

## Advanced Force/Torque Indicator (AFTI) Specifications

### Specifications

**Resolution:** 1 part in 5000

**Smart Sensor Port:** Any Quantrol Smart Sensors may be plugged in with automatic configuration of capacity, calibration, display increments and units.

**Advanced Loadcell Cartridges (ALC):** Capacities can be changed in seconds by swapping ALCs. Automatic recognition of capacity, display increments and calibration.

**Sampling Rate:** 5000Hz

**Peak Capture Rate:** Configurable: High — 2000 Hz, Medium — 10Hz (default), Low — 2Hz

**Display Update Rate:** 2Hz or 10Hz

**Tare Capacity:** 10% of capacity

**Display:** Dot graphic LCD display offers unique display modes and exceptional text prompts. Supports simultaneous display of live and peak readings. Display may be inverted 180° for improved readability during hand-held use.

**Backlight:** Standard

**Auto-off:** 2 minute timer. May be disabled.

**Data Storage:** Up to 100 peak values may be stored for later download.

**Freeze Reading:** Display freezes when switch under test changes state.

**Average Load Measurement:** Average load is displayed above user-defined threshold.

**Footswitch:** Optional footswitch controls any two keypad functions (Max, Units, Transmit, Zero, Reset)

**Test Stand Control:** Cycle testing (user defined load points and number of cycles), or stand reverse, stop on alarm or sample break. Requires cable 49756-1142. Cycle testing compatible on TC<sup>2</sup> only.

**Output(s):** Configurable RS-232, Digimatic (Mitotoyo), and ±4 VDC Analog (optional calibration of analog – consult factory)

**Control Output:** Output signal from gauge based upon user-defined load limit. Cable with 5v relay (49756-1217)

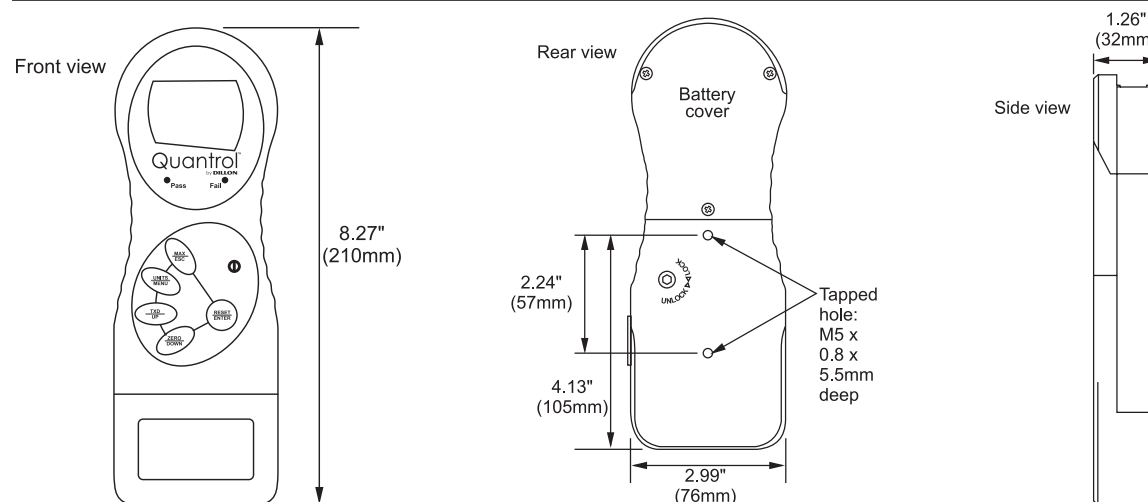
**Operating Temperature Range:** 50°F – 95°F (10°C to 35°C)

**Includes:**

- AFG/AFTI display console
- One blank Loadcell Cartridge
- Carrying case
- AC charger/power supply
- Allen wrenches to install battery and ALC
- User's manual

**Warranty:** 2 years

### Dimensions



## Smart Load Sensor Specifications

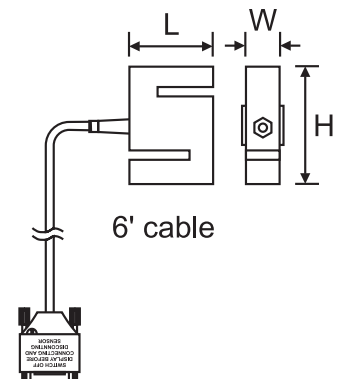
Quantrol Smart Sensors arrive calibrated and with the unique Smart connector allowing a “plug and play” environment. Once the included 15-pin connector is attached to the AFTI or AFG display, all that is required is press the ON button to begin testing.

