

## DC Single-Acting Solenoid in explosion-protected Design

# 1



Product group

## G MC E 037

### Function

- Increasing force vs. stroke characteristic

### Construction

- Fastening via central thread
- Insulation materials of the exciter coil correspond to thermal class F
- Electrical connection via connecting cable  
FL4G11Y 2x1,5mm<sup>2</sup>
- Protection class when properly installed:
  - Magnetic body: according to DIN 40050-9: IP 69K
  - Tube according to DIN VDE 0470/EN 60 529: IP 40
- Explosion protection:  II 2G Ex mb IIC T4 Gb  
 II 2D Ex mb IIIC T130°C Db

### Application examples

- Application in explosive atmospheres  
e.g. chemical companies, refineries and refuelling facilities  
and areas with combustible dust (zones 1, 21)

### Options and accessories

- Three wire connecting cable
- Electrical connection via terminal box
- Other temperature classes
- Modifications and special designs
- Please contact us for application related solutions

### Standards and approvals

- Design and testing according to VDE 0580
- Production according to ISO 9001
- ATEX, IECEx



Fig. 1: Type G MC E 037 A GD A02

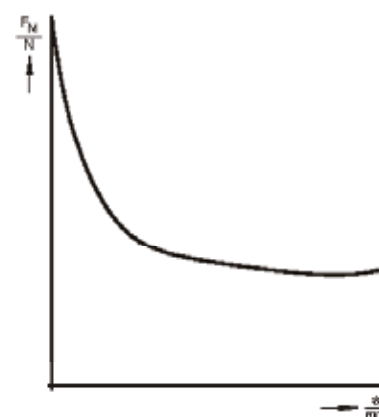


Fig. 2: Force vs. stroke characteristic

## Technical Data

<b>G MC E 037 A GD A02</b>		
Operating mode		S1 (100%)
Ambient temperature $T_a$	(°C)	-20 bis +40
Stroke s	(mm)	Magnetic force FM (N)
	1	11,5
	2	9,7
	3	9,3
	4	9,1
	5	8,9
	6	8,8
	8	5,3
Rated work $A_N$	(Ncm)	7
Rated power $P_{20}$	(W)	12
Actuation time $t_1$	(ms)	95
Fall time $t_2$	(ms)	60
Armature weight $m_A$	(kg)	0,05
Solenoid weight $m_M$	(kg)	0,4

The times listed in above table refer to rated voltage, max. stroke, weight load 70 % of rated magnetic force. They may decrease essentially with a higher load.

### Notes on the tables

The magnetic force values indicated in the table refer to 90 % of the rated voltage and normal operating temperature. There may be deviations with other rated voltages.

Due to natural dispersion the magnetic force values may deviate by approx.  $\pm 10\%$  from the table values.

The normal operating temperature is based on:

- Mounting on heat-insulating base
- Rated voltage  $\approx 24$  V (other voltages on request)
- Operating mode S1 (100% ED)
- Reference temperature  $40^\circ$  C

### Rated voltage

Rated voltage is  $\approx 24$  V. An adaptation of the exciter coil to a rated voltage less than  $\approx 120$  V is possible on request.

The devices correspond to protection class III. Electrical equipment of protection class III may be only connected to low voltage systems (PELV, SELV)(IEC 60364-4-41). The design limit of the equipment is a rated voltage not higher than 120 V (EN 61140:2002) with DC. On request we are pleased to check to what extent the delivery of higher rated voltages is possible as special solutions by agreement.

**Please note the respective operating manual delivered with each device. An EC conformity declaration of the manufacturer is attached to every delivery one time.**

**Please make sure that this device is suitable for your application.**

**Information and remarks concerning European directives** can be taken from the correspondent information sheet which is available under *Produktinfo.Magnet-Schultz.com*.

### Note on the RoHS Directive

The devices presented in this document do not fall into the scope of RoHS Directive and to our knowledge they do not become part of products which fall into this scope. In case of surfaces zinc coating with yellow chromating and zinc iron with black chromating separate agreements are necessary for applications within the scope of RoHS.

