

# MT30H4 D.C. Servomotors

## Technical Data

Parameter	Unit	MT30H4-65	MT30H4-44	MT30H4-33	MT30H4-22
<b>GENERAL</b>					
Voltage Gradient No Load	Volts/1000RPM*	65	44	33	22
Max. Terminal Voltage	Volts	140	140	130	90
Max. Speed	RPM	2100	3100	4000	4000
<b>Continuous Stall Torque TENV***</b>	<b>Nm</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>
	<b>lb - in</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>19</b>
Continuous Stall Torque Blower Cooled***	Nm	4.0	4.0	4.0	4.0
	lb - in	35	35	35	35
<b>Continuous Stall Current TENV***</b>	<b>Amps</b>	<b>3.5</b>	<b>4.4</b>	<b>6.8</b>	<b>10.5</b>
Armature Polar Moment of Inertia	Kgm <sup>2</sup>	0.0014	0.0014	0.0014	0.0014
	lb - in Sec <sup>2</sup>	0.012	0.012	0.012	0.012
<b>Torque Constant KT**</b>	<b>Nm/Amp*</b>	<b>0.61</b>	<b>0.43</b>	<b>0.31</b>	<b>0.20</b>
	<b>lb - in/Amp*</b>	<b>5.4</b>	<b>3.8</b>	<b>2.7</b>	<b>1.7</b>
Voltage Constant KV**	Volts Sec Rad <sup>-1*</sup>	0.61	0.43	0.31	0.20
Peak Stall Torque**	Nm	10.0	10.0	10.0	10.0
	lb - in	88	88	88	88
Current at Peak Torque**	Amps	18	26	37	57
Theoretical Acceleration at Peak Torque	Rad/Sec <sup>2</sup>	7100	7100	7100	7100
<b>Winding</b>					
Armature Resistance Less Brushes**	Ohms*	4.6	2.0	1.3	0.4
Armature Inductance	Millihenrys*	24.0	12.0	6.0	2.4
Mechanical Time Constant**	Milliseconds	18	18	18	18
<b>Thermal</b>					
Insulation Class		F	F	F	F
Max. Ambient Temperature	°C	40	40	40	40
Thermal Time Constant	Minutes*	50	50	50	50
<b>Mechanical</b>					
Static Friction Torque	Nm	0.15	0.15	0.15	0.15
	lb - in	1.3	1.3	1.3	1.3
Motor Weight	Kg	6.5	6.5	6.5	6.5
	lb	14	14	14	14
<b>TACHOMETER</b>					
Voltage Gradient	Volts/1000RPM*	9.5	STANDARD FOR USA ONLY		
	Volts Sec Rad <sup>-1*</sup>	0.090			
Ripple	Per Cent	1.0			
	Cycles/Rev	25			
Armature Resistance**	Ohms	36			
Armature Inductance	Millihenrys*	55			
Maximum Current	Amps	0.025			

\* Tolerance Plus or Minus 10%

\*\* At 25°C

\*\*\* At 40°C Ambient

■ **Motor Performance** data is on the basis of a pure D.C. i.e. unity system form factor supply. Appropriate performance derating is necessary when using a supply with a system form factor greater than unity.

■ **Commutation Curves** opposite and peak torque are based on the **peak value** of the current wave form. For a form factor greater than unity the maximum torque permitted will be lower than that detailed on the performance curves. **IMPORTANT** The commutation curves are based on a load inertia equal to the motor inertia. Advice should be taken in the event the load inertia is greater than the motor inertia.

● **Heatsink Ratings** Torque ratings shown in brackets (opposite top right) are correct for motors when fitted to a heatsink size (300mm x 300mm x 12mm)  
(12" x 12" x 0.5")

**STALL TORQUE** 2.1Nm / 19lb-in

● (2.3Nm / 20.4lb-in)

*Performance Curves*

