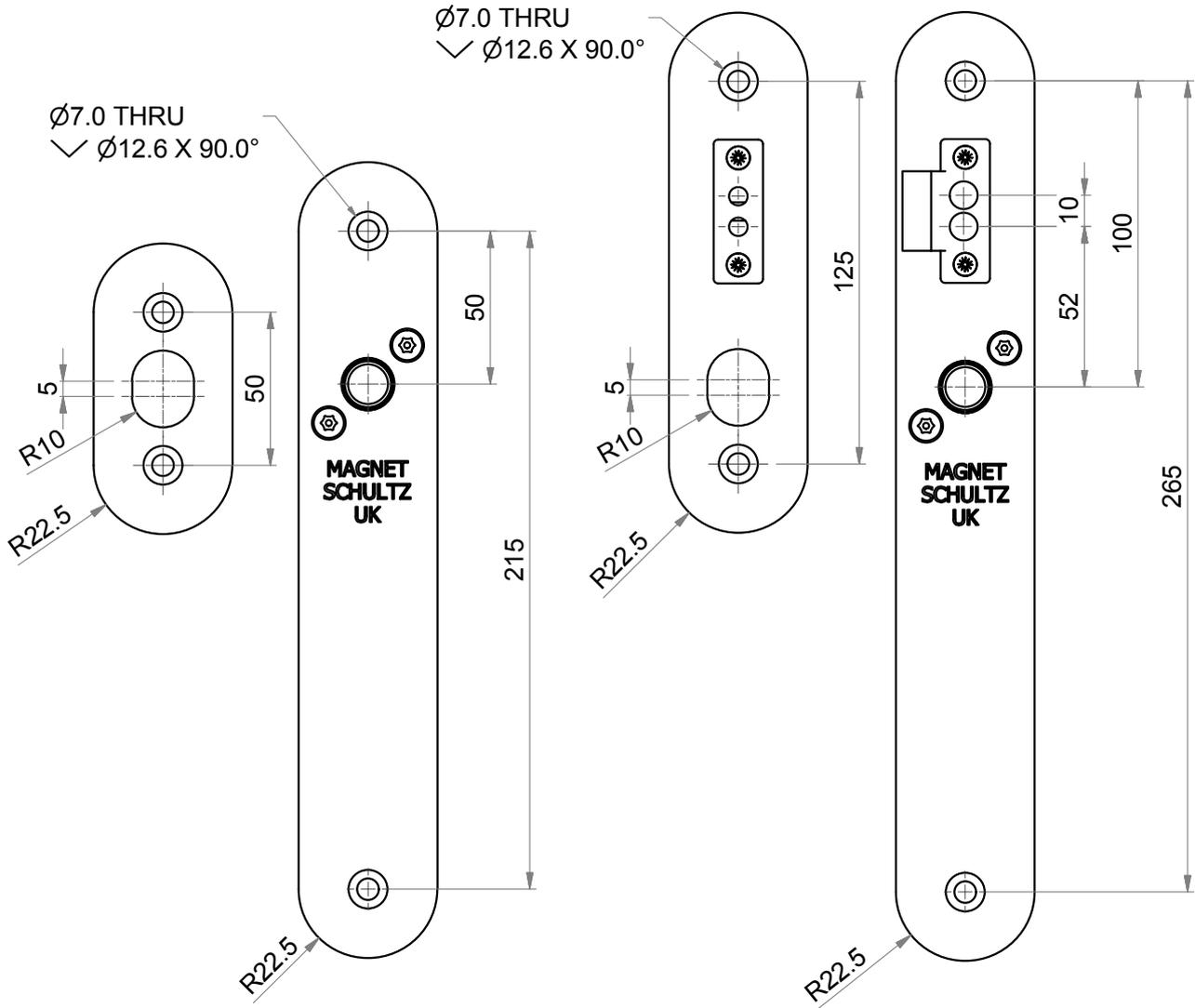


Fig.7 60/61 Front plate & keeper kit

Fig.8 60/61 Front plate & keeper (DPS) kit

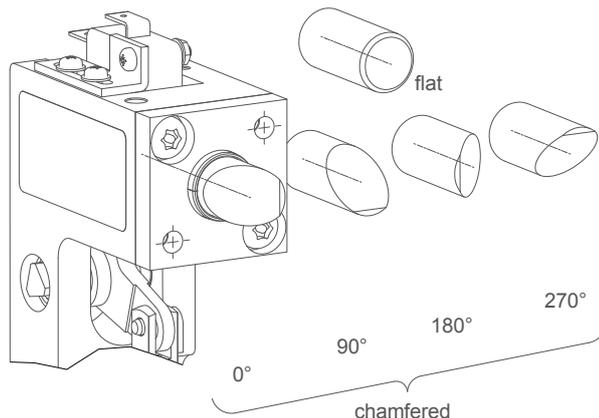


Fig.9 Bolt options

**Order codes table:**

Order Example	61	GFCX 040	FC	CH	0°	24V 100%
Group and function type	<b>60</b> - Energise-to-lock <b>61</b> - Spring-to-lock					
Solenoid type		GFCX 040				
Switch type			<b>FC</b> - forced contact <b>SA</b> - snap action			
Bolt design				<b>CH</b> - Chamfered <b>FL</b> - Flat end		
Chamfered bolt angle - see Fig 9					<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	
Voltage % duty rating						<b>24V 100%</b>

Ancillary Items	Order Code
60/61 Front plate & keeper kit fig. 7	A9900063
60/61 Front plate & keeper (DPS) kit fig. 8	A9900062
Manual override key fig. 10	P0200478
Door proving Contact set to SK6619 fig. 11	P0200342

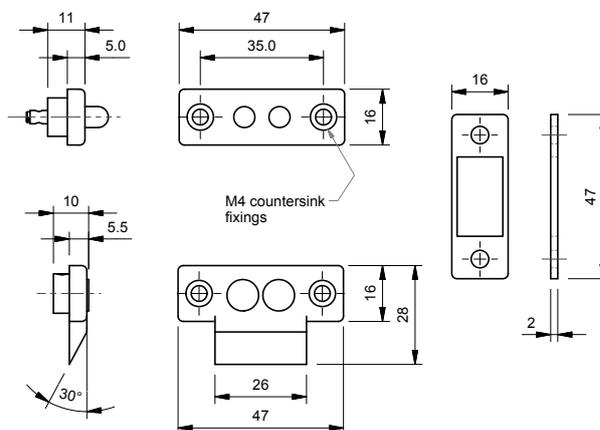


Fig.12 Door proving contact set



Fig.11 Door proving contact set    Fig. 10 Override key

## Need more information or advice?

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