### SMART S BEAM LOADCELL

Accuracy:  $\pm 0.25\%$  F.S.

Calibration: Tension & Compression

Part No.	Capacity	L	W	H	Thread
55447-0013	100 N / 22 lb	2.00	0.50	2.50	1/4-28 UNF-2B
55447-0021	200 N / 44 lb	2.00	0.50	2.50	1/4-28 UNF-2B
55447-0039	500 N / 110 lb	2.00	0.50	2.50	1-4-28 UNF-2B
55447-0047	1000 N / 220 lb	2.00	0.50	2.50	1/4-28 UNF-2B
55447-0054	2500 N / 550 lb	2.00	0.75	2.50	1/2-20 UNF-2B
55447-0062	5000 N / 1100 lb	2.00	0.75	2.50	1/2-20 UNF-2B
55447-0070	10kN / 2200 lb	2.00	1.00	2.50	1/2-20 UNF-2B
55447-0088	25kN / 5500 lb	3.00	1.00	4.00	3/4-16 UNF-2B
55447-0096	50kN / 11000 lb	3.00	1.00	4.00	3/4-16 UNF-2B
55447-0104	100kN / 22000 lb	5.00	2.00	7.00	1 1/4-12 UNF-2B

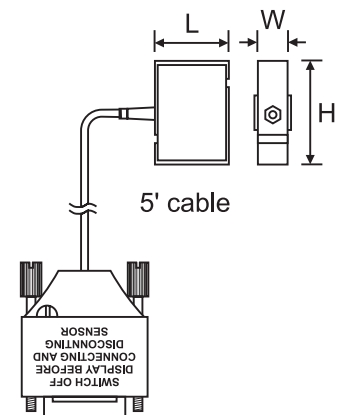


### SMART “MINI” S-BEAM

Accuracy:  $\pm 0.5\%$  F.S.

Calibration: Tension & Compression

Part No.	Capacity	L	W	H	Thread
55448-0012	1 N / 0.22 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0020	2.5 N / 0.55 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0038	5 N / 1.1 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0046	10 N / 2.2 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0053	25 N / 5.5 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0061	50 N / 11 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0079	100 N / 22 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0087	250 N / 55 lb	0.68	0.25	0.75	#4-40 UNF-2B
55448-0095	500 N / 110 lb	0.68	0.25	0.75	#4-40 UNF-2B

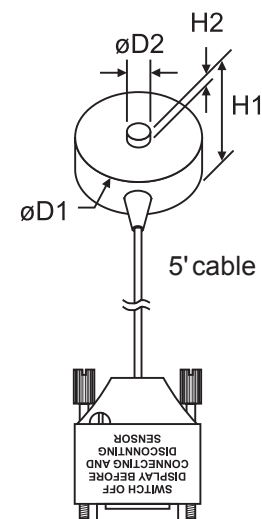


### SMART LOAD BUTTON

Accuracy:  $\pm 0.5\%$  F.S.

Calibration: Compression

Part No.	Capacity	D1	D2	H1	H2
<b>Standard Package</b>					
55449-0029	100 N / 22 lb	0.98	0.21	0.32	0.05
55449-0037	250 N / 55 lb	0.98	0.21	0.32	0.05
55449-0045	500 N / 110 lb	1.23	0.32	0.39	0.05
55449-0052	1000 N / 220 lb	1.23	0.32	0.39	0.05
55449-0060	2500 N / 550 lb	1.23	0.32	0.39	0.05
55449-0078	5000 N / 1100 lb	1.23	0.32	0.39	0.05
55449-0086	10k N / 2200 lb	1.23	0.32	0.39	0.05
55449-0094	20k N / 4400 lb	1.48	0.43	0.63	0.08
55449-0102	50k N / 11000 lb	1.48	0.43	0.63	0.08

