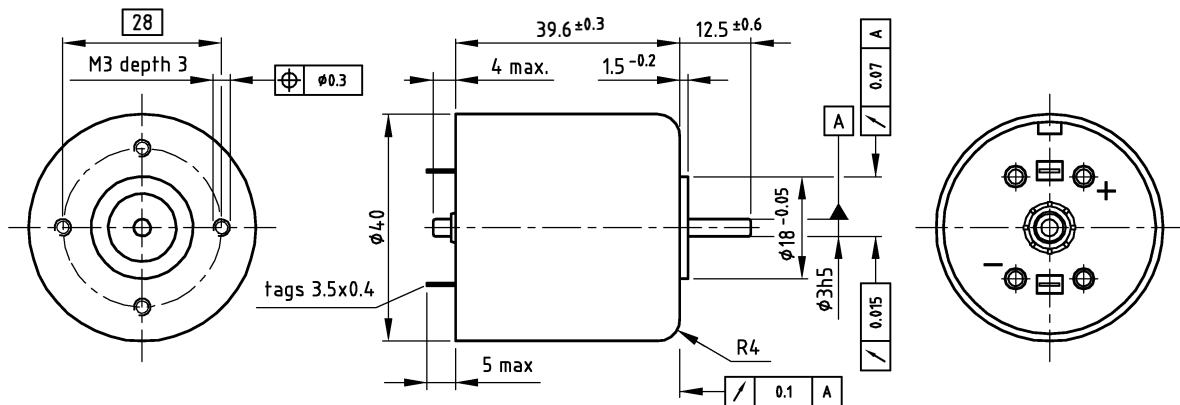


# CL40

# Coreless DC motor

# 3 Watt

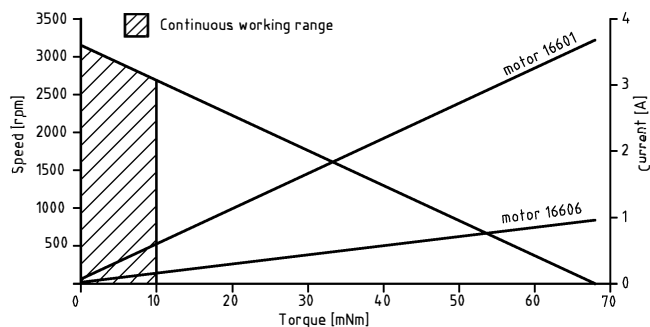
## Dimensional drawing



## Motor data

Motor order number	9904 120 +	16601	16602	16603	16604	16605	16606
Nominal Voltage	[V]	6	9	12	15	18	24
Nominal Torque	[mNm]	10	10	10	10	10	10
Nominal Speed	[rpm]	2670	2670	2680	2670	2680	2690
Nominal Current	[mA]	600	400	300	240	200	150
No load Speed	[rpm]	3150	3140	3150	3150	3150	3150
No load Current	[mA]	46	31	23	19	15	12
EMF at 3000 rpm	[V]	5.65	8.48	11.3	14.1	17.0	22.6
Torque constant	[mNm/A]	18.0	27.0	36.0	45.0	54.0	72.0
Terminal Resistance	[Ohm]	1.6	3.7	6.3	10.1	14.1	25.1
Starting Torque at nominal Voltage	[mNm]	66	66	68	67	68	68
Starting Current at nominal Voltage	[A]	3.70	2.47	1.90	1.49	1.27	0.96
Rotor Inductance	[mH]	0.21	0.48	0.85	1.33	1.92	3.41
Rotor Moment of Inertia	[kgm <sup>2</sup> ]	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>	4x10 <sup>-6</sup>
Mechanical time constant	[ms]	20	20	20	19	19	19
Thermal resistance winding-housing	[K/W]	5.5	5.5	5.5	5.5	5.5	5.5
Thermal resistance housing-ambient	[K/W]	13	13	13	13	13	13

## Performance curve



## General data

*	Type of bearings	sleeve	
*	Commutation system	precious metal	
*	Maximum radial load 10 mm from mounting front	5	N
*	Maximum axial load	0.5	N
*	Ambient temp. range operating	-10/+60	°C
*	Ambient temp. range storage	-40/+70	°C
*	Mass of motor	200	g

## Product combinations

- \* Gearbox P32A
- \* Gearbox P32B
- \* Gearbox S40A
- \* Gearbox S38A

## Options

- \* Ball bearings
- \* Connecting wires
- \* Integrated EMI suppression
- \* Tacho
- \* Special shafts
- \* Other supply voltages
- \* Encoder