DC control solenoid for hydraulic application

4
Product group

G AA Supplements

- According to DIN VDE 0580
- Armature space pressure tight
- Increasing force vs. stroke characteristic
- Push type
- Very small overall height
- Armature guided in pressure tight armature tube
- Insulation materials of the exciter coil correspond to thermal class F
- Electrical connection and protection class with duly executed installation:
  - Plug connection by receptacles according to DIN 46247 Protection class according to DIN VDE 0470 / EN 60529 – IP 00
  - Plug connection by plug connector Z KB according to DIN EN 175301-803 Cable gland (4 times 90° rotatable) Protection class according to DIN VDE 0470 / EN 60529 – IP 65
- Protection class I
- Fastening with 4 screws
- Manual override
- Sealing between solenoid and valve by o-ring
- Please contact us for modifications and special designs
- Application examples: Actuation of hydraulic and special valves

Fig. 1: G AA Y 035 F43 A01

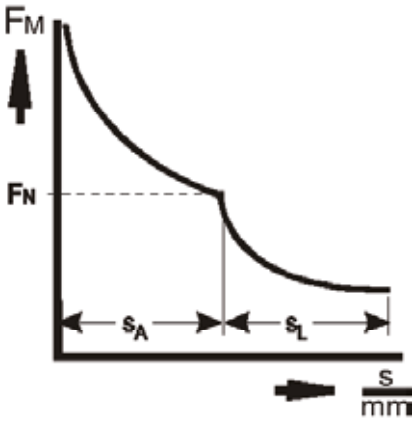


Fig. 2: Force vs. stroke characteristic

QUALITY
SINCE 1912

Technical data

		G AA X 035 F 20 D01	G AA Y 035 F 43 A01	G AA X 045 F 43 D01
Operating mode		S1 (100%)	S1 (100%)	S1 (100%)
Stroke s	(mm)	Magnetic force F_M (N)		
	0	101	57	170
	1	68	39	68
	2	59	36	53
	2,5	45	34	52
	3	33	28	41
	4	19	12	23
	5	12	6,4	13
	5,5	11	4,4	11
Rated work W_N	(Ncm)	11,25	8,5	13
Working stroke s_A	(mm)	2,5	2,5	2,5
Rated power P_{20}	(W)	37	24,5	32,5
Max. operating frequency S_h	(1/h)	3600	3600	3600
Actuation time t_1	(ms)	70	50	62
Fall time t_2	(ms)	30	30	48
Armature weight m_A	(kg)	0,05	0,03	0,08
Solenoid weight m_M	(kg)	0,55	0,43	0,90
Rated static pressure	(bar)	200	300	315

Rated voltage ⎓ 24 V, an adaptation of the exciter coil to a rated voltage of max. ⎓ 250 V is possible on request.

List values (times)

The times indicated in the tables refer to the rated voltage, max. stroke, weight load and 70% of the rated force. They can decrease considerably with hydraulic load (slide against spring).

List values (magnetic force)

The indicated magnetic force values refer to 90% of the rated voltage (for other voltages deviations of magnetic force may occur) and to the normal operating temperature.

Due to natural dispersion the force values may deviate by ± 10% from the values indicated in the tables.

The normal operating temperature is based on:

a) Mounting on a oil filled valve box with the minimum dimensions of 46 x 46 x 66 mm and a base plate of 46 x 66 x 30 mm
b) Rated voltage ⎓ 24 V
c) Operating mode S1 (100 % ED)
d) Reference temperature 50 °C

With deviations from the indicated operating conditions an adaptation of the coil winding is necessary. With other dimensions of the box and other reference temperatures the magnetic force may be adapted by modifications of the exciter coil.

