

## DC single-acting solenoids

# 1

Product group

## G TA

### Function

- For strokes up to 5 mm
- Push and pull type
- Almost linear magnetic force vs. stroke characteristic

### Construction

- Armature guided in maintenance free bearings
- Insulation materials of the excitation winding correspond to thermal class F
- Electrical connection via free flexible lead ends
- Protection class according to DIN VDE/DIN EN 60529 when properly installed: IP 20
- Mounting via central thread

### Application examples

- Tooling machines, office machines, packing machines, textile machines
- Measuring and control technology, building of automats
- Coin operated machines

### Options

- Please contact us for application related solutions

### Standards

- Design and testing according to DIN VDE 0580
- Production according to ISO 9001



Fig. 1: Type G TA F 026 M20 A01

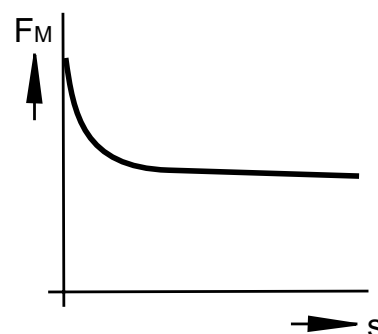


Fig. 2: Force vs. stroke characteristic

## Technical data

G T A F	020					026					032				
	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 %
Operating mode rel. Einschaltdauer															
Stroke s (mm)	3					4					5				
Holding force stroke 0 mm (N)	5,3	6,6	8,3	11,3	16,5	9,8	15	19,6	23	35	15,5	26,5	35,8	49	72
Magnetic force $F_M$ stroke s mm (N)	1,7	2,2	2,7	3,7	5,4	2,4	4	5,9	7,2	12,3	3,9	6,9	9	12	17,7
Rated work $A_N$ (Ncm)	0,51	0,66	0,81	1,11	1,62	0,96	1,6	2,36	2,9	4,9	1,95	3,45	4,5	6	8,9
Rated power $P_{20}$ (W)	3,9	5,5	7,2	11,8	22,3	5,4	8,6	13,1	15,7	38	6,2	11,6	16,1	25,6	53
Operating frequency $S_n$ (1/h)	28.000	13.000	10.000	7.000	3.200	24.000	11.000	8.000	5.000	3.000	22.000	10.000	7.000	4.500	2.400
Actuation time $t_1$ <sup>1)</sup> (ms)	35	38	39	40	30	50	40	40	40	30	57	50	52	50	40
Fall time $t_2$ <sup>2)</sup> (ms)	30	28	25	25	25	36	30	30	30	30	40	35	33	33	33
Armature weight $m_A$ (kg)	0,012					0,02					0,03				
Solenoid weight $m_M$ (kg)	0,06					0,11					0,16				

<sup>1)</sup> **Actuation time**  $t_1$  is the sum of response delay and stroke time.

<sup>2)</sup> **Fall time**  $t_2$  is the sum of drop-out delay and return time.

### Notes on the tables

The magnetic force values indicated in the table refer to 90 % of the rated voltage ( $U_N = \text{---} 24 \text{ V}$ , deviations of the magnetic force may occur for other voltages) and the normal operating temperature.

Due to natural dispersion the magnetic force values may deviate by approx.  $\pm 10 \%$  from the table values.

The normal operating temperature is based on:

- Mounting on heat-insulating base
- Rated voltage  $\text{---} 24 \text{ V}$
- Operating mode S1 - S3 5 % according to part list G XX, section 4
- Reference temperature  $35^\circ \text{ C}$

### Rated voltage


Rated voltage  $\text{---} 24 \text{ V}$ , an adaptation of the exciter coil to a rated voltage of max.  $\text{---} 42 \text{ V}$  is possible on request.

The devices correspond to protection class III. Electrical equipment of protection class III may be only connected to low voltage systems (PELV, SELV)(IEC 60364-4-41).

**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

The devices presented in this document do not fall into the scope of RoHS Directive and to our knowledge they do not become part of products which fall into this scope. In case of surfaces zinc coating with yellow chromating and zinc iron with black chromating separate agreements are necessary for applications within the scope of 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.

