

Magnetic body

1/4
Product group

F H M G

Function

- Magnetic body to be mounted on the suitable tube
- For ON/OFF and proportional solenoids
- Combination with hydraulic tubes, tubes for linear solenoids and locking devices
- High power density
- High corrosion protection

Construction

- Electrical connection via various plugs
- Construction size: 37mm, 45mm, 63mm
- Protection class according to DIN VDE 470/DIN EN 60529, in case of proper assembly depending on plug type, from IP65 to IPX9K
- Corrosion protection / surface protection: Zn resp. ZnNi

Application examples

- Hydraulic and mechanical applications

Options and accessories

- Other plug forms as well as variants with cable
- Integrated recovery diode
- Deviant ambient and/or standard temperatures
- Variants according to ATEX/IECEX
- In the framework of our platform for valve solenoids there is a variety of variation possibilities for customer specific requirements. We are pleased to work out your individual solution in a personal meeting.

Standards and approvals

- Design and testing according to DIN VDE 0580
- Quality management to ISO 9001
- UL approval for connector AMP-Junior-Timer and Deutsch DT04-2P U



Fig. 1: Type FHMG037925428
Plug: DIN

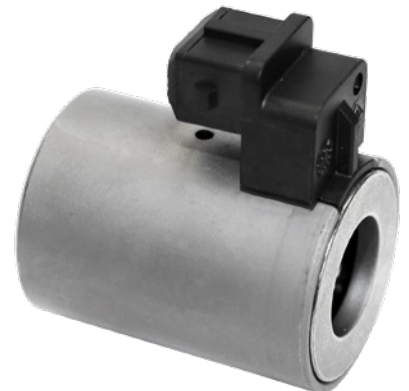


Fig. 2: Type FHMG037925123
Plug: AMP-Junior-Timer 2-pole



Fig. 3: Type FHMG037925770
Plug: Deutsch DT04-2P

Technical Data

| | | | | | | | | | | | |
|--|--|---------------|---------------|---|---------------|---------------|--------------------------------------|---------------|--------------------|---------------|---------------|
| F H M G Material no. | 037 925428 | 045 926433 | 063 924585 | 037 927135 | 045 927137 | 063 927138 | 037 925123 | 045 925384 | 037 925770 | 045 926292 | 063 926296 |
| Connector type | DIN EN 175301-803-A002M | | | in compliance with DIN EN 175301-803-A002M | | | AMP-Junior-Timer 2-pole, coding 1 | | Deutsch DT04-2P | | |
| Size (diameter) (mm) | 037 | 045 | 063 | 037 | 045 | 063 | 037 | 045 | 037 | 045 | 063 |
| Protection class | I | | | III | | | | | | | |
| Preferred value rated voltage (VDC) | 24 | | | | | | | | | | |
| Maximum rated voltage with optional winding adaption (VDC) | 230 | | | 120 | | | | | | | |
| UL approval | --- | | | | | | AU6340 | | AU6340 | | --- |
| Rated voltage range for optional winding adaption with UL approval (VDC) | --- | | | | | | 12 - 48 | | 12 - 48 | | --- |
| Voltage supply requirements | --- | | | Electrical equipment of protection class III may be only connected to low voltage systems (PELV, SELV)(IEC 60364-4-4-41). The design limit of the equipment is a rated voltage not higher than 120 V (EN 61140:2002) with DC. | | | | | | | |
| Protective conductor connection | Inherent to their design, devices with detachable solenoid bodies do not have a persistent approved protective conductor connection between the solenoid's protective conductor terminal and the tube. The operator must secure a proper protective conductor connection of the tube and/or the valve connected. | | | --- | | | | | | | |
| Protection class when properly installed | IP65 | | | | | | IP6K6K | | IPX9K / IPX7 | | |
| Surface | Zn | | | | | | ZnNi | | | | |