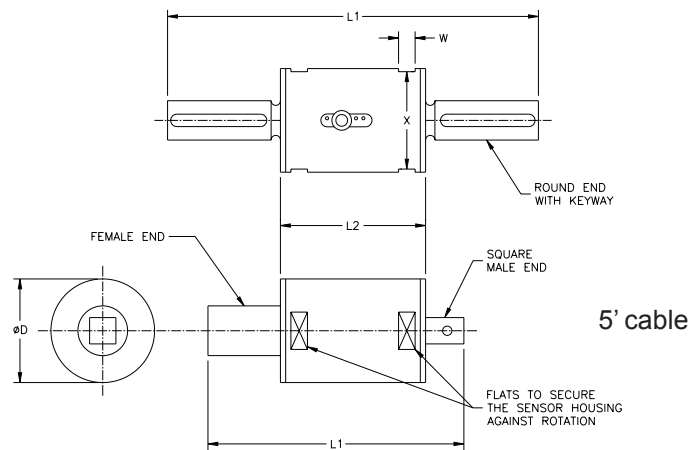


# SMART ROTARY TORQUE SENSOR

Accuracy:  $\pm 1\%$  F.S.

Calibration: Clockwise & Counterclockwise

Part No.	Capacity	L1	L2	D	W	X	Drive	RPM
<b>Square Drive</b>								
55450-0017	2 Nm / 18 in-lb	3.76	2.76	1.57	0.32	1.46	Square - 1/4"	1000
55450-0025	6 NM / 53 in-lb	3.76	2.76	1.57	0.32	1.46	Square - 1/4"	1000
55450-0033	15 Nm / 11 ft-lb	3.76	2.76	1.57	0.32	1.46	Square - 1/4"	1000
55150-0041	60 Nm / 44 ft-ib	4.21	2.76	1.97	0.32	1.85	Square - 3/8"	1000
55450-0058	150 Nm / 110 ft-lb	4.86	2.76	1.97	0.32	1.85	Square - 1/2"	1000
55450-0066	250 Nm / 184 ft-lb	4.86	2.76	1.97	0.32 <td 1.85	Square - 1/2"	1000	
<b>Round Drive</b>								
55450-0074	2 Nm / 18 in-lb	4.92	2.76	1.57	0.32	1.46	Round - 0.35"	5000
55450-0082	6 Nm / 53 in-lb	4.92	2.76	1.57	0.32	1.46	Round - 0.35"	5000
55450-0090	15 Nm / 11 ft-lb	4.92	2.76	1.57	0.32	1.46	Round - 0.35"	5000
55450-0108	60 Nm / 44 ft-lb	5.47	2.76	1.97	0.32	1.85	Round - 0.55"	5000
55450-0116	150 Nm / 110 ft-lb	7.05	2.76	1.97	0.32	1.85	Round - 0.75"	5000
55450-0124	250 Nm / 184 ft-lb	7.05	2.76	1.97	0.32	1.85	Round - 0.75"	5000

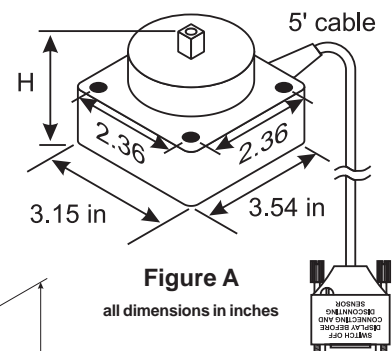


# SMART STATIC TORQUE TRANSDUCER

Accuracy:  $\pm 0.5\%$  F.S.

Calibration: Clockwise & Counterclockwise

Part No.	Capacity	Figure	H	Square Drive
55451-0016	150 Nm / 110 ft-lb	A	3.12	1/2"
55451-0024	300 Nm / 221 ft-lb	A	3.12	1/2"
55451-0032	600 Nm / 442 ft-lb	B	3.43	3/4"
55451-0040	1000 Nm / 737 ft-lb	B	3.62	1"



**Figure B**  
all dimensions in inches

