

# Datasheet

Reversible Synchronous Motor - 500 RPM

**RS Stock No: 9180742, 9180748, 9180751, 9180754, 9180758, 9180760, 9180767, 9180770, 9180773, 9180776, 9180789, 9180843, 9180764, 9180852, 9180855, 9180859, 9180871**



### Application

Valve Actuators, Light displays, Textile machinery, Medical equipment, Air conditioning & refrigeration, Dampers peristaltic Pumps, Dosing pumps, Vending machines, CCTV Camera positioning, any positioning Application.

### Standard Data

Motor type		Reversible synchronous
Ambient temperature operation	°C	-15...+55
Ambient temperature storage	°C	-20...+100
Thermal class	°C	105
Motor speed	rpm	500 @ 50 Hz
Life expectancy		3 years in continuous operation
Mounting		any position
Standard motor voltages	V	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	200
Rotor stalling		Motor can be stopped when voltage is applied, without being overheated
Rotor shaft		Hardened steel, ground and polished
Bearings		Sintered bronze, self-lubricating
External dimensions		dia. 52 x 28.5 mm

### Design

MTR4b reversing synchronous motor is 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. The sense of rotation is determined by the resulting circular rotating field. Electrical reversal of the sense of rotation is effected by means of a single-pole changeover switch.

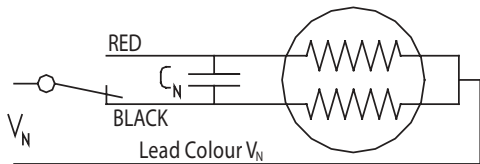
The 12 pole rotor which has a steel shaft polished to a mirror-finish rotates in sintered bronze bearings.

Motor can be provided with Mounting plate/ Screw clip for fixing.

**Technical data**

Rated voltage $V_N$	V	24	48	110	220	240
Operation capacitor (50 Hz) $C_N$	$\mu\text{F/VAC}$	10/50	2.7/100	0.47/250	0.12/400	0.1/400
Operation capacitor (60 Hz) $C_N$	$\mu\text{F/VAC}$	8.2/50	2.2/100	0.39/250	0.1/400	0.082/400
Lead colour ( $V_N$ )		Blue	Brown	White	Yellow	Yellow
Tolerance of voltage	%	-10... +15% of rated voltage				
Duty cycle	%	100				
<b>Rated frequency</b>	<b>Hz</b>	<b>50</b>			<b>60</b>	
Power output at rated voltage	W	0.83			0.87	
Speed	rpm	500			600	
Running torque at rated voltage	gm-cm	160			150	
Power consumption at rated voltage	W	3.6			3.7	
Detent torque	gm-cm	75				

**Connection Diagram**



**Motor Drawing**