Table 1: Protection class and type of protection depending on connector

Performance data

| F HM G - Hydraulic applications - Proportional solenoid / ON/OFF solenoid | | | | | |
|---|--|-----------------------|----------|------|------------|
| Size (mm) | | 037 | 045 | 063 | |
| Operating mode | | S1/100% ED | | | |
| Reference temperature ϑ_{11} ¹⁾ (°C) | | 50 | | | |
| Rated voltage U _N (V) | | 24 | | | |
| ON/OFF solenoid | Rated power P ₂₀ (W) | 25.4 | 29.1 | 47.2 | |
| Proportional solenoid | Rated resistance R ₂₀ (Ω) | 13 | 14 | 7.38 | |
| | Rated current I _N (A) | 0.94 | 0.96 | 1.70 | |
| | Limit curren I _G (A) | 0.94 | 0.96 | 1.70 | |
| | Rated power P _N = I _N ² x R ₂₀ (W) | 11.5 | 12.9 | 21.0 | |
| | Peak performance P _G = I _G ² x R _W (W) | 17.3 | 19.5 | 32.2 | |
| Weight (kg) | | 0.25 | 0.4 | 0.95 | |
| The heating test is based on the assembly on a tube as well as a hydraulic slide with base plate and the minimum dimensions | | hydraulic valve (mm³) | 46x46x66 | | 67x67x82 |
| | | base plate (mm³) | 66x46x30 | | 102x115x30 |

¹⁾ The ambient temperature resp. reference temperature must not be exceeded by a heat input by an operating medium (e.g. oil).


Table 2: Technical data hydraulic applications

| F HM G - Mechanical applications (dry) | | | | | | | | | | | | | | | | |
|--|------|------|------|-------|-------|------|------|------|------|-------|------|------|-------------|-----|-----|--|
| Size (mm) | 037 | | | | | 045 | | | | | 063 | | | | | |
| Operating mode | S1/ | S3/ | S3/ | S3/ | S3/ | S1/ | S3/ | S3/ | S3/ | S3/ | S1/ | S3/ | S3/ | S3/ | S3/ | |
| Rel. duty cycle | 100% | 40% | 25% | 15% | 5% | 100% | 40% | 25% | 15% | 5% | 100% | 40% | 25% | 15% | 5% | |
| Rated power P ₂₀ (W) | 19.1 | 44.3 | 61.5 | 104.7 | 213.0 | 18.6 | 41.2 | 56.7 | 91.7 | 239.0 | 36.0 | 77.3 | Auf Anfrage | | | |
| Reference temperature $\vartheta_{11}^{1)}$ (°C) | 35 | | | | | | | | | | | | | | | |
| Rated voltage U _N (V) | 24 | | | | | | | | | | | | | | | |
| Weight (kg) | 0.25 | | | | | 0.4 | | | | | 0.95 | | | | | |

¹⁾ The ambient temperature resp. reference temperature must not be exceeded by a heat input by an operating medium (e.g. oil).

Table 3: Technical data mechanical applications

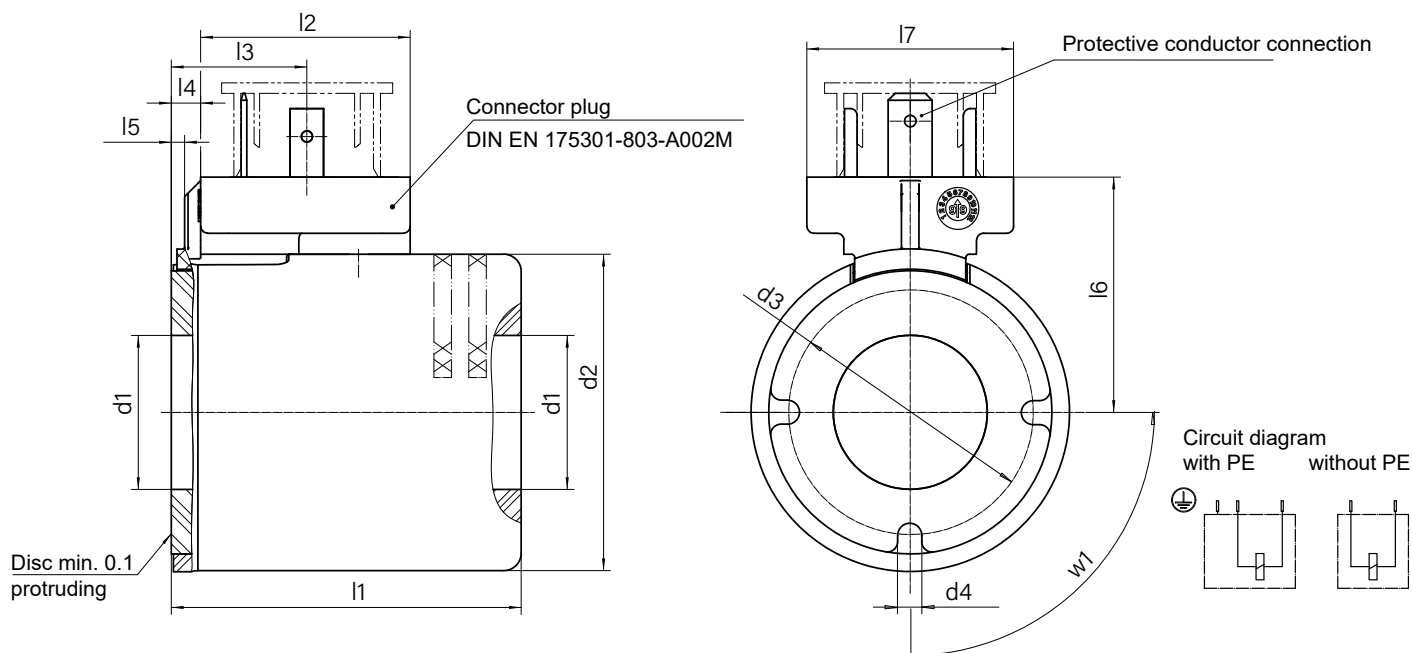
Information and remarks concerning European directives
can be taken from the correspondent information sheet which is available under Produktinfo.Magnet-Schultz.com.

