

## Model 103

## Load Cell



### DESCRIPTION

Model 103 load cell is engineered to measure bending forces and still achieve an impressive 0.02% full scale accuracy. Small dimensions allow easy unit integration into existing systems. Model 103 uses foil gages and is available for load ranges from 100 kg to 10000 kg.

### FEATURES

- Low cost
- 100 kg to 10000 kg range
- $\pm 0.02$  % accuracy
- Integral cable
- Cost efficient
- One-piece, nickel-plated alloy steel construction

# Model 103

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Load ranges <sup>3</sup>	100, 200, 300, 500, 1000, 2000, 3000, 5000, 10000 kg
Accuracy	±0.02 % full scale
Output	2 mV/V (nominal)
Creep (max.)	±0.02 % full scale (30 minutes)

## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-30 °C to 70 °C [-22 °F to 158 °F]
Temperature, compensated	-20 °C to 55 °C [-4 °F to 130 °F]
Temperature effect, zero	±0.02 % full scale/10 °C
Temperature effect, span	±0.02 % full scale/10 °C

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strain gage type	Bonded foil
Excitation (calibration)	10 Vdc to 12 Vdc
Excitation (max.)	15 Vdc
Insulation resistance	≥5000 mOhm
Bridge resistance (tolerance) - input resistance	400 ohm ± 10 ohm (nominal)
Bridge resistance (tolerance) - output resistance	352 ohm ± 2 ohm (nominal)
Zero balance (tolerance)	± 1 % full scale
Electrical termination (std) 100 kg to 300 kg	3 m flying leads
Electrical termination (std) 1000 kg to 5000 kg	5 m flying leads
Electrical termination (std) 10000 kg	8 m flying leads

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Maximum allowable load	150 % full scale <sup>1</sup>
Material	Nickel plated alloy steel
Deflection	≤ 1,5 mm

