



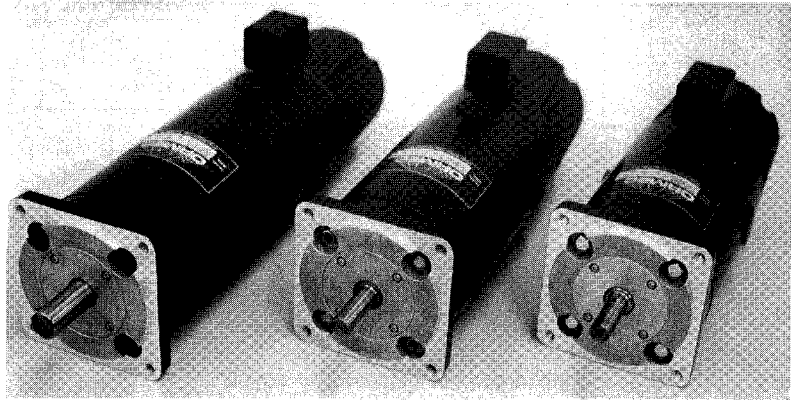
MOTOR-TACH-ENCODER MTE-530 Series

19 Linden Park Rochester, NY 14625 (716) 385-3520

MTE-530 Series DC Servomotors are compact, low inertia motors designed for applications which demand fast, accurate response, outstanding reliability and reasonable cost.

These motors feature aluminum die-cast housings and over-sized brushes for ruggedness and long brush life, typically over 10,000 hours.

Optical incremental encoders with a zero-reference channel and linedrivers are included. All terminations are made at a single standard connector, and custom cables are available.



The MTE-530 Series Servomotors pictured above feature continuous torque ratings from 25 to 48 lb-in. Optical incremental encoders are available with standard resolutions from 50 to 2,500 linecount.

Performance Specifications

	Units	MTE-533	MTE-535	MTE-537
Maximum Speed	RPM	2500	2500	2500
Torque, Continuous Stall (4)	lb-in	25	37.5	48
Torque, Continuous at 1750 RPM (4)	lb-in	19.5	27.9	36.7
Torque, Peak	lb-in	150	250	350
Torque/Inertia (Continuous)	rad/sec ²	3125	3209	3097
Torque Ripple	% of ave.	n/a	n/a	n/a
Ripple Frequency	cycles/rev	21	21	21
Motor-Tach Torsional Resonance	hertz	4000	4000	4000

Mechanical Specifications

Moment of Inertia (Motor/Tach)	lb-in-sec ²	0.008	0.012	0.016
Friction Torque, Static	lb-in	0.94	1.2	1.5
Friction Torque, Viscous	lb-in/kRPM	0.688	0.813	0.938
Weight (Motor/Tach)	lbs	22	30	38

Electrical Specifications

Torque Sensitivity (2)	lb-in/amp	3.31	3.25	3.56
Back EMF Voltage Constant (2)	volts/kRPM	39.3	38.5	42.2
Armature Resistance	ohms	0.95	0.51	0.44
Armature Inductance	millihenrys	2.5	1.3	1.3
Maximum Terminal Voltage	volts	160	160	160
Armature Current, Continuous (2)	amps	7.5	11.5	13.5
Armature Current at Peak Torque (2)	amps	45.3	76.9	98.2

Thermal Specifications

Thermal Resistance, Mounted (4)	deg C/watt	1.3	1.1	0.9
Thermal Time Constant (4)	minutes	32	44	49
Maximum Armature Temperature	deg C	155	155	155
Normally Closed Thermal Protector	deg C	n/a	n/a	n/a

Tachometer Specifications

Tachometer Sensitivity (2)	volts/kRPM	7	7	7
Tachometer Resistance (3)	ohms	100	100	100
Tachometer Ripple Volts	% of ave.	1.5	1.5	1.5
Tachometer Ripple Frequency	cycles/rev	21	21	21

