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FUTEK

US Manufacturer
www.futek.com

ADVANCED SENSOR TECHNOLOGY, INC.

(Parameters to consider when selecting a LOAD CELL and related instruments)

LOAD CELL

General	Type	• Static Load • Dynamic	Specifications	Output (mV/V, VDC, mA), Digital	Compensated Temp.
	Mounting Type	• Female/Male Thread • In-Line • Side Mount • Flange Mount • Thru Hole • Compression Washer		Nonlinearity	Operating Temp.
	Load Direction	• Tension • Compression • Both		Hysteresis	Vibration/Shock
	Capacity	• Min. • Max. • Resolution		Nonrepeatability	Natural Frequency
	Material	• Stainless Steel • Aluminum • BeCu • Titanium		Creep	Deflection
	Critical Characteristic	• See "FEATURE OPTIONS" at bottom of page		Temp. Shift Span	Bridge Excitation
	Physical Characteristics	• Width • Height • Length • Weight • Thread • O.D.		Temp. Shift Zero	Bridge Resistance
				Safe Overload	Extraneous Load & Moments

MULTI-COMPONENT

Same as LOAD CELL


Axial Component	• Fx • Fy • Fz • Mx • My • Mz	Cross Talk
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INSTRUMENT

General		Signal Conditioner	Display	Specifications	Signal Conditioner		Display	
	Type	• Signal Condition/Amplifier	• Digital Display/ Graphic Display		Frequency Response	Reverse Polarity Protection	Resolution	Sampling Rate
	Mounting Type	• Din-Rail • In-Line • Built-In • Integrated	• Panel Mount • Bench Type • Hand Held		Operating Temp.	Short Circuit Protection	Storage Memory	Filtering
	Power Supply	• 12-24 VDC	• AC • DC		Accuracy	Shunt Cal Feature	Peak/Vally	Shunt Cal
	Special Requirement	• TEDS • CE	• TEDS • CE		System Calibration: System calibration is required when selecting a sensor with an instrument as a package. System calibration includes integration, setup, configuration, scaling and traceable calibration for both sensor & instrument together. System calibration records are available at www.futek.com and are very useful for trouble shooting & follow up.			
	Physical Characteristics	• Width • Length • DIA • Height	• Width • Length • DIA • Height					
	Sensor Input Range	• 0.5 mV/V • 1 mV/V • 1.5 mV/V • 2 mV/V • 3 mV/V • 4 mV/V	• mV/V • VDC • mA					
	Options	• ±5 VDC • ±10 VDC • 0.5-4.5 VDC • 4-20 mA • 4-12-20 mA	• Analog Output Relay • Alarm RS232 • RS485 • USB					

CABLE & CONNECTOR OPTIONS

FEATURE OPTIONS

Cable		Connector	Dual/ Multiple Bridge	Electrical Termination
Material	Teflon	Bendix	High Temperature	Custom Capacities
	PVC	Amphenol	Cryogenic	Magnetic Effect
	Polyurethane	Lemo	Wash-Down / Submersible	Shunt Calibration
	Silicone	Microtech	ID Chip/ Auto Recognition 	Special/ Custom Calibration
• Length • Number of Conductors • AWG • Shielded • Twisted • Straight • Coil		Hirose	Matched, Normalized, Standardized or Trimmed Output	Metric Thread
		Molex	Higher Bridge Resistance for Battery Operation	Special Mounting/ Packaging
		D Sub 9, 15, 25		


CALIBRATION OPTIONS

• Additional Direction • System Calibration • NIST Calibration • ISO17025	Quick Disconnect	Customized Software
	Built-in Amplifier	System Integration

SELECTED CATEGORIES



FUTEK ADDED TIPS

- Select the capacity over the maximum operating load.
- For endurance or fatigue application try to operate at 50% or lower of rated capacity.
- Determine all extraneous load & moments prior to selecting the capacity.
- Extraneous load and moments increase combined stress which would accelerate the fatigue and could also effect the performance & accuracy if the correct load cell is not selected. Most in-line sensors such as the S-Beam are not designed with extraneous load & Moment capability.
- The units with overload protection is only effective in load direction.
- Have load cell connected to the instrument during handling & installation.
- Avoid Zero distortion when applying torque with mounting hardware.
- Avoid dropping, overloading, abusing or handling the load cell by the cable.
- Specify or select the instrument the same time you select the load cell.
- Check the response time and available resolution.
- Utilize TEDS  where possible to avoid mis configuration or mis scaling. Visit www.futek.com for more Tips.