

## 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

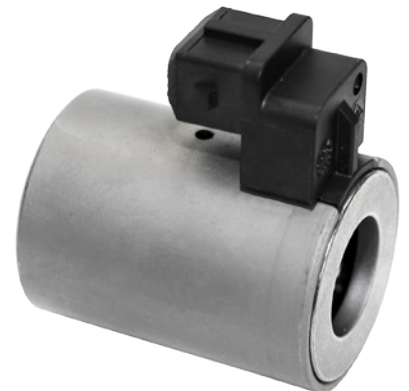


Fig. 2: Type FHMG037925123  
Plug: AMP-Junior-Timer 2-pole



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 60364-4-41). 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 $\vartheta_{11}$ <sup>1)</sup> (°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 $R_{20}$ ( $\Omega$ )	13		14		7.38		
	Rated current $I_N$ (A)	0.94		0.96		1.70		
	Limit current $I_G$ (A)	0.94		0.96		1.70		
	Rated power $P_N = I_N^2 \times R_{20}$ (W)	11.5		12.9		21.0		
	Peak performance $P_G = I_G^2 \times R_W$ (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 (mm <sup>3</sup> )	46x46x66				67x67x82	
		base plate (mm <sup>3</sup> )	66x46x30				102x115x30	

<sup>1)</sup> 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		S1/100%	S3/40%	S3/25%	S3/15%	S3/5%	S1/100%	S3/40%	S3/25%	S3/15%	S3/5%	S1/100%	S3/40%	S3/25%	S3/15%	S3/5%
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	61.5	10.5	21.3	18.6	41	57	92	240	36	77	Auf Anfrage		
Reference temperature $\vartheta_{11}$ <sup>1)</sup> (°C)		35														
Rated voltage $U_N$ (V)		24														
Weight (kg)		0.25					0.4					0.95				

<sup>1)</sup> 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

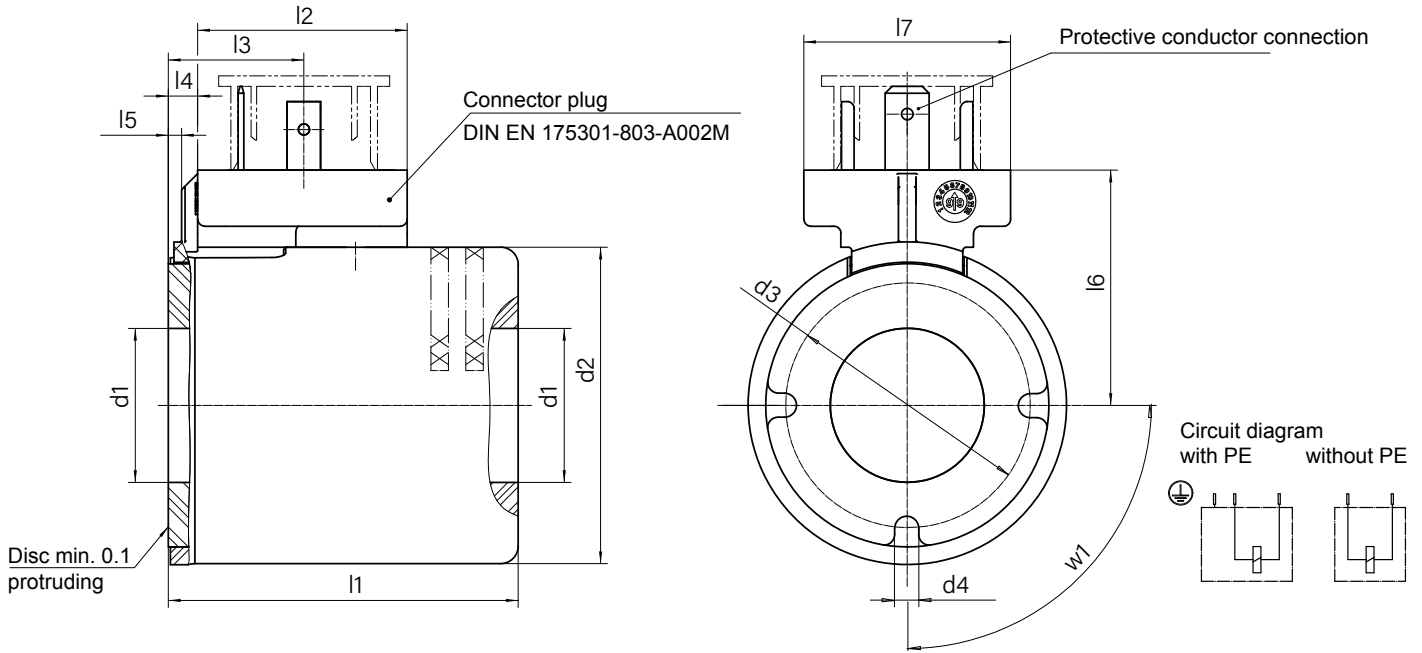
**Information and remarks concerning European directives** can be taken from the correspondent information sheet which is available under [Produktinfo.Magnet-Schultz.com](http://Produktinfo.Magnet-Schultz.com).

