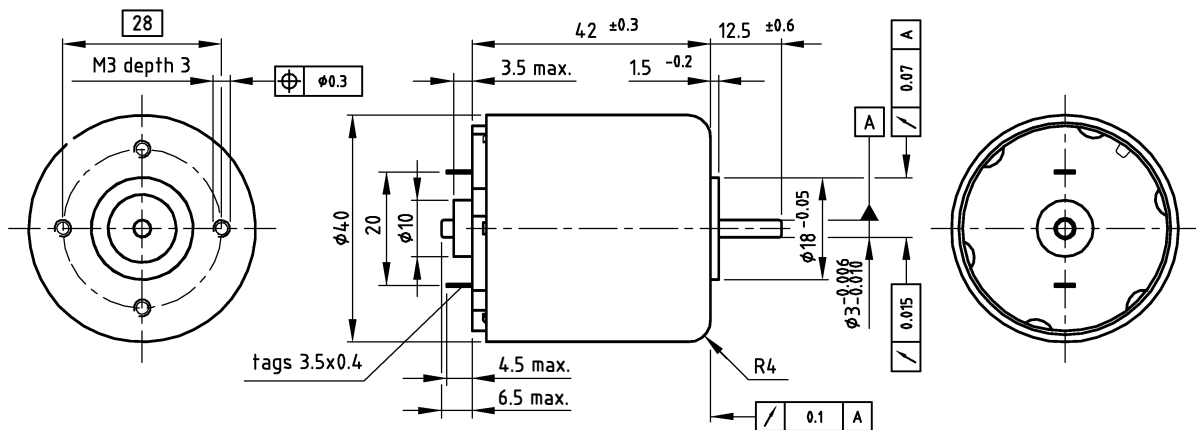


# CL40

# Coreless DC motor

# 12 Watt

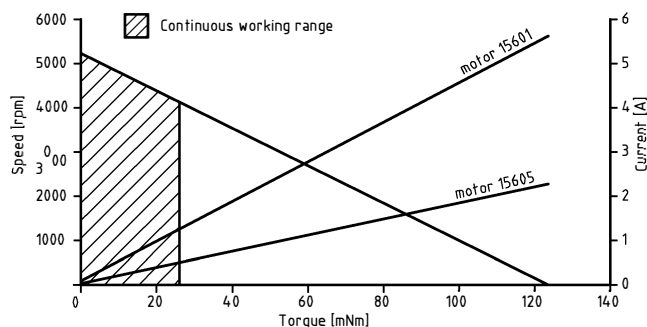
## Dimensional drawing



## Motor data

Motor order number	9904 120 +	15601	15602	15603	15604	15605
Nominal Voltage	[V]	12	15	18	24	30
Nominal Torque	[mNm]	26	26	26	26	26
Nominal Speed	[rpm]	4140	4090	4150	4170	4100
Nominal Current	[mA]	1250	980	830	630	490
No load Speed	[rpm]	5280	5180	5220	5280	5180
No load Current	[mA]	49	38	32	25	19
EMF at 3000 rpm	[V]	6.76	8.62	10.3	13.5	17.2
Torque constant	[mNm/A]	21.5	27.4	32.6	43.0	54.9
Terminal Resistance	[Ohm]	2.1	3.3	4.6	8.3	13.1
Starting Torque at nominal Voltage	[mNm]	121	123	126	123	125
Starting Current at nominal Voltage	[A]	5.6	4.5	3.9	2.9	2.3
Rotor Inductance	[mH]	0.31	0.50	0.71	1.23	2.01
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>
Mechanical time constant	[ms]	18	18	18	18	18
Thermal resistance winding-housing	[K/W]	5.5	5.5	5.5	5.5	5.5
Thermal resistance housing-ambient	[K/W]	10.5	10.5	10.5	10.5	10.5

## Performance curve



## General data

*	Type of bearings	sleeve + ball	
*	Comutation system	graphite / copper	
*	Number of commutator segments	9	
*	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

- \* Double ball bearings
- \* Connecting wires
- \* Special shafts
- \* Other supply voltages