

Permanent Holding Magnet

9

Product group

G MP

Product group

- To DIN VDE 0580
- Holding current principle:
 - de-energised: maximum holding force through integrated permanent magnet
 - energised: holding force is compensated
- High holding force
- Increasing magnetic force vs stroke graph
- Coil to insulation rating B
- Electrical connection and protection rating if mounted properly:
 - Flexible flying leads
Protection to DIN VDE 0470/EN 60529 - IP 00
- Mounting via centre thread in solenoid face
- Modifications and special designs on request
- Application examples:
Machine tools, feeder mechanisms, lifting-locking door holding, all sorts of shotbolts



Fig. 1: Type G MP X 030 X00 A01

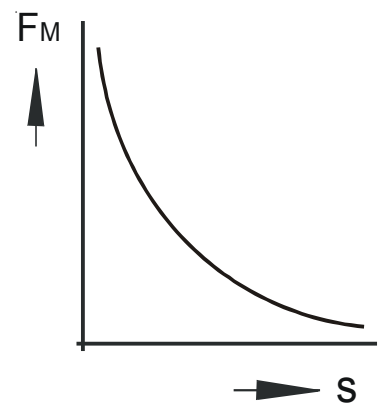


Fig. 2: Magnetic force vs stroke characteristic



Technical data

G MP X ... X00 A01		025	030	035	050
Operating mode ED		S2	S2	S2	S2
Rated Power P_{20}	(W)	6,7	6,4	6,6	9,8
¹⁾ Holding Force F_M at 0 mm stroke*	(N)	120	180	300	500
²⁾ Residual Force F_{MR} at 0 mm stroke*	(N)	20	30	50	80
³⁾ $I_{ab} = \text{constant}$	(A)	0,23	0,28	0,28	0,48
³⁾ Residual force F_{MR} at $I_{ab} = \text{constant}$ and 0 mm stroke*	(N)	6	9	15	25
Reference temperature ϑ_{11}	(°C)	35	35	35	35
Solenoid weight mM	(kg)	0,1	0,17	0,28	0,75
Test specimen diameter	(mm)	25	30	35	50
* Test specimen thickness	(mm)	3	4	5	6

* If the thickness of the test specimen is smaller, the magnetic force decreases. If materials with a different permeability or with a lower surface quality are used, the deviations from the rated magnetic force may be bigger.

- 1) Magnetic force values were measured from a test specimen made of 9 S Mn 28 with ground surface and a surface roughness of 15 μ max.
- 2) The external return forces have to be sufficiently higher than the residual force.
- 3) In order to eliminate the influence of the coil resistance (dependent on the temperature rise) on the residual force, we suggest to drive the solenoid with constant current (see also fig. 3).

Rated voltage $\overset{\text{---}}{=} 24$ VDC, on request the coil winding can be adjusted to a rated voltage of $\overset{\text{---}}{=} 60$ VDC.

Owing to natural dispersion, the magnetic-force values may deviate by ± 10 % from the values indicated in the tables.

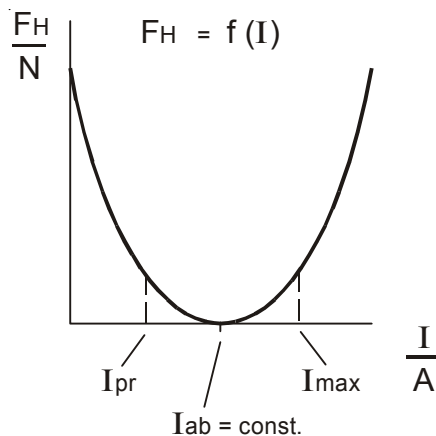


Fig. 3: Force characteristic

Please find further details and definitions in our - Technical Explanation „Polarised Solenoid Systems“ V1300.1342 or in VDE 0580.

