

## D C Small Shotbolt Lock Assembly

Spring to lock - energise to unlock  
Stroke 10mm  
(Rectifier for A.C. supply)

**1**  
Product group  
**Type G HU Z 040 M20 D03**

- According to VDE 0580 and ISO 9001 (conform with article 10 of directions 73/23/EEC - according to CENELEC memorandum no. 3 of March 1987)
- Spring to lock, energise to unlock
- Integral spring and high endurance, maintenance free bearings
- Robust cylindrical construction
- Threaded nose mounting
- Suitable for mounting and operation in any attitude
- Force characteristic (Fig. 2)
- For direct-acting solenoid equivalent see data sheet G T C A
- Coil with insulation to class F, for voltages up to 250 volts
- Protection classification - DIN VDE 0470 / EN60529  
Flying leads - IP 00
- Shotbolt, ratchet and holding magnet locks available in other product groups
- Application



Fig. 1  
G HU Z 040 M20 D03

Access Controls

Shutters

Interlocks

Machine Tools

Guards interlocking applications in commerce and industry and gates indexing

### Performance and dimensions for type G HU Z 040 M20 D03

| <b>G HU Z 040 M20 D03</b>                    |            |           |
|----------------------------------------------|------------|-----------|
| Duty rating (ED)                             | (%)        | 100       |
| Stroke (s)                                   | (mm)       | 10        |
| Work rating ( $A_N$ )                        | (Ncm)      | 10.8      |
| Power consumption ( $P_{20}$ )               | (W)        | 12.9      |
| Ambient temperature ( $\delta_{11}$ )        | (°C)       | 35        |
| Frequency of operating ( $S_h$ max)          | (1/h)      | 25000     |
| Closing time ( $t_1$ )                       | (ms)       | 85        |
| Opening time ( $t_2$ )                       | (ms)       | 50        |
| Armature weight ( $m_A$ )                    | (kg)       | 0.078     |
| Solenoid weight ( $m_M$ )                    | (kg)       | 0.46      |
| Radial bolt load (max) allowable<br>(approx) | (N)<br>(N) | 1500<br>8 |

## PERFORMANCE TABLE

Terms are explained in Technical Bulletin G XX & VDE 0580

## TABLE BASIS

24V DC 100% duty. Ambient temperature 35°C  
Heat insulated, free air. horizontal/pull mounted  
Tolerance +/- 10% (inherent and manufacture)

## MOUNTING

Threaded nose mounting with lock nut provides high rigidity. Shotbolts of other sizes and mounting arrangements including ratchet and holding magnet locks are in product groups: G HU Z, G FC, G TC A, G TC E, G DA, G DC, G MH, G MP.

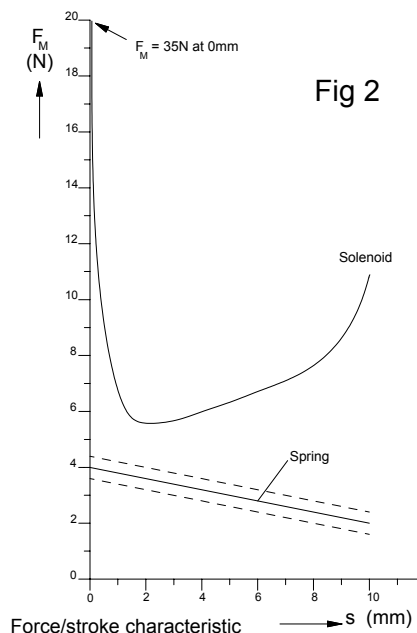
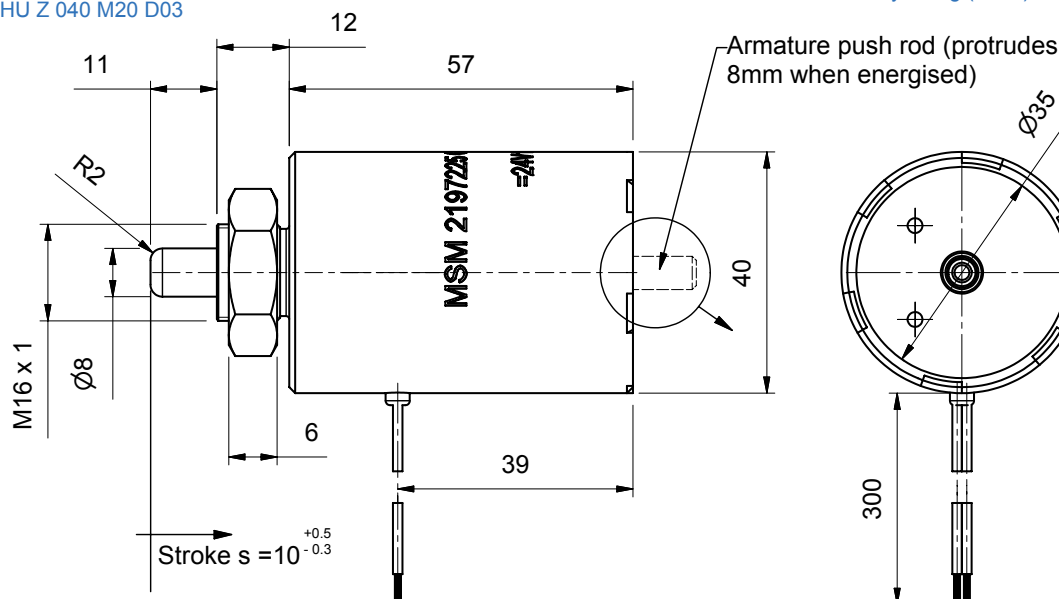
## LOCK-BOLT

Radial load to the bolt should be kept within the max. allowable (see table above) so ensuring maximum reliability and operational life with a minimum of maintenance.  
electronic control is available to give increased stroke force with continuous duty hold.  
over voltage of 2:1 will give approx. 20N at initiation of stroke

**DUTY RATING (ED %)**  
% of energised time per cycle

$$\frac{t(\text{on})}{t(\text{on}) + t(\text{off})} \times 100$$

Fig.3  
G HU Z 040 M20 D03



### POWER CONSUMPTION ( $P_{20}$ )

Listed with a 20°C coil temperature (decrease/HOT)

### MAGNETIC FORCE ( $F_M$ )

Listed in HOT condition at 90% of rated voltage (increase approx 20% at rated voltage). Adjust for armature weight

## OPERATING TIMES

( $t_1/t_2$ ) are listed per cycle of operating in HOT condition at rated voltage with weight load of 70% of force ( $F_M$ ) at and over rated stroke

## SUPPLY VOLTAGE

The standard supply voltages are: 12V and 24V, DC  
other voltages upon request

## PROTECTION

### Passivated zinc body

**ORDER CODE**

|                   |                    |
|-------------------|--------------------|
| Type              | G HU Z 040 M20 D03 |
| Voltage           | 24V D.c.           |
| Duty rating (ED%) | 100%               |

