

TSL-BX6215

Ø85 mm Robot Joint Module | Cycloidal Gearbox

Compact integrated robot joint module with 15:1 / 25:1 / 35:1 cycloidal reduction options.



Reduction Ratio	Rated Torque	Peak Torque	Supply Voltage
15:1 / 25:1 / 35:1	16.8 / 28 / 39 N·m	41.8 / 70 / 98 N·m	24-48 V

1. Basic Data

Parameter	TSL-BX6215
Transmission Structure	Cycloidal pinwheel
Reduction Ratio	15:1 / 25:1 / 35:1
Nominal Voltage	24-48 V
Nominal Current	5 A
Stall Current	12.2 A
Phase-to-Phase Resistance	1017 mΩ
Phase-to-Phase Inductance	582 μH
Speed Constant	38.5 rpm/V
Torque Constant	0.250 N·m/A
Rotor Inertia	147 kg·mm²
Number of Pole Pairs	14 pairs
Operating Temperature Range	-20 to 80 °C
Maximum Demagnetization Temperature	120 °C
Encoder Type	Dual encoders
Encoder Technology	Hall magnetic encoding
Encoder Resolution	16-bit absolute value
Hollow Bore Diameter	5 mm
Weight	685 ± 10 g
Control Methods	CAN / PWM / Pulse & Direction / Bluetooth / Wi-Fi

Parameters are for reference only. Final specifications and installation dimensions are subject to the approved drawing.

TSL-BX6215

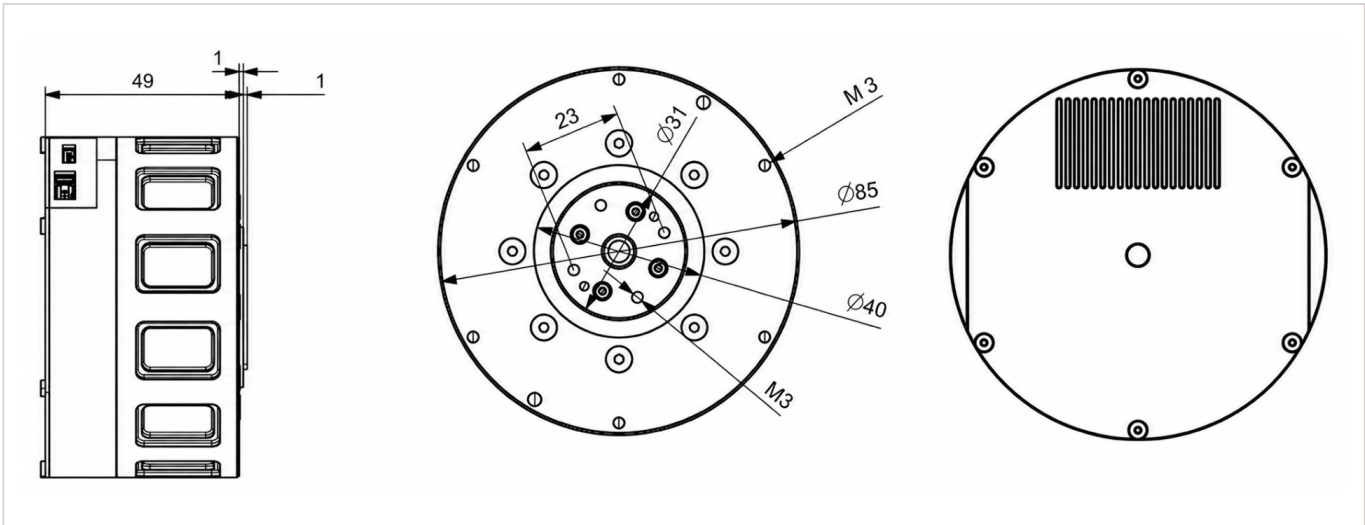
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2. Output Parameters

Model	Reduction Ratio	Rated Torque	Peak Torque	Rated Speed	Peak Speed
TSL-BX6215-15	1:15	16.8 N·m	41.8 N·m	96 rpm	123 rpm
TSL-BX6215-25	1:25	28 N·m	70 N·m	58 rpm	74 rpm
TSL-BX6215-35	1:35	39 N·m	98 N·m	41 rpm	53 rpm

3. Dimension Drawing

All dimensions are in millimeters unless otherwise specified.



Dimension Item	Specification
Configuration	Ø85 mm cycloidal robot joint module
Reduction Ratio Options	15:1 / 25:1 / 35:1
Outer Diameter	Ø85 mm
Main Body Length	49 mm
Front / End Features	1 mm + 1 mm; see dimension drawing
Hollow Bore Diameter	Ø5 mm
Front Reference Diameters	Ø31 mm and Ø40 mm
Mounting Features	M3 threaded features; 23 mm spacing shown in drawing