Please make sure that the described devices are suitable for your application. Our offers for these devices are based on the assumption of maximal 8 in an FMEA severity table, i. e. in case of malfunction of the device model as offered, there is, amongst others, no jeopardy to life or limb. Supplementary information concerning its proper installation can be taken also from the  -Technical Explanation, the effective DIN VDE0580 as well as the relevant specifications.

This part list is a document for technically qualified personnel.

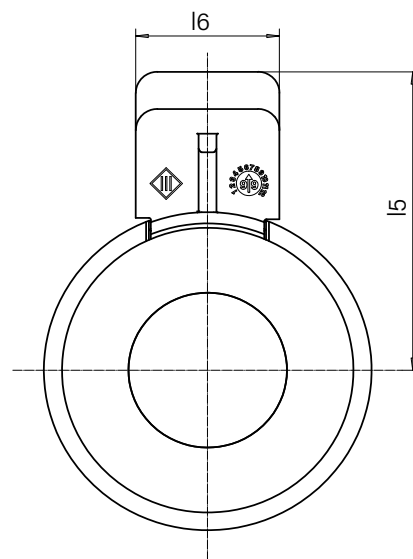
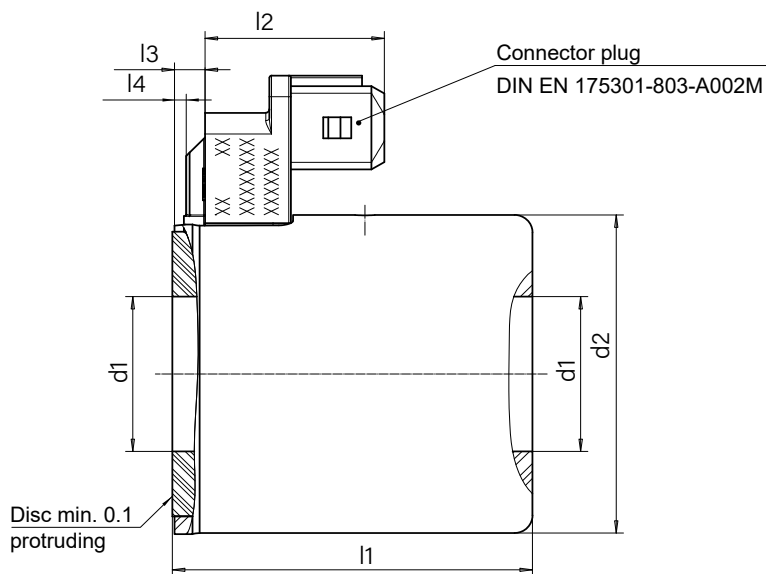
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Dimensional drawings (plug: DIN)

