

6 Watt ironless rotor dc servo motor

M28 series

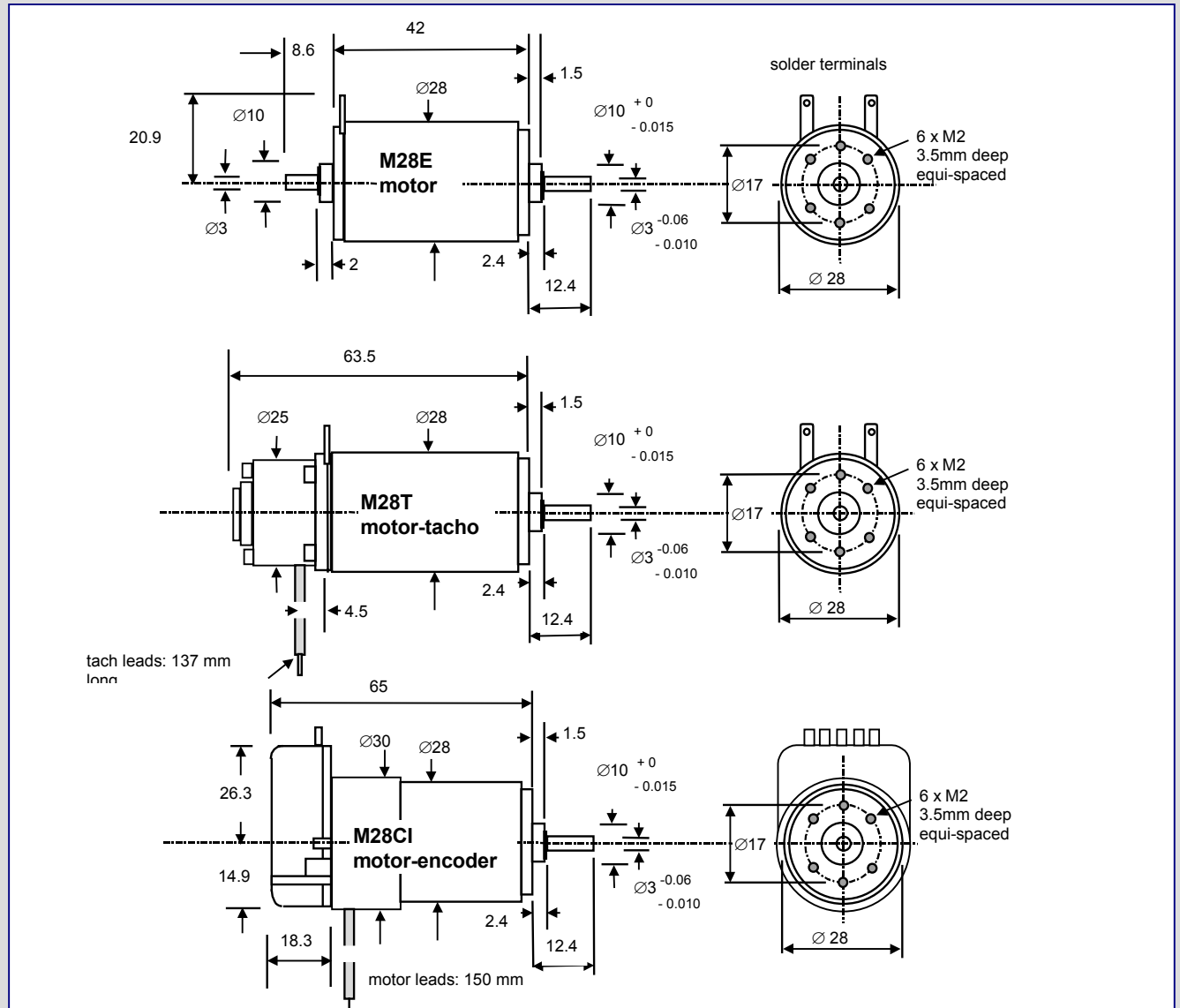
The M28 series provides excellent servo performance combining rapid response and smooth operation over the full speed range together with compact dimensions.

Features include:

- Skew wound ironless rotor providing fast acceleration and smooth operation free from cogging
- Pre-loaded ball race bearings withstand high radial load and zero shaft end float
- Heavy duty copper-graphite commutation withstand high peak current and provide long life
- Optional dc tach for accurate velocity control using analogue control techniques
- Dual track incremental encoder for use with digital control techniques



Dimensions: mm.



Typical performance

Motor	No-load Speed (rpm)	Rated Speed (rpm)	Rated Torque (Ncm)	Rated Current (Amps)	Peak Torque (Ncm)	using Servo Amplifier	DC Supply (Vdc)	Power Supply for AC operation (110-240 Vac)
M28-12 series	5,100	3,600	1.2	0.6	2.1	MSE40-1	N/A	MSE47
	5,100	3,000	2.0	1.0	4.8	MSE421	12	suitable for use with 12 Vdc battery
M28 -24 series	5,000	3,000	2.0	0.5	5.0	MSE421	24	MSE 171E

Note* Specify PM121-3T when using M28T-24 dc servo motor-tacho unit

Specification dc servo motor type M28E

M28 Motor- options:	M28E-	-06	-12	-24
Nominal Voltage (Vdc)		6	12	24
Maximum Output Power (Watts)		5.6	6.8	6.9
No-load speed (rpm)		5,100	5,100	5,000
Speed @ rated torque (rpm)		3,000	3,000	3,000
Rated Torque (Ncm)		2.0	2.0	2.0
Peak Torque (Ncm)		3.99	4.87	5.01
Typical No load current (Amps)		0.1	0.05	0.025
Rotor Inertia (Kgcm ²)		0.01	0.012	0.013
Mechanical time constant (milli secs)		13	15	15
Torque Constant (Ncm / A)		1.09	2.2	4.48
Voltage Constant (V / 1000 rpm)		1.15	2.3	4.7
Terminal Resistance (Ohms)		1.6	5.3	21
Rotor inductance (mH)		0.15	0.58	2.5
Commutation	Copper -graphite			
Bearings	pre-loaded ball			
Maximum radial load @ 3000 rpm	20 N, 3 mm from bearing face			
Maximum axial load @ 3000 rpm	2 N			
Ambient temperature range	-30 to +125 °C			


motor-tacho versions M28T series

types:	M28T-06	M28T-12	M28T-24
Nominal Voltage	6 Vdc	12Vdc	24Vdc
Motor specification:	As above		
Tacho Specification			
Voltage constant	V/1000 rpm	1.0	
Average ripple	peak / peak	7% (ripple frequency 10 cycles per rev.	
Terminal resistance	Ohms	210 (Load resistance \geq 25K Ohm)	
Max. continuous speed	rpm	5,000	

motor-encoder version M28-CI...series

types:	M28CI..T-06	M28CI..T-12	M28CI..T-24
	M28CI..L-06	M28CI..L-12	M28CI..L-24
Nominal Voltage	6 Vdc	12Vdc	24Vdc
Motor specification:	As above		
Encoder type		CI..T	CI..L
Supply	Vdc	5 \pm 0.5	5 \pm 0.5
Max. Output signal	Vdc	5	5
Signal wave form		Square	Square
Output Circuit		TTL	RS 422
Output Configuration		Dual Track Quadrature	Dual Track + Index (complementary)
Number of Lines		100 or 500	100 or 500

Typical Motor-encoder part number: M28 CI 500 L-24

500 line dual track encoder with Index  24 Vdc motor winding