

# Model 3336

## Tension/Compression Donut Load Cell



### DESCRIPTION

Model 3336 Tension/Compression Donut Load Cell features a smooth thru-hole design for use in applications which require the load structure to pass through the cell. The hollow load cells are available for tension-compression loads in capacities of 5K, 10K and 20K lbs.

The precision design and manufacture of this versatile transducer style is the result of our experience in the metal working industry and automotive applications.

### FEATURES

- 5000 lb to 5000 lb range
- Thru-hole design
- Compact column construction
- mV/V output
- 0.25 % linearity

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## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Load range <sup>1</sup>	5000, 10000, 20000 lb
Non-linearity	±0.25 % of rated output
Hysteresis	±0.15 % of rated output
Repeatability	±0.15 % 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	±0.002 % of rated output/°F
Temperature effect, output	±0.002 % 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, 5K lb	350 ohm
Bridge resistance, (tol.) 10K, 20 K lb	700 ohm
Number of bridges	1 or 2
Zero balance	±1.0 %
Electrical termination	MS3102E-14S-5P

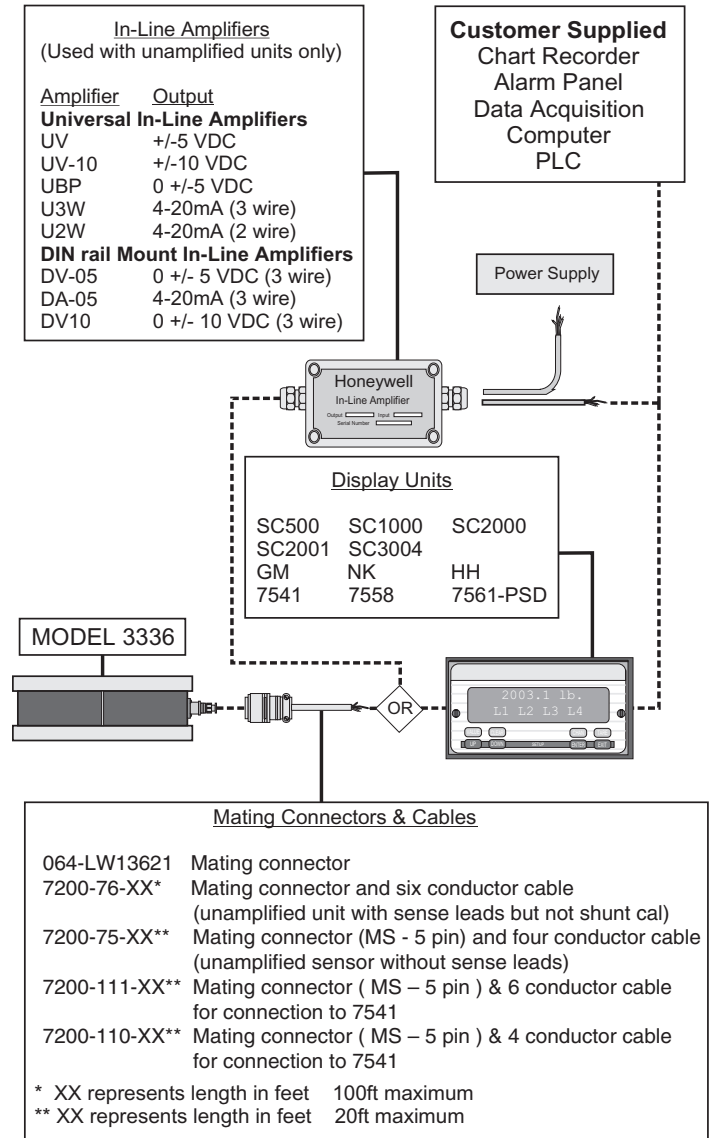
## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Static overload capacity	150 % of nominal capacity
Material	Aluminum
Natural frequency	See table

## WIRING CODES

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

## TYPICAL SYSTEM DIAGRAM



# Tension/Compression Donut Load Cell

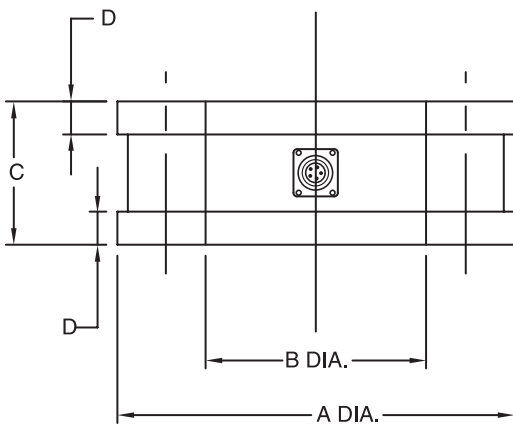
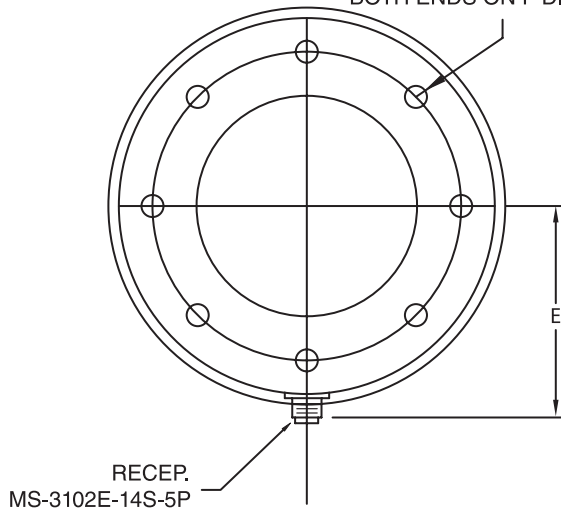
## NATURAL FREQUENCY

Nominal load limit capacity $F_z$		Static extraneous load limits					
lb	N	Static over-load 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)	Ringing frequency (Hz)
5K	20K	150	550	12K	1850	0.005	1100
10K	50K	150	1400	31K	3750	0.005	1500
20K	100K	150	2650	62K	14K	0.005	2200

## MOUNTING DIMENSIONS

Model	A cm [in]	B cm [in]	C cm [in]	D cm [in]	E cm [in]	F cm [in]
3336	22,86 [9]	12,70 [5]	8,26 [3.25]	1,91 [0.75]	12,40 [4.88]	17,78 [7]

1/2-13 THD. D DEEP  
8 HOLES EQUALLY SPACED  
BOTH ENDS ON F DIA.



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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](http://www.honeywell.com/sensing) or call +1-815-235-6847

Email inquiries to [info.sc@honeywell.com](mailto: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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