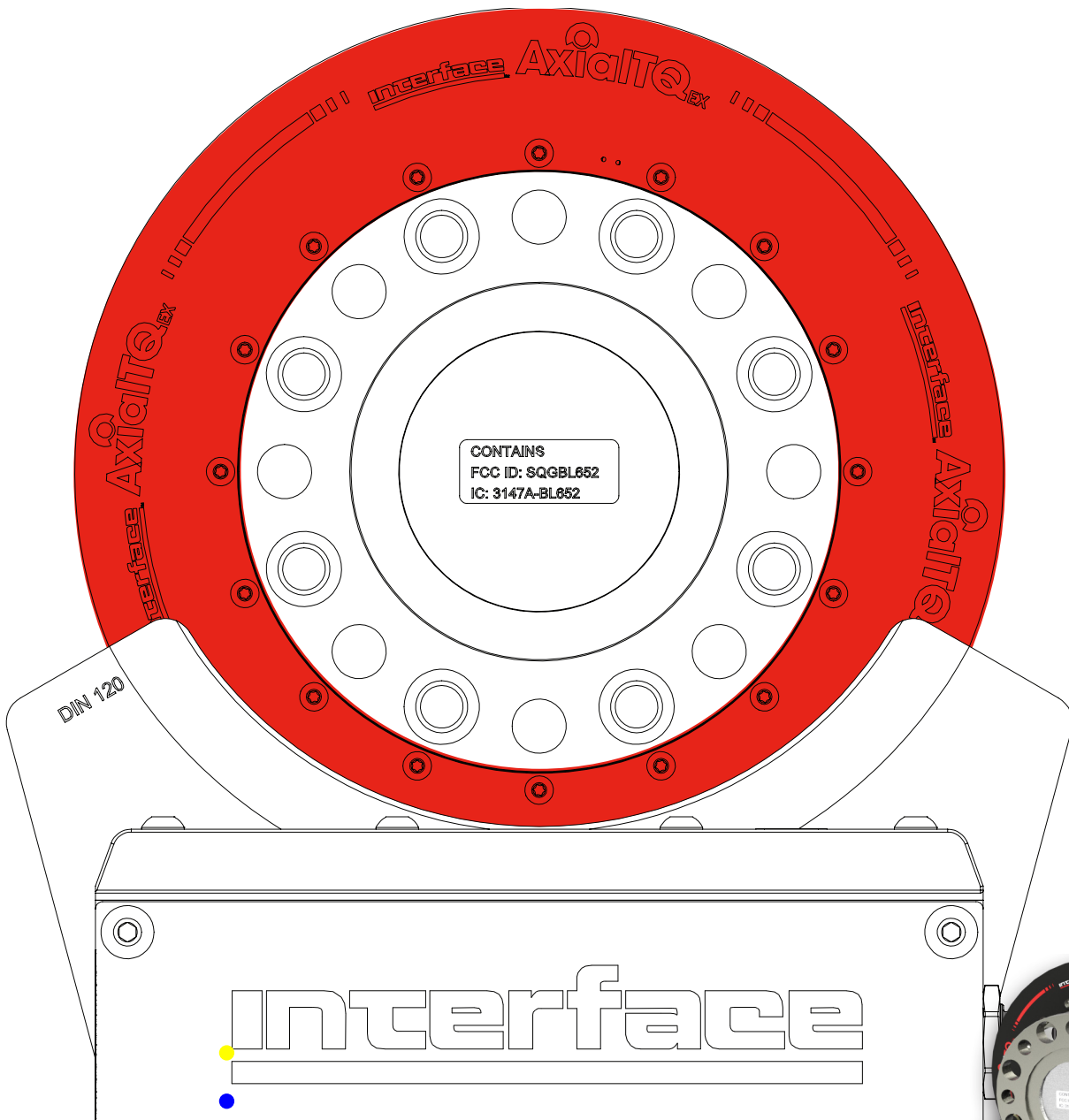


# AxialTQ

The Next Generation of **TORQUE MEASUREMENT DEVICES™**



AxialTQ v7.9 08-15-2023



# Introducing The Interface AxialTQ Torque Measurement System

The Interface AxialTQ torque measurement system was developed in direct collaboration with over 30 end-users who shared their wish-lists for operational priorities, user interface, design, features, real-world field issues and more.

**AxialTQ torque measurement system redefines the category in terms of function, accuracy and customizable compatibility.**

The rotor sensing element and electronics are the heart of the system which is offered in 8 torque capacities in 5 DIN sizes. With the flexible capability of stator and output module mounting, the AxialTQ system offers an infinite number of configurations to meet any application need.

