

# Geared ironless rotor dc servo motor

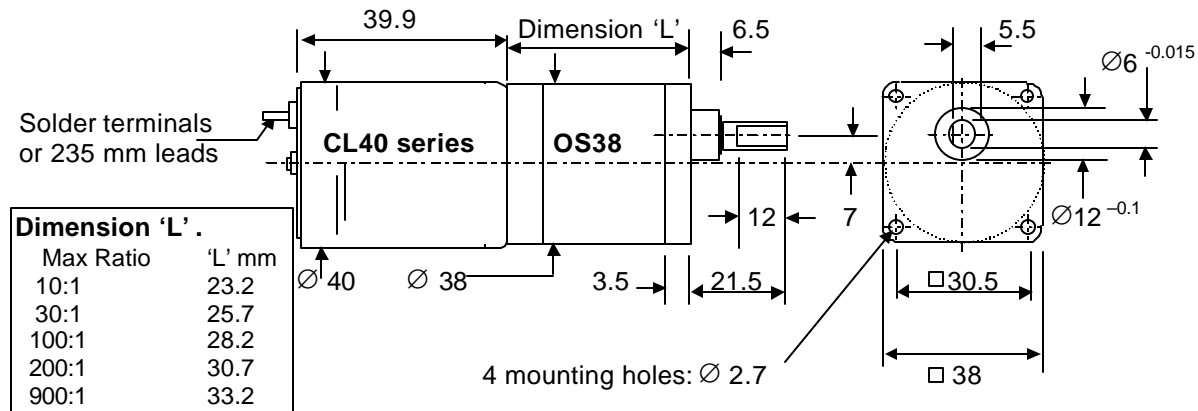
# OS38 / CL40

The OS38 geared dc servo motor provides a compact drive for a wide range of instrumentation applications.

## Features

- Low inertia ironless servo motor provides rapid response to control signal changes
- Precious metal commutation ensures high efficiency and excellent servo control
- Metal geartrain for high reliability
- Choice of 12 or 24 Vdc motor options with wide range of standard gear ratios
- Low unit cost ideal for small and medium size Original equipment manufacturers

## Dimensions: mm



## Performance @ rated voltage

Gearhead	Ratio (: 1)	Motor	Rated Speed rpm	Rated Torque Nm	Peak Torque Nm	Torque Constant * Nm/A x Kt
OS38	6	CL40	400	0.07	0.3	0.17
	10		250	0.12	0.4	0.29
	18		140	0.20	0.6	0.46
	30		90	0.22	0.7	0.77
	60		45	0.40	1.8	1.40
	100		26	0.67	1.8	2.35
	200		13	0.70	1.8	4.27
	500		5	0.70	2.0	9.60
	900		3	0.70	2.0	17.3

## General Specification

Motor construction	low inertia ironless rotor
Commutation	precious metal
Typical current @ no load	0.040 A (12 volt version) motor type 9904 120 16603 / 16111 0.020 A (24 volt version) motor type 9904 120 16606 / 16206
Torque constant ( Kt )	1.0 (12 volt version) 2.0 (24 volt version)
Motor rotor inertia	0.039 Kgcm <sup>2</sup>
Motor mechanical time constant	13 milli secs.
Gearhead construction	Multi-stage spur gear
Gear material	metal
Maximum radial load @ output	45 N @ 5 mm from bearing face
Maximum axial load	30N
Maximum press on force	450N with supported output shaft @ rear
Maximum axial shaft play	0.2 mm

## Typical motor current under load

Motor current =  $\frac{\text{operating torque}}{\text{Kt} \times \text{torque constant}}$  + No load current

### Example:

For 24 Volt unit with 30:1 gear ratio operating at full rated torque of 0.22 Nm

$$\text{Motor current} = \frac{0.22}{2 \times 0.77} + 0.02 = 0.16 \text{ Amps}$$