Permanent Holding Magnet

9

Product group

G MP

- 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
- 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

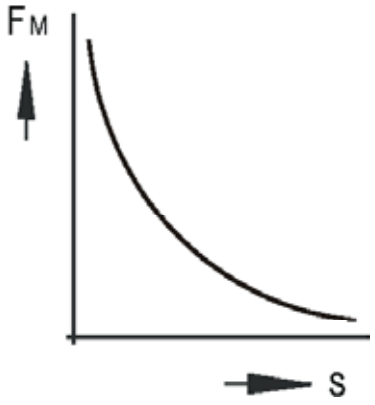


Fig. 2: Magnetic force vs stroke characteristic

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} = constant	(A)	0,23	0,28	0,28	0,48
[3] Residual force F_{MR} at I_{ab} = constant and 0 mm stroke*	(N)	6	9	15	25
Reference temperature ϑ_{11}	(°C)	35	35	35	35
Solenoid weigth 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 U_N ⎓ 24 VDC, on request the coil winding can be adjusted to a rated voltage of ⎓ 60 VDC.

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

This part list is a document for technically qualified personnel. The present publication is for informational purposes only and shall not been construed as mandatory illustration of the products unless otherwise confirmed expressively.

Please make sure that the described devices are suitable for your application. Supplementary information concerning its duly assembly can be found also in -Technical Explanations, in the effective DIN VDE0580 as well as in the relevant specifications.

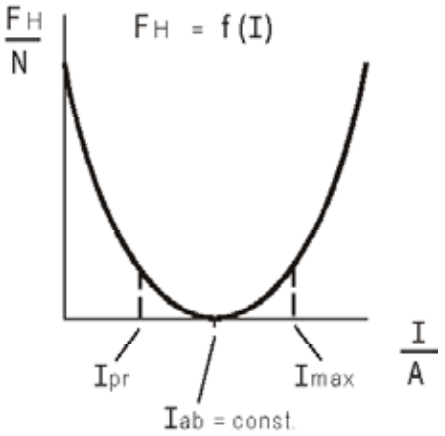


Fig. 3: Force characteristic

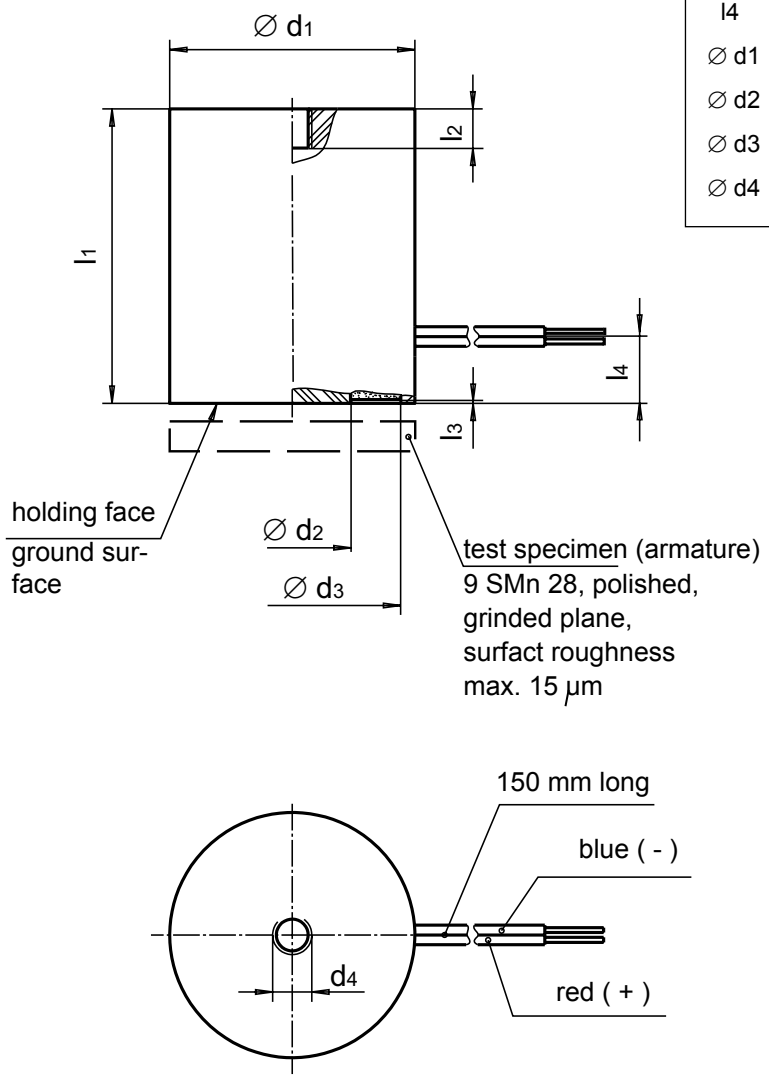
Information and remarks concerning European directives can be taken from the correspondent information sheet which is available under *Produktinfo.Magnet-Schultz.com*.

Note on the RoHS Directive

According to our current state of knowledge the devices pictured in this document do not contain any substances in concentration values or applications for which putting into circulation with products manufactured from them is prohibited in accordance to RoHS.

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
∅ d1	25	30	35	50
∅ d2	12	14,4	16,8	23,8
∅ d3	22	26,4	30,8	44
∅ d4	M4	M4	M5	M5

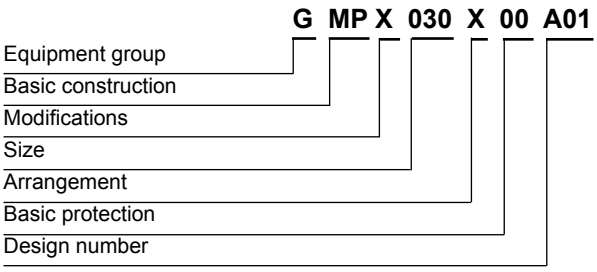


design with plug con-
nector on request

armature available on
request

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

Type code



Order Example

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

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.