

DC Control Solenoid for Hydraulic Application

4

Product group

G AA ... 035 / 060

- According to DIN VDE 0580
- Armature space pressure tight
Rated static pressure: BG 035 200 bar
BG 060 300 bar
- Increasing force vs. stroke characteristic
- Push type
- Armature guided in pressure tight armature tube
- Insulation materials of the excitation winding correspond to thermal class F
- Electrical connection and protection class when properly installed:
 - Plug connection by spade connectors according to DIN 46247
Protection class according to DIN VDE 0470 / DIN EN 60529 – IP 00 (P 00)
 - Plug connection via plug connector type Z KB according to DIN EN 175301-803
Cable gland (4 times 90° rotatable)
Protection class according to DIN VDE 0470 / DIN EN 60529 – IP 65 (P 54)
- Fastening with 4 screws
- Manual override
- Sealing between solenoid and valve by o-ring
- Please contact us for application related solutions
- Application examples:
Actuation of hydraulic and special valves

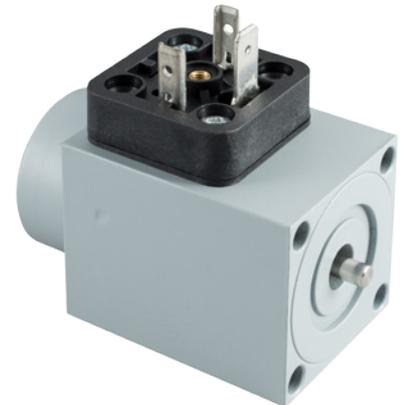


Fig. 1: Type G AA X 035 F20 D02

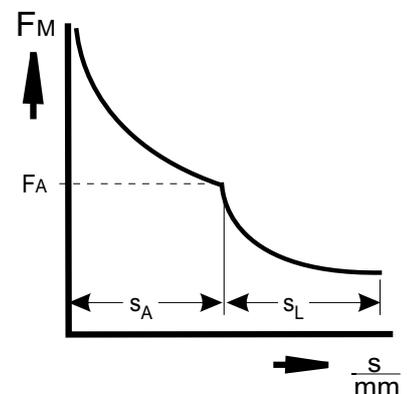


Fig. 2: Force vs. stroke characteristic

Technical data

| | | G AA X 035 F20 D02 | G AA Y 060 F43 A01 |
|-------------------------------------|-------|-----------------------------|-----------------------------|
| Operating mode | | S1 (100%) | S1 (100%) |
| Stroke s | (mm) | Magnetic force F_M (N) | Magnetic force F_M (N) |
| | 0 | 86 | 235 |
| | 1 | 55 | 143 |
| | 2 | 48 | 115 |
| | 2,5 | 36 | |
| | 3 | 25 | 99 |
| | 4 | 14,5 | 90 |
| | 5 | 10 | 65 |
| | 5,5 | 8,5 | |
| | 6 | | 39 |
| | 7 | | 25 |
| | 8 | | 17 |
| | 9 | | 11,5 |
| Rated work W_N | (Ncm) | 9 | 36 |
| Working stroke s_w | (mm) | 2,5 | 4 |
| Rated power P_{20} | (W) | 37 | 34,5 |
| max. Operating frequency S_n max. | (1/h) | 3600 | 3600 |
| Actuation time t_1 | (ms) | 70 | 110 |
| Fall time t_2 | (ms) | 30 | 40 |
| Armature weight m_A | (kg) | 0,05 | 0,16 |
| Solenoid weight m_M | (kg) | 0,55 | 1,87 |

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

Standard values for voltage and operating mode: 24 V, S1 (100%).

Table 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).

Table values (magnetic force)

The indicated magnetic force values refer to 90% of the rated voltage ($U_N = \approx$ 24 V, 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 \pm 10% from the values indicated in the tables.

The normal operating temperature is based on:

- 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
- Rated voltage \approx 24 V
- Operating mode S1 (100 % ED)
- 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*.

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 expressively.

