

Industrial Load Release

Incorporating holding-magnets GMH and GMP

Product group: **9**

Load capacity up to 1000N

Type EH,ER

Function

- electromagnetic cable release mechanism for instant release of loads:
 - energise to hold - Type EH (GMH magnet)
 - energise to release - Type ER (GMP magnet)
- high load capacity up to 1000 N
- resettable design allows regular functional testing without releasing the load

Construction

- no parts to replace following actuation
- can be installed in by attitude
- robust construction, minimal maintenance
- stainless steel load hook
- positive separation of magnet/armature by spring action ensures release of very light loads
- plug connector for DC and AC supply
 - F (GMH magnet)
 - B (GMP magnet)

Applications

- fire shutters and doors
- sliding doors and shutter doors
- emergency shut off valves
- security and fire doors/enclosures
- test weights
- drop plates

Standards

- designed and tested to VDE 0580
- ISO 9001



Fig. 1 Industrial Load Release

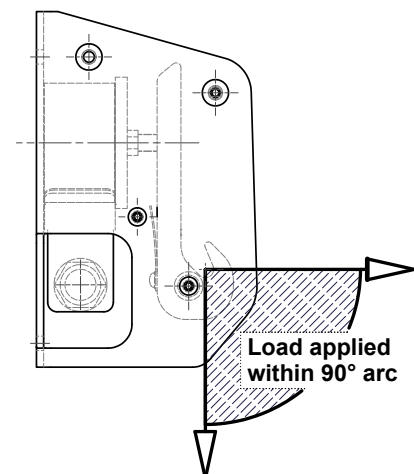


Fig. 2 Load angle diagram

Type	EH	ER
Operation	Energise to hold	Energise to release
Load capacity (N)	1000	500
Mechanism weight (kg)	1.6	1.6
Magnet	G MH X 050 X20 D07	G MP X 035 X20 D01 ¹⁾
Duty rating	Continuous	Impulse ²⁾
Power consumption P ₂₀ (W)	6.2	6.6

Table Notes

¹⁾ Correct electrical polarity in the connector must be observed for type 'ER'. Flux path design permits electromagnetic release without harm to the permanent magnet.

²⁾ Impulse Duty Rating - see details below for limitations on energisation.

Table Basis

The terms used are defined in Technical Explanation GXX

The Industrial Load Release incorporates electro magnet GMPX 035 (energise-to-release) or GMHX 050 (energise-to-hold). For performance and other details refer to data sheet 'GMP GZZ' or 'GMH GZZ' respectively.

Magnetic forces F_M stated are based on

- 24v 100% duty coil
- working in the Hot condition
- 90% of the rated voltage
- 35°C ambient temperature
- armature 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, 40% - 120S, 25% - 75S, 15% - 45S, 5% - 15S, impulse - 5S.

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

Values given may vary by up to 10% owing to inherent and manufacturing tolerances.

Supply Voltage

The standard supply voltages are 24V DC and 230V AC.

Mounting

4 mounting holes, 5mm, 3mm thick are provided on the rear face of the unit.

Operation

On de-energisation (Type EH) or energisation (Type ER), the load arm pivots away from the magnet to release the cable. To reset, the load arm is returned to magnet face and cable restored to the load arm hook.

Service Pin

A service pin is supplied to prevent accidental load release during installation, maintenance or repair and to provide means of periodic electrical testing without load release. The mechanism is delivered with service pin in 'out of service position'. During commissioning it must be relocated to the pin storage position to make the mechanism operable (see page 3).

