Honeywell



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 ¹	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 %			

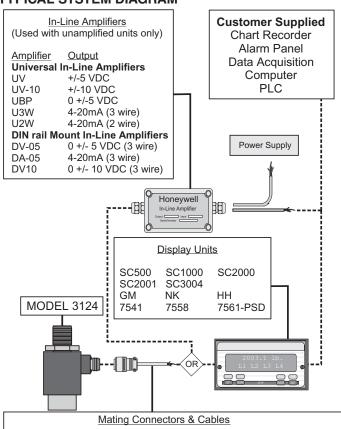
MECHANICAL SPECIFICATIONS

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



064-LW13621 Mating connector

7200-76-XX* Mating connector and six conductor cable

(unamplified unit with sense leads but not shunt cal)

7200-75-XX** Mating connector (MS - 5 pin) and four conductor cable

(unamplified sensor without sense leads)

7200-111-XX** Mating connector (MS - 5 pin) & 6 conductor cable

for connection to 7541

7200-110-XX** Mating connector (MS - 5 pin) & 4 conductor cable

for connection to 7541

* XX represents length in feet 100ft maximum

** XX represents length in feet 20ft maximum

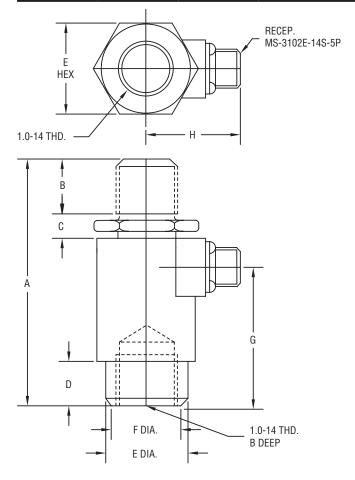
Tension/Compression In-Line Load Cell

NATURAL FREQUENCY

Nominal load limit capacity F _z				Static extran	ts			
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)	Ringing 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.

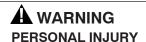
Tension/Compression In-Line Load Cell

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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.

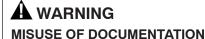
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- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

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