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

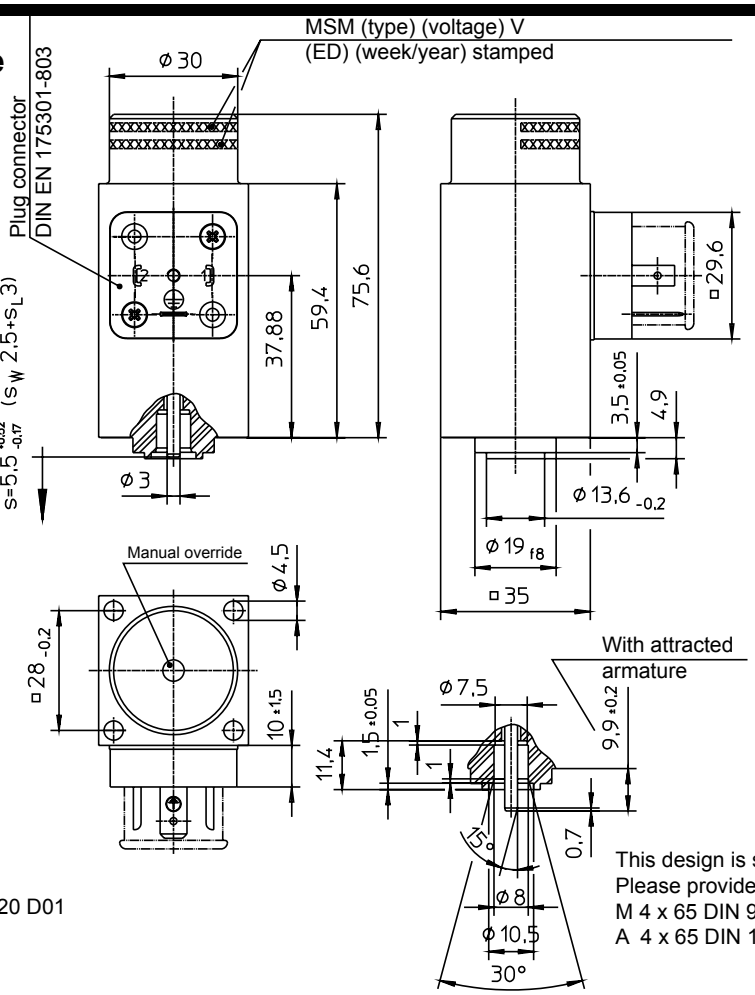
According to our current state of knowledge the devices pictured in this document do not contain any substances in concentration values or applications for which putting into circulation with products manufactured from them is prohibited in accordance to RoHS.

Please make sure that the described devices are suitable for your application. 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 expressively.

Dimensional table



This design is supplied without fastening screws.
Please provide hexagon socket screws
M 4 x 65 DIN 912 MSM PN 60/1181 and spring washers
A 4 x 65 DIN 128 MSM PN 63/1122

