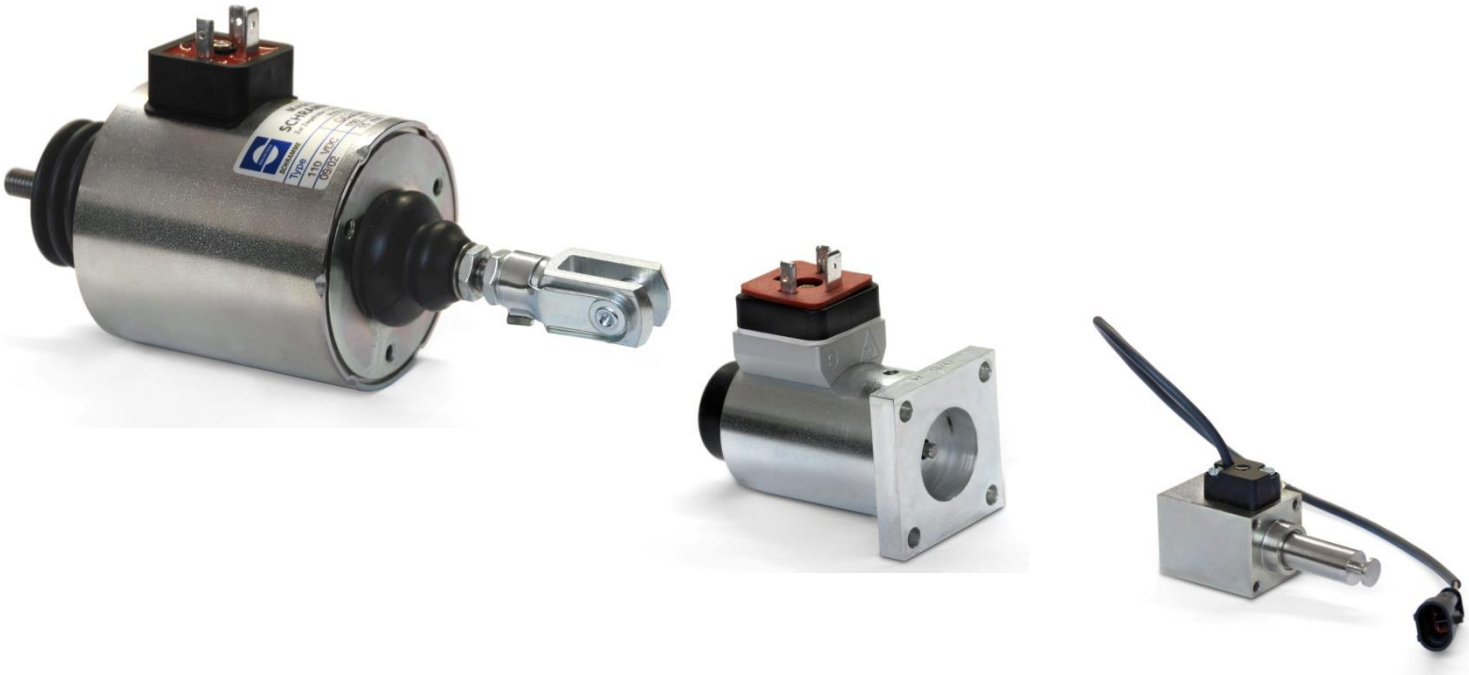


Linear Solenoid, DC single linear solenoid, GC2



The following electromagnets are examples for linear solenoids realized in series. Electromagnets in linear solenoid design are also referred to as DC single linear solenoids. This solenoid is a universal magnet.

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.

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

1

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



Operation

The DG-linear solenoid is a universal solenoid whose armature is moved from its initial position at the beginning of stroke to its final position at the end of stroke by the action of electromagnetic forces. Its return is effected by external forces. The solenoid can be designed for drawing and pushing forces, and has a long service-life owing to its very precise bearing. Its design and equipment offer universal possibilities of application.

Characteristics

The Solenoids in Produktion Show linear to slightly rising magnetic force/stroke characteristics on the initial 80% of the stroke; whereupon the magnetic force rises to about twice the nominal value.

