SENTRAN

WorkSheet

Innovative Measurement Solutions

LOAD CELLS

LOAD CELL/FORCE TRANSDUCER WORKSHEET

Fax or email to SENTRAN Applications Engineering Group: (909) 605-6305 or mail@sentranllc.com

CONTACT: _____ PHONE: _____

COMPANY: _____ FAX: _____

ADDRESS: _____ EMAIL: _____

_____ CITY: _____ STATE: _____ ZIP: _____

Δ Notice! To whom it may concern:

SENTRAN specializes in non-standard, application-specific measurement solutions, particularly in the Load Pin product segment, where "standard" solutions are often not adequate to meet customer requirements. SENTRAN Load Pins are generally a Dual Shear design, Center-Loaded and End-Supported.

The Load Pins are instrumented internally utilizing unique, proprietary techniques for precise positioning of strain gauges along the Load Pin neutral axis to create a Full Wheatstone Bridge configuration. To ensure proper orientation of the Load Pin when installed, an Anti-rotation or Keeper device is typically incorporated.

Thank you for the opportunity to be of service. SENTRAN has developed this worksheet as a means for gathering information necessary to make the best product solution recommendation for your load pin application. To that end, please provide complete, accurate information in the following questionnaire for all considerations influencing your application. Once completed, fax or e-mail the document to the attention of:

SENTRAN Applications Engineering Group at (909) 605-6305 or mail@sentranllc.com.

1.0 OPERATIONAL		
1.1	Rated Load Capacity (RC):	☐☐☐☐☐☐☐☐
1.2	Loading Mode (Check one):	Compression ☐ Tension ☐ Universal (T&C) ☐
1.3	Full Scale Output (FSO): (2 or 3 m/V is typical)	_____ mV/V + _____%
1.4	Display Resolution (max):	☐☐☐,☐☐☐ X ☐☐☐ (For example, 10,000 X 1)

SENTRAN, LLC 4355 LOWELL STREET, ONTARIO, CA 91761, U.S.A.
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2.0 PERFORMANCE		
2.1	Overall Accuracy Target:	+ _____ % FSO (max)
2.2	Non-linearity (terminal)	+ _____ % FSO (max)
2.3	Hysteresis (terminal)	+ _____ % FSO (max)
2.4	Non-repeatability	+ _____ % FSO (max)
2.5	Creep (10 sec to 20 min):	+ _____ % FSO (max)
3.0 ELECTRICAL		
3.1	Excitation Voltage	_____ VDC (max)
3.2	Zero Balance	_____ % FSO (max)
3.3	Terminal Resistance • Input (Excitation) • Output (Signal)	_____ ohms + _____ ohms _____ ohms + _____ ohms
3.4	Bridge Symmetry	_____ % Bridge Input Resistance
3.5	Insulation Resistance Bridge to Ground Shield to Ground Bridge to Shield	_____ K MegOhm (min.) _____ K MegOhm (min.) _____ K MegOhm (min.)
3.6	Cable (Note number of conductors/Jacket material/ Shielding requirement/Temp. range, etc.)	Type: _____ Length: _____ feet or meters (circle one)
3.7	Cable/Connector Code (Specify conductor color or connector pin position)	Excitation (Input) (-) _____ , (+) _____ Signal (Output): (-) _____ , (+) _____ Remote Sense (optional) (-) _____ , (+) _____ Shield: _____ (Bare unless a drain wire is specified.)
3.8	Electrical Termination (Unless otherwise noted, connector orientation will be based on best engineering practices.)	☐ Free Ends ☐ Connector on load cell ☐ Connector on cable ☐ Mating Connector Connector(s) preference _____
3.9	Internal Amplification (Span is set for “no load” to RC of the load cell unless specified otherwise)	☐ 4-20 mA Current 2-wire ☐ 4-20 mA Current 3-wire ☐ 0-5 or ± 5VDC ☐ 0-10 or ± 10VDC

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3.10	Special Calibration (Zero and FSO count as 2 points) Loading Mode (Check one) Positive (+) Output (Check one) Calibration Points/Intervals	☐ Compression ☐ Tension ☐ Universal (T & C) ☐ Compression ☐ Tension _____/_____% Compression _____/_____% Tension
4.0 ENVIRONMENTAL		
4.1	Compensated Temperature Range	_____° F or ° C to _____° F or ° C
4.2	Temperature. Effect on Rated Output	+ _____% (FSO or Reading)/ _____° F or ° C
4.3	Temperature. Effect on Zero Balance:	+ _____% (FSO or Reading)/ _____° F or ° C
4.4	Storage Temperature Range	_____° F or ° C to _____° F or ° C
5.0 ADVERSE LOAD RATING		
5.5	Safe Overload:	_____% RC
5.2	Ultimate Overload:	_____% RC
5.3	Safe Side Load:	_____ % RC
5.4	Side Load Sensitivity:	_____ % FSO
5.5	Eccentric Load Effect:	_____ % FSO/ inch or mm
6.0 AMBIENT CONDITIONS		
6.1	Operating Humidity Range	0 to _____% RH ☐ Non-condensing ☐ Condensing
6.2	Sealing	☐ IP Rating _____ ☐ NEMA Rating _____
6.3	Element Material (Check one):	☐ 2024 Aluminum ☐ 4340 Alloy Tool Steel ☐ 17-4PH Stainless Steel ☐ Other _____
6.4	Element Finish (Check one)	☐ Anodize ☐ Nickle ☐ Electro-polish ☐ Other _____
6.5	Hostile Elements	☐ Corrosive (Type?) ☐ Washdown (Type?) ☐ Submersion (Type?)
6.6	Hazardous Rating:	Class: _____ / Division: _____ / Group: _____ ☐ FM ☐ CSA ☐ CE ☐ Other? _____

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