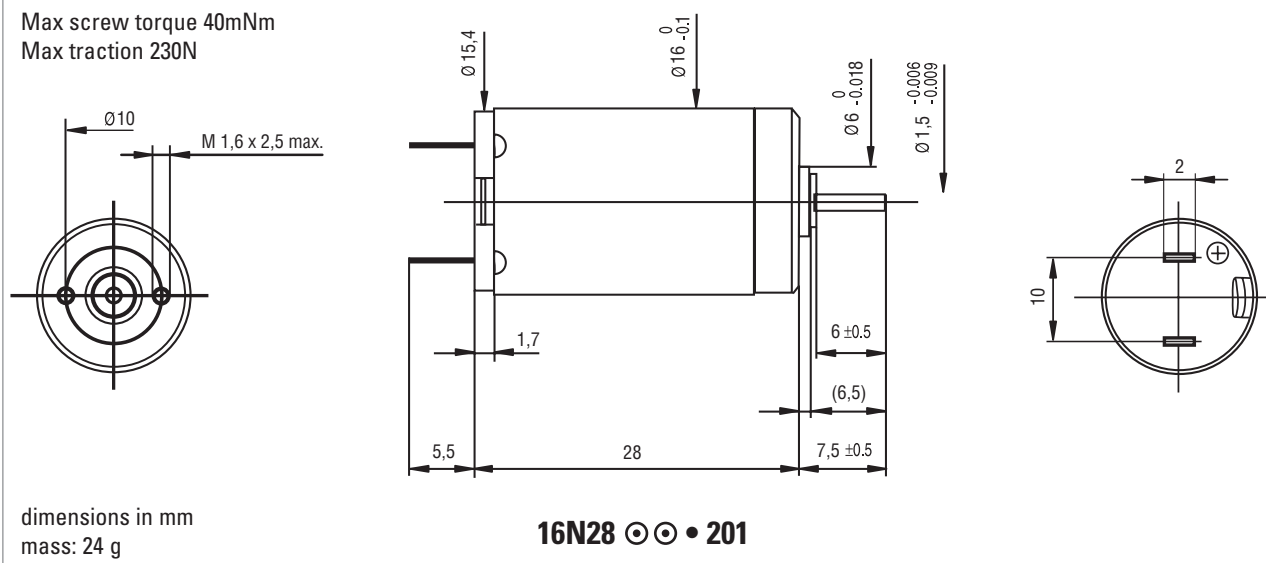


2.3 Watt

Precious Metal Commutation System - 9 Segments

Max screw torque 40mNm
Max traction 230N



Winding Type



-111P

-210E

-208E

-207E

Measured Values

Measuring voltage	V	3	7.5	9.0	12.0
No-load speed	rpm	9500	9700	8900	10800
Stall torque	mNm (oz-in)	3.7 (0.52)	3.7 (0.52)	3.1 (0.45)	3.1 (0.45)
Average No-load current	mA	28	13.3	8.4	7.7
Typical starting voltage	V	0.10	0.15	0.2	0.3

Max. Recommended Values

Max. continuous current	A	1.01	0.42	0.29	0.24
Max. continuous torque	mNm (oz-in)	2.9 (0.44)	2.9 (0.41)	2.7 (0.38)	2.4 (0.34)
Max. angular acceleration	10 ³ rad/s ²	161	148	172	192

Intrinsic Parameters

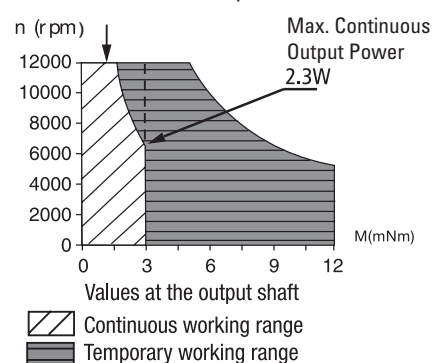
Back-EMF constant	V/1000 rpm	0.31	0.75	1.0	1.1
Torque constant	mNm/A (oz-in/A)	2.96 (0.42)	7.2 (1.0)	9.5 (1.35)	10.3 (1.45)
Terminal resistance	ohm	2.4	14.6	28	40.5
Motor regulation R/k ²	10 ³ /Nms	270	280	310	380
Rotor inductance	mH	0.08	0.5	0.8	0.9
Rotor inertia	kgm ² 10 ⁻⁷	0.72	0.77	0.63	0.51
Mechanical time constant	ms	20	22	20	19

Executions

		Single Shaft	With F16
Gearbox	Page	16N28	16N28
B16 200	236	235	235
BA16 200	237	235	235
R16	238	201	201