Installation

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.

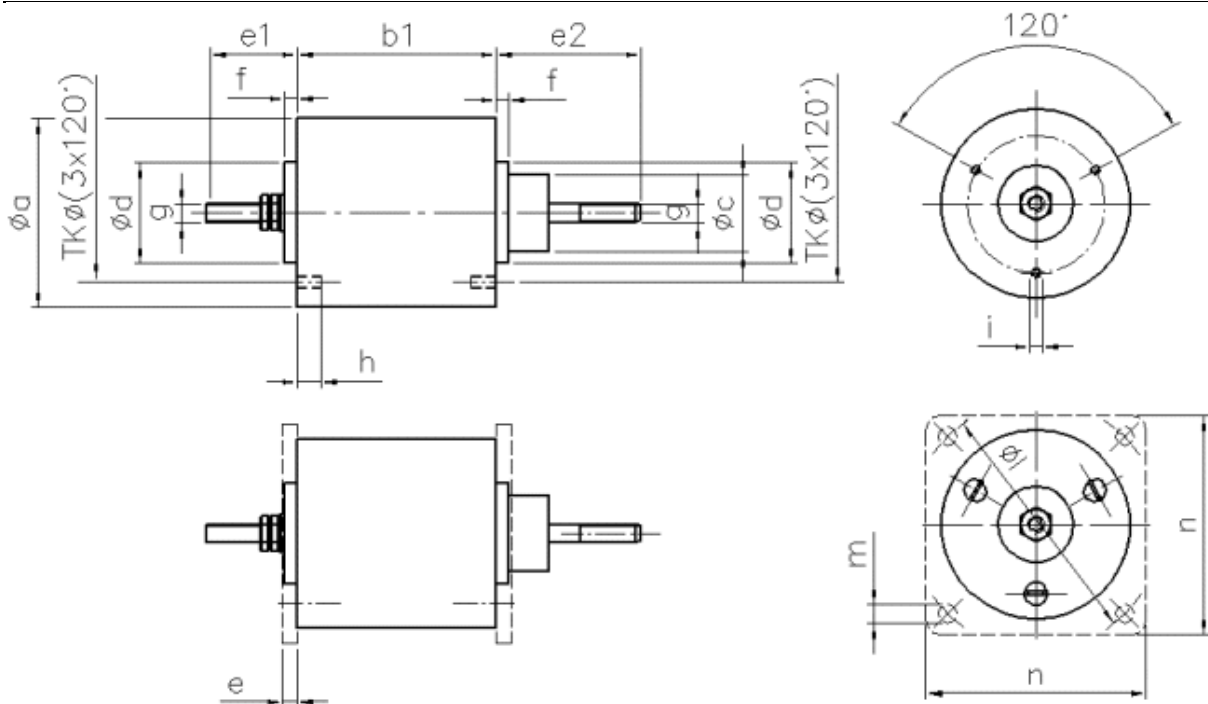
Nominal Data (recommended):

Nominal supply voltage:	U _N 24 VDC
Relative duty cycle:	100%
Insulation class:	"H" according to VDE 0580
Limiting temperature:	180 °C
Degree of protection:	IP 00 according to DIN 40050
Electric connection	Supplied with two leads, approx 200mm

Technical data for linear solenoid GC2 020 to GC2 045

Typ	Stroke [mm]	100% duty cycle			40% duty cycle			25% duty cycle			5% duty cycle		
		Magnetic force [N]	Stroke work [Ncm]	Power consumption [W]	Magnetic force [N]	Stroke work [Ncm]	Power consumption [W]	Magnetic force [N]	Stroke work [Ncm]	Power consumption [W]	Magnetic force [N]	Stroke work [Ncm]	Power consumption [W]
GC2 020	3	1,5	0,5	4	2,5	0,8	7	3,6	1,1	9	7	2,1	25
GC2 025	4	2,2	0,9	5,5	4,1	1,7	10	6	2,4	13,5	12	5	40
GC2 032	5	3,5	1,8	7	6	3	13,5	8	4,0	18	18	9	60
GC2 040	6	8	4,8	12	14	8,5	24	20	12	38	45	27	110
GC2 045	8	16	12	15	28	22,5	40	38	31	60	60	48	170

Installation drawing



Dimensions in mm

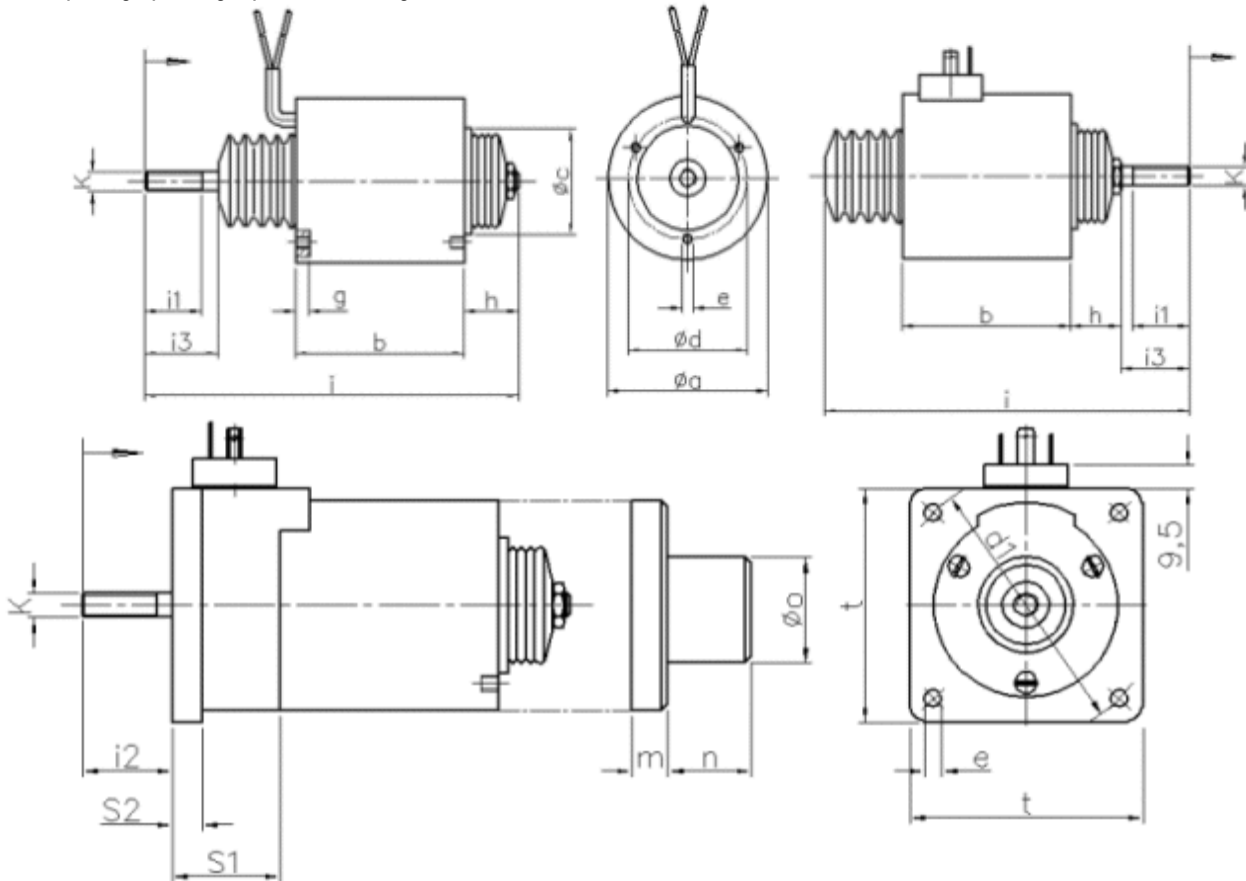
Typ	ϕa	b	ϕc	ϕd	e	e_1	e_2	f	g	h	i	Tk ϕ	ϕl	m	n
GC2 020	20	35	7	10	1,5	11	14	1	M3	2,7	M2,5	15	26	2,8	24
GC2 025	25	40	8	12	2	13	17	1	M3	3,5	M3	18	33	3,4	30
GC2 032	32	42	12	18	2	15	20	2	M4	4	M3	25	42	3,4	40
GC2 040	40	50	15	22	3	17	23	3	M4	4,5	M4	30	54	4,5	50
GC2 045	45	50	18	23	3	20	28	3	M5	5	M4	34	60	4,5	55

Technical data for linear solenoid GC2 050 to GC2 165

Typ	Stroke [mm]	100% duty cycle				40% duty cycle				25% duty cycle				Weights	
		Magnetic force [N] in N	Stroke work [Ncm]	Power consumption [W]	Pull-up-/Release times [ms]	Magnetic force [N] in N	Stroke work [Ncm]	Power consumption [W]	Pull-up-/Release times [ms]	Magnetic force [N] in N	Stroke work [Ncm]	Power consumption [W]	Pull-up-/Release times [ms]	Armature [kg]	Magnet [kg]
GC2 050	10	15	15	15	170/ 55	24	24	32	135/ 45	32	32	48	110/ 40	0,2	1,0
GC2 055	12	19	23	18	220/ 65	28	34	37	180/ 60	38	46	56	160/ 55	0,2	1,5
GC2 062	15	24	36	21	250/ 75	36	54	42	220/ 70	48	72	65	190/ 65	0,3	2,0
GC2 070	20	30	60	26	320/ 100	45	90	47	280/ 85	60	120	71	240/ 80	0,4	2,5
GC2 080	22	47	100	31	450/ 120	70	160	65	350/ 100	95	210	95	300/ 95	0,6	3,5
GC2 090	25	64	160	38	500/ 140	105	260	80	390/ 115	140	350	115	350/ 110	0,8	5,0
GC2 100	28	71	195	45	520/ 150	120	340	92	420/ 120	155	440	150	360/ 115	1,0	6,0
GC2 115	30	85	255	54	550/ 160	135	410	130	460/ 140	185	560	210	380/ 125	1,3	8,0
GC2 135	40	180	720	65	700/ 200	250	1000	162	600/ 180	320	1280	265	480/ 165	3,2	14
GC2 165	50	200	1000	100	820/ 270	340	1700	240	700/ 220	450	2250	400	550/ 200	5,5	25

Installation drawing, linear solenoid, GC2 050 to GC2 165

pulling / pushing, Options with flange or cover hood



Typ	$\varnothing a$	b	$\varnothing c$	$\varnothing d$	$\varnothing d1$	e	f	g	h	i	$i1$	$i2$	$i3$	k	m	n	$\varnothing o$	$s1$	$s2$	t
GC2 050	50	52,5	30	40	65	M4	4,8	4,0	20	121,5	20	23	25	M6	10	26	25	26	7	58
GC2 055	55	57,5	36	45	70	M4	4,8	4,5	22	135,5	25	28	30	M6	10	30	28	28	8	63
GC2 062	62	65,0	36	45	76	M4	4,8	5,0	22	147,0	25	30	32	M8	12	33	30	30	9	70
GC2 070	70	73,5	45	52	88	M5	5,8	6,0	24	163,5	25	30	32	M8	12	38	35	36	10	78
GC2 080	80	84,0	50	62	100	M5	5,8	7,0	28	189,0	27	33	35	M10	15	41	40	44	11	88
GC2 090	90	95,0	55	65	110	M5	5,8	8,0	30	205,0	27	33	35	M10	20	44	45	47	13	98
GC2 100	100	116,0	60	72	125	M6	7,0	10,0	32	230,0	30	42	38	M10	20	50	50	56	13	108
GC2 115	115	127,0	70	85	150	M8	9,0	10,0	35	282,0	40	48	68	M12	24	60	60	62	13	126
GC2 135	135	144,0	85	100	175	M8	9,0	12,0	43	335,0	45	55	83	M16	28	65	70	71	15	148
GC2 165	165	152,0	100	120	200	M10	11,0	16,0	50	375,0	80	68	95	M20	30	80	90	86	18	176