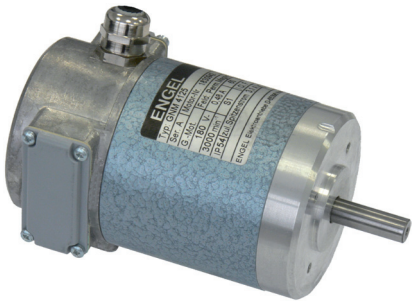
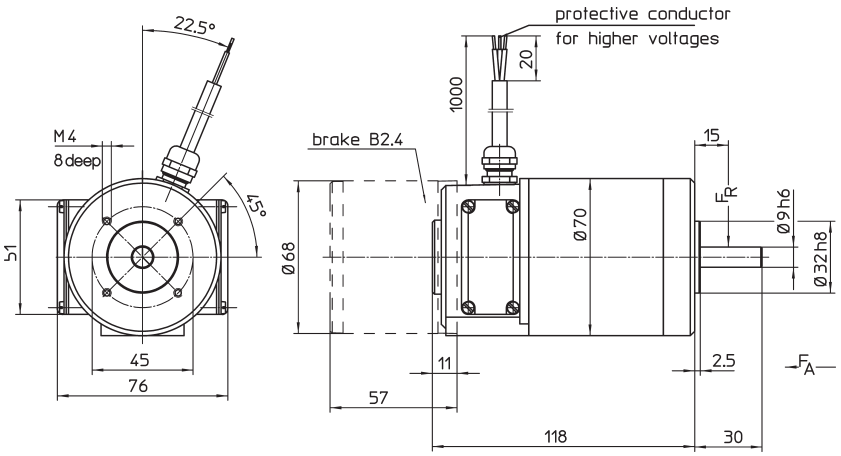


GNM 4125

DC Motors

with permanent magnet field

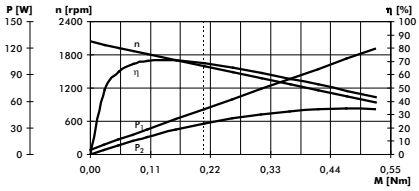
Motor series GNM 4125
up to 60 Watts output power
with + without parking brake



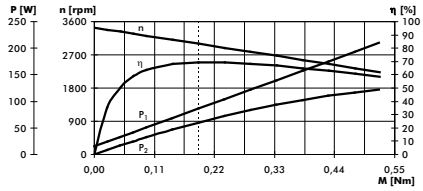
Operation characteristics:

n - Speed
η - Efficiency
P_1 - Input power
P_2 - Output power

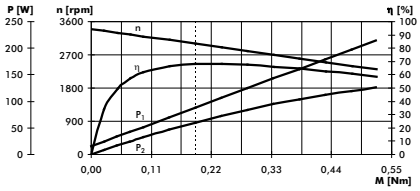
GNM4125, 24V, 1600rpm



GNM4125, 24V, 3000rpm



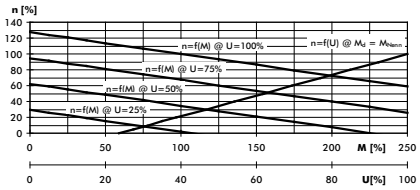
GNM4125, 42V, 3000rpm



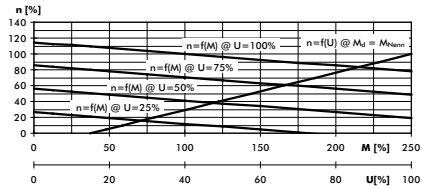
Control characteristics :

n=f(M) - Speed as a torque function
n=f(U) - Speed as a supply voltage function

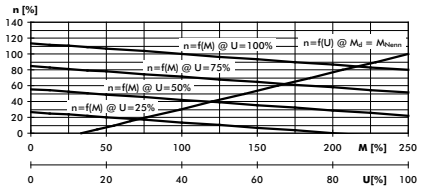
GNM4125, 24V, 1600rpm



GNM4125, 24V, 3000rpm



GNM4125, 42V, 3000rpm



ENGEL ElektroMotoren AG · Am Klingenweg 7 · D-65396 Walluf

Telefon: +49 (0) 6123 994 400 · Telefax: +49 (0) 6123 994 410 · E-Mail: kontakt@engel-elektromotoren.de · www.engel-elektromotoren.de

type		GNM 4125		
series			A	
nominal speed	rpm	1600	3000	3000
nominal voltage	V	24	24	42
nominal current	A	2,15	3,6	2,1
nominal power	W	35	60	60
operation acc. to VDE 0530			S1	
protection acc. to VDE 0530			IP 54	
connection			light plastic-sheathed cable	
rotating direction			reversible	
design			IMB 14	
mechanical data:				
mass moment of inertia	kgm^2		$0{,}0558*10^{-3}$	
nominal torque	Nm	0,209	0,191	0,191
starting torque	Nm	0,87	1,35	1,35
max. continous torque at stall	Nm	0,23	0,23	0,23
speed regulation constant	$N^{-1}\ cm^{-1}$ rpm	21	23	21
mechanical time constant	ms	12,3	13,5	12,3
friction torque	Nm	0,025	0,04	0,04
rotor weight	kg		0,425	
motor weight	kg		1,45	
motor weight incl. parking brake	kg		1,85	
ball bearings			629/629	
F_R (allowable radial shaft load)			130	
F_A (allowable axial shaft load)			52	
electrical data:				
armature resistance	Ω	2,52	0,86	2,52
armature inductance	mH	5,8	1,85	5,8
terminal resistance	Ω	2,66	1	2,66
voltage constant	V/1000 rpm	11,47	6,73	11,47
torque constant	Nm/A	0,11	0,0643	0,11
starting current	A	9	24	15
max. peak current [1]	A	14	24	14
electrical time constant	ms	2,2	1,85	2,2
thermical data:				
max. ambient temperature	°C		40	
insulation class acc. to VDE 0530			F	
thermal time constant	min		40	
temperature-rise without cooling	K/W	6,1	3,95	3,95
parking brake B 2:				
nominal voltage	V		24	
nominal current	A		0,35	
static break torque (motor shaft)	Nm		0,8	
max. number of operations per hour			2000	

Tolerances acc. to standard VDE 0530. ± 10 % is valid for not VDE mentioned tolerances.

The values mentioned in the table are valid for supply with DC voltage with allowable harmonic contingent up to 5%. For undulatory current with increased harmonic contingent the rated motor values must be multiplied by 0,7.

[1] The values are valid for operation in temperature-ranges from 0 up to 40°C and it is not allowed to excess them, even not for a short-time, to avoid magnet-weakening.

- Motors also available with DC tacho generator and/or incremental encoder.
- Motors also available with device plug DIN 43650.

Motor design:
Brushed 2-pole DC motor with permanent magnet field.
Brush holder opening will be accessible by removing the cover plate.
Flange mounting with 4 threads (see drawing).

Rotating direction:
The rotating direction can be changed by inverting the connections.

1. Order example
   Motor
   GNM 4125A
   24 V, 1600 rpm, 35 W

2. Order example
   Motor - DC tacho generator
   GNM 4125A - T 17.05
   42 V, 3000 rpm, 60 W - 5 V / 1000 rpm

Special designs on request.