Geared ironless rotor dc servo motor   MX38 / CL29
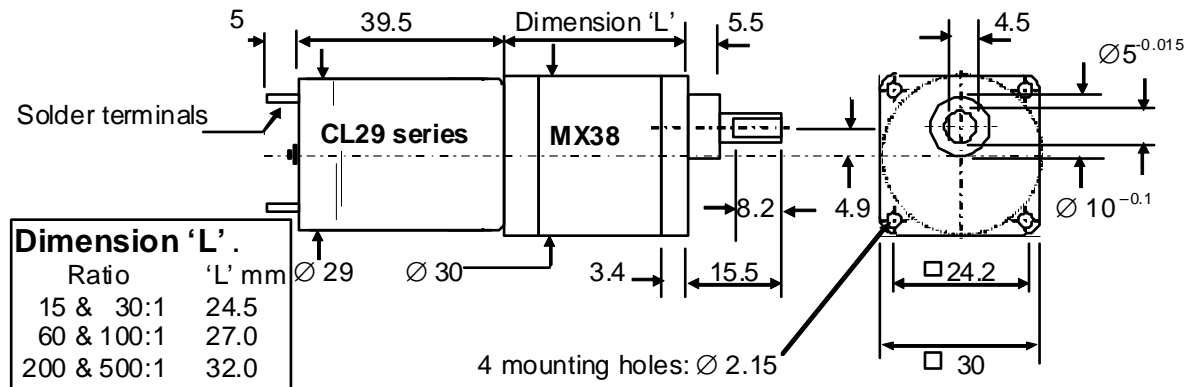
General
The MX38 geared dc servo motor provides a compact drive for a wide range of instrumentation applications.
Features
- Low inertia ironless servo motor provides rapid response to control signal changes
- Precious metal commutation ensures high efficiency and excellent servo control
- Metal geartrain 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

Dimension 'L'.
Ratio	'L' mm
15 & 30:1	24.5
60 & 100:1	27.0
200 & 500:1	32.0

4 mounting holes: ∅ 2.15

Performance @ rated voltage

Gearhead	Ratio (: 1)	Motor	Rated Speed rpm	Rated Torque Nm	Peak Torque Nm	Torque Constant * Nm/A x Kt
MX38	15	CL29	200	0.06	0.2	0.317
	30		100	0.07	0.2	0.635
	60		50	0.1	0.3	1.13
	100		30	0.1	0.3	1.88
	200		15	0.2	0.6	3.42
	500		6	0.2	0.6	7.54

General Specification
Motor construction	low inertia ironless rotor	
Commutation	precious metal	
Typical current @ no load	0.070 A	(12 volt version) motor type 9904 120 18105
	0.040 A	(24 volt version) motor type 9904 120 18215
Torque constant (Kt)	1.0	(12 volt version)
	2.1	(24 volt version)
Motor rotor inertia	0.009	
Motor mechanical time constant	13 milli secs.	
Gearhead construction	Multi-stage spur gear	
Gear material	metal	
Maximum radial load @ output	30 N @ 5 mm from bearing face	
Maximum axial load	15N	
Maximum press on force	350N with supported output shaft @ rear	
Maximum axial shaft play	0.2 mm	

Typical motor current under load

Motor current $= \dfrac{\text{operating torque}}{\text{Kt x torque constant}}$ + No load current

Example:
For 12 Volt unit with 30:1 gear ratio operating at full rated torque of 0.07 Nm

Motor current $= \dfrac{0.07}{1 \times 0.635}$ + 0.07 = 0.18 Amps