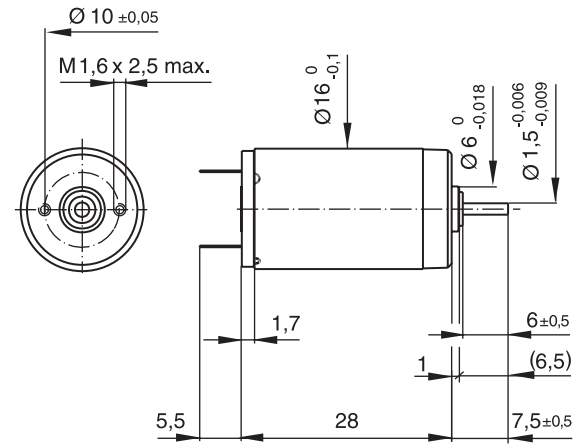
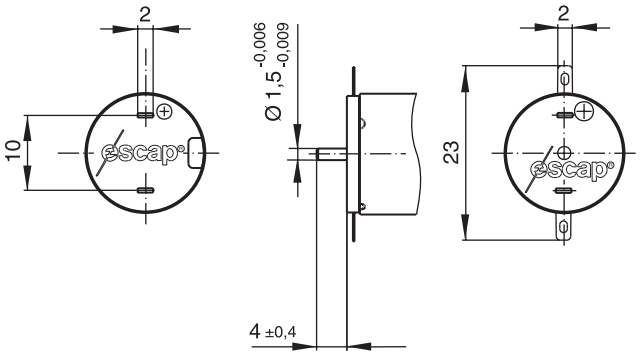
escap 16N28 & 16N38

Precious metal commutation system - 9 segments

D.C. Motor 1.7 Watt



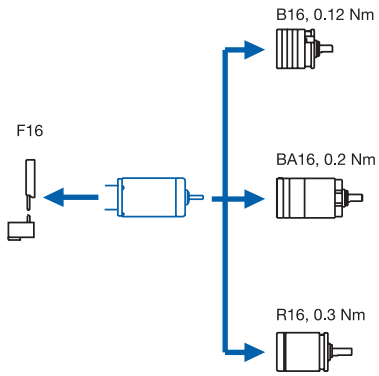


scale : 1:1
dimensions in mm
mass : 24 g

16N28 ▭ • 201 **16N38 ▭ • 213**

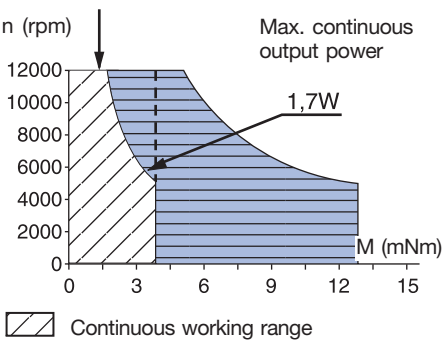
Winding types	▭	-114	-210E	-208E	-207E	-106	-205E
Measured values							
1 Measuring voltage	V	4.0	7.5	9.0	12.0	16.0	18.0
2 No-load speed	rpm	8900	9700	8900	10800	10200	9600
3 Stall torque	mNm (oz-in)	4.1 (0.6)	3.9 (0.55)	3.1 (0.45)	3.1 (0.45)	3.4 (0.5)	2.9 (0.4)
4 Average no-load current	mA	18.9	13.3	8.4	7.7	6.3	4.9
5 Typical starting voltage	V	0.06	0.15	0.2	0.3	0.4	0.45
Max. recommended values							
6 Max. continuous current	A	0.77	0.42	0.29	0.24	0.19	0.15
7 Max. continuous torque	mNm (oz-in)	3.2 (0.45)	2.9 (0.4)	2.7 (0.4)	2.4 (0.35)	2.7 (0.4)	2.5 (0.35)
8 Max. angular acceleration	10^3 rad/s^2	102	94	108	120	125	113
Intrinsic parameters							
9 Back-EMF constant	V/1000 rpm	0.44	0.75	1.0	1.1	1.5	1.8
10 Torque constant	mNm/A (oz-in/A)	4.2 (0.6)	7.2 (1.0)	9.5 (1.35)	10.3 (1.45)	14.6 (2.05)	17.3 (2.45)
11 Terminal resistance	ohm	4.1	14	28	40.5	68.5	109
12 Motor regulation R/k^2	10^3/Nms	230	270	310	380	320	360
13 Rotor inductance	mH	0.21	0.5	0.8	0.9	2	3
14 Rotor inertia	kgm^2 . 10^{-7}	0.77	0.77	0.63	0.51	0.53	0.55
15 Mechanical time constant	ms	18	21	20	19	17	20

Availability: see enclosed document at the end of the catalogue



- 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 +65 °C (-22 °F to +150 °F)
- Viscous damping constant :
  0.04 x 10^{-6} Nms
- Max. axial static force for press-fit : 100 N
- 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)
- With rear shaft extention, the no-load current is 50% higher

Max. recommended speed



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Specifications subject to change without prior notice