## AxialTQ-EX

- Designed to minimize uncertainty while covering a broad array of torque measurement applications.
- An accuracy class of 0.05 with an axial gap and dual analog and digital simultaneous outputs.

## AxialTQ Assistant Software

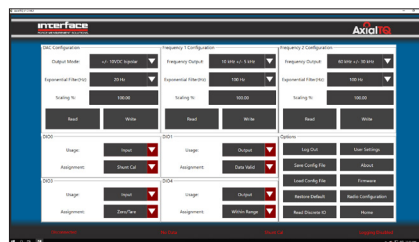
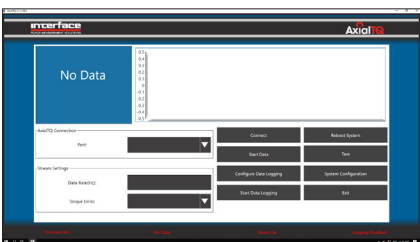
- Connect the PC to the AxialTQ system.
- Monitor the rotor data.
- Change the configuration of the Output Module analog outputs.
  - Voltage/Current
  - Frequency
  - Data Filter
  - Scaling
- Secure login for system configuration.
- Save and share system configuration.
- Change the firmware in the rotor, stator or OM.
- Collect the digital data from the rotor.
- Capture system information and troubleshooting data.
- Change communication channel to avoid crosswalk.



## AxialTQ Models Are Available In 8 Torque Capacities

- 🔴 100Nm - DIN 100
- 🔴 250Nm - DIN 100
- 🔴 500Nm - DIN 120
- 🔴 1KNm - DIN 120
- 🔴 2KNm - DIN 150
- 🔴 3KNm - DIN 150
- 🔴 5KNm - DIN 180
- 🔴 10KNm - DIN 225

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# AxialTQ

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The Next Generation of **TORQUE MEASUREMENT DEVICES™**

With the creation of the Interface AxialTQ torque transducer, we are again leading the way with a unique combination of accuracy, reliability and ease of use, for the automotive, energy, aerospace industries and more.



# The AxialTQ System Hardware Consists Of The Rotor, Stator And Output Module

The rotor measures the torque with a high precision sensing element and strain gages, the electrical output is converted from an analog to a digital signal in the rotor. The high accuracy of the system is based on this combination of the

proven sensing element technology with next generation electronics to provide the highest quality torque measurement available in the industry.

The combination of power transfer and communication technologies allow for contact-free operation minimizing uncertainty. Power is transferred from the stator coil to the rotor coil with an axial separation gap to minimize the chance of contact and damage. The rotor and stator communicate through a 2.4 GHz link for rotor configuration, software updates and high speed transmission of the digital torque values. The rotor and stator are not a matched pair and any stator can be used with any rotor of the same DIN size.



## Rotor Assembly

- 8 torque capacities
- 5 DIN sizes



## Stator Assembly

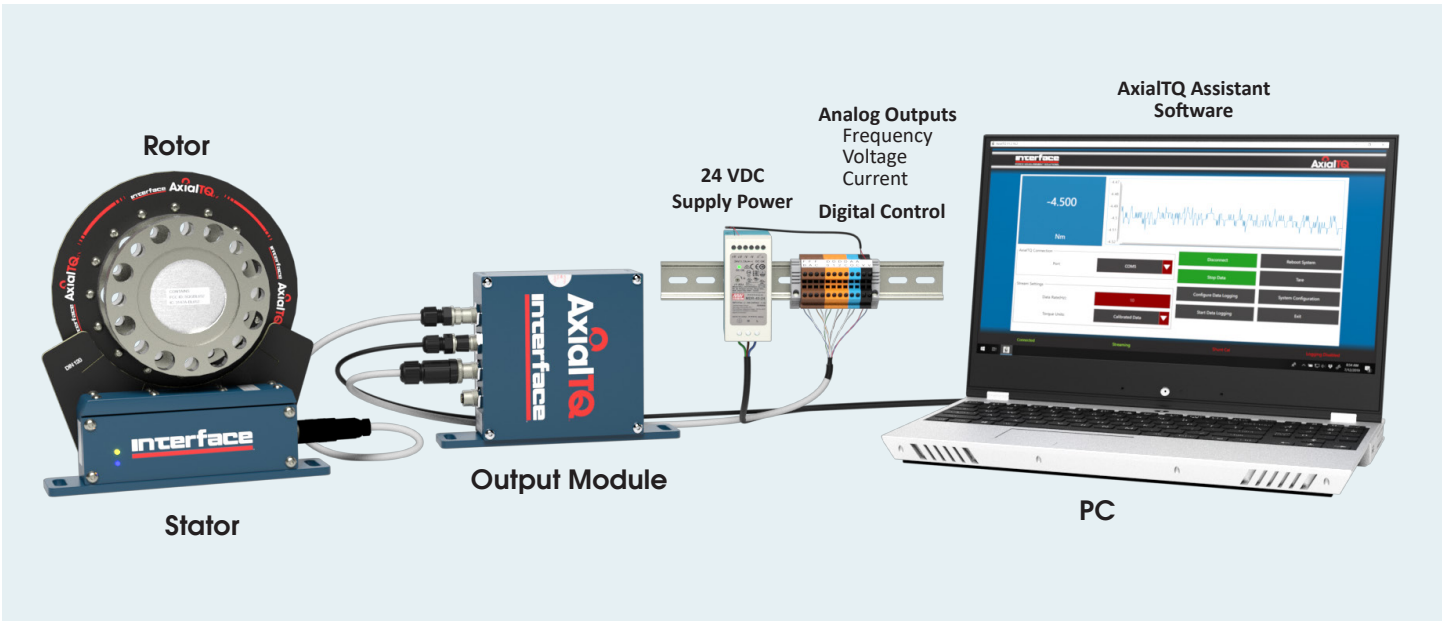
- Matched to rotor DIN size
- Interchangeable with equivalent DIN size rotor assemblies



