

Model 3130-131

Tension/Compression Canister Load Cell



DESCRIPTION

The Model 3130-131 fatigue-resistant load cells are extremely resistant to extraneous bending and side loading forces. The structure virtually eliminates bending strains at the strain gage,

minimizing the primary cause of load cell failure. Dual bridge option available for feedback control and redundancy.

FEATURES

- Optional dual bridge (not shown)
- Metric threads
- Resist fatigue failure
- Multi-beam structure design
- Capacities to 5000000 N
- Bending moment resistance up to 6110000 lb inches
- Up to 180000 lb of shear resistance
- Flexible mounting configurations

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PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Load range ¹	2M, 3.5M, 5M N
Non-linearity	±0.2 % of rated output
Hysteresis	±0.2 % of rated output
Repeatability	±0.05 % of rated output
Output @ rated capacity	±2 mV/V (nominal)
Operation	Tension/compression
Resolution	Infinite
Standard calibration	Tension (+) and compression (-)

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-54 °C to 93 °C [-65 °F to 200 °F]
Temperature, compensated	21 °C to 77 °C [70 °F to 170 °F]
Temperature effect, zero	±0.003 % of rated output/°F
Temperature effect, output	±0.003 % of reading/°F

ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strain gage type	Foil
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance (tolerance)	700 ohm
Number of bridges	1 or 2
Zero balance	±1.0 %
Electrical termination	MS-3102E-14S-5P

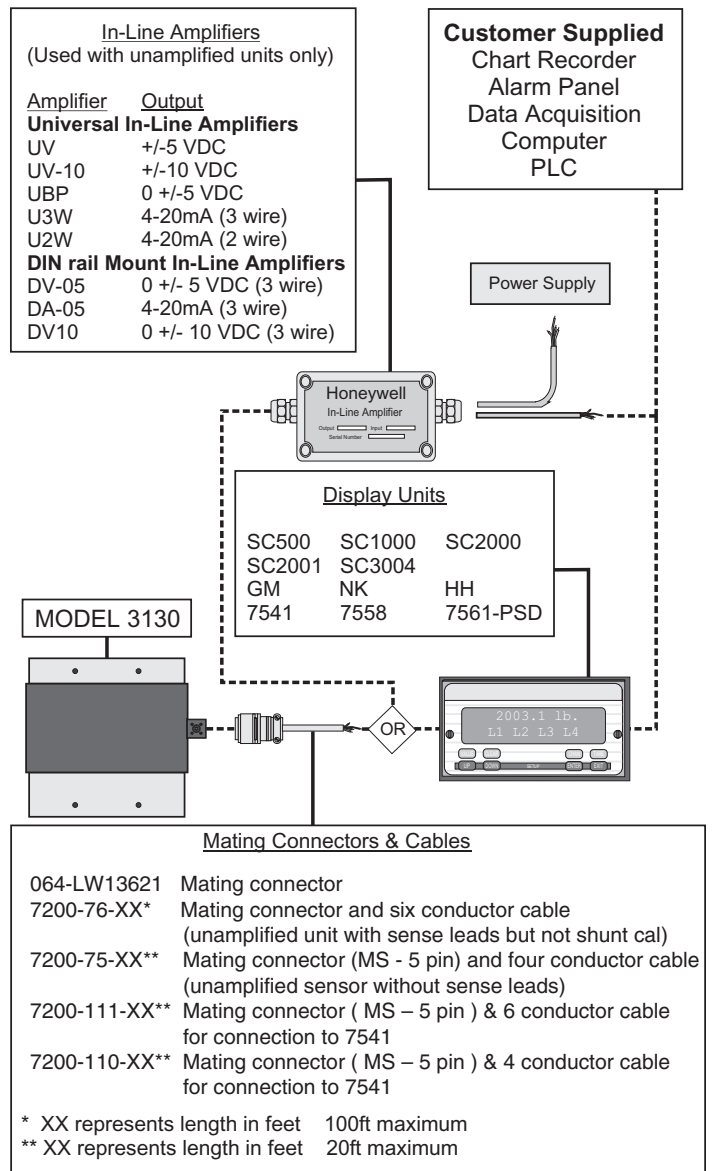
MECHANICAL SPECIFICATIONS

Characteristic	Measure
Static overload capacity	150 % of nominal capacity
Material	Carbon steel
Fatigue life (0 to full fatigue load)	100 x 10 ⁶ cycles
Fatigue life (full fatigue tension to compression)	50 x 10 ⁶ cycles
Natural frequency	See table