- Thermal resistance: rotor-body 7°C/W, body-ambient 28°C/W
- Thermal time constant - rotor / stator: 7 s / 390 s
- Max. rated coil temperature: 100°C (210°F)
- Recom. ambient temperature range: -30°C to +85°C (-22°F to +185°F)
- Viscous damping constant: 0.04 x 10⁻⁶ Nms
- Max. axial static force for press-fit: 100 N (with sleeve bearing only)
- End play: ≤ 150 µm Radial play: ≤ 30 µm
- Shaft runout: ≤ 10 µm
- Max. side load at 5 mm from mounting face: - sleeve bearings 1.5 N - ball bearings 3 N
- Motor fitted with sleeve bearings (ball bearings optional)

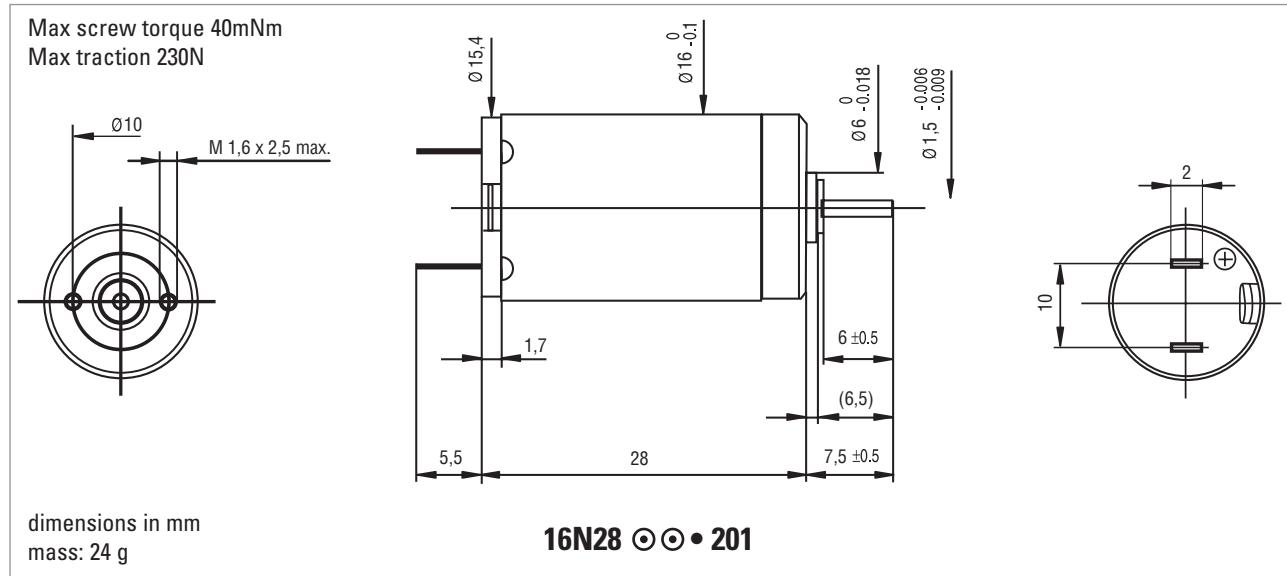
Max. Recommended Speed



16N28

Precious Metal Commutation System - 9 Segments

2.3 Watt



Winding Type	☉☉	-106	-205E	209E	207P
Measured Values					
Measuring voltage	V	16.0	18.0	9	4.8
No-load speed	rpm	10200	9600	9800	7900
Stall torque	mNm (oz-in)	3.4 (0.48)	2.9 (0.41)	5.4(0.76)	2.7(0.38)
Average No-load current	mA	6.3	4.9	8.4	11.9
Typical starting voltage	V	0.4	0.45	0.35	0.15
Max. Recommended Values					
Max. continuous current	A	0.19	0.15	0.41	0.49
Max. continuous torque	mNm (oz-in)	2.7 (0.38)	2.5 (0.35)	3.5(0.5)	2.7(0.38)
Max. angular acceleration	10 ³ rad/s ²	200	182	253	211
Intrinsic Parameters					
Back-EMF constant	V/1000 rpm	1.5	1.8	0.91	0.59
Torque constant	mNm/A (oz-in/A)	14.6 (2.07)	17.3 (2.45)	8.7	5.6
Terminal resistance	ohm	68.5	109	14.6	10
Motor regulation R/k ²	10 ³ /Nms	320	360	190	320
Rotor inductance	mH	2	3	0.7	0.28
Rotor inertia	kgm ² 10 ⁻⁷	0.53	0.55	0.55	0.51
Mechanical time constant	ms	17	20	11	16

Executions			
		Single Shaft	With F16
Gearbox	Page	16N28	16N28
B16 200	236	235	235
BA16 200	237	235	235
R16	238	201	201

- Thermal resistance: rotor-body 7°C/W, body-ambient 28°C/W
- Thermal time constant - rotor / stator: 7 s / 390 s
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- Shaft runout: ≤ 10 µm
- Max. side load at 5 mm from mounting face: - sleeve bearings 1.5 N - ball bearings 3 N
- Motor fitted with sleeve bearings (ball bearings optional)

Max. Recommended Speed