Note on the technical harmonisation guidelines within the EU

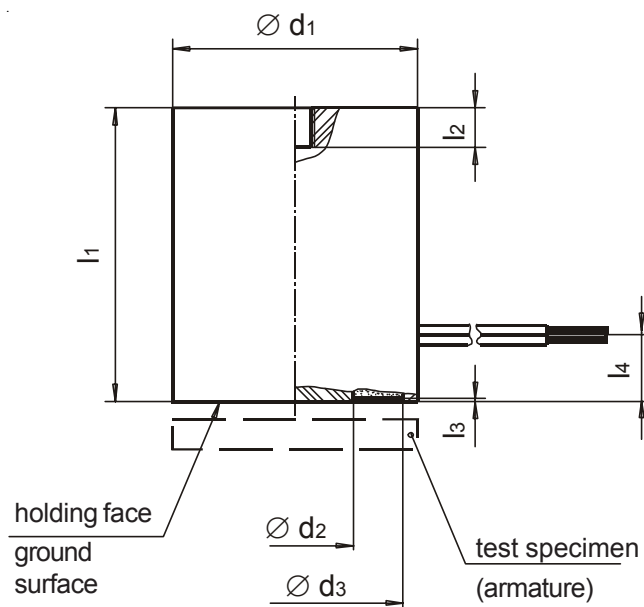
Electromagnetic solenoids of this product range are subject to the low-voltage guideline 73 / 23 EWG.

To guarantee the targets of this regulation, products are manufactured and inspected to the valid edition of DIN VDE 0580. This also equals a declaration of conformity by the manufacturer.

Note on the EMC (electromagnetic compatibility) guideline 89/336 EWG

Electromagnetic solenoids are not affected by this guideline because neither do they cause electromagnetic disturbances, nor can they be disturbed through electromagnetic disturbances. Therefore, the adherence to the EMC guideline has to be guaranteed by the user through appropriate circuitry wiring. Examples for protection circuits can be taken from the corresponding technical documents.

Dimensions sheets



Size	025	030	035	050
sizes	sizes in mm			
l1	30	37	48	63
l2	4	5	5	6
l3	0,2	0,2	0,2	0,5
l4	6	10	15	20
$\varnothing d_1$	25	30	35	50
$\varnothing d_2$	12	14,4	16,8	23,8
$\varnothing d_3$	22	26,4	30,8	44
$\varnothing d_4$	M4	M4	M5	M5

design with plug
connector on request

armature available on
request

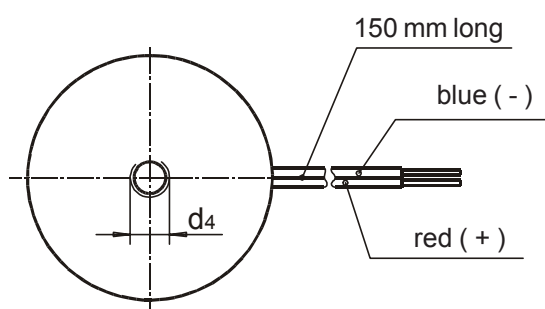
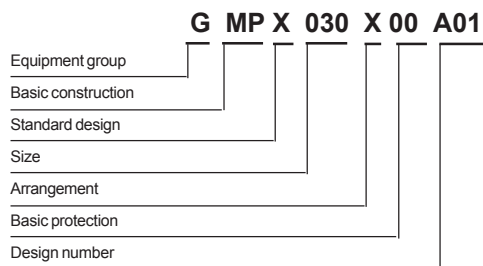


Fig. 4: Type G MP X 025 X00 A01
to G MP X 050 X00 A01

The solenoid shown is not a ready-to-use device in the sense of DIN VDE 0580. The general requirements and protective measures to be taken by the user, are included in DIN VDE 0580.




Type code



Order Example

Type G MP X 030 X00 A01
Voltage === 24 V
Operating mode S2 (short operation service)

Specials

Special designs are available on request for which full application conditions should be specified in accordance with our  -Technical Explanations.