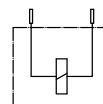


| Size | 037 | | 045 | | 063 | |
|---------------------------|------------------|--------|---------------|--------|-------------|--------|
| Material no. | 925428 | 927135 | 926433 | 927137 | 924585 | 927138 |
| | Dimensions in mm | | | | | |
| d1 | Ø 19.03 | | Ø 22 | | Ø 31 | |
| d2 | Ø 37.1 | | Ø 45 | | Ø 63 | |
| d3 | - | | - | | Ø 50.9 ±0.2 | |
| d4 | - | | - | | Ø 3.45 ±0.1 | |
| l1 | 50 | | 50.1 | | 72 | |
| l2 | 30 | | 30 ±0.5 | | 31 | |
| l3 | 18.35 | | 19.4 ±1 | | 22 | |
| l4 | 3.15 ±0.4 | | 4.2 | | 5.8 | |
| l5 | 0,85 ±0.4 | | 1.9 +0.4/-0.3 | | - | |
| l6 | 29,7 | | 33.7 ±1 | | 42.2 | |
| l7 | 29.6 | | 29.6 ±0.5 | | 29.6 | |
| w1 | - | | - | | 90° ±30' | |
| Protective conductor (PE) | Yes | No | Yes | No | Yes | No |

Dimensional drawings (plug: AMP-Junior-Timer 2-pole)