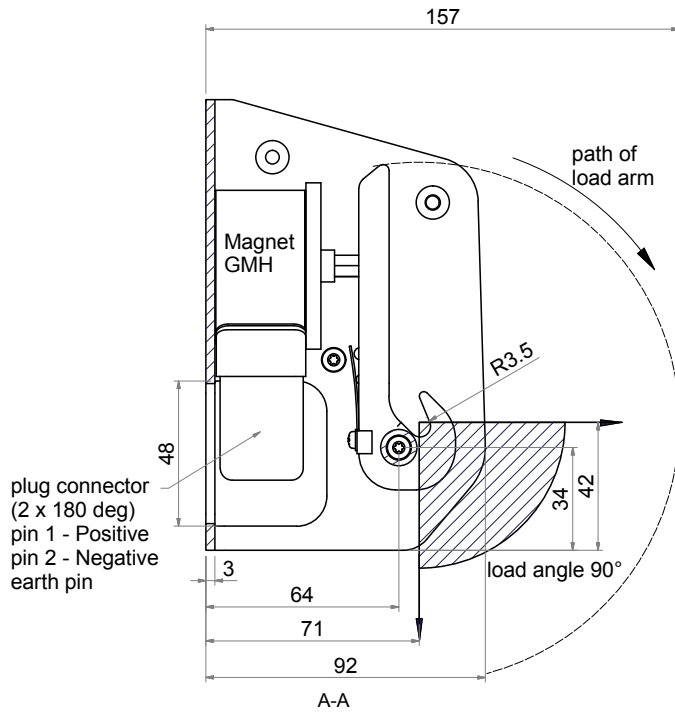


Fig. 3 EH energise-to-hold

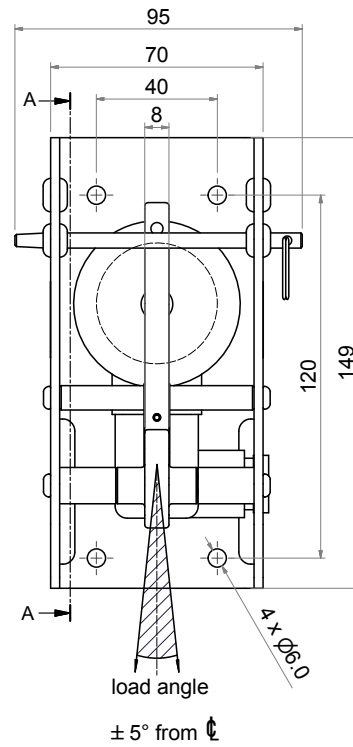


Fig. 4 EH and ER

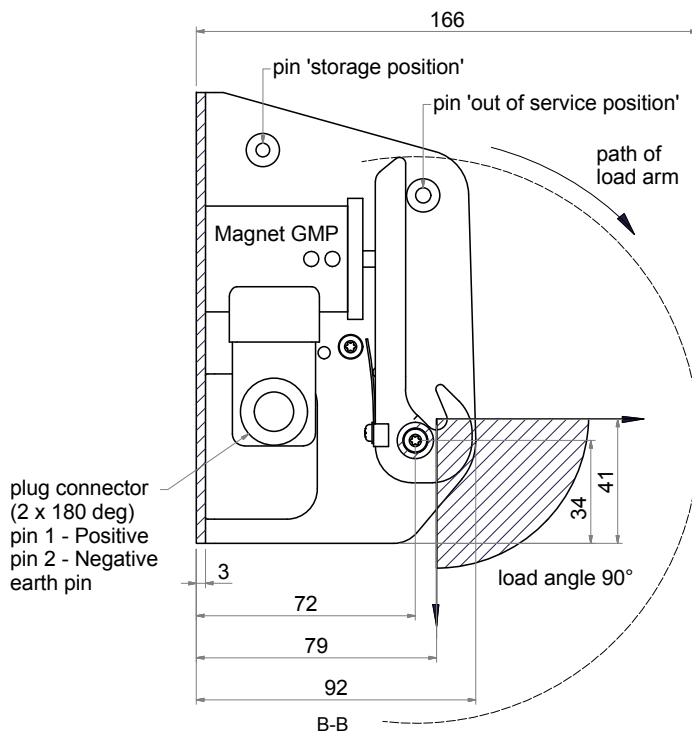


Fig. 5 ER energise-to-release

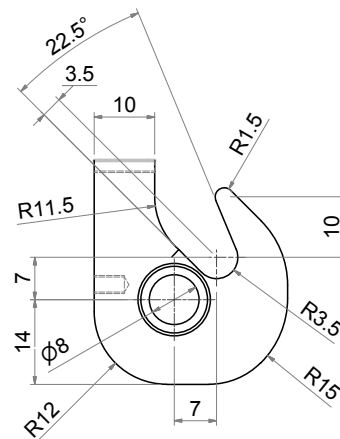


Fig. 6 load hook detail EH and ER

Maintenance

Regular functional tests should be carried out at intervals to suit the environment in which the unit is installed. During testing attention should be given to: the magnet and armature faces which must be free from corrosion (do not clean with an abrasive material as this will damage the plating) and clean (particles can be removed using sticky tape), the load arm which must move freely on its spindle; the plug connector which must be secure with all gaskets and seals fitted.

Installation

The unit may be installed in any attitude provided the direction of load is within the angle defined on page.3

Where the mechanism is accessible by non-service personnel, a suitable protective guard must be fitted to eliminate the possibility of injury from the load arm which rotates rapidly when the mechanism is operated.

The units should be installed in a clean, dry environment and are not suitable for external use unless effective weatherproofing protection is provided.

Heavy impact or prolonged exposure to heat may reduce the force of the permanent magnet in type ER.

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

Order Example	ER	GMPX 035	24v 100%
Type & function type	EH - Energise-to-hold ER - Energise-to-release		
Magnet type		GMHX 050 - EH version GMPX 035 - ER version	
Voltage and duty rating			24v DC - EH version 230v AC - EH version 24v DC - ER version 230v AC - ER version