

## Model 3124

### Tension/Compression In-Line Load Cell



#### DESCRIPTION

The small-diameter, cost-efficient load cells are designed to be used in applications that require an ability to mount in an existing system with restricted working area. They are commonly used in fluid power transfer systems. Their low cost and ease of mounting allow simultaneous testing of multi-element systems.

They may be directly attached to the piston rod of a hydraulic cylinder. Side-mounted cable connectors allow cable assemblies to be supported without affecting movement of the cell during tension or compression loading.

#### FEATURES

- 5000 lb to 25000 lb range
- 0.25 % non-linearity
- 0.15 % hysteresis
- Adapts directly to hydraulic cylinder
- Small diameter allows mounting in restricted areas
- Low deflection

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## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Load range <sup>1</sup>	5000, 10000, 15000, 20000, 25000 lb
Non-linearity	±0.25 % of rated output
Hysteresis	±0.15 % 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	±0.002 % 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 (tolerance)	350 ohm
Number of bridges	1 or 2
Zero balance	±1.0 %

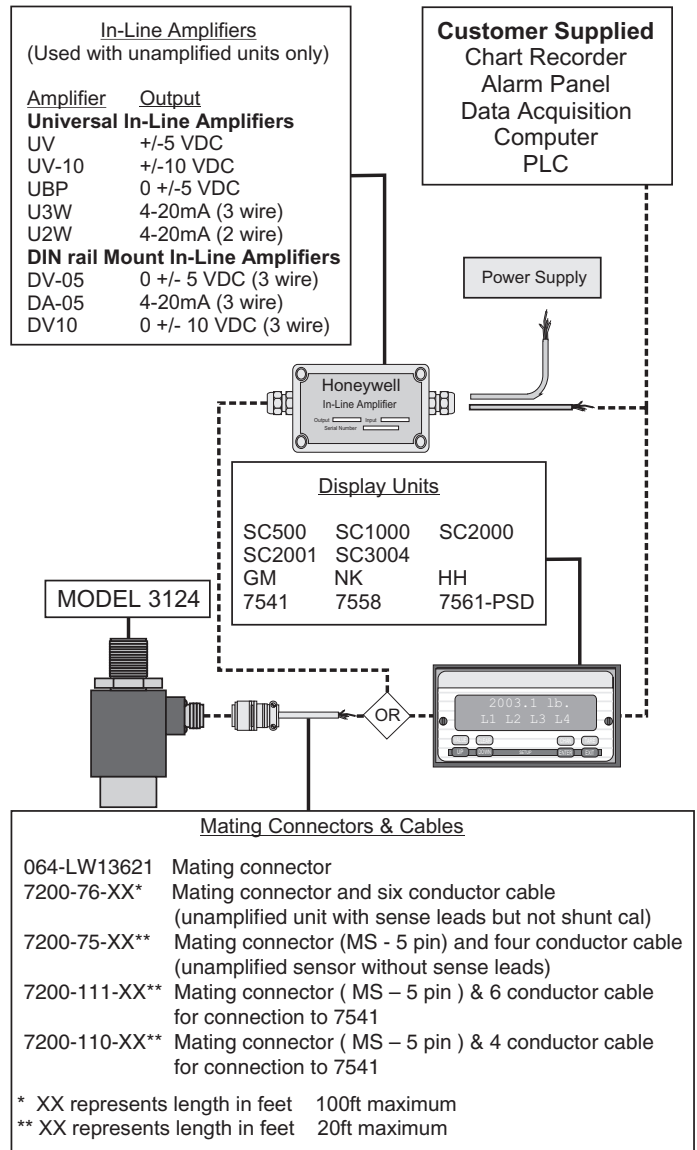
## MECHANICAL SPECIFICATIONS

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

## RANGE CODES

Range Code	Available ranges
DR	5000 lb
DV	10000 lb
EJ	15000 lb
EL	20000 lb
EM	25000 lb

## TYPICAL SYSTEM DIAGRAM



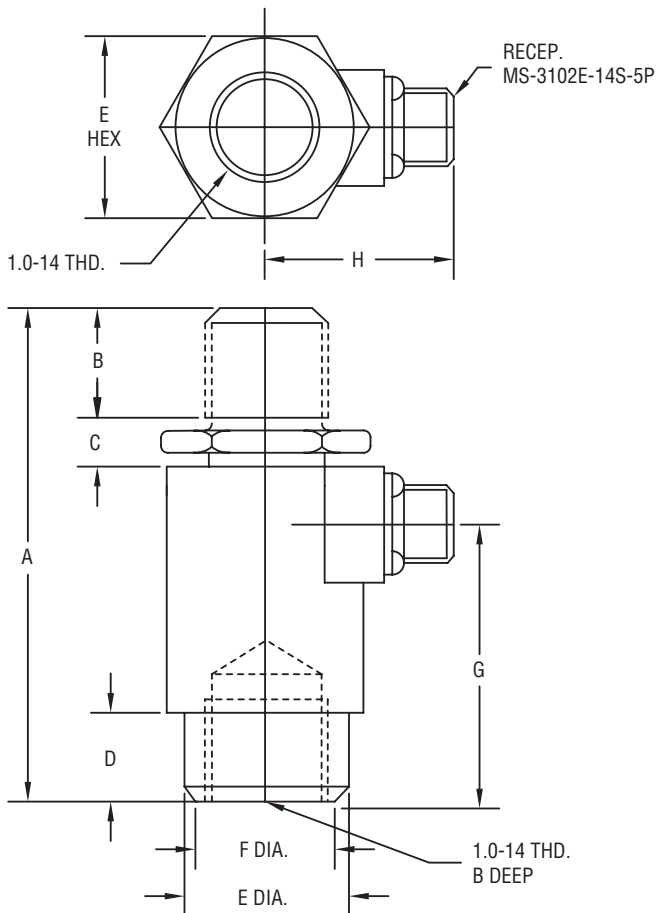
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### NATURAL FREQUENCY

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)	Ring frequency (Hz)
5K	20K	150	n/a	250	750	15000	0.005	4600
10K	50K	150	n/a	250	700	1100	0.005	6400
15K	75K	150	n/a	450	1300	2100	0.005	7700
20K	100K	150	n/a	650	2000	3000	0.005	8800
25K	125K	150	n/a	950	2700	4500	0.005	9600

### MOUNTING DIMENSIONS

Model	A cm [in]	B cm [in]	C cm [in]	D cm [in]	E cm [in]	F cm [in]	G cm [in]	H cm [in]
3124	11,43 [4.50]	2,54 [1.0]	0,97 [0.38]	2,06 [0.81]	3,81 [1.50]	3,51 [1.38]	6,20 [2.44]	4,37 [1.72]



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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.

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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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