

Operating Manual

791529



BA013367-002

(Rev. 05.08.2015)

Solenoid Coil FHMSE 037 926813 with Tube MSM 926477

D. C. Solenoid GSCE 037 AGD A03

Explosion protection ATEX and IECEx

 0637  II 2G Ex mb IIC T4 Gb
II 2D Ex mb IIIC T130°C Db

Applied standards:

EN 60079-0:2012 (IEC 60079-0:2011)
EN 60079-18:2009 (IEC 60079-18:2009)

EC Type Examination Certificate
IECEx Certificate of Conformity:

IBExU 13 ATEX 1040 X
IECEx IBE 13.0017X

Protection system acc. to IEC/EN 60529:

Tube IP54
Solenoid Coil IP67
(with intended assembling)

Protection class acc. to DIN VDE 0580:

III

Related Documents

EC Declaration of Conformity:
Dimensional Drawing:
Diagram sheet:

DC013367
G013367
V1350.10609

Main Features and Prescribed Operation

Application engineering and operation of this D. C. Solenoid must be according to standard engineering practice and to all applicable regulations and laws.

For the installation of electrical systems in explosive atmospheres above ground IEC/EN 60079-14 must be generally observed.

The D. C. Solenoid GSCE 037 AGD A03, consisting of Solenoid Coil FHMSE 037 926813 and Tube MSM 926477, in type II 2G Ex mb IIC T4 Gb and II 2D Ex mb IIIC T130°C Db is applied as shotbolt lock unit in industrial applications.

To ensure correct, safe operation and a long service life, the instructions and the Technical Data of this operating manual and of the device-labelling must be observed.

Not allowed impairments or unintended operations must be prevented by appropriate means.

The Solenoid is delivered with a non-detachable connecting cable.

For limitation of transient overvoltages an internal diode is connected in parallel to the coil.

The Technical Data of this operating manual must be adhered to.

Ambient Conditions

If used in hazardous locations, the device-labelling and operating manual must be strictly observed.

Installation and Commissioning

These operations have to be carried out by an electrician with adequate qualifications.

The electrical connection can be made via the connecting cable outside the hazardous location or via an ex-certified terminal box within the hazardous location.

The D. C. Solenoid meets protection class III (protective extra low voltage), supply therefore only with suitable current source (e. g. isolating transformer / PELV)!

An external earth connection is provided on the solenoid housing for equipotential bonding

In accordance with the Technical Data, use of this solenoid is only allowed together with the appropriate tube in a mounted condition.

Dissipation of internal heat and electrostatic charging must not be negatively influenced by varnishing or covering the solenoids surface.

ATTENTION!: Prior to carrying-out any work on electrical circuits and prior to opening the terminal box within hazardous locations the electrical circuits must be switched off.

Only the appropriate and permitted tools and measuring instruments are allowed for use in hazardous locations.

If the D. C. Solenoid fails to operate, the correct function of the cable connections and the power-supply must be examined outside the hazardous location.

It is not allowed to modify or repair the Solenoid Coil or the Tube.

Maintenance

No maintenance is necessary if the D. C. Solenoid is applied correctly according to the operating manual. For inspection and maintenance of electrical systems in potentially explosive areas above ground IEC/EN 60079-17 has generally to be observed.

