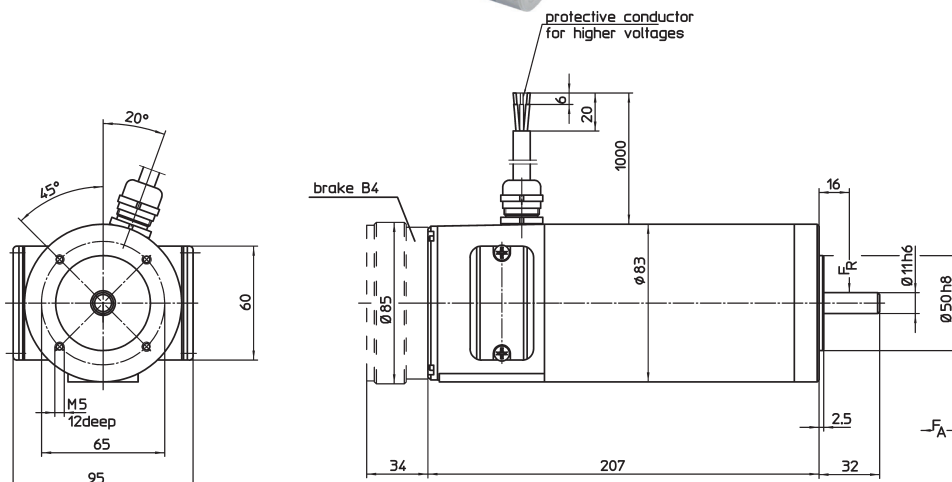




GNM 5480

DC Motors
with permanent magnet field

Motor series GNM 5480
up to 250 Watts output power
with + without parking brake

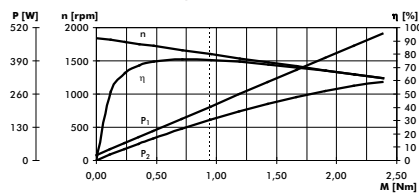


Operation characteristics:

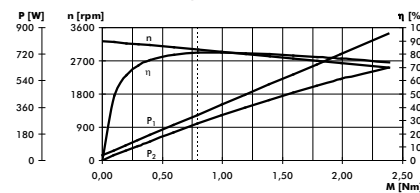
n - Speed
 η - Efficiency

P_1 - Input power
 P_2 - Output power

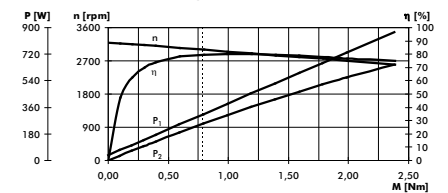
GNM5480, 24V, 1600rpm



GNM5480, 24V, 3000rpm



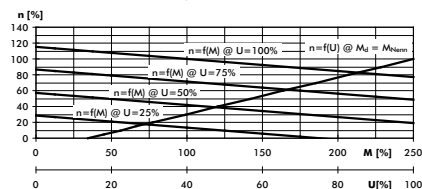
GNM5480, 42V, 3000rpm



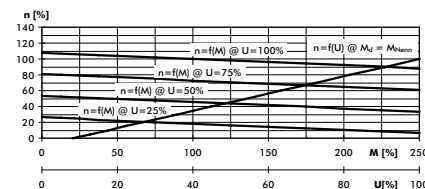
Control characteristics :

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

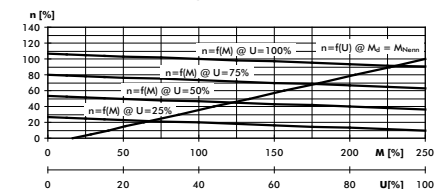
GNM5480, 24V, 1600rpm



GNM5480, 24V, 3000rpm



GNM5480, 42V, 3000rpm



		GNM 5480		
type		E		
series	rpm	1 600	3 000	3 000
nominal speed	V	24	24	42
nominal voltage	A	8,8	12,9	7,5
nominal current	W	160	250	250
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		0,37*10 ⁻³	0,796
nominal torque	Nm	0,955	0,796	6,9
starting torque	Nm	6,1	7,1	1,1
max. continuous torque at stall	Nm	1,1	1,1	1,1
speed regulation constant	N ⁻¹ cm ⁻¹ rpm	2,5	3	2,5
mechanical time constant	ms	9,6	11,6	9,6
friction torque	Nm	0,1	0,1	0,1
rotor weight	kg		1,4	
motor weight	kg		4,1	
motor weight incl. parking brake	kg		5,2	
ball bearings			6201/6200	
F _R (allowable radial shaft load)			140	
F _A (allowable axial shaft load)			56	
electrical data:				
armature resistance	Ω	0,33	0,106	0,33
armature inductance	mH	1,1	0,33	1,1
terminal resistance	Ω	0,375	0,152	0,375
voltage constant	V/1000 rpm	12,6	7,3	12,6
torque constant	Nm/A	0,12	0,0697	0,12
starting current	A	57	126	95
max. peak current ¹⁾	A	65	115	65
electrical time constant	ms	2,9	2,2	2,9
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	2,2	1,8	2,2
parking brake B 4:				
nominal voltage	V		24	
nominal current	A		0,14	
static break torque (motor shaft)	Nm		1	
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.

- 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.

1. Order example
Motor
GNM 5480E
24 V, 1 600 rpm, 1 60 W
2. Order example
Motor
GNM 5480E
42 V, 3 000 rpm, 250 W

Special designs on request.