

TSL-CRA-RI30-40

Ø40 mm Robot Joint Module | Harmonic Gearbox

Compact integrated joint module with 51:1 / 101:1 harmonic reduction options.



Reduction Ratio 51:1 / 101:1	Rated Torque 1.8 / 2.4 N·m	Peak Torque 3.3 / 4.8 N·m	Supply Voltage 24-48 V
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1. Electrical, Mechanical and Control Parameters

Parameter	Unit	51	101
Peak Torque at Start-Stop	N·m	3.3	4.8
Max Allowable Average Load Torque	N·m	2.3	3.3
Rated Torque @ 2000 rpm (Motor Speed / Reduction Ratio)	N·m	1.8	2.4
Peak Output Shaft Speed	rpm	118	59
Rated Speed (With 1/2 Rated Torque Load)	rpm	90	45
Backlash	arcsec	40	40
Motor Power	W	36	36
Supply Voltage	V	24-48	24-48
Max Continuous Current	A	2	2
Rated Current	A	1	1
Torque Constant	N·m/A	0.024	0.024
Encoder Resolution	bit	20 / 20	20 / 20
Communication Bus	-	CAN / EtherCAT	CAN / EtherCAT
Hollow Shaft Bore Diameter	mm	6	6
Nominal Length Options	mm	60 ± 0.5 / 75.5 ± 0.5	60 ± 0.5 / 75.5 ± 0.5
Mass	kg	0.21 / 0.27	0.21 / 0.27
Rotational Inertia	g·cm ²	23.73 / 28.15	23.73 / 28.15
Allowable Radial Load	kN	3.19	3.19
Allowable Axial Load	kN	6.56	6.56
Allowable Bending Moment	N·m	38	38
Gearbox Type	-	Harmonic	Harmonic

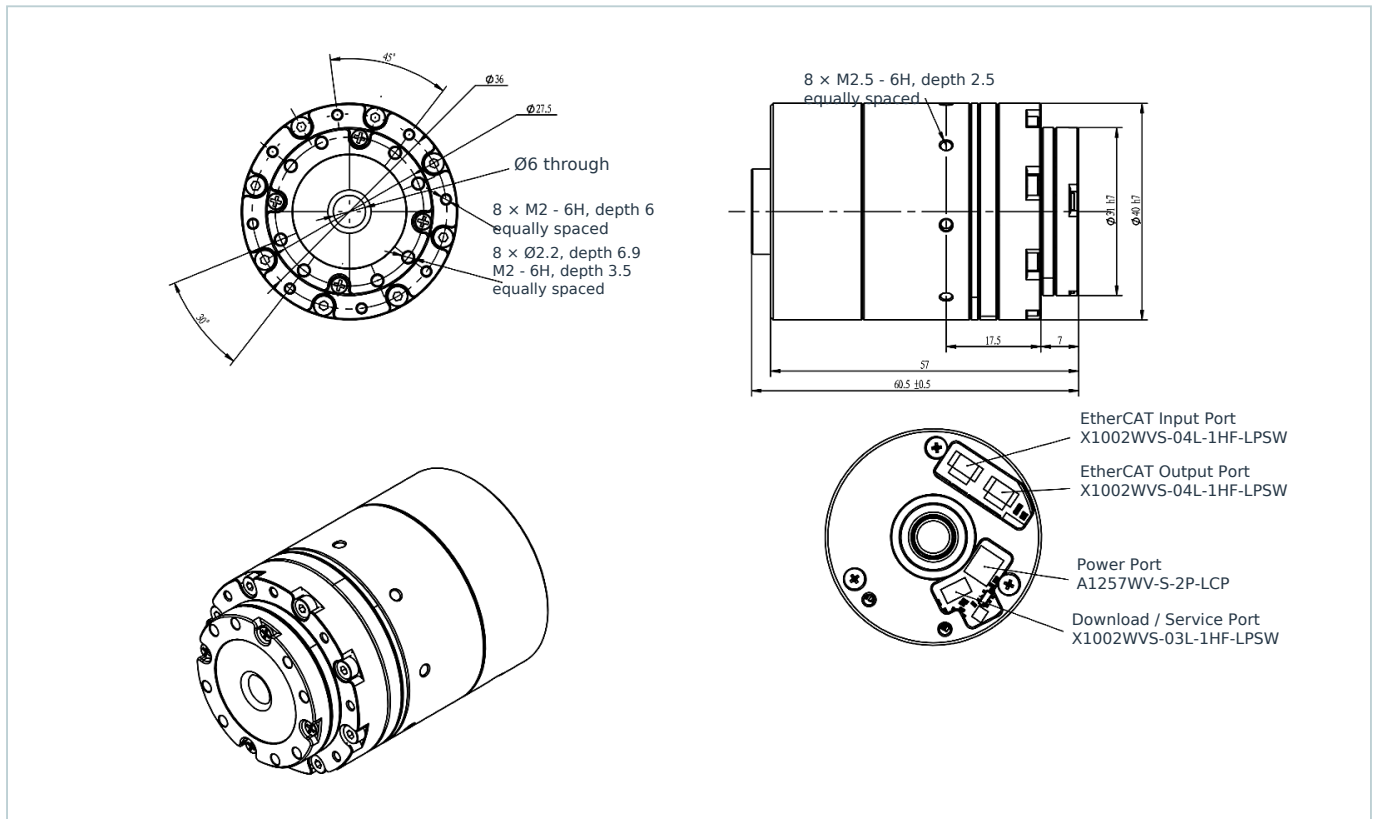
Parameters are for reference only. For final installation dimensions, refer to the drawings on pages 2-3.

