

Single acting spreader solenoid Typ GF1 and GF2
Double acting spreader solenoid Typ GF3 and GF4



Magnetbau Schramme GmbH & Co. KG
Zur Ziegelhütte 1-5
D-88693 Deggenhausertal
Sitz der Gesellschaft: Deggenhausertal
Registergericht: Freiburg i.Br. HRA 581101
USt-IDNr.: DE814460086

Phone +49 (0) 7555 9286-0
Fax +49 (0) 7555 9286-30

www.magnetbau-schramme.de
info@magnetbau-schramme.de

Wir sind
zertifiziert nach
IATF 16949
ISO 9001

member of Schramme group

phG:
Magnetbau Schramme Verwaltungs-GmbH
Registergericht: Freiburg i. Br. HRB 581744
Geschäftsführer: Dr. Joachim Hümmeler

Bankverbindung:
Sparkasse Schwäbisch Hall
Deutsche Bank Heilbronn

SWIFT/BIC:
SOLADES1SHA
DEUTDESS620

IBAN:
DE28 6225 0030 0006 4085 03
DE89 6207 0081 0113 7868 00



The following electromagnets are examples for brake solenoids (spreader solenoids, brake magnets) realized in series. Magnetbau Schramme developments are customer-specific. If you are searching for the right electromagnet or solenoid for your series project, simply contact us for the perfect solution.

Our team will help you - guaranteed.

Please note that we do not have „ex stock“ standard products, and can therefore only process inquiries for series.

Single acting spreader solenoid Typ GF1 and GF2

Function

Spreader solenoids are used almost only as actuation (releasing) magnets for brakes. Single-acting spreader solenoids are used almost only in moving stairways (escalators), or as replacement units for older elevators. Only double-acting spreader solenoids are allowed to be used in passenger elevators.

Operation

Single-acting DC spreader solenoids consist of one electromagnet system which exerts a thrusting force. A hinge is provided at the rear, making the solenoid suitable for spreading as, for example, venting airbrakes. Electromagnetic force moves the plunger; it is returned by external force. An emergency manual control is installed.

Characteristics

The fore of standard solenoids rises, with a high force combined with short stroke. Maintenance-free support of the plunger ensures a long service life.

Installation Instructions

The solenoid can be installed in any position.

The power transfer should take place only in axial direction; lateral loads on the plunger are to be avoided. When employing these units, the „[Technical Introduction](#)“ is to be observed.

Nominal Data (recommended):

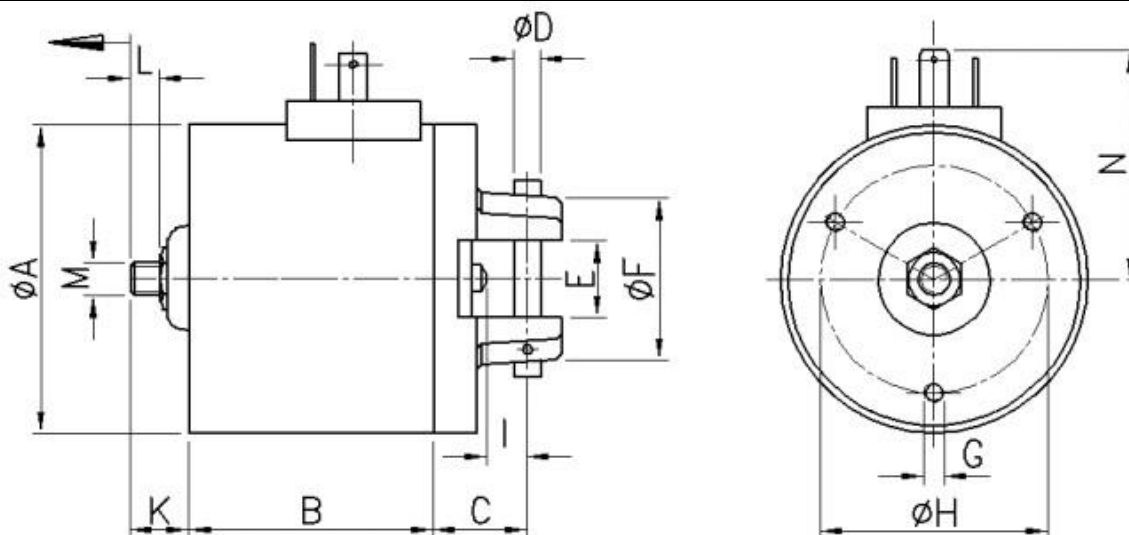
Nominal supply voltage:	U _N 24 VDC U _N = 230 VAC (with built-in rectifier)
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Relative duty cycle:	40%
Insulation class:	"H" according to VDE 0580
Limiting temperature:	180 °C
Degree of protection:	IP 43 according to DIN 40050

