

### M600 Series DC Servo Motors - 0.15-0.4 kW

The M600 series motors provide the ideal solution for use in applications which require output power ratings up to 400 watts.

#### Key features:

- The robust low inertia design allows for smooth running and reliable operation in an industrial environment
- Version available with built in tachometer for speed regulation using analogue control techniques
- Can be fitted to a variety of gear heads, dual track encoders and parking brakes

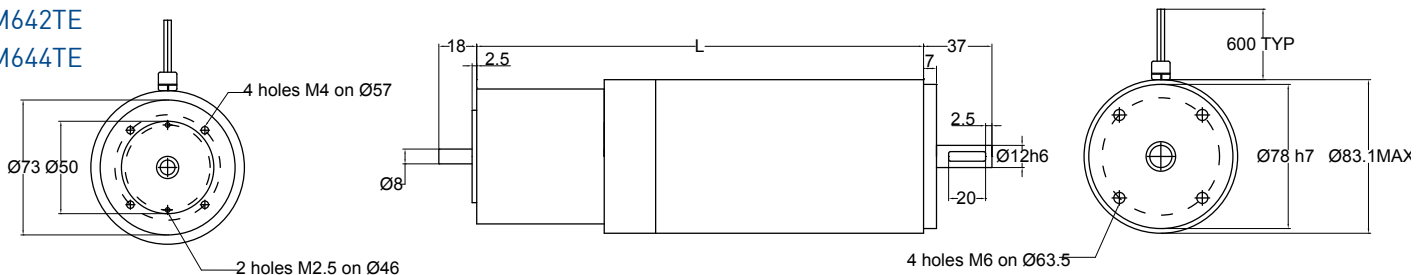


### Mechanical specification

#### Outline dimensions (mm)

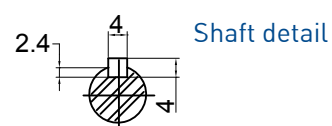
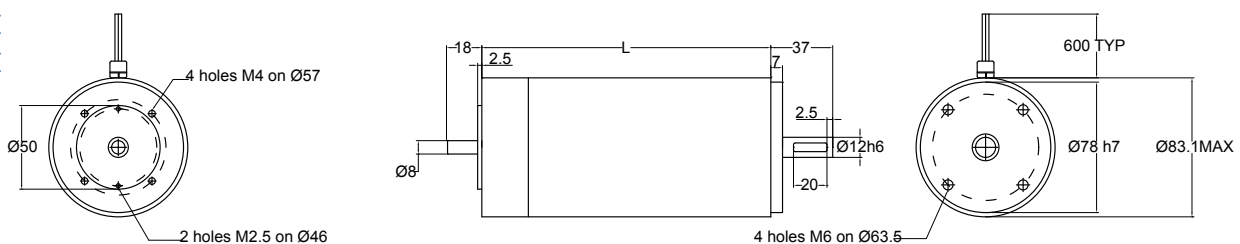
M642TE

M644TE



M642E

M644E



Motors	Length (L) mm	Mass kg
M642E	105.5	2.3
M644E	172.8	3.9
M642TE	174.5	2.7
M644TE	242.0	4.5

### Typical Performance

DC Servo Motors	No-load Speed	Rated Speed	Rated Torque	Rated Current	Peak Torque	Using Servo Amplifier	DC Supply V DC
	rpm	rpm	Nm	Amps	Nm		
M642E	2750	2250	0.66	8.0	1.6	MSE 810	24
M644E	3750	3000	1.30	8.0	2.6	MSE 810	50
<b>Version with built-in Tachometer</b>							
M642TE	2750	2250	0.66	8.0	1.6	MSE 810	24
M644TE	3750	3000	1.30	8.0	2.6	MSE 810	50

### Electrical specification

Specification	Units	M642E 0860	M644E 1340	M642TE 0860	M644TE 1340
Maximum Voltage	V DC	60	60	60	60
Typical Voltage	V DC	24	50	24	50
Maximum Continuous Output Power	Watts	150	440	150	440
Maximum No-load speed	rpm	4000	4000	4000	4000
Typical speed @rated torque	rpm	2250	3000	2250	3000
Rated torque	Nm	0.66	1.4	0.66	1.4
Maximum peak torque	Nm	3.3	6.36	3.3	6.36
Typical no-load current	Amps	0.5	0.30	0.5	0.30
Rotor inertia	Kgcm <sup>2</sup>	1.2	2.4	1.3	2.6
Mechanical time constant	ms	8.1	6.5	8.1	6.8
Torque constant	Nm/A	0.0816	0.130	0.0816	0.130
Voltage constant	V/1000 rpm	8.6	13.4	8.6	13.4
Terminal resistance	ohms	0.6	0.46	0.6	0.46
Rotor inductance	mH	0.42	0.64	0.42	0.64
Communication		Copper - graphite			
Bearings		Pre-loaded ball			
Maximum radial load		45N			
Maximum axial load		130N			
<b>Tacho Specification</b>					
Voltage constant	V/1000rpm	14+/- 10%			
Average ripple	Peak/peak	0.7@1000rpm			
Ripple frequency	Per rev	21			
Rotor Resistance	Ohms	600-800			
Max continuous speed	rpm	4000			

### Encoder option

M600 series motors are available fitted with quadrature (RS422 line driver) encoders to provide feedback of motor position. Motors thus equipped are therefore ideally suited for use with motion systems employing closed loop controllers. The standard 'E5' encoder option has 1000 pulses per rev (4000 positions) and is supplied complete with a cable assembly.

