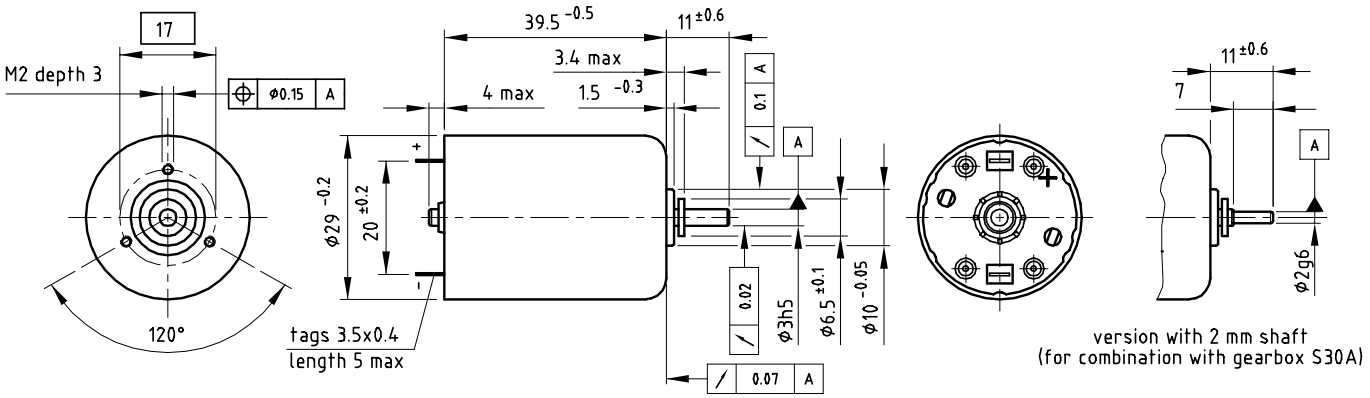
CL29 Coreless DC motor 3 Watt

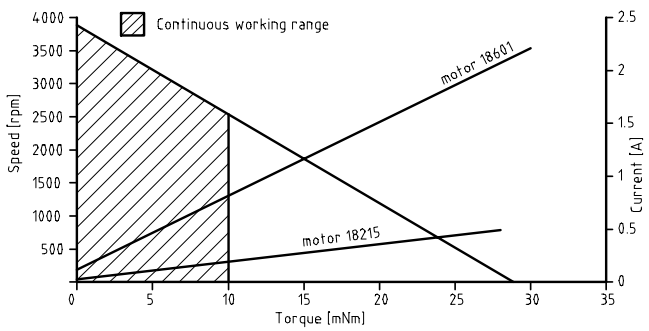
Dimensional drawing



Motor data

Motor order number	shaft ⌀3 mm	9904 120 +	18601	18602	18603	18105	18605	18606	18215
	shaft ⌀2 mm	9904 120 +	18611	18612	18613	18614	18615	18616	18617
Nominal Voltage		[V]	6	7.2	9	12	15	18	24
Nominal Torque		[mNm]	10	10	10	10	10	10	10
Nominal Speed		[rpm]	2680	2550	2680	2440	2380	2680	2470
Nominal Current		[mA]	775	620	515	370	290	260	185
No load Speed		[rpm]	4010	3850	3990	3840	3750	4010	3840
No load Current		[mA]	67	52	45	31	24	22	16
EMF at 3000 rpm		[V]	4.35	5.44	6.53	9.07	11.6	13.1	18.1
Torque constant		[mNm/A]	13.9	17.3	20.8	28.9	37.0	41.6	57.7
Terminal Resistance		[Ohm]	2.7	4.2	6.1	12.5	20.1	24.5	49.0
Starting Torque at nominal Voltage		[mNm]	30	30	30	27	27	30	28
Starting Current at nominal Voltage		[A]	2.21	1.73	1.47	0.96	0.75	0.73	0.49
Rotor Inductance		[mH]	0.20	0.32	0.46	0.89	1.46	1.84	3.55
Rotor Moment of Inertia		[kgm ^{2}]	$0.9x10^{-6}$	$0.9x10^{-6}$	$0.9x10^{-6}$	$0.9x10^{-6}$	$0.9x10^{-6}$	$0.9x10^{-6}$	$0.9x10^{-6}$
Mechanical time constant		[ms]	13	13	13	13	13	13	13
Thermal resistance winding-housing		[K/W]	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Thermal resistance housing-ambient		[K/W]	16.3	16.3	16.3	16.3	16.3	16.3	16.3

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	125	g

Product combinations

- * Gearbox P32A
- * Gearbox S30A (use motor with 2 mm shaft)
- * Gearbox S38A
- * Gearbox S49A

Options

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

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