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2. Dimension Drawing - 60.5 mm Version

All dimensions are in millimeters unless otherwise specified.



Configuration	60.5 mm version
Overall Length	60.5 ± 0.5 mm
Main Body Length	57 mm
Outer Diameter	Ø40 h7
Front Interface	Ø31 h7; Ø36 and Ø27.5 reference diameters
Hollow Shaft Bore	Ø6 through
Communication Interfaces	EtherCAT input / output, power port, download / service port
Mounting Features	Multiple M2.5 and M2 threaded holes as shown

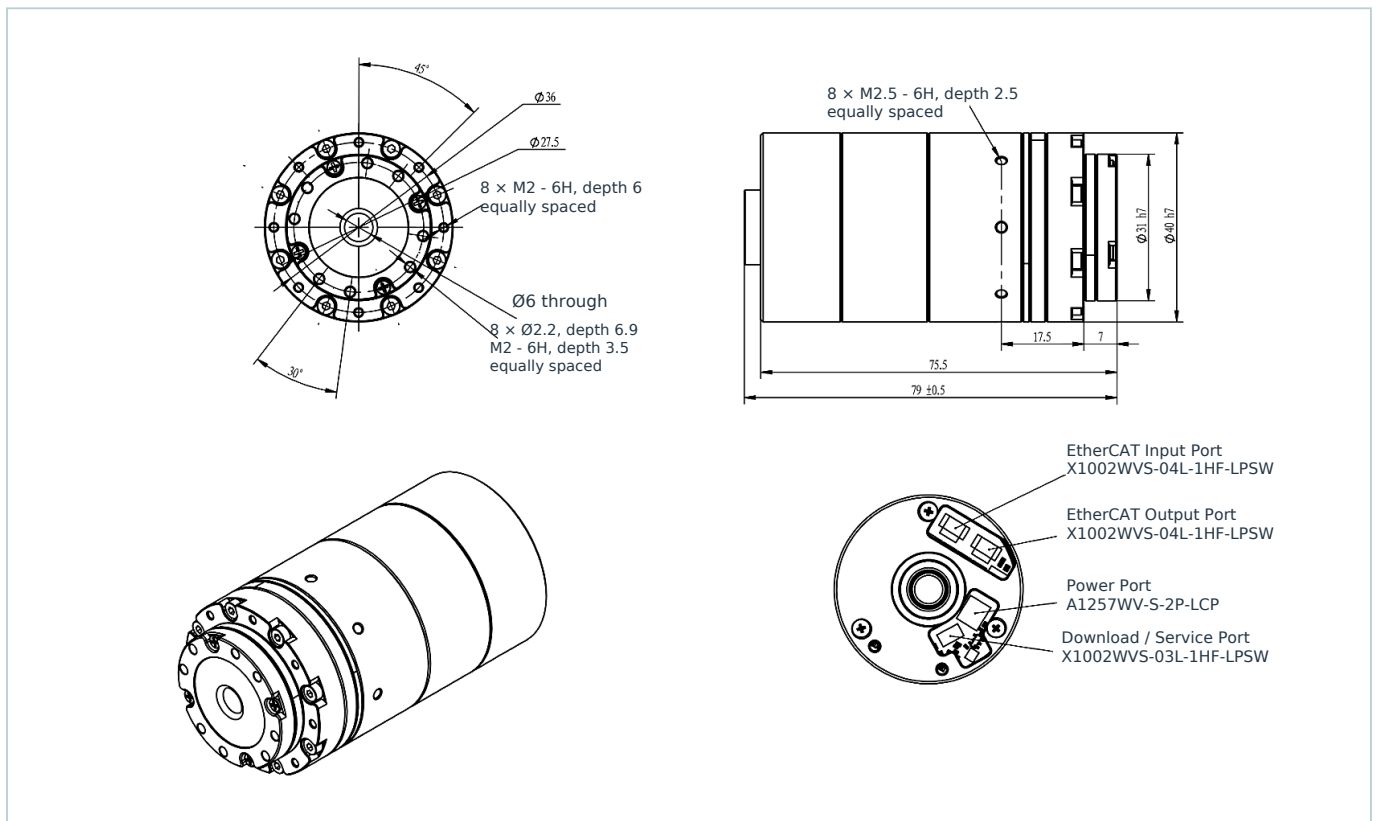
Drawing: TSL-CRA-RI30-40 - 60.5 Mm Version Version V1.0 | Updated 2026-07-11

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3. Dimension Drawing - 79 mm Version

All dimensions are in millimeters unless otherwise specified.



Configuration	79 mm version
Overall Length	79 ± 0.5 mm
Main Body Length	75.5 mm
Outer Diameter	Ø40 h7
Front Interface	Ø31 h7; Ø36 and Ø27.5 reference diameters
Hollow Shaft Bore	Ø6 through
Communication Interfaces	EtherCAT input / output, power port, download / service port
Mounting Features	Multiple M2.5 and M2 threaded holes as shown
Drawing: TSL-CRA-RI30-40 - 79 Mm Version	
Version V1.0 Updated 2026-07-11	