

## Model AL-SC

### High Output Load Cell



#### DESCRIPTION

Model AL-SC is high-output load cell. These semiconductor strain gage load cells are engineered to measure loads from 500 lb to 2000 lb. The tension/compression Model AL-SC is designed with female threads. It provides high performance in non-

linearity, hysteresis, and repeatability. Low mechanical deflection allows for better response capability.

#### FEATURES

- 500 lb, 1000 lb, and 2000 lb range
- 0.15 % accuracy
- Tension/compression
- High output/low bridge resistance
- Low mechanical deflection

# Model AL-SC

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Load ranges <sup>4</sup>	500, 1000, 2000 lb
Accuracy (static error band) <sup>1</sup>	±1.25 % full scale
Non-repeatability	±0.10 % full scale
Output	70 mV/V minimum
Operation	Tension/compression
Resolution	Infinite

## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-54 °C to 93 °C [-65 °F to 200 °F]
Temperature, compensated	-12 °C to 49 °C [10 °F to 120 °F]
Temperature, storage	-73 °C to 121 °C [-100 °F to 250 °F]
Temperature effect, zero	0.5 % full scale/°F
Temperature effect, span	1.0 % reading/°F

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strain gage type	Bonded semiconductor
Excitation (calibration)	24 Vdc or Vac (RMS)
Insulation resistance	5000 mOhm @ 50 Vdc
Bridge resistance, input	1000 ohm (nominal)
Bridge resistance, output	3000 ohm (nominal)
Zero balance	1.5 % full scale (max.)
Electrical termination (std)	MS3100A-14S-5P at end of 1 ft cable

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Maximum allowable load	200 % full scale <sup>2</sup>
Side load without damage	25 % full scale
Weight	See table
Material	17-4 PH stainless steel
Deflection	See table
Natural frequency	See table

## WIRING CODES

Tension	
A	(+) excitation
B	(+) signal
C	(-) signal
D	(-) excitation
E	shield

Compression	
A	(+) excitation
B	(-) signal
C	(+) signal
D	(-) excitation
E	shield

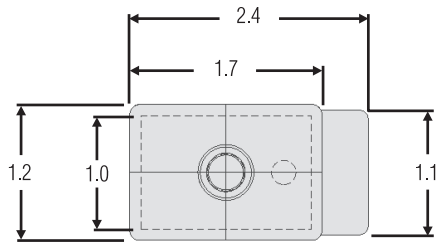
## RANGE CODES

Range Codes	Range
CR	500 lb
CV	1000 lb
DL	2000 lb

## OPTION CODES

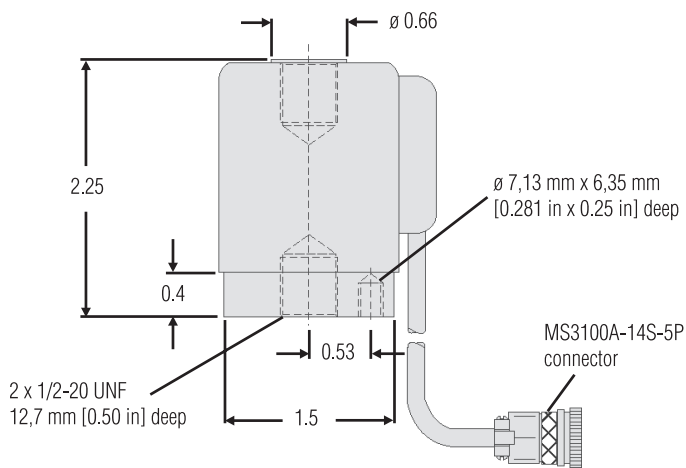
	<b>Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMsensor-ship">http://sensing.honeywell.com/TMsensor-ship</a> for updated listings.</b>
<b>Load range</b>	500 lb, 1000 lb, 2000 lb
<b>Temperature compensation</b>	10 °F to 120 °F
<b>Internal amplifiers</b>	2u. Unamplified, mV/V output
<b>Electrical termination</b>	3106B-14S-5P connector mounted at end of 10 ft cable
<b>Special calibration</b>	30a. Compression only (+) output 30b. Tension and compression (+, -) output 30c. Compression only (-) output

### MOUNTING DIMENSIONS



### DEFLECTIONS AND RINGING FREQUENCIES

Capacity	Axial deflection at full scale mm [in]	Natural frequency (Hz)	Weight kg [lb]
500 lb	0,025 mm [0.0010]	5000	0,544 [1.2]
1000 lb	0,038 mm [0.0015]	6000	0,544 [1.2]
2000 lb	0,051 mm [0.0020]	6700	0,544 [1.2]



## NOTES

1. Static error band is the recommended performance specification. The static error band is calculated as the best fit straight line through zero, including the effects of linearity, hysteresis and non-repeatability.
2. Allowable maximum loads – maximum load to be applied without damage<sup>3</sup>.
3. Without damage - loading to this level will not cause excessive zero shift of performance degradation. The user must consider fatigue life for long term use and structural integrity. All structurally critical applications (overhead loading, etc.) should always be designed with safety redundant load paths.
4. 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.**

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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.**

Sensing and Control  
Automation and Control Solutions  
Honeywell  
1985 Douglas Drive North  
Golden Valley, MN 55422 USA  
+1-815-235-6847  
[www.honeywell.com/sensing](http://www.honeywell.com/sensing)

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