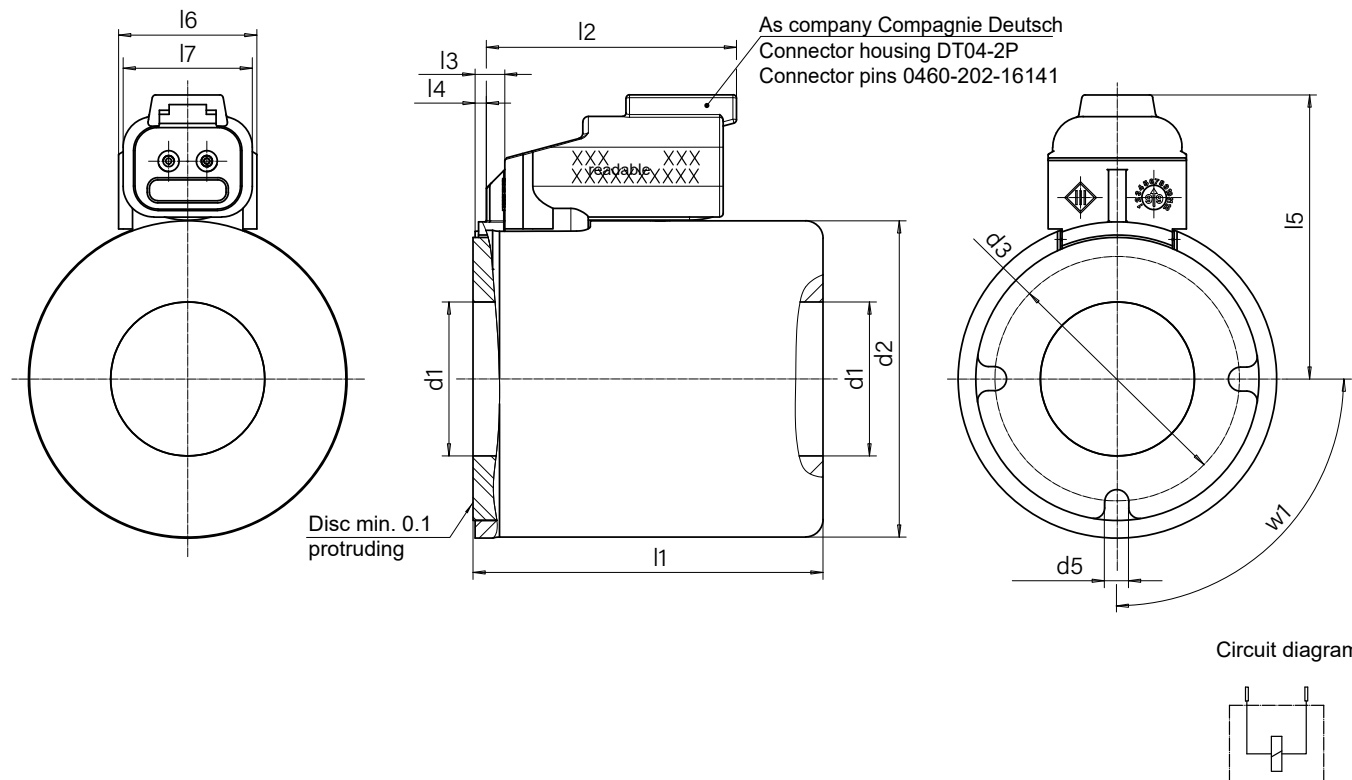


Circuit diagram



| Size | 037 | 045 |
|------------------|--------------|--------|
| Material no. | 925123 | 925384 |
| Dimensions in mm | | |
| d1 | Ø 19.03 | Ø 22 |
| d2 | Ø 37.1 | Ø 45 |
| l1 | 50 | 50.1 |
| l2 | 24.95 ±0.3 | 24.95 |
| l3 | 3.5 ±0.2 | 4.25 |
| l4 | 1.55 +0.3/-1 | - |
| l5 | 38.5 ±0.5 | 42.5 |
| l6 | 20 ±0.2 | 20 |

Dimension drawings size 063



| Size | 037 | 045 | 063 |
|------------------|------------|-----------|-------------|
| Material no. | 925770 | 926292 | 926296 |
| Dimensions in mm | | | |
| d1 | Ø 19.03 | Ø 22 | Ø 31 |
| d2 | Ø 37.1 | Ø 45 | Ø 63 |
| d3 | - | - | Ø 50.9 ±0.2 |
| d4 | - | - | Ø 3.45 ±0.1 |
| l1 | 50 | 50.1 | 72 |
| l2 | 33.2 ±0.3 | 36 ±1 | 40.6 |
| l3 | 3.5 ±0.2 | - | 7 +0.5 |
| l4 | 0.85 ±0.35 | 1.6 ±0.5 | - |
| l5 | 36.7 ±0.5 | 40.7 ±1 | 49.2 ±1 |
| l6 | 19.8 ±0.2 | 19.8 -0.2 | 19.9 ±0.5 |
| l7 | - | 18.5 ±0.5 | - |
| w1 | - | - | 90° ±30' |

Examples of further magnetic bodies and customer-specific variants:



Cable connection



AMP seal 16 - connector



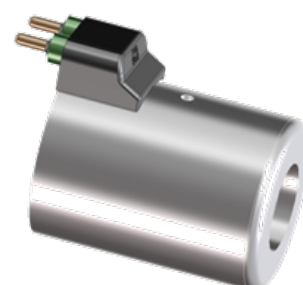
Bajonett - connector



Kostal - connector



M12 - connector



Plug In



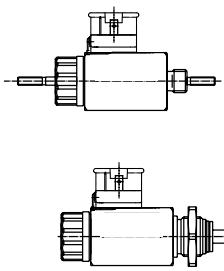
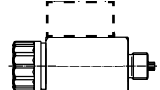
Type F MM E 035 K01 A01
(ATEX / IECEx)



Type F MM E 045 L02 A01
(ATEX / IECEx)

Fig. 7: Magnetic body variants

Type code

| | | | | | | | Designation | | |
|--|---|----------------|---------------------------|---------------|-------------------------------------|----------------|--------------|------------|------------|
| | | | | | | | F H M G | | |
| | | Connector type | Ambient temperature range | Rated voltage | Heat dissipation via the valve part | Duty cycle (%) | 037 | 045 | 063 |
| | | | | | | | Material no. | | |
| Linear solenoid or Shotbolt Lock Unit |  | DIN | -30°C ... +35°C | 24 V DC | No | 100 | 005 | 002 | 004 |
| | | | | | | 40 | * | * | * |
| | | | | | | 25 | 927135 * | 927137 * | 927138 * |
| | | | | | | 15 | * | * | * |
| | | | | | | 5 | * | * | * |
| ON/OFF solenoid for hydraulic applications |  | DIN | -30°C ... +50°C | | Yes | 100 | 925428 021 | 926433 005 | 924585 020 |
| AMP | | 925123 007 | | | | | 925384 011 | --- | |
| Deutsch | | 925770 004 | | | | | 926292 004 | 926296 003 | |
| DIN | | 925428 038 | | | | | 926433 003 | 924585 024 | |
| AMP | | 925123 009 | | | | | 925384 013 | --- | |
| Proportional solenoid for hydraulic applications | | Deutsch | | | | | 925770 006 | 926292 006 | 926296 005 |


* On request

Tabell 7

Example

Designation: F H M G 037
 Material no.: 925428 001
 Voltage: --- 24 V DC
 Duty cycle: S1 (100%)

Specials designs

Please do not hesitate to ask for our assistance with the solution of your application-oriented task. 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.