Dimensional table

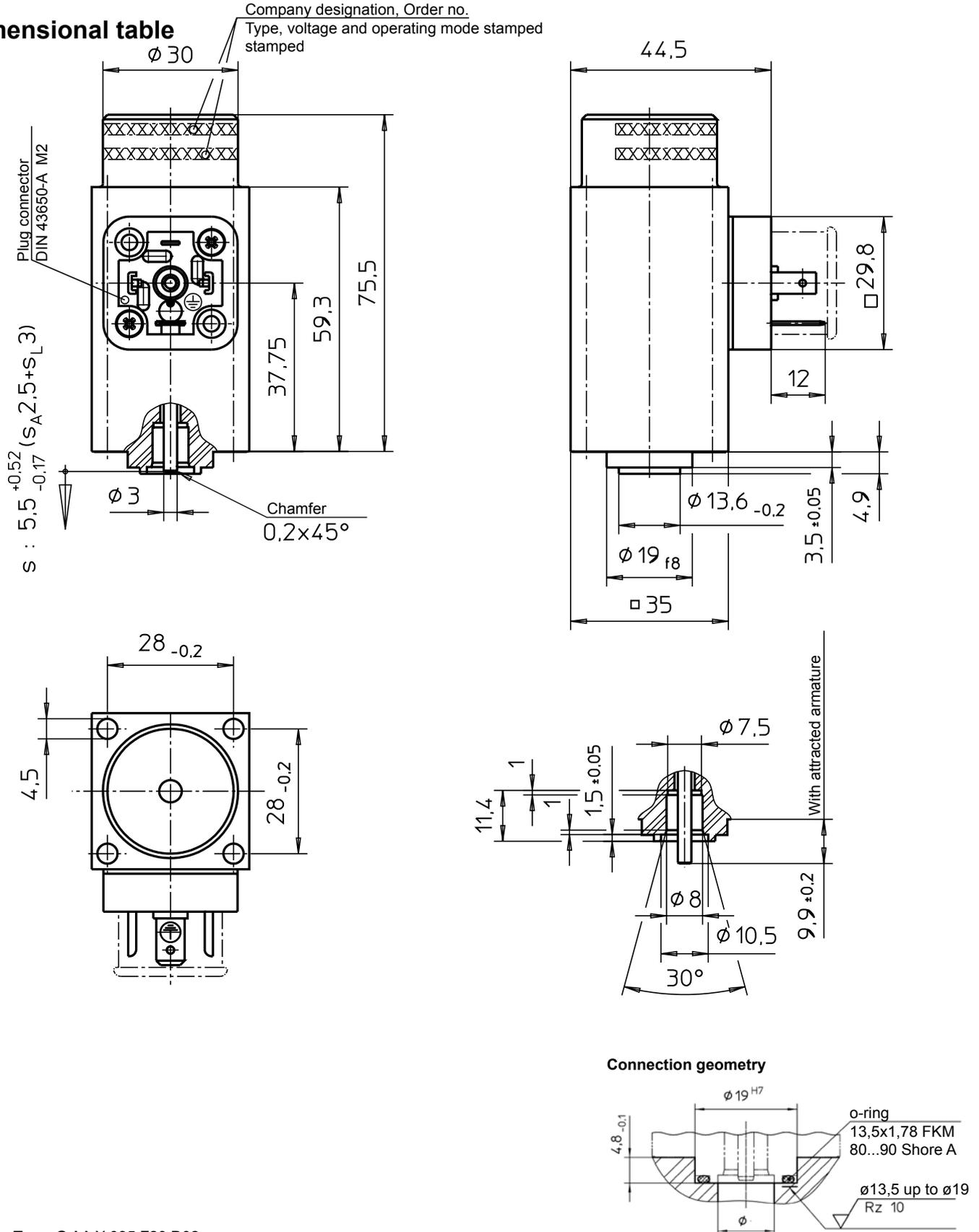
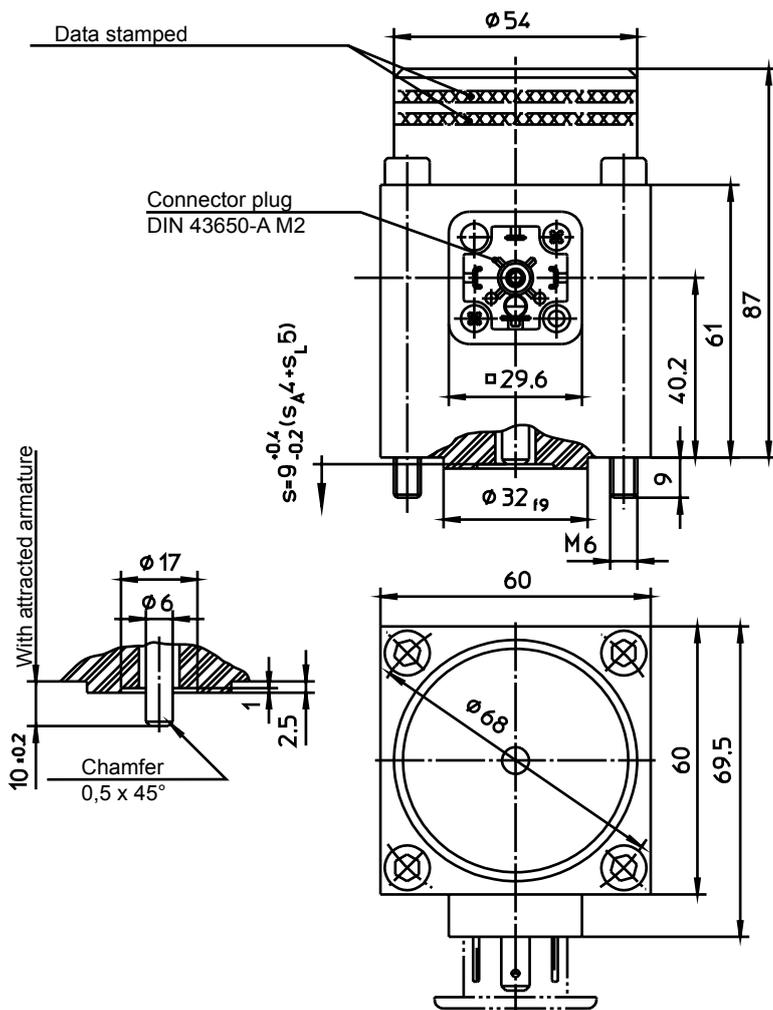


