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TECHNOLOGY GROUP

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- In stock / Ready-to-ship
- Leasing / Rentals / Demos
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Expert team | Trust guarantee | 100% satisfaction

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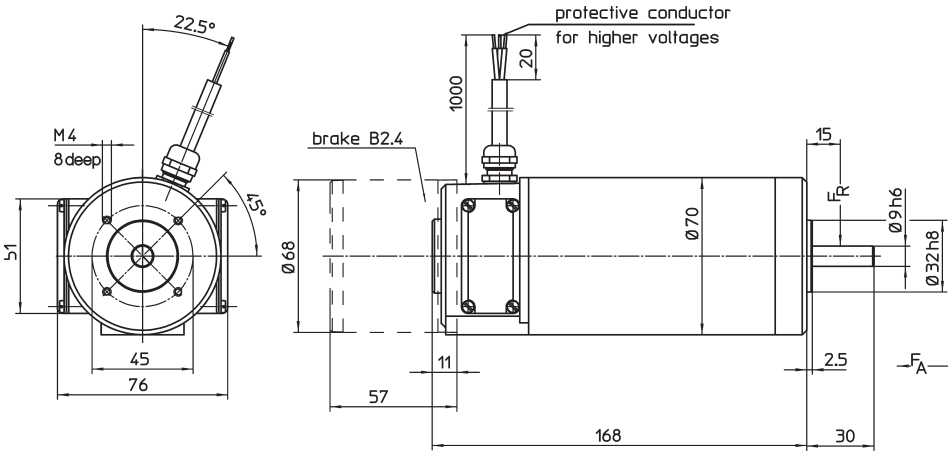


GNM 4175

DC Motors

with permanent magnet field

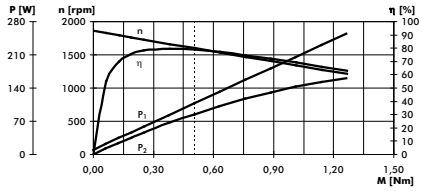
Motor series GNM 4175
up to 140 Watts output power
with + without parking brake



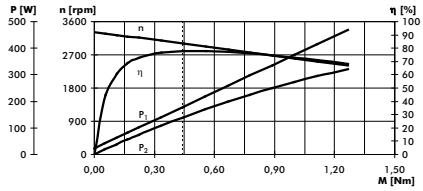
Operation characteristics:

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

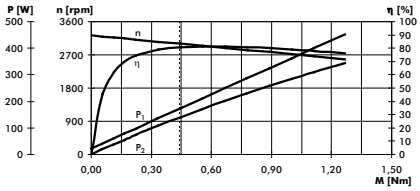
GNM4175, 24V, 1600rpm



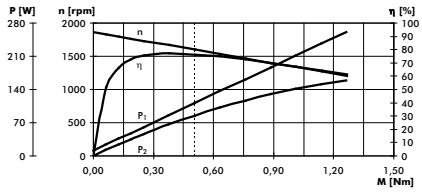
GNM4175, 24V, 3000rpm



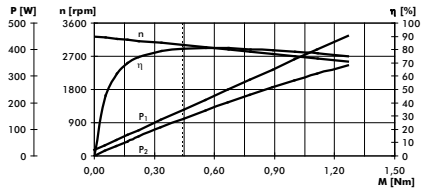
GNM4175, 42V, 3000rpm



GNM4175, 180V, 1600rpm



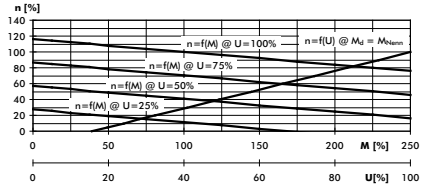
GNM4175, 180V, 3000rpm



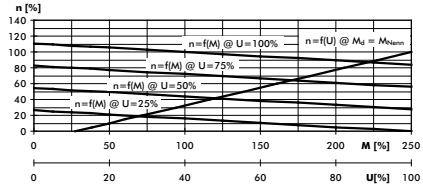
Control characteristics :

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

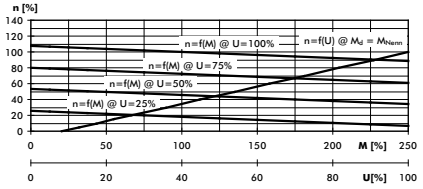
GNM4175, 24V, 1600rpm



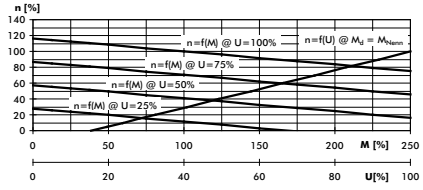
GNM4175, 24V, 3000rpm



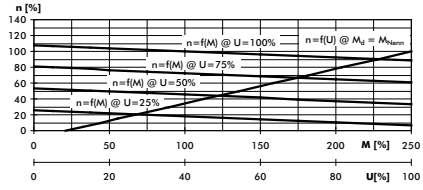
GNM4175, 42V, 3000rpm



GNM4175, 180V, 1600rpm



GNM4175, 180V, 3000rpm



edition 01.11

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type		GNM 4175				
series				A		
nominal speed	rpm	1600	3000	3000	1600	3000
nominal voltage	V	24	24	42	180	180
nominal current	A	4,5	7,5	4,15	0,63	1
nominal power	W	85	140	140	85	140
operation acc. to VDE 0530				S1		
protection acc. to VDE 0530				IP 54		
connection				light plastic-sheathed cable		
rotating direction				reversible		
design				B 14		
mechanical data:						
mass moment of inertia	kgm^2			$0{,}133*10^{-3}$		
nominal torque	Nm	0,507	0,446	0,446	0,507	0,446
starting torque	Nm	3	3,7	3,7	3,1	3,7
max. continous torque at stall	Nm	0,57	0,57	0,57	0,57	0,57
speed regulation constant	N^{-1} cm^{-1} rpm	5,1	7,2	5,1	5,2	5,3
mechanical time constant	ms	7,2	10	7,2	7,2	7,4
friction torque	Nm	0,05	0,065	0,065	0,055	0,065
rotor weight	kg			0,77		
motor weight	kg			2,65		
motor weight incl. parking brake	kg			3,05		
ball bearings				629/629		
F_R (allowable radial shaft load)				130		
F_A (allowable axial shaft load)				52		
electrical data:						
armature resistance	Ω	0,72	0,24	0,72	44,5	15,2
armature inductance	mH	1,5	0,56	1,5	90	30
terminal resistance	Ω	0,83	0,35	0,83	45	15,7
voltage constant	V/1000 rpm	13	7,15	13	95	55,8
torque constant	Nm/A	0,124	0,0683	0,124	0,91	0,53
starting current	A	27	61	45	3,9	10,8
max. peak current [1]	A	34	62	34	4,6	7,9
electrical time constant	ms	1,8	1,6	1,8	2	1,9
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	3,9	2,6	2,6	3,9	2,6
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 4175A
   24 V, 1600 rpm, 85 W

2. Order example
   Motor - DC tacho generator
   GNM 4175A - T 10.05
   42 V, 3000 rpm, 140 W - 5 V / 1000 rpm

Special designs on request.

design-changes reserved

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