

DC Single Acting Solenoids

Type GTA

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Function

- push and pull type
- for strokes up to 5 mm
- near linear magnetic force vs. stroke characteristic, fig. 2

Construction

- high-endurance maintenance-free bearings
- coil insulation materials to thermal Class F for voltages up to 42 Volts
- Electrical connection via flexible leads
- protection class: DIN VDE/DIN EN 60529 - IP 20 when correctly installed
- mounting via central thread

Application examples

- machine tools, office machines,
- packing machines, textile machines
- measuring and control technology, automation
- coin operated machines

Options

- please contact us for application related solutions

Standards

- designed and tested to DIN VDE 0580
- quality management to ISO 9001

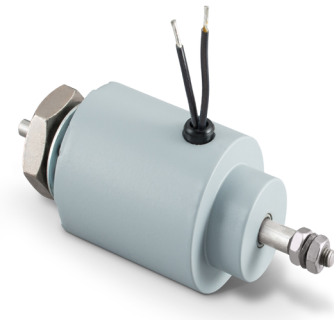


Fig. 1: Type G TA F 026 M20 A01

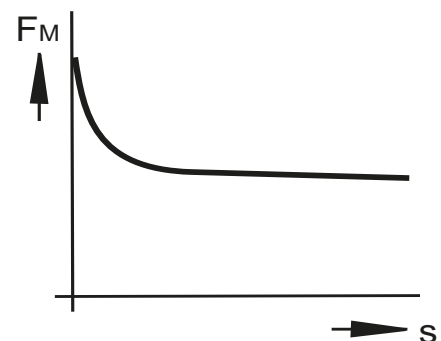


Fig. 2: force vs. stroke characteristic within the nominal stroke

Technical data

G T A F	020					026					032				
Operating Mode	S1	S3	S3	S3	S3	S1	S3	S3	S3	S3	S1	S3	S3	S3	S3
ref. Duty Cycle	100%	40%	25%	15%	5%	100%	40%	25%	15%	5%	100%	40%	25%	15%	5%
Stroke s (mm)	3					4					5				
Holding force F_{Ha} 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 ¹⁾ (ms)	35	38	39	40	30	50	40	40	40	30	57	50	52	50	40
Fall time t_2 ²⁾ (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				

¹⁾ **Actuation time** t_1 is the sum of response delay and stroke time.

²⁾ **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 ($U_N = 24$ 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. ± 10 % from the table values.

The normal operating temperature is based on:

- Mounting on heat-insulating base
- Rated voltage $U_N = 24$ V
- Operating mode S1 (100%) up to S3 (5 %)
- Reference temperature 35° C

Max. energised time/cycle: 100% - continuous, 40% - 120 secs, 25% - 75 secs, 15% - 45 secs, 5% - 15 secs.

Operating times (t_1 & t_2) are listed per cycle of operation in the HOT condition at rated voltage, with weight load of 70% of force (F_M) at and over rated stroke.

Rated voltage

Rated voltage $U_N = 24$ V, an adaptation of the coil to a rated voltage of max. $U_M = 42$ V is possible on request.

Standard values for voltage and operating mode:

for sizes 020 / 026: 24V, S1 (100%)

for size 032: 24V, S1 (100%) / 24V, S3 (40%).

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 on the magnetschultz.co.uk website.

Note on the RoHS Directive

According to our current state of knowledge, the devices shown in this document do not contain concentrations of hazardous substances which would result in them, or subsequent assemblies in which they are utilised, not complying with RoHS.

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 and installation can be found in our [Technical Explanations \(GXX\)](#) document, as well as DIN VDE0580 and other relevant specifications. Further information regarding device selection can be found in our [Solenoid Selection Guide](#).

This datasheet 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 explicitly confirmed.

Dimensional drawing

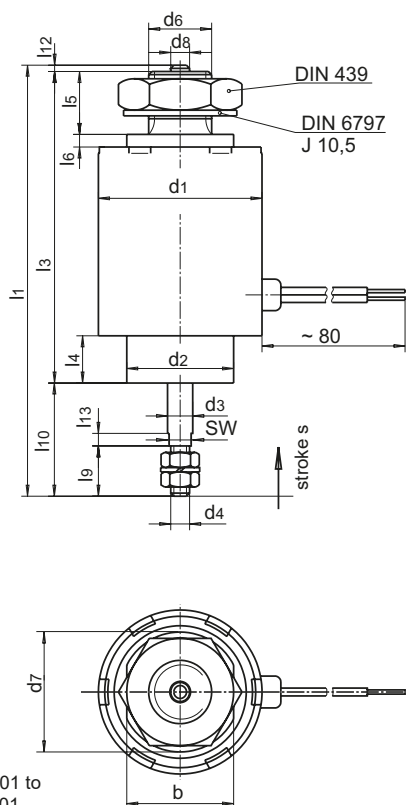


Fig. 3: Type G TA F 020 M20 A01 to
G TA F 032 M20 A01

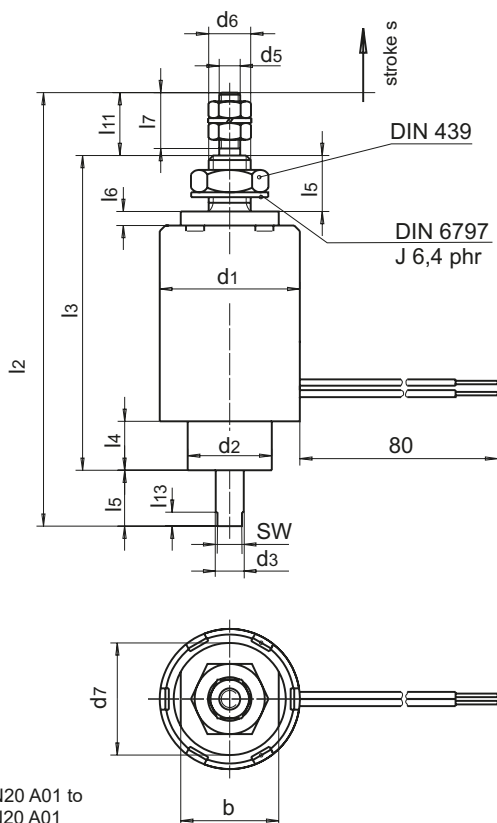


Fig. 3: Type G TA F 020 N20 A01 to
G TA F 032 N20 A01

G TA F	020	026	032
	sizes in mm		
b	14	17	17
Ø d ₁	20	26	32
Ø d ₂	12	17	18
Ø d ₃	4	4	4
d ₄	M3	M3	M3
d ₅	M3	M3	M3
d ₆	M6	M10	M10
Ø d ₇	16	19	19
Ø d ₈	3	3	3
l ₁	67	68.5	75.5
l ₂	62	68.5	74.5
l ₃	45	49.5	50.5
l ₄	7	7.5	7.5
l ₅	8	10	10
l ₆	2	2	2
l ₇	8	8	10
l ₈	8	10	8.5
l ₉	8	8	10
l ₁₀	20	18	24
l ₁₁	9	9	15.5
l ₁₂	2	1	1
l ₁₃	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 --- 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 a reliable solution we require details about your specific application and installation conditions. The details should be specified as precisely as possible in accordance with the relevant [Technical Explanations \(GXX\)](#) document.

Need more information or advice?

Email one of our technical experts at sales@magnetschultz.co.uk or call +44(0)1483 794700 now