ROBOTIQ

FORCE TORQUE SENSOR

FT 150

A 6-AXIS FORCE TORQUE SENSOR
WITH HIGH QUALITY DIGITAL SIGNAL
AND EASY INTEGRATION.

HIGH QUALITY DIGITAL SIGNAL

- Immune to external electrical noise
- No filtering needed

DIRECT COMMUNICATION WITH YOUR CONTROLLER

- No need for an external signal processing box

SPEED UP INTEGRATION

- Compatible with industrial robots
- Software packages available for Universal Robots, ROS, Linux and Windows

DESIGNED FOR

PRODUCT TESTING

HAND GUIDING

ASSEMBLY

robotiq.com

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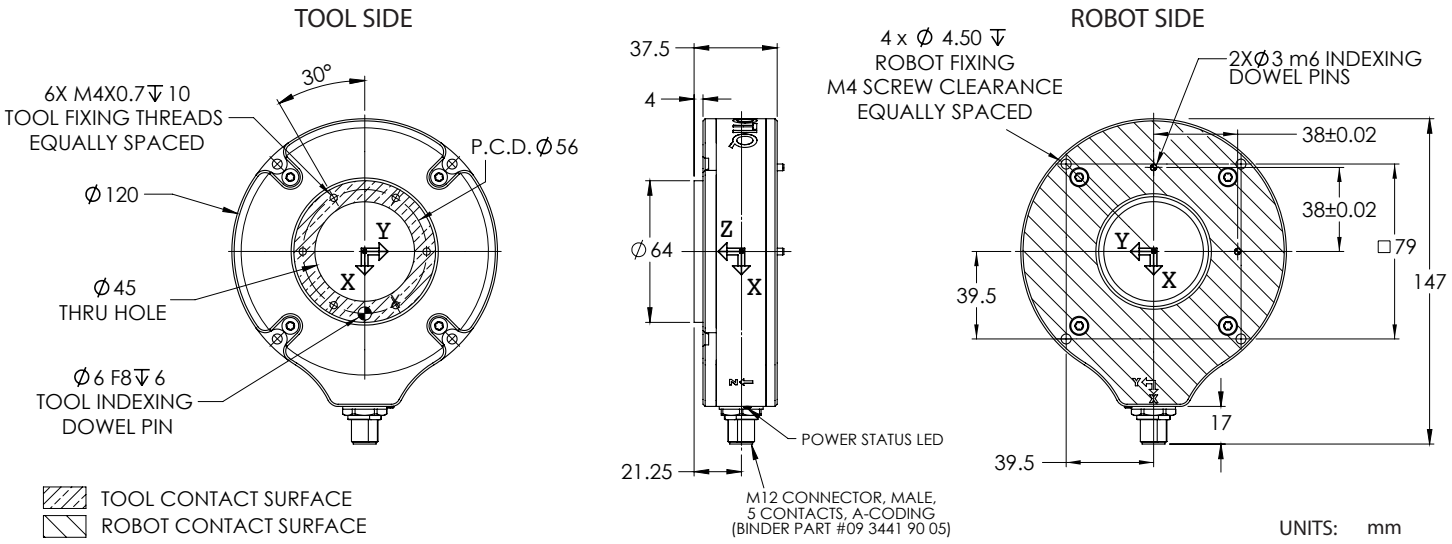

SIGNAL SPECIFICATIONS

			Recommended threshold	
Measuring range	Fx, Fy, Fz	± 150 N		
	Mx, My, Mz	± 15 N.m		
Signal noise	Fx, Fy	0.5 N	2 N	Noise is here defined as the standard deviation of all data collected for 10 seconds for a steady signal. The value is computed for all 3 sensing elements for both vectors.
	Fz	0.25 N	1 N	
	Mx, My	0.015 Nm	0.06 Nm	
	Mz	0.02 Nm	0.08 Nm	
External noise sensitivity	All axes	Immune		For example, welding current passing through the sensor hole does not affect the readings.
Drift	Fx, Fy, Fz	±3 N over days		Hour-to-hour drift is non-significant. Can be minimized if the environment is well-controlled. This specification does not consider the effect of a long-term change of the environment relative humidity.
	Mx, My, Mz	Non-significant		
Data output rate		100 Hz		
Communication protocol		Modbus RTU		
Temperature compensation		15°C - 35°C		Temperature fluctuation is compensated for within this range. Signal quality may be affected outside of this range.

MECHANICAL SPECIFICATIONS

Outside diameter		120 mm	
Through-hole diameter		45 mm	
Thickness		37.5 mm	Without adapter plate
Weight		650 g	
Stiffness (calculated)	Fx, Fy	3.2×10^6 N/m	
	Fz	3.9×10^6 N/m	
	Mx, My	4700 Nm/rad	
	Mz	4600 Nm/rad	
Mechanical overload	All axes	500% *	Exceeding the overload capacity will permaanently damage the sensor

* of the measuring range

ELECTRICAL SPECIFICATIONS

Input voltage	6-28 V DC	
Max power consumption	2 W	
Electrical interface	RS-485	RS-485 to USB converter provided (RS-485 to RS-232 also available)

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Specifications subject to change without notice