Fig. 3: Type G AA X 035 F20 D02

The type will be delivered without fastening screws, please provide:

Hexagon socket screws M 4 x 65 DIN 912 60-1181
and spring washers A4 DIN 128 63-1122



Connection geometry

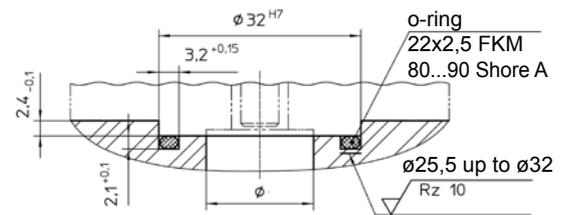
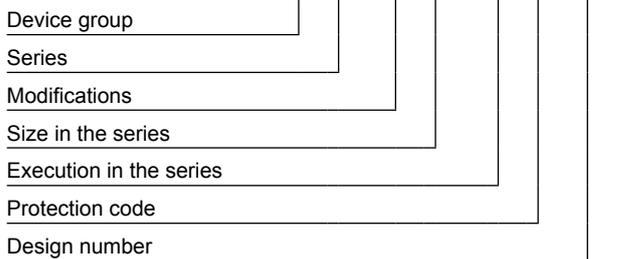


Fig. 4: Type G AA Y 060 F43 A01

Type code

G AA X 035 F 20 D02
G AA Y 060 F 43 A01



Order example

Type G AA X 035 F20 D02
Voltage == 24 V DC
Operating mode 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.