Fig. 3: Type G AA X 035 F20 D01

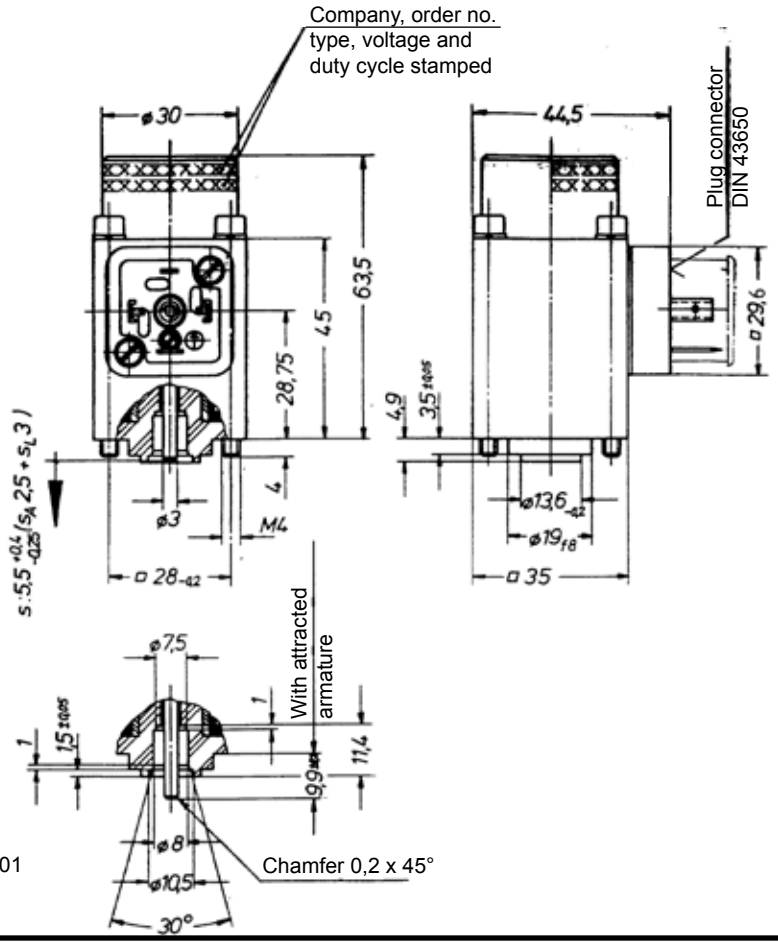


Fig. 4: Type G AA Y 035 F43 A01

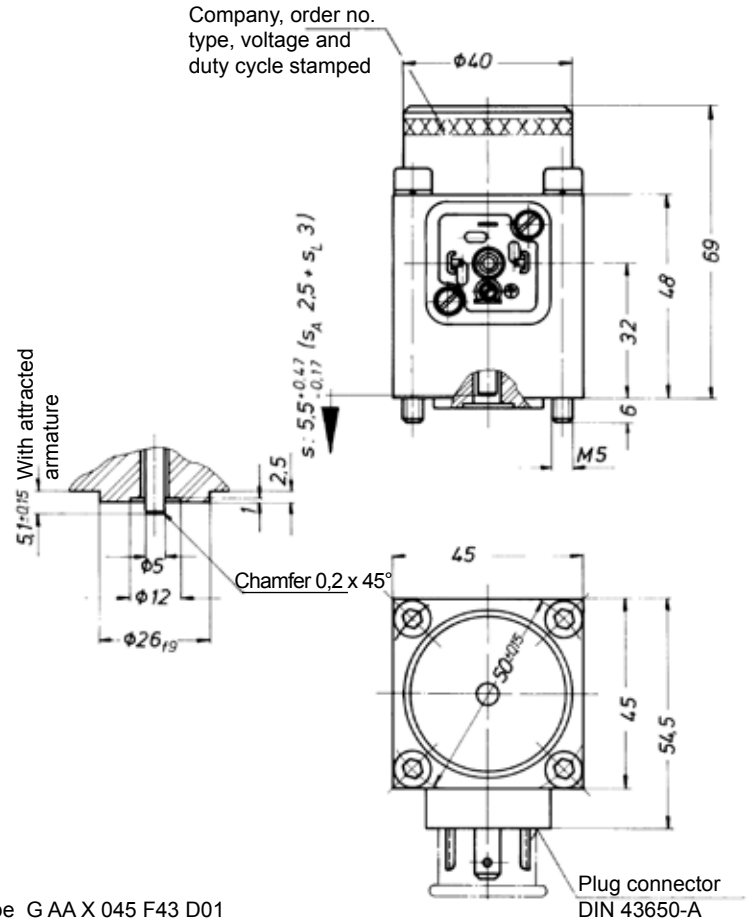


Fig. 5: Type G AA X 045 F43 D01

Type code

G	**AA**	**X**	**035**	**F**	**20**	**D01**
G	**AA**	**Y**	**035**	**F**	**43**	**A01**
G	**AA**	**X**	**045**	**F**	**43**	**D01**

Device group
Series
Modifications
Size in the series
Execution in the series
Protection code
Design number

Order example

Type	G AA X 045 F43 D01
Voltage	⎓ 24 V DC
Operating mode	S1 (100 %)

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.