

Electric Bolt Lock - Weatherproof

Type EBL-W2020

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Function

- energise-to-lock or spring-to-lock
- 2 bolt position switches (extended and retracted)
- integral manual override
- DC or AC supply
- 20mm bolt stroke

Standard features

- IP65 design
- stepped power control to solenoid
- rated for continuous energisation
- body mounting, installation in any attitude
- high performance, maintenance-free bearings
- coil insulation class F, maximum voltage 250V
- pre-installed 1m cable

Options on request

- alternative body material
- different bolt designs - chamfered/length
- alternative switch arrangements
- alternative cable/connector arrangements

Applications

robust and secure locking in wet/outdoor applications:

- gates in exposed locations
- external security doors
- access control in perimeter fencing
- deck-mounted marine applications
- washed-down process machinery

Standards

- ISO 9001
- solenoid designed and tested to VDE 0580



Fig. 1 Standard EBL-W2020



For videos of this and our other products, please visit our YouTube channel

Technical data

Type EBL-W2020		Spring to lock		Energise to lock	
		Magnetic force F_M (N)	Return spring force (N)	Magnetic force F_M (N)	Return spring force (N)
Bolt position	retracted	34.8	15.2	13.4	4.2
	extended	13.4	4.2	34.8	15.2
Bolt stroke (mm)		20			
Operating mode - duty rating ED ₁₎		40% (S3) / 100% (S1)			
Power consumption (P_{20}) (W)		50 / 20			
Total weight (kg)		2.45			
Maximum bolt side-load (static or dynamic) ₂₎		10,000			

Table notes

1) The shotbolt incorporates stepped power control to the solenoid. When energised, it operates at 40% rating (50W) for 1 second then steps to 100% rating (20W) at which point it can be left to operate continuously, provided conditions are as stated in table basis below. Energisations should not exceed 24/minute.

2) The bolt **will not move** if a side-load is present. In the rest position, the maximum side-load must not exceed 10,000N for functionality to return to normal once said load is removed. Higher side-loads risk permanent damage to the bolt arrangement.

Table basis

The terms used are defined in [Technical Explanations GXX](#)

Magnetic forces F_M stated are based on

- 24V 40% / 100% duty coil
- working in the Hot condition
- 90% of the rated voltage
- 35°C ambient temperature
- armature/bolt in horizontal attitude
- 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 10% owing to inherent and manufacturing tolerances

Type EBL-W2020 shotbolts incorporate solenoid GFCX050X00E14. For solenoid performance and other details refer to [data sheet 'GFC'](#)

Supply voltage

Standard voltage available: 24V dc

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 locking devices are available – see respective data sheets

Also, special and modified versions, including:

- ATEX / Explosionproof
- special finishes
- long strokes

Contact our technical department for assistance

Dimensional drawings

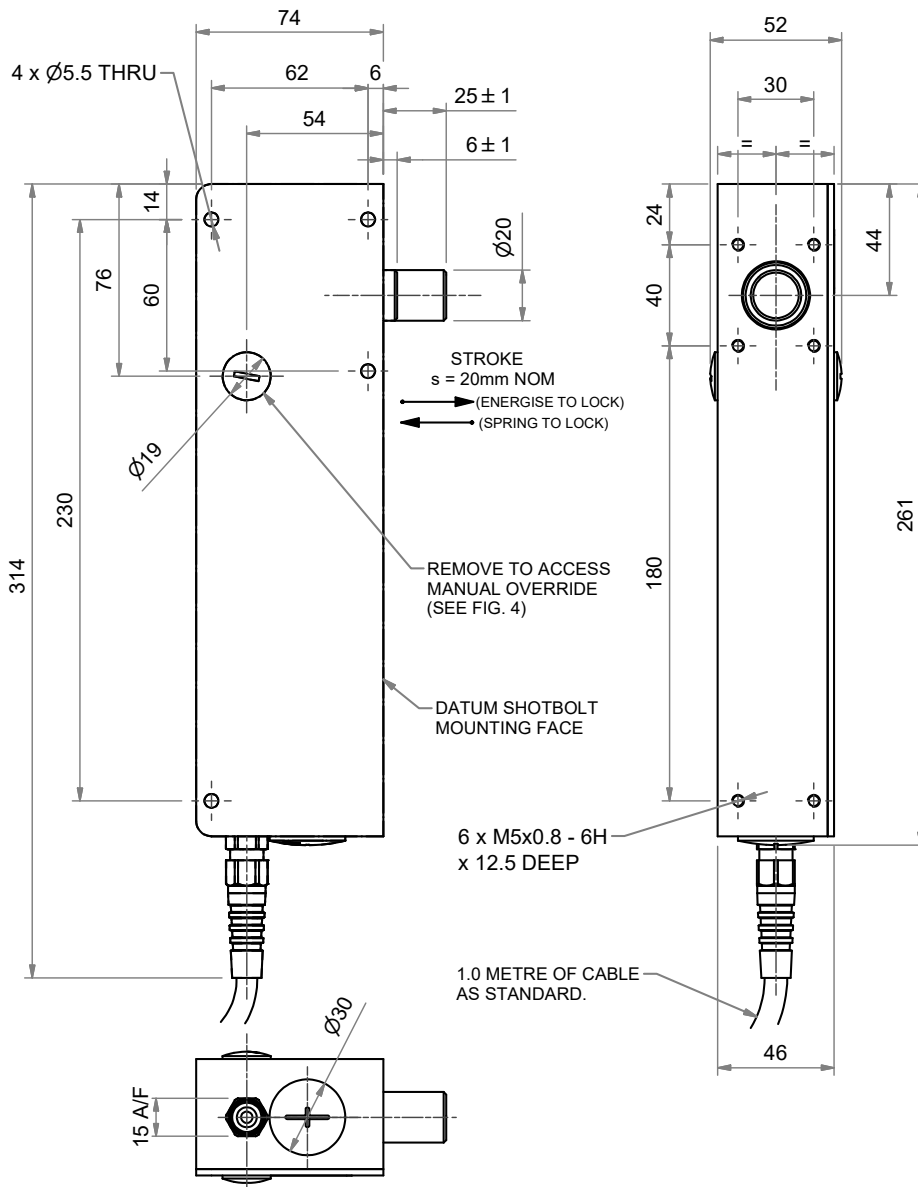


Fig. 2 Dimensional drawing

Switches

Two snap-action switches: rating: 125V ac, 12V dc, 2A - see fig.5

The switches are set as standard at 5-9mm on 'bolt in' position, 22-26mm on 'bolt out' position

Cable

8 core, unscreened grey cable: 0.33mm²/core, Low Smoke Zero Halogen (LSZH) insulation, overall diameter 5.48mm

Cable length or type can be changed upon request

Construction

Body - Aluminium body with clear anodisation

Cover - Stainless steel (304) cover with brushed finish

Bolt - Stainless steel (303) bolt with clean finish

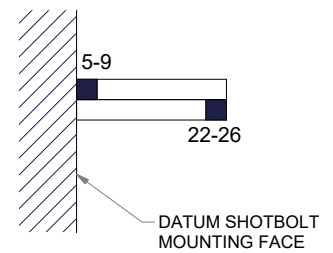


Fig. 3 Bolt position switch settings

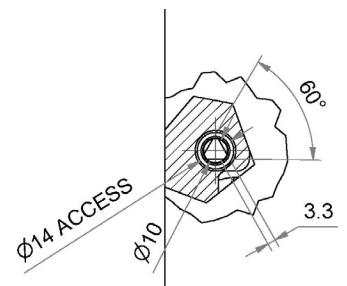


Fig. 4 Manual override scrapview

Wiring diagram

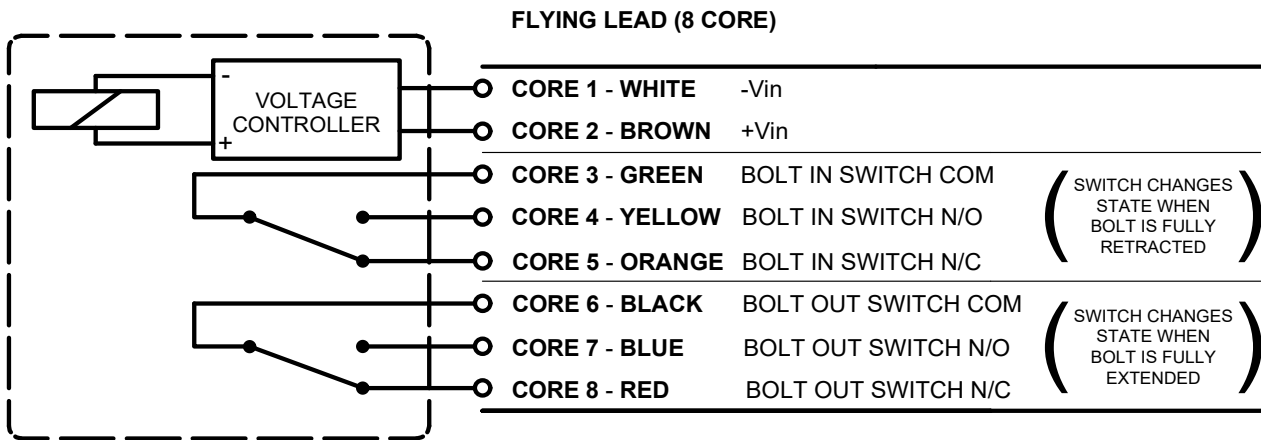


Fig. 5 Wiring diagram

Order codes

Order code examples: for EBL-W2020 SL SA FL 24V 100% - A0101057
for EBL-W2020 EL SA FL 24V 100% - A0101058

Product group	Function	Switch type	Bolt end	Voltage	Duty	Order code
EBL-W2020	SL - spring to lock	SA - snap action	FL - flat	24V	100%	A0101057
	EL - energise to lock					A0101058

Ancillary items	Order code
Manual override key (fig. 6)	P0200478



Fig. 6 Override key

Need more information or advice?

Email one of our technical experts at sales@magnetschultz.co.uk or call +44(0)1483 79400 now