**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 of 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.

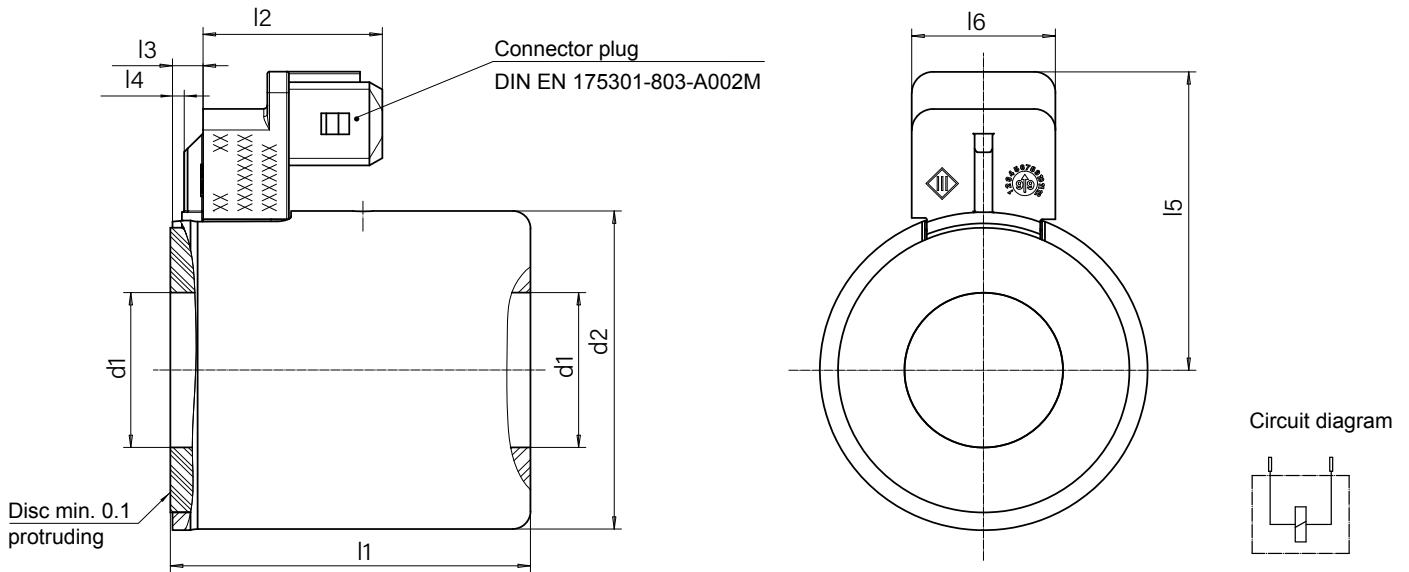
The present publication is for informational purposes only and shall not be construed as mandatory illustration of the products unless otherwise confirmed expressly.