Technical Data, Single acting spreader solenoid Typ GF1 and GF2

Typ/Modell	Stroke in [mm]	100% Duty Cycle			40% Duty Cycle			Weight [kg]
		Power consumption at 20°C [W]	Magnetic Force Stroke start [N]	Magnetic Force Stroke end [N]	Power consumption at 20°C [W]	Magnetic Force Stroke start [N]	Magnetic Force Stroke end [N]	
GF1 090	4	32	220	350	72	350	560	3,5
GF1 100	5	42	290	430	90	460	660	5,2
GF1 115	6	50	360	620	125	560	870	7,7
GF1 135	6	65	680	1030	148	1080	1530	12,0
GF2 135	8	80	690	1080	165	1040	1480	15,3
GF1 165	8	100	1200	1800	235	1850	2650	28,0
GF1 200	10	165	2380	3000	365	3180	4000	57

Installation drawing



Dimensions in mm

Typ	$\varnothing A$	B	C	$\varnothing D$	E	$\varnothing F$	G	$\varnothing H$	I	K	L	M	N
GF1 090	90	76	27,5	8	26	50	5	65	10	21	12	10	85



GF1 100	100	87	31	8	26	55	6	72	12	22	12	10	90
GF1 115	115	91	35	10	29	65	8	85	15	22	12	12	97
GF1 135	135	106	44	14	42	80	8	100	19	22	12	12	107
GF2 135	135	144	44	14	42	80	8	100	19	22	12	12	107
GF1 165	165	152	55	14	42	80	10	120	19	36	18	20	122
GF1 200	200	221	60	14	42	80	12	150	19	52	32	24	140

Double acting spreader solenoid Typ GF3 and GF4

Function

Spreader solenoids are used almost only as actuation (releasing) magnets for brakes.

Single-acting spreader solenoids are used almost only in moving stairways (escalators), or as replacement units for older elevators. Only double-acting spreader solenoids are allowed to be used in passenger elevators.

Operation

DC double-acting spreader solenoids consist of two magnet systems that are combined in a housing and operate pressure-exerting in opposed direction to each other. They are suitable for spreading applications, e.g., for releasing brakes

The design provides relatively low weight and fast operating times. Electromagnetic force moves the plungers; they are returned by external force. An emergency manual control is installed which moves both plungers simultaneously.

Characteristics:

The force of standard solenoids rises, with a high force combined with short stroke. Galvanizing as corrosion inhibitor and maintenance-free support of the plunger ensures a long service life.

Installation Instructions

The solenoid can be installed in any position.

The power transfer should take place only in axial direction; lateral loads on the plunger are to be avoided. When employing these units, the „[Technical Introduction](#)“ is to be observed.

