

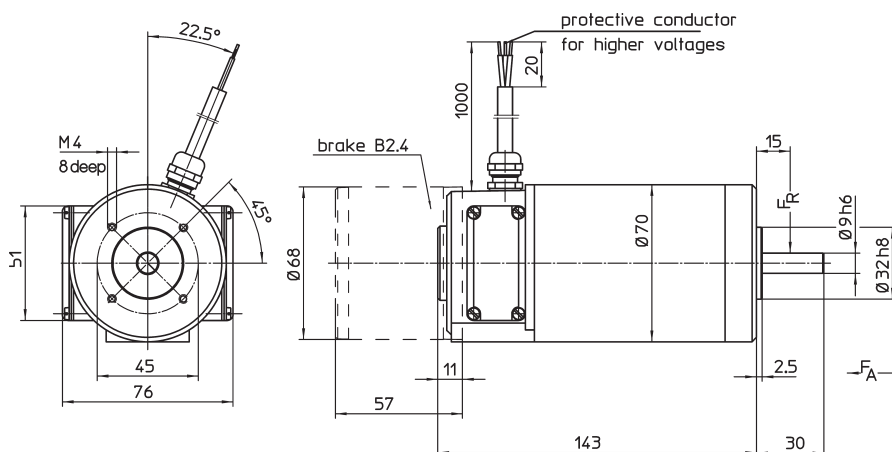


GNM 4150

DC Motors

with permanent magnet field

Motor series GNM 4150
up to 100 Watts output power
with + without parking brake

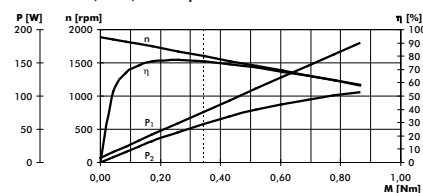


Operation characteristics:

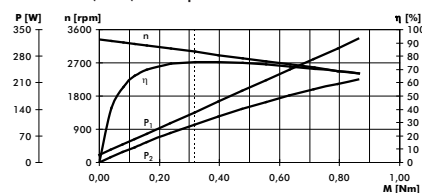
n - Speed
 η - Efficiency

P_1 - Input power
 P_2 - Output power

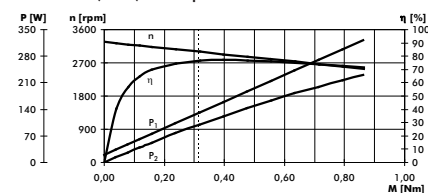
GNM4150, 24V, 1600rpm



GNM4150, 24V, 3000rpm



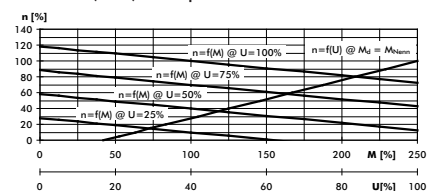
GNM4150, 42V, 3000rpm



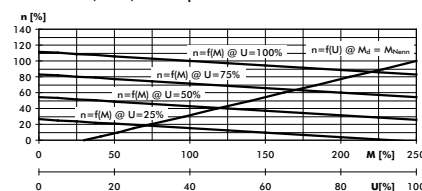
Control characteristics :

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

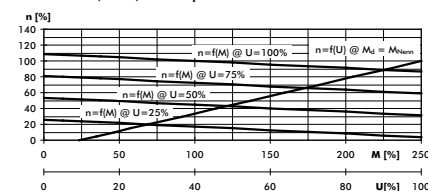
GNM4150, 24V, 1600rpm



GNM4150, 24V, 3000rpm



GNM4150, 42V, 3000rpm



		GNM 4150		
type		1 600	3000	3000
series	rpm	A		
nominal speed	V	24	24	42
nominal voltage	A	3,2	5,5	3,1
nominal current	W	58	100	100
nominal power			S1	
operation acc. to VDE 0530		IP 54		
protection acc. to VDE 0530		light plastic-sheathed cable		
connection		reversible		
rotating direction		IMB 14		
design				
mechanical data:				
mass moment of inertia	kgm ²	0,0938*10 ⁻³		
nominal torque	Nm	0,346	0,318	0,318
starting torque	Nm	1,91	2,54	2,54
max. continuous torque at stall	Nm	0,38	0,38	0,38
speed regulation constant	N ⁻¹ cm ⁻¹ rpm	8,4	10,8	8,4
mechanical time constant	ms	8,3	10,6	8,3
friction torque	Nm	0,035	0,055	0,055
rotor weight	kg		0,56	
motor weight	kg		2,05	
motor weight incl. parking brake	kg		2,45	
ball bearings		629/629		
F _r (allowable radial shaft load)		130		
F _A (allowable axial shaft load)		52		
electrical data:				
armature resistance	Ω	1,15	0,4	1,15
armature inductance	mH	2,54	0,83	2,54
terminal resistance	Ω	1,27	0,52	1,27
voltage constant	V/1000 rpm	12,6	7,1	12,6
torque constant	Nm/A	0,12	0,0678	0,12
starting current	A	18	43	31
max. peak current ¹⁾	A	24	42	24
electrical time constant	ms	2	1,6	2
thermal data:				
max. ambient temperature	°C	40		
insulation class acc. to VDE 0530		F		
thermal time constant	min	40		
temperature-rise without cooling	K/W	5,1	3,2	3,2
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 content up to 5%. For undulatory current with increased harmonic content 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 exceed them, even not for a short-time, to avoid magnet-weakening.				
<ul style="list-style-type: none"> ● Motors also available with DC tachogenerator 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.		
		<ol style="list-style-type: none"> 1. Order example Motor GNM 4150A 24 V, 1 600 rpm, 58 W 2. Order example Motor GNM 4150A 42 V, 3000 rpm, 100 W 		
		- DC tachogenerator - T 17.05 - 5 V / 1000 rpm		
		Special designs on request.		