## Dimensional drawings (plug: DIN)



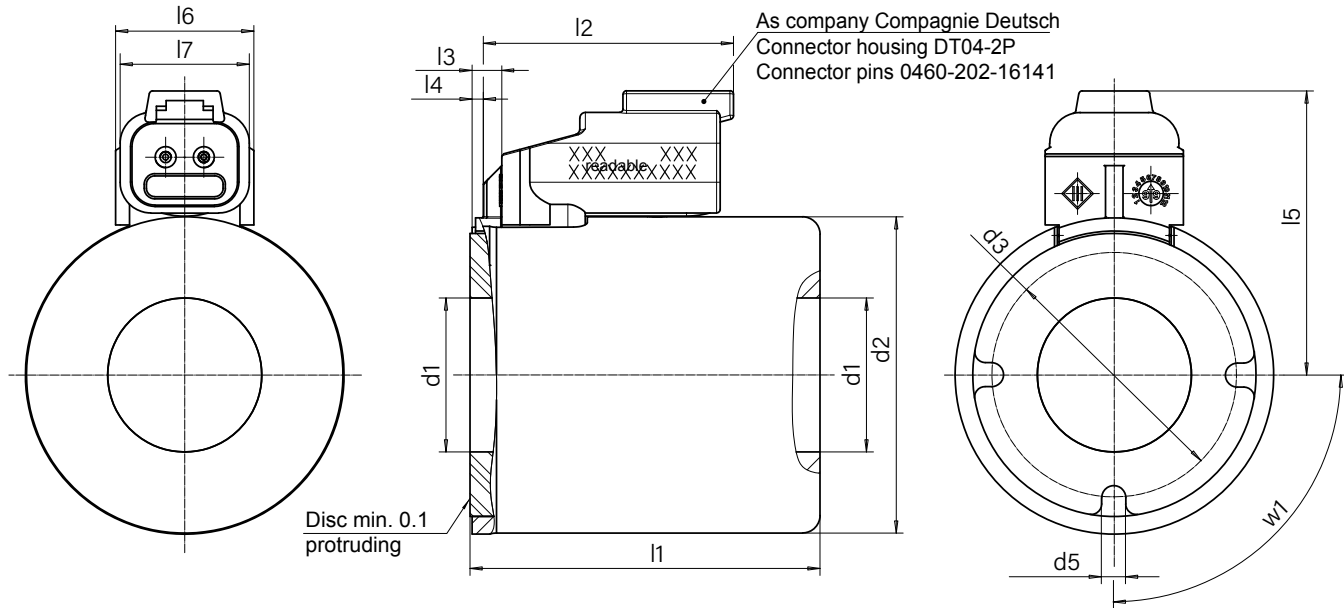
Size	037		045		063	
Material no.	925428	927135	926433	927137	924585	927138
Dimensions in mm						
d1	Ø 19.03		Ø 22		Ø 31	
d2	Ø 37.1		Ø 45		Ø 63	
d3	-		-		Ø 50.9 ±0.2	
d4	-		-		Ø 3.45 ±0.1	
l1	50		50.1		72	
l2	30		30 ±0.5		31	
l3	18.35		19.4 ±1		22	
l4	3.15 ±0.4		4.2		5.8	
l5	0,85 ±0.4		1.9 +0.4/-0.3		-	
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)

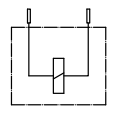


Size	037	045
Material no.	925123	925384
Dimensions in mm		
d1	Ø 19.03	Ø 22
d2	Ø 37.1	Ø 45
l1	50	50.1
l2	24.95 ±0.3	24.95
l3	3.5 ±0.2	4.25
l4	1.55 +0.3/-1	-
l5	38.5 ±0.5	42.5
l6	20 ±0.2	20

### Dimension drawings size 063



Circuit diagram

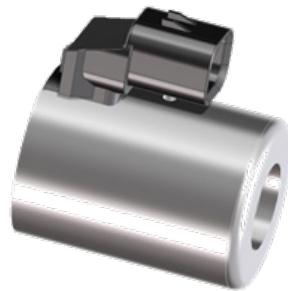


Size	037	045	063
Material no.	925770	926292	926296
Dimensions in mm			
d1	Ø 19.03	Ø 22	Ø 31
d2	Ø 37.1	Ø 45	Ø 63
d3	-	-	Ø 50.9 ±0.2
d4	-	-	Ø 3.45 ±0.1
l1	50	50.1	72
l2	33.2 ±0.3	36 ±1	40.6
l3	3.5 ±0.2	-	7 +0.5
l4	0.85 ±0.35	1.6 ±0.5	-
l5	36.7 ±0.5	40.7 ±1	49.2 ±1
l6	19.8 ±0.2	19.8 -0.2	19.9 ±0.5
l7	-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

**Examples of further magnetic bodies and customer-specific variants:**



Cable connection



AMP seal 16 - connector



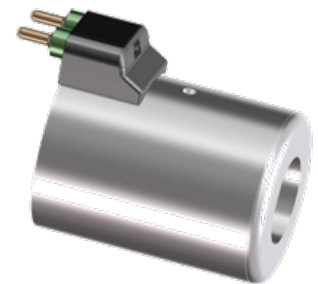
Bajonett - connector



Kostal - connector



M12 - connector



Plug In



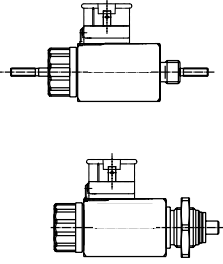
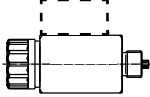
Type F MM E 035 K01 A01  
(ATEX / IECEx)



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	24 V DC	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.