

20 Watt Ironless rotor dc servo motor

M35 series

The M35 series provides outstanding performance for a unit of such compact dimensions.

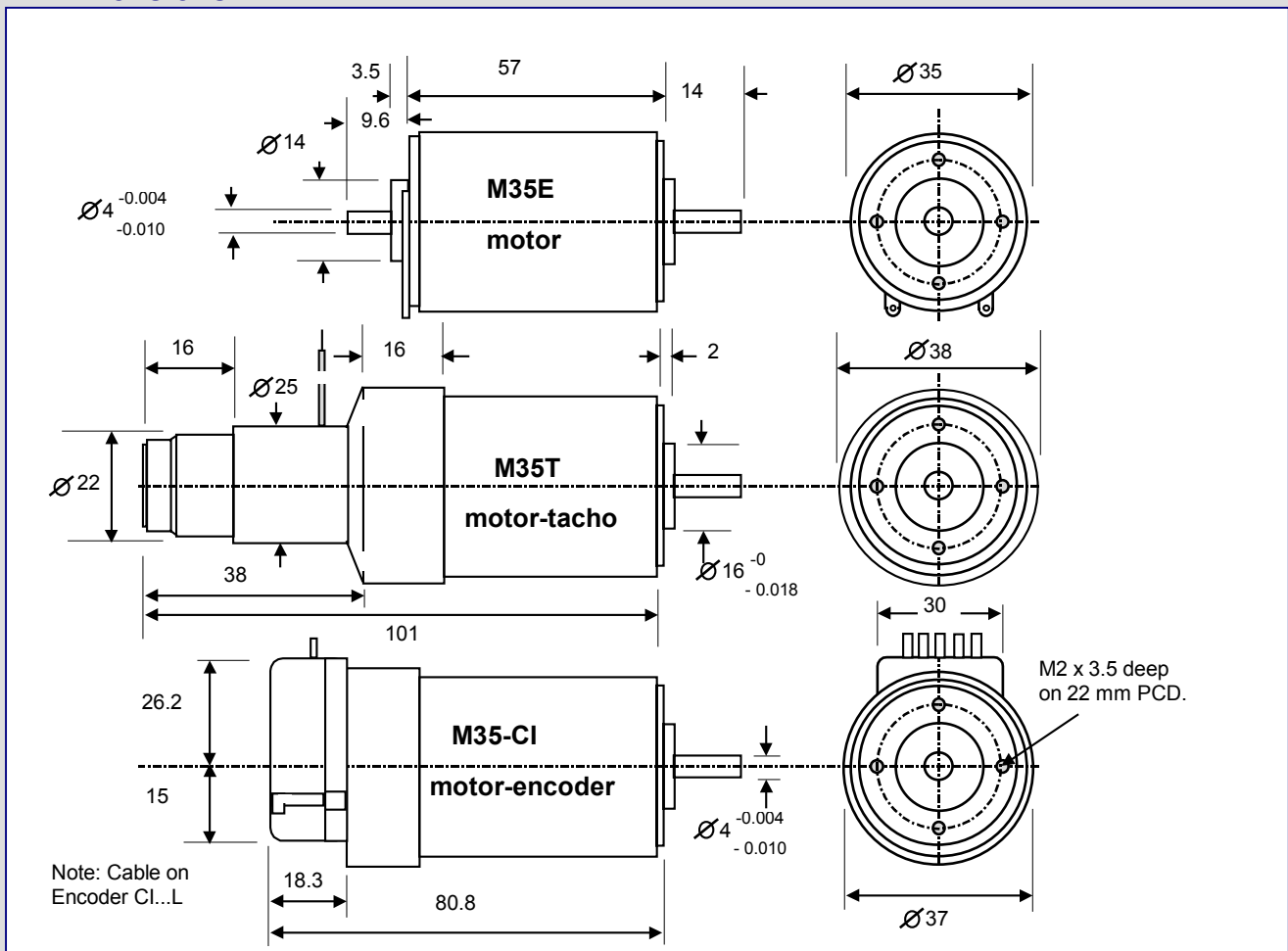
This, combined with the high reliability and long life expectancy makes it ideal for a wide range of professional applications requiring high torque, accurate control and rapid response.

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
- Optional dc tachometer 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)
M35-12 series	5,400	3,600	3.9	2.0	8	MSE421	12	suitable for use with 12 Vdc battery
M35 -24 series	5,500	3,750	3.8	1.0	12	MSE421	24	MSE 171E
	5,500	3,600	4.6	1.2	16	MSE421	24	MSE 171E

Note* Specify PM121-10T when using M35T-24 dc servo motor-tacho unit

Specification dc servo motor type M35E

M35 Motor- options:	M35E-	-12	-24	-48
Nominal Voltage (Vdc)		12	24	48
Maximum Output Power (Watts)		27	26	25
No-load speed (rpm)		5,400	5,500	5,200
Speed @ rated torque (rpm)		3,600	3,600	3,500
Rated Torque (Ncm)		3.9	4.6	4.3
Peak Torque (Ncm)		18.5	17.7	17.7
Typical No load current (Amps)		0.125	0.065	0.040
Rotor Inertia (Kgcm ²)		0.047	0.049	0.047
Mechanical time constant (milli secs)		16	16	16
Torque Constant (Ncm / A)		2.09	4.1	8.6
Voltage Constant (V / 1000 rpm)		2.19	4.3	9.1
Terminal Resistance (Ohms)		1.34	5.5	23
Rotor inductance (mH)		0.22	0.85	3.4
Commutation	copper -graphite			
Bearings	pre-loaded ball			
Maximum radial load @ 3000 rpm	30 N, 3 mm from bearing face			
Maximum axial load @ 3000 rpm	5 N			
Ambient temperature range	-30 to +125 °C			

motor-tacho versions M35T series

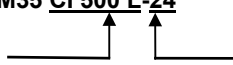
types:	M35T-12	M35T-24	M35T-48
Nominal Voltage	12Vdc	24Vdc	48 Vdc
Motor specification:	As above		
Tacho Specification			
Voltage constant	V/1000 rpm	4.3	
Average ripple	peak / peak	7% (ripple frequency 10 cycles per rev.	
Terminal resistance	Ohms	260 (Load resistance ≥ 25K Ohm)	
Max. continuous speed	rpm	5,000	

motor-encoder version M35-CI...series

types:	M35CI..T-12	M35CI..T-24	M35CI..T-48
	M35CI..L-12	M35CI..L-24	M35CI..L-48
Nominal Voltage	12Vdc	24Vdc	48 Vdc
Motor specification:	As above		
Encoder type		CI...T	CI...L
Supply	Vdc	5 ± 0.5	5 ± 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: M35 CI 500 L-24

500 line dual track encoder with Index



24 Vdc motor winding