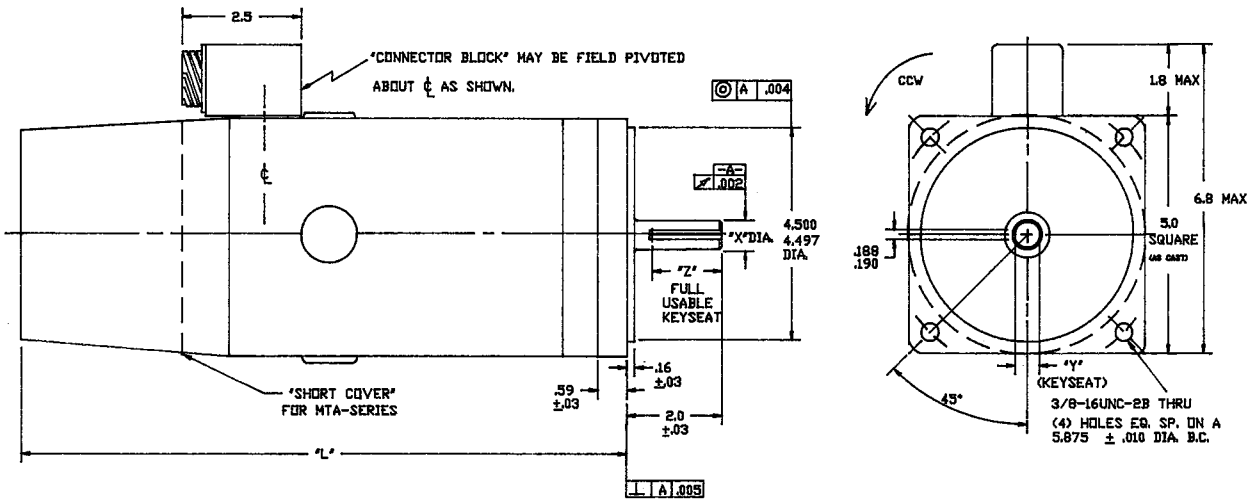
Encoder Specifications

Encoder Resolution	linecount	50-2500	50-2500	50-2500
Operating Temperature	deg C	0-70	0-70	0-70

- (1) All values at 25 degrees C unless otherwise noted.
 (2) ±10% parameter variability
 (3) ±15% parameter variability

- (4) Mounted to 10"x10"x1/4" aluminum plate
 (5) Brush life: 8000 hours @ 1000 RPM minimum
 (6) Motor Style: Totally Enclosed Non-Ventilated (TENV)

MOTOR OUTLINE DRAWING



NOTE: For counterclockwise rotation when facing the motor shaft, the armature lead at Pin 6 will be positive with respect to Pin 14 and the tach lead at Pin 1 will be positive with respect to Pin 2.

TABULATION

Model No.	"L"	"X"	"Y"	"Z"
MTE-533	12.8 ±.1	0.625	0.517	1.53
	"	0.624	0.502	"
MTA-533	9.4 ±.1	0.625	0.517	1.53
	"	0.624	0.502	"
MTE-535	14.8 ±.1	0.625	0.517	1.53
	"	0.624	0.502	"
MTA-535	11.4 ±.1	0.625	0.517	1.53
	"	0.624	0.502	"
MTE-537	16.8 ±.1	0.875	0.771	1.59
	"	0.874	0.756	"
MTA-537	13.4 ±.1	0.875	0.771	1.59
	"	0.874	0.756	"

MTE-530 SERIES ORDERING GUIDE

MTE-533/xxxx - Motor-Tach-Encoder
 Maximum Speed: 2,500 RPM
 Continuous Stall Torque: 25 lb-in
 Recommended Servo-Module: SPM-651A
 MTA-533 - Motor-Tach only

MTE-535/xxxx - Motor-Tach-Encoder
 Maximum Speed: 2,500 RPM
 Continuous Stall Torque: 37 lb-in
 Recommended Servo-Module: SPM-651B
 MTA-535 - Motor-Tach only

MTE-537/xxxx - Motor-Tach-Encoder
 Maximum Speed: 2,500 RPM
 Continuous Stall Torque: 48 lb-in
 Recommended Servo-Module: SPM-651B
 MTA-537 - Motor-Tach only

For all the above Motor-Tach-Encoders, "xxxx" specifies the encoder linecount. ORMEC maintains stock of 500, 1000, 1250 and 2500 linecount units. For other resolutions from 50 to 2,500, call ORMEC for price and delivery. Example: to specify an MTE-533 with a 500 linecount encoder, the part # is MTE-533/0500.

MTE CONNECTOR PINOUT

PIN	CONNECTOR	PIN	CONNECTION
6	Armature Red	3	+5VDC
14	Armature Black	4	DC COM
10	Case Ground	7	ENCA
1	Tach Red	8	ENCA'
2	Tach Black	11	ENCB
5	Shield	12	ENCB'
		15	ENCR
		16	ENCR'

OPERATING ENVELOPES:

