

DC single-acting high performance solenoids

1

Product group

G MC X

- According to DIN VDE 0580
- Increasing force vs. stroke characteristic
- Pull and push type
- Armature guided in maintenance-free bearings. Long service life
- Exciter coil corresponds to insulation class F
- Protection type tube IP 20
- Electrical connection and protection class spool with duly executed installation
 - Plug connection via receptacles according to DIN 46247
Protection class according to DIN VDE 0470/EN 60529 – IP 00
 - Plug connection via plug connector Z KB according to DIN 43650
Cable gland (4x 90 degree rotatable)
Protection class according to DIN VDE 0470/EN 60529 – IP 54
- Further electrical connections on request
- Fastening with central thread
- Please contact us for modifications and special designs
- Application examples:
Machine tools, packing machines,
textile machinery, control technology



Fig. 1: Type G MC X 045 X20 A01

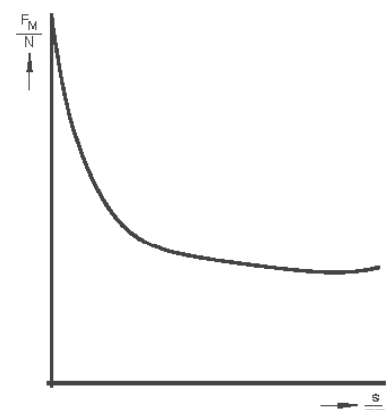


Fig. 2: force vs. stroke characteristic



Technical data G MC X

037

045

Operating mode		S1 100%	S3 40%	S3 25%	S3 15%	S3 5%	S1 100%	S3 40%	S3 25%	S3 15%	S3 5%
Stroke s	(mm)	Magnetic force F_M (N)					Magnetic force F_M (N)				
	1	21	35	41	54	73	16,5	29	37	46	72
	2	15,3	26	32	43	58	13,5	23	31	39	63
	3						13	22	28	36	60
	4	12	22	27	38	54	12	20	27	35	60
	5										
	6	11,1	19	23	34	52	11	18	25	33	59
	8	10,8	18	21	30	46	11	18	24	31	57
	10						13	19	24	31	55
Rated work A_N	(Ncm)	8,6	14,4	17	24	37	11	18	24	31	55
Rated power P_{20}	(W)	19,1	44	61,5	105	213	18,6	41	57	92	240
Armature weight m_A	(kg)			0,05					0,05		
Solenoid weight m_M	(kg)			0,39					0,59		

G MC X

063

Operating mode		S1 100%	S3 40%	S3 25%	S3 15%	S3 5%
Stroke s	(mm)	Magnetic force F_M (N)				
	1	70	104	129	159	230
	2	54	83	106	133	194
	3	47	75	97	123	181
	4	43	71	93	119	176
	5					
	6	40	65	86	112	176
	8	37	61	80	105	175
	10	36	58	75	99	170
	12	39	59	75	97	165
	15					
Rated work A_N	(Ncm)	43	70	90	116	198
Rated power P_{20}	(W)	36	77	120	183	480
Armature weight m_A	(kg)			0,18		
Solenoid weight m_M	(kg)			1,5		



Rated voltage 24 V, the exciter coil can be adjusted to a rated voltage of 60 VDC if desired. Rated voltages until 250 V are possible on request.

The force values indicated in the tables refer to 90% of the rated voltage and to the normal operating temperature.

According to VDE 0580 § 35 this has been determined on a badly head-conducting base.

At other rated voltages deviations of the magnetic force may occur. 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:

- a) Rated voltage 24 V
- b) Operating mode S1 (100%)
- c) Reference temperature 35 °C

Note for application of series G MC X via rectifier

A connection to the AC-network is possible with use of a rectifier insert in connector plus Z KB G (part list Z BK X / Z KB G / Z KC X / Z KC G).

Please consider that the AC-networks are widely free of voltage peaks. If within spitting distance of the devices higher inductances and capacities are switched, it must be made sure that those voltage peaks can be made ineffective by suitable switch means (choke resp. band-pass filters).

Switching at the AC side should be striven at.

Please make sure that the described devices are suitable for your application. Please find further details and definitions in our -Technical Explanation or, respectively, in VDE 0580.

Information about the technical harmonisation directives within the ESM (European Single Market)

Solenoids belonging to this product range are classed in the low voltage directive 73/23 EEC. To guarantee the protection targets of this directive, products are manufactured and inspected according to the valid edition of DIN VDE 0580. This is also regarded as manufacturer's declaration of conformity.

Information about EMC directive 89/336 EEC

Solenoids do not come within the scope of the EMC directive because they don't emit electromagnetic disturbances in the sense of the directive and because their operation is not disturbed by electromagnetic disturbances. The user has to secure the compliance with the EMC directive by appropriate wiring. Examples for protection circuits can be taken from the corresponding technical documents.