## Dimension drawing

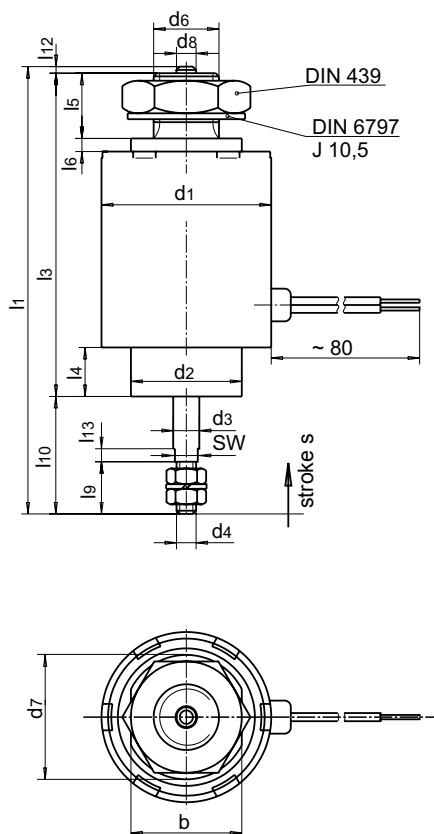


Fig. 3: Type G TA F 020 M20 A01 to  
G TA F 032 M20 A01

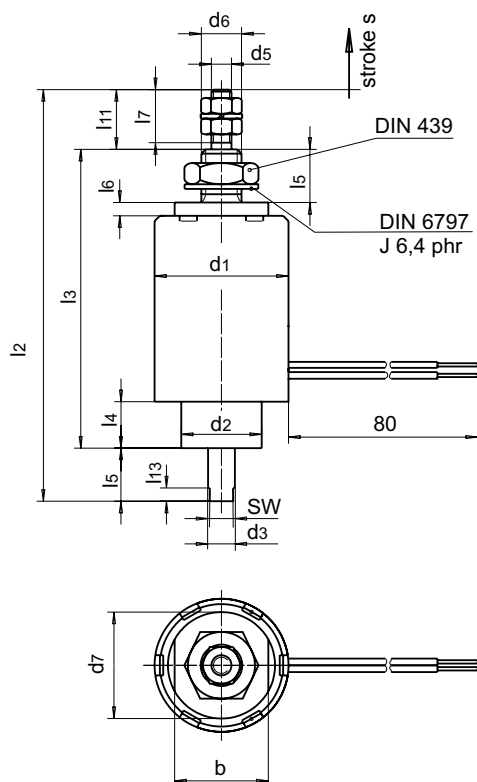


Fig. 3: Type G TA F 020 N20 A01 to  
G TA F 032 N20 A01

G TA F	020	026	032
	sizes in mm		
b	14	17	17
Ø d <sub>1</sub>	20	26	32
Ø d <sub>2</sub>	12	17	18
Ø d <sub>3</sub>	4	4	4
d <sub>4</sub>	M3	M3	M3
d <sub>5</sub>	M3	M3	M3
d <sub>6</sub>	M6	M10	M10
Ø d <sub>7</sub>	16	19	19
Ø d <sub>8</sub>	3	3	3
l <sub>1</sub>	67	68,5	75,5
l <sub>2</sub>	62	68,5	74,5
l <sub>3</sub>	45	49,5	50,5
l <sub>4</sub>	7	7,5	7,5
l <sub>5</sub>	8	10	10
l <sub>6</sub>	2	2	2
l <sub>7</sub>	8	8	10
l <sub>8</sub>	8	10	8,5
l <sub>9</sub>	8	8	10
l <sub>10</sub>	20	18	24
l <sub>11</sub>	9	9	15,5
l <sub>12</sub>	2	1	1
l <sub>13</sub>	2	2	2
s	3	4	5
SW	3,5	3,5	3,5


## Type code

Example	G T A F	020	M20 A01	Description
Type	G T A F			
Size		020		
		026		
		032		
Code for execution & protection class			M20 A01	pull-type
			N20 A01	push-type

## Order example

Type                    G T A F 026 M20 A01  
Voltage                 $\equiv$  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.