Nominal Data (recommended):

Nominal supply voltage:	U _N 24 VDC U _N = 230 VAC (with built-in rectifier)r)
Relative duty cycle:	40%
Insulation class:	"H" according to VDE 0580
Limiting temperature:	180 °C



Schramme

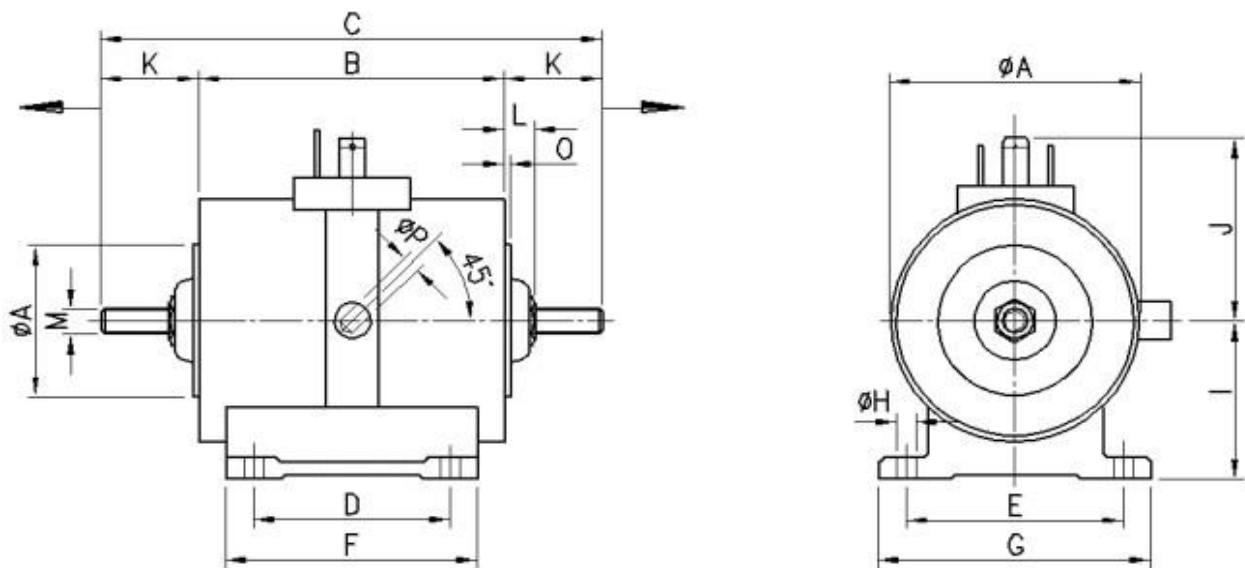
Degree of protection:

IP 43 according to DIN 40050

Technical Data, Double acting spreader solenoid Typ GF3 and GF4

Typ/Modell	Stroke in [mm]	100% Duty Cycle			40% Duty Cycle			Weight [kg]
		Leistungs-aufnahme P	Hubanfangskraft in N	Hubendkraft in N	Leistungs-aufnahme P bei 20°C in W	Hubanfangskraft in N	Hubendkraft in N	
GF3 090	2	38	250	460	70	450	550	5,5
GF3 100	2,5	50	360	570	90	560	780	7,9
GF3 115	3	60	480	620	100	680	750	11,0
GF3 135	3	68	720	1200	135	1100	1300	17,2
GF4 135	4	82	960	1400	180	1310	1590	23,3
GF3 165	4	115	1690	2600	230	2300	2900	42

Installation drawing



Dimensions in mm

Typ	ØA	B	C	D	E	F	G	ØH	I	J	K	L	M	ØN	O	Ø PH9	Pg
GF3 090	90	120	200	70	90	90	110	6,6	55	85	40	15	10	59	3	6	11
GF3 100	100	136	216	80	100	105	125	9	60	90	40	15	10	59	3	8	11
GF3 115	115	140	230	90	100	115	125	9	75	100	45	15	12	72	3	8	11
GF3 135	135	165	255	120	110	145	135	9	90	110	45	15	12	72	3	8	11
GF4 135	135	225	315	120	110	145	135	9	90	110	45	15	12	72	3	8	11
GF3 165	165	250	390	160	170	190	200	11	105	130	70	15	20	104	3	8	11