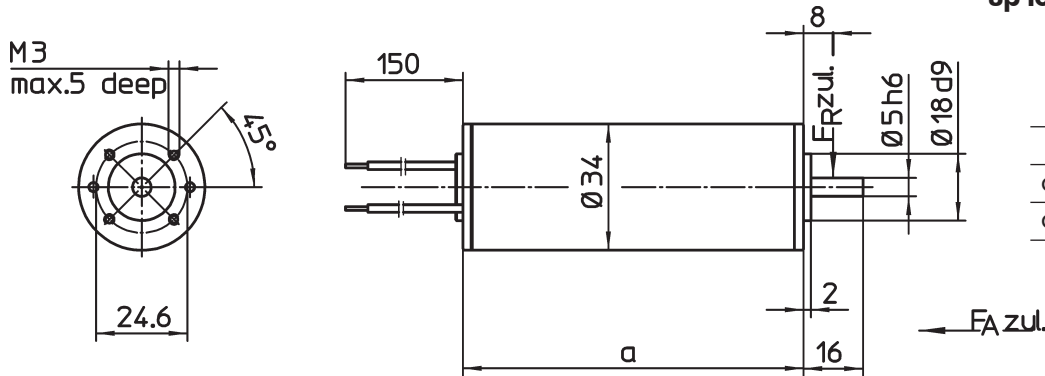




GNM 21

DC Motors with permanent magnet field

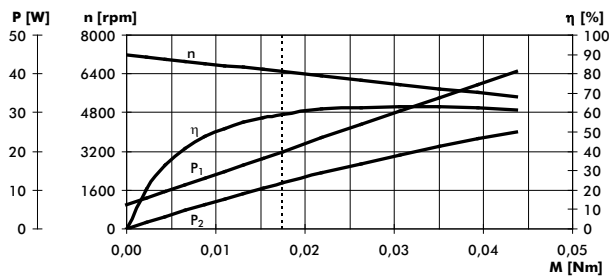
Motor series GNM 21
up to 16 Watts output power



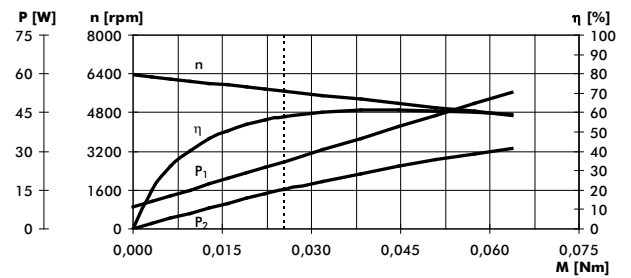
Type	Dimension a
GNM 2130C	78
GNM 2145C	94

Operation characteristics: n - Speed
 η - Efficiency
 P_1 - Input power
 P_2 - Output power

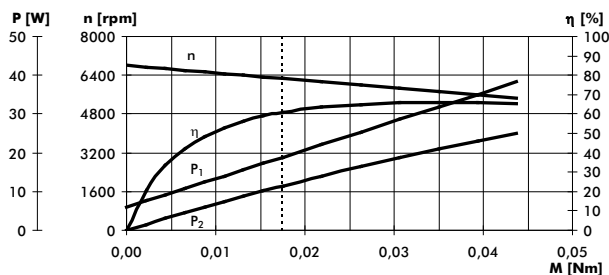
GNM2130C, 12V, 6000rpm



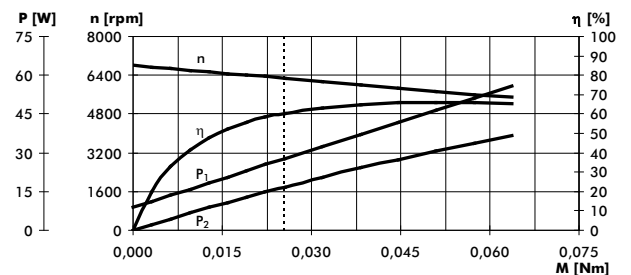
GNM2145C, 12V, 6000rpm



GNM2130C, 24V, 6000rpm

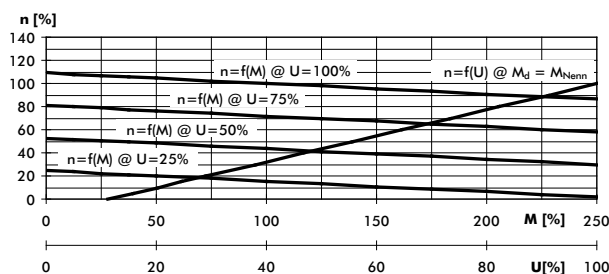


GNM2145C, 24V, 6000rpm

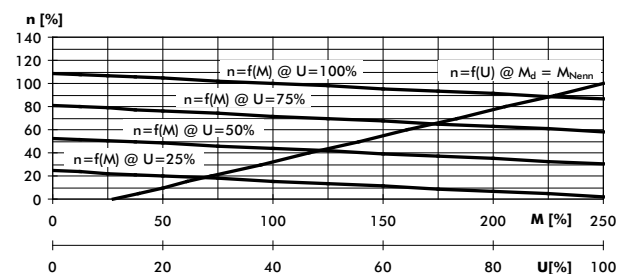


Control characteristics : n=f(M) - Speed as a torque function
n=f(U) - Speed as a supply voltage function

GNM2130C, 24V, 6000rpm



GNM2145C, 24V, 6000rpm



type series	GNM 2130		GNM 2145	
	6000	C 6000	6000	C 6000
nominal speed	rpm	12	24	24
nominal voltage	V	12	24	24
nominal current	A	1,7	0,8	1,15
nominal power	W	11	11	16
operation acc. to VDE 0530				S1
protection acc. to VDE 0530				IP 21
connection				free leads
rotating direction				reversible
design				
mechanical data:				
mass moment of inertia	kgm ²	0,0175	0,0175	0,0043*10 ⁻³
nominal torque	Nm	0,16	0,2	0,255
starting torque	Nm	0,022	0,022	0,21
max. continuous torque at stall	Nm	0,022	0,022	0,03
speed regulation constant	N ⁻¹ cm ⁻¹ rpm	396	315	265
mechanical time constant	ms	13,3	10,5	12,1
friction torque	Nm	0,008	0,008	0,012
rotor weight	kg	0,078	0,078	0,103
motor weight	kg	0,275	0,275	0,35
ball bearings				625/625
F _r (allowable radial shaft load)				50
F _a (allowable axial shaft load)				20
electrical data:				
armature resistance	Ω	0,9	3,7	0,71
armature inductance	mH	0,63	2,7	0,4
terminal resistance	Ω	0,97	3,45	0,81
voltage constant	V/1000 rpm	1,6	3,4	1,8
torque constant	Nm/A	0,0153	0,0325	0,017
starting current	A	12,4	7	14,8
max. peak current ¹⁾	A	18,3	8,8	23,8
electrical time constant	ms	0,65	0,78	0,49
thermal data:				
max. ambient temperature	°C	40	40	40
insulation class acc. to VDE 0530		F	F	F
thermal time constant	min	15	15	15
temperature-rise without cooling	K/W	6,6	6,6	6,4

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.

Motor design:
Brushed 2-pole DC motor with permanent magnet field.

Flange mounting with 4 threads (see drawing).

Rotating direction:

The rotating direction can be changed by inverting the connections.

1. Order example

Motor

GNM 2130C

24 V, 6000 rpm, 11 W

Special designs on request.