Motor Series **MTR3L**

Linear AC Actuator - 6.67/8.33 mm/sec

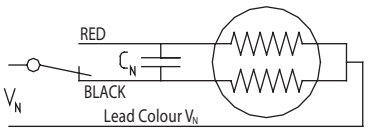
Application

Instrumentation, Machinery, Valve Actuators, Medical Equipment, Dampers, HVAC, Factory Automation, Valves etc.

Design

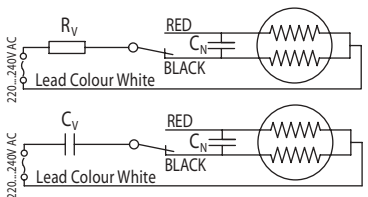
Mtr3L is a linear reversing synchronous motor of the permanent magnet type with two stator windings, for single phase AC 50/60 Hz. Phase displacement of the excitation current is achieved by connecting a capacitor in series with one of the stator windings. Axial movement is determined by the resulting circular rotating field. Electrical reversal of the axial movement is effected by means of a single-pole changeover switch. The 12pole rotor causes to & fro when motor is energised.

Connection Diagram



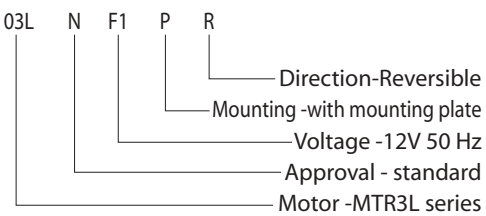
Add on units for 220* & 240* V

220….240 V (V_N motor 110V)



Unit	220V	240V
R_N (1.5W) 50/60Hz	8.2 KΩ	10 KΩ
C_N (200 VAC) 50 Hz	0.18 µF	0.15 µF
C_N (200 VAC) 60 Hz	0.15 µF	0.12 µF

Ordering Data (eg.)



Standard Data

Motor type		Reversible synchronous
Ambient temperature operation	˚C	-15...+55
Ambient temperature storage	˚C	-20...+100
Thermal class	˚C	105
Linear speed	mm/sec	6.67/8.33 @50Hz
Life expectancy		3 years in continuous operation
Mounting		any position
Standard motor voltages	V	12,24,48,110,220*&240*(others on request)
HVT		2.0 KV (motor voltage>40V) or 0.6 KV (motor voltage<40V) for 1 min.
Weight	gm	90
Rotor stalling		Motor can be stopped when voltage is applied, without being overheated
Rotor shaft		Cu. alloy
Bearings		Ball bearing
External dimensions		dia. 36 x 41 mm

Techinical data

Rated voltage V_N	V	12	24	48	110	220*	240*
Operation capacitor (50 Hz)C_N	µF/VAC	15/20	3.9/50	1.0/100	0.18/200	with add on unit	
Operation capacitor (60 Hz)C_N	µF/VAC	15/20	3.9/50	1.0/100	0.18/200		
Lead colour (V_N)		Grey	Blue	Brown	White	Yellow	
Tolerance of voltage	%	-10... +15% of rated voltage					
Duty cycle	%	100					
Rated frequency	**Hz**			**50**		**60**	
Linear speed	mm/sec			6.67/8.33		8/10	
Power consumption at rated voltage	W			1.5		1.5	
Travel	mm	8, 13 mm (other on request)					
Force	kg	2.0 (special winding)					

Motor Drawing