Note on the RoHS guideline 2002/95/EC

The devices presented in this document do not fall into the scope of regulation 2002/95/EC (RoHS) and do not become part of products which fall into the scope according to our state of information.



Dimension table

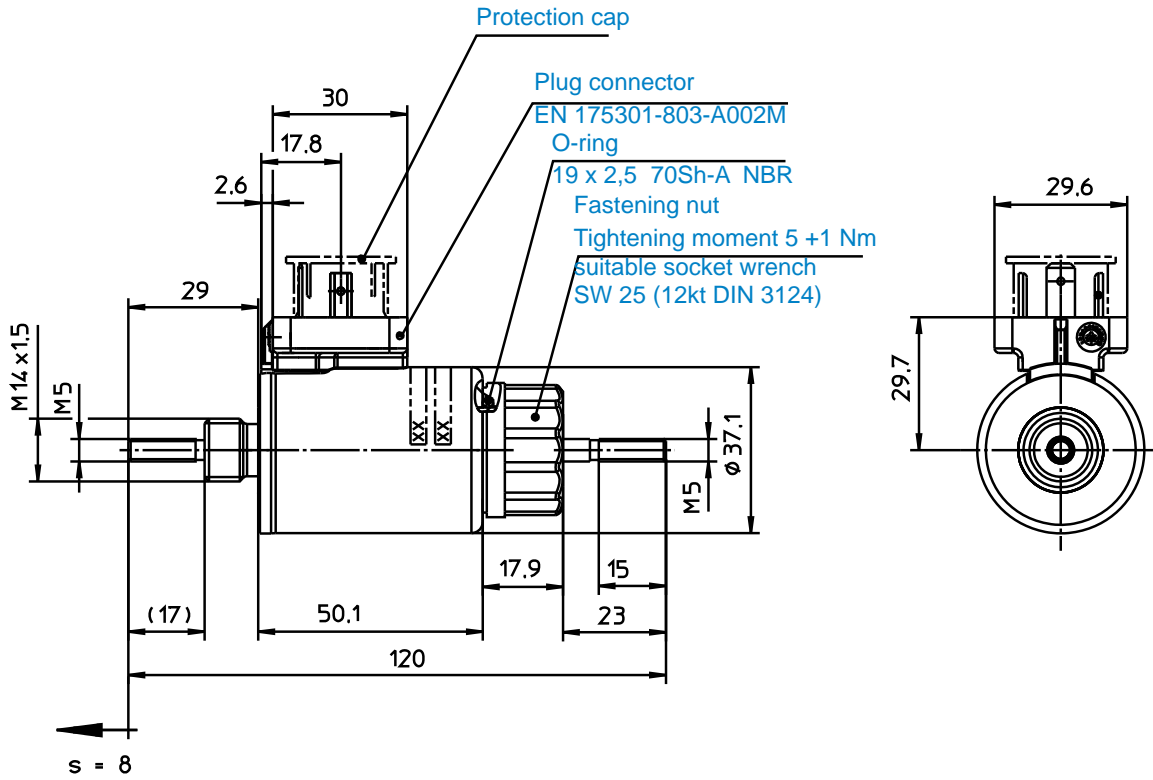


Fig. 2: Type GMCX 037 X20 A02

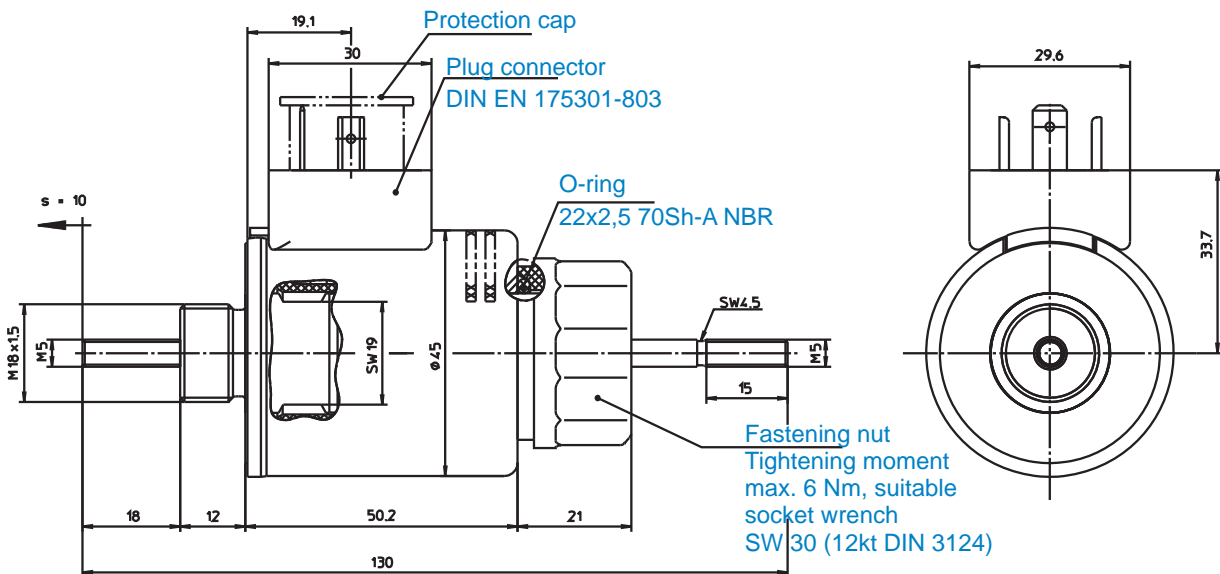


Fig. 3: Type GMCX 045 X20 A01

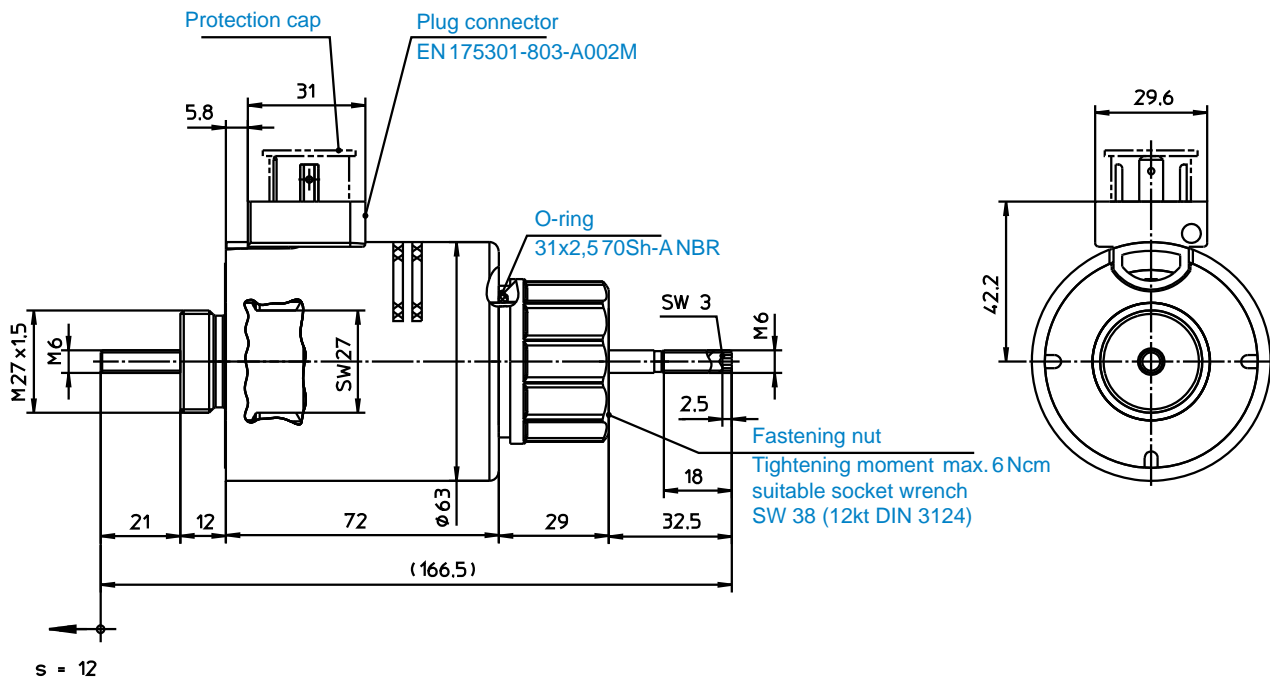
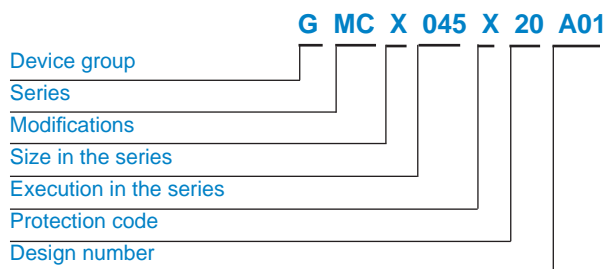


Fig. 4: Type GMCX 063 X20 A01

The here shown solenoids are no ready for use devices in the sense of DIN VDE 0580. The general requirements and protective measures to be taken by the user are included in DIN VDE 0580. The use of the shown devices in safety relevant applications requires always the written agreement of MSM.




Type code



Order example

Type	G MC X 045 X20 A01
Voltage	24 V DC
Operating mode	S1 (100 %)

Special 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.