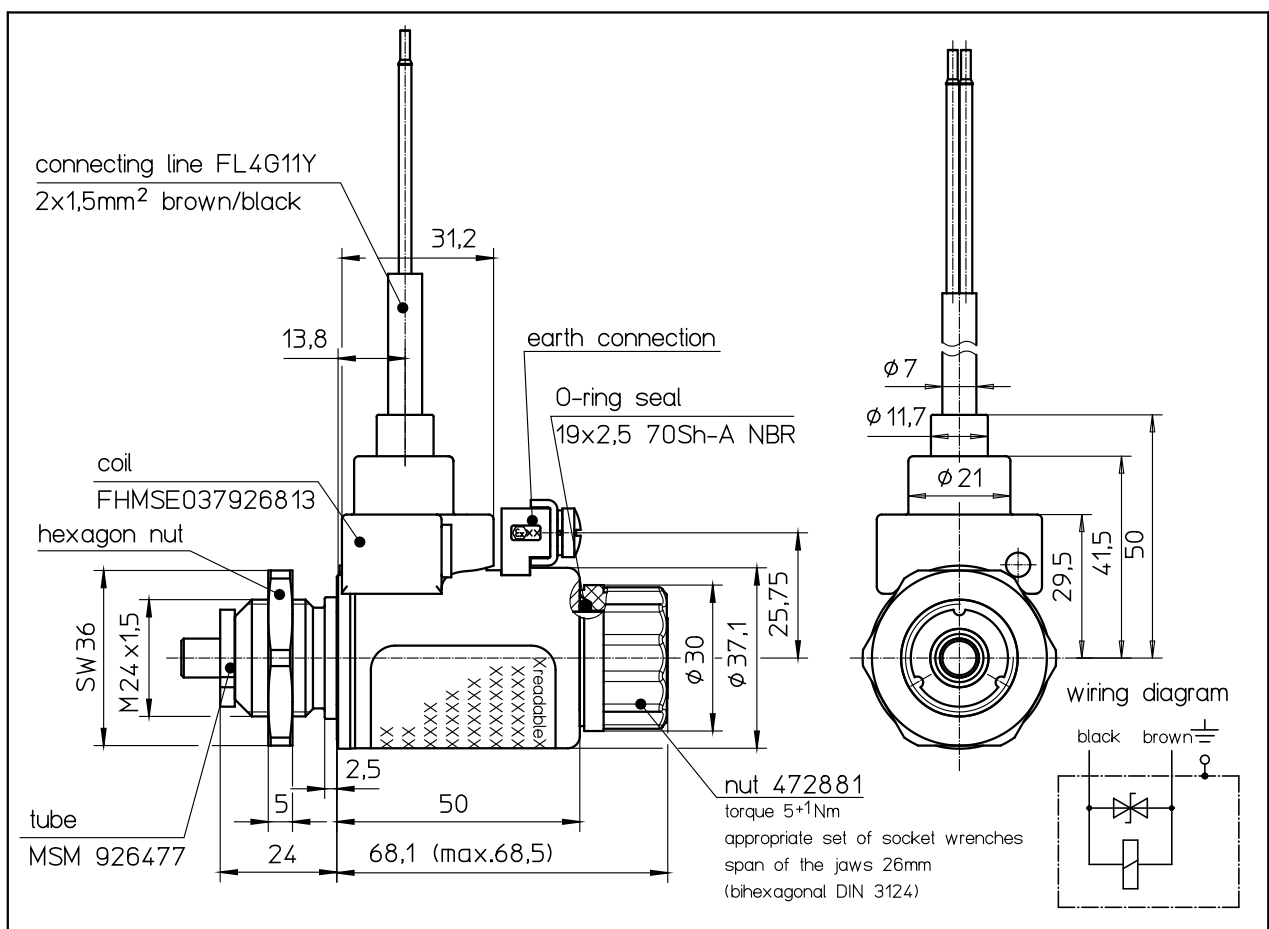
Mounting

Screw in Tube as directed and tighten hexagon nut with prescribed torque according to Assembly Drawing.

Place coil on tube according to Assembly Drawing, insert O-ring seal and tighten nut with torque as prescribed in the Assembly Drawing.

Arrangement see Assembly Drawing

Assembly Drawing



Materials and Finishes

Iron, blank
 Iron, zinc-plated
 Stainless steel, blank
 Brass, blank
 Copper wire, blank and tin-plated

Copper enamel wire
 Epoxy resins
 Thermoplastics
 Elastomers

Technical Data			
Manufacturer		Magnet-Schultz GmbH & Co. KG Allgäuer Straße 30 D-87700 Memmingen	
Proportional Solenoid-type		GSCE 037 AGD A03	
Variant		001 / 002 / 004 / 005	003
Date of production		Refer to device labelling e. g. 24/14 → week 24 / year 2014	
Tube		MSM 926477	
Fastening nut		MSM 472881	
O-ring seal		19 x 2.5 NBR	
Solenoid Coil		FHMSE 037 926813	FHMSE 037 926813
Variant		-002 / -005 / -009 / -003	-008
Nominal voltage	U_N	24 V DC $\pm 10\%$	12 V DC $\pm 10\%$
Rated current	I_B	0.498 A	1.091 A
Limiting power	P_G	10.5 W	11.3 W
Ripple	w	Max. 48 %	
Duty cycle	ED	S1 (100 %)	
Max. frequency of operation		5 operations / sec	
Ambient temperature	T_a	-30 °C ... +40 °C	
Temperature class		T4	
Supply		Current source must be suitable for protection class III (protective extra low voltage)	
Assembly on valve block		Single mounting and multiple mounting, single operation without any restrictions	
Connecting cable		FL4G11Y 2 x 1.5 mm ²	
Diode for limitation of transient overvoltages		Internally moulded, Type 1.5KE68CA	
Transient overvoltage		Max. 90 V	
Short circuit protection		A fuse corresponding to the solenoid's rated current (max. 3 x I_B acc. to IEC/EN 60127-2) or a motor protective switch with short circuit and thermal rapid release (corresponding to rated current) has to be connected in series to each solenoid.	
Terminal for equipotential bonding		Up to 4 mm ²	
Torque Equipotential bonding terminal		3.5 Nm ... 4.5 Nm	