

DC-Micromotor

Precious Metal Commutation

1,35 mNm

For combination with:

Gearheads:

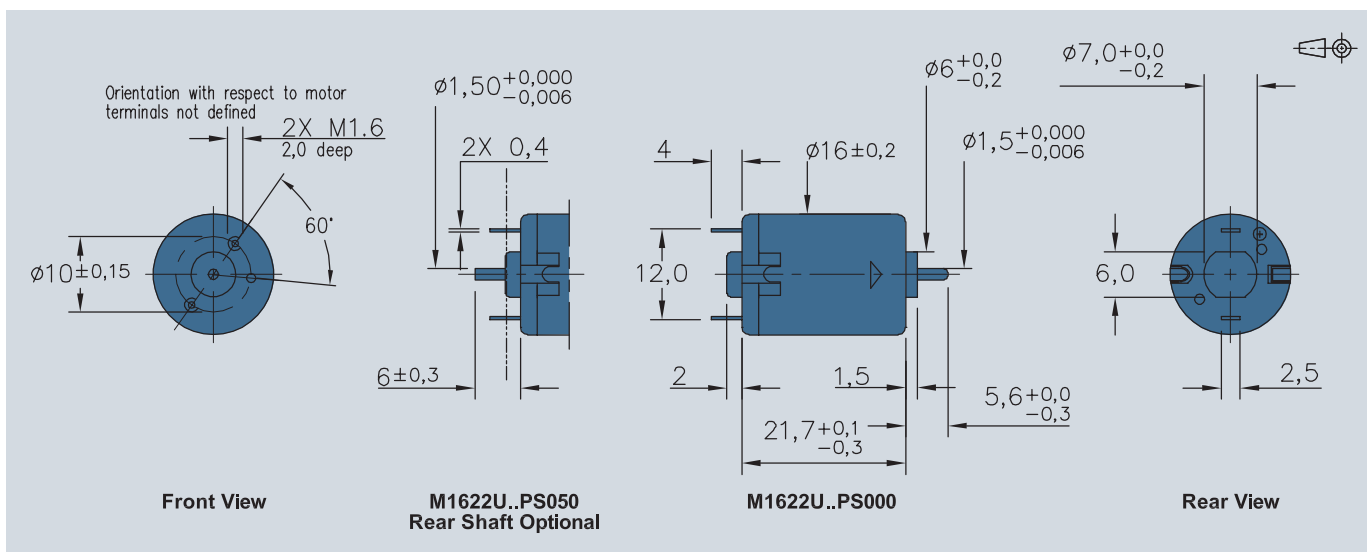
M16P

Encoder:

ME2-16

Series M1622U

	M1622U		05PS	07PS	18PS	
1 Nominal voltage	U_N		4.5	7	18	Volt
2 Winding resistance	R	± 10%	5.50	8.20	75	Ω
3 Output power	$P_{2 \text{ max.}}$		0.79	1.29	0.80	W
4 Efficiency	$\eta_{\text{ max.}}$		53	54	39	%
5 No-load speed	n_o	± 10%	10,400	12,900	11,050	rpm
6 No-load current max. (shaft Ø 1.5 mm)	I_o	± 50%	0.062	0.06	0.034	A
7 Stall torque	M_H		3.12	4.11	3.20	mNm
8 Friction torque	M_R		0.24	0.29	0.45	mNm
9 Speed constant	k_n		2,501	1,982	715	rpm/V
10 Back-EMF constant	k_E		0.40	0.50	1.40	mV/rpm
11 Torque constant	k_M		3.82	4.82	13.35	mNm/A
12 Current constant	k_I		0.262	0.208	0.075	A/mNm
13 Slope of n-M curve	$\Delta n/\Delta M$		3,329	3,137	3,448	rpm/mNm
14 Rotor inductance	L		1,600	2,500	14,844	μH
15 Mechanical time constant	τ_m		24	19	23	ms
16 Rotor inertia	J		0.63	0.54	0.54	gcm ²
17 Angular acceleration	$\alpha_{\text{ max.}}$		50	76	59	·10 ³ rad/s ²
18 Thermal resistance	$R_{th 1} / R_{th 2}$	30 / 41				°C/W
19 Thermal time constant	τ_{w1}	295				s
20 Operating temperature range:						
– motor		– 10 to + 50				°C
– rotor, max. permissible		+ 120				°C
21 Shaft bearing		sintered bronze sleeves				
22 Shaft load max.:						
– with shaft diameter		1.5				mm
– radial at 3,000 rpm (3 mm from bearing)		1.67				N
– axial at 3,000 rpm		1				N
– axial at standstill (shaft supported)		98				N
23 Shaft play						
– radial (4 mm from motor face)	≤	0.03				mm
– axial	≤	0.05 to 0.45				mm
24 Housing material		steel, nickel plating				
25 Weight		14.25				g
26 Direction of rotation		clockwise, viewed from the front face				
27 Speed up to	$n_{e \text{ max.}}$		10,000	10,000	10,000	rpm
28 Torque up to	$M_{e \text{ max.}}$		1.242	1.351	1.238	mNm
29 Current up to (thermal limits)	$I_{e \text{ max.}}$		0.404	0.349	0.115	A



How to Order a M1622U

Part number	Voltage	Description
M1622U05PS000	4,5	Standard motor
M1622U05PS050	4,5	Standard motor with rear shaft
M1622U07PS000	7	Standard motor
M1622U07PS050	7	Standard motor with rear shaft
M1622U18PS000	18	Standard motor
M1622U18PS050	18	Standard motor with rear shaft