## Output Module

- Simultaneous analog and digital outputs enables real-time control and data collection
- Automatic data compensation
- USB digital interface and configuration

## System Architecture



## Specifications

### Accuracy / Data Rate

Model	EX
Accuracy Class	0.05
Temp Effect on Zero – %RO/10°C	±0.05
Temp Effect on Output – %RO/10°Cw	±0.05
Data Rate (max) samples/sec	5K
Accuracy Class Output	Analog or digital

DIN Size	Capacity		Rated Speed	
	U.S. (lbf-in)	Metric (Nm)	Nominal	Extended (0.10% Accuracy Class)
100	885, 2.21K	100, 250	15K	20K
120	4.42K, 8.85K	500, 1K	14K	20K
150	17.7K, 26.5K	2K, 3K	11K	15K
180	44.2K	5K	7K	10K
225	88.5K	10K	5K	6K

### Environmental

Compensated Operating Range	+50 to +158 °F +10 to +70 °C
Maximum Operating Range	+4 to +158 °F -20 to +70 °C
Storage Range	-40 to +185 °F -40 to +85 °C

### Electrical

Output Types	Voltage, Frequency, USB
Power Supply – VDC	24 ± 6

### Analog Output

10 kHz ± 5kHz	± 10 VDC
60 kHz ± 300kHz	± 5 VDC
60 kHz ± 20kHz	12 mA ± 8 mA

### Mechanical

Safe Overload – % RO	200
Rotor / Stator Axial Gap	0.118 ± 0.078 in 3 ± 2 mm
Radial Clearance	0.472 in 12 mm
IP Rating	IP65
DIN Size	100                      120, 150, 180, 225
Material	Aluminum                      Steel

### Models

#### AxialTQ-EX

- Designed to minimize uncertainty while covering a broad array of torque measurement applications.
- An accuracy class of 0.05 with an axial gap and dual analog and digital simultaneous outputs.

### Options

- Balanced Rotor to G2.5
- Speed Sensing 60 PPR



### Features & Benefits

- Crash-Proof Design for Maximum Reliability
- Versatile Design for Application Flexibility
- Flexible Configuration
- Simultaneous Analog and Digital Outputs Enables Real-time Control and Data Collection
- Interchangeable Stators and Output Modules to Minimize Parts Inventory
- Wide Range of Standard Components to Match Any Application

### Options

- Balanced Rotor to G2.5
- Speed Sensing 240 PPR

To learn more about the Interface AxialTQ torque measurement system or other force measurement solutions call 480-948-5555.

**Interface is the world's trusted leader in technology, design and manufacturing of force measurement solutions.**

**Our clients include a “who's who” of the aerospace, automotive and vehicle, medical device, energy, industrial manufacturing, test and measurement industries.**

Interface engineers around the world are empowered to create high-level tools and solutions that deliver consistent, high quality performance. These products include load cells, torque transducers, multi-axis sensors, wireless telemetry, instrumentation and calibration equipment.

Interface, Inc., was founded in 1968 and is a US-based, woman-owned technology manufacturing company headquartered in Scottsdale, Arizona.