WIRING CODES

Wire	
Red	(+) excitation
Black	(-) excitation
Green	(+) output
White	(-) output

TYPICAL SYSTEM DIAGRAM



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NATURAL FREQUENCY

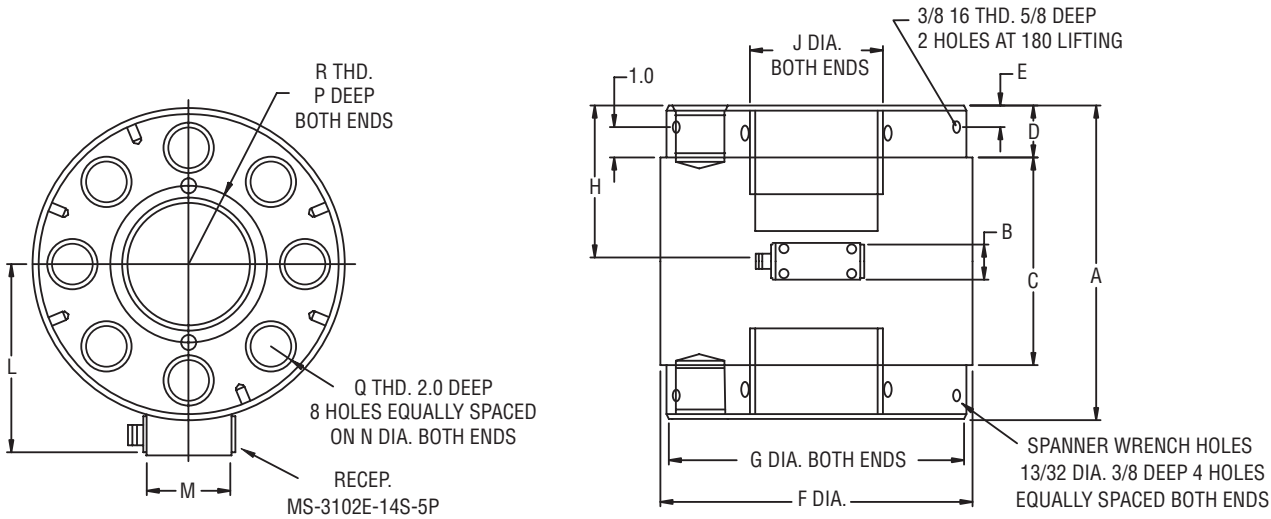
Nominal load limit capacity F_z		Static extraneous load limits						
lb	N	Static overload capacity (% of nominal capacity)	Fatigue capacity (% of nominal capacity)	Shear F_x or F_y (lb)	Bending M_x or M_y (lb-in)	Torque M_z (lb-in)	Deflection at nominal load limit (in)	Ringling frequency (Hz)
500K	2M	150	50	94K	4530K	820K	0.006	2500
800K	3.5M	150	50	180K	5450K	1050K	0.006	3100
1000K	5M	150	50	180K	6110K	1100K	0.006	3600

MOUNTING DIMENSIONS

Model	A cm [in]	B cm [in]	C cm [in]	D cm [in]	E cm [in]	F cm [in]	G cm [in]
3130	31,75 [12.50]	3,81 [1.50]	17,78 [7.0]	5,08 [2.0]	1,91 [0.75]	32,29 [12.75]	31,12 [12.25]

H cm [in]	J cm [in]	K cm [in]	L cm [in]	M cm [in]	N cm [in]	P cm [in]	*Q cm [in]	*R cm [in]
15,88 [6.25]	13,34 [5.25]	2,54 [1.0]	19,86 [7.82]	6,35 [2.50]	24,15 [9.50]	8,89 [3.50]	M42-3 [1.75-12]	M125-4 [5-8]

* 3130-131 • Q and R are metric thread measures
 * 3130 standard • Q and R are English thread measures



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NOTES

1. This unit calibrated to Imperial (non-Metric) units.

Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit www.honeywell.com/sensing or call +1-815-235-6847
Email inquiries to info.sc@honeywell.com

WARNING **PERSONAL INJURY**

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARNING **MISUSE OF DOCUMENTATION**

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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