## Dimensional drawing

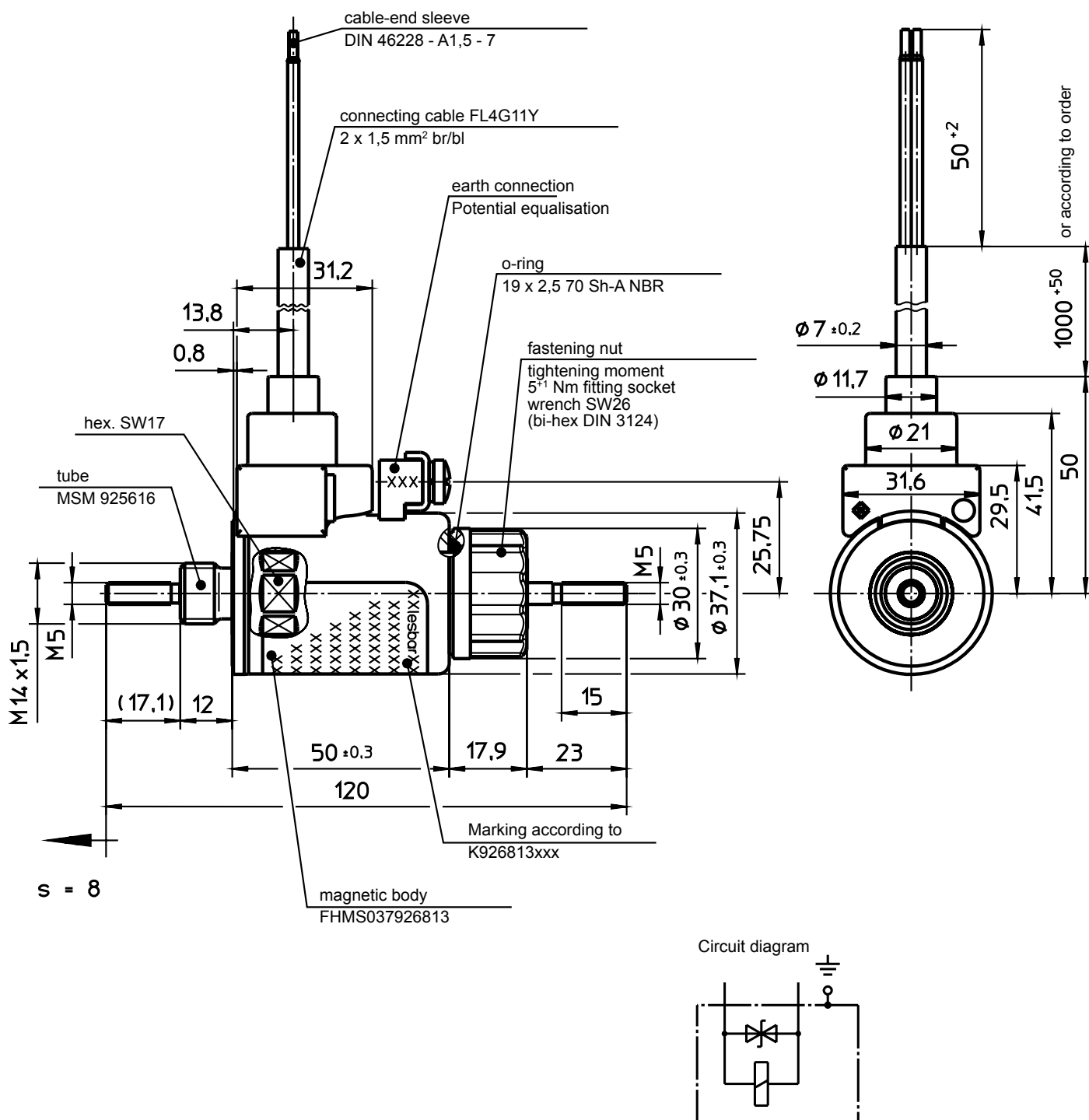



Fig. 3: Type G MC E 037 AMX A02

## Order example

Type	G MC E 037 AGD A02
Voltage	=== 24 V DC
Operating mode	S1 (100 %)
Cable length	3 m

## Specials designs

Please do not hesitate to ask us for application-oriented problem solutions. In order to find rapidly a reliable solution we need complete details about your application conditions. The details should be specified as precisely as possible in accordance with the relevant -Technical Explanations.

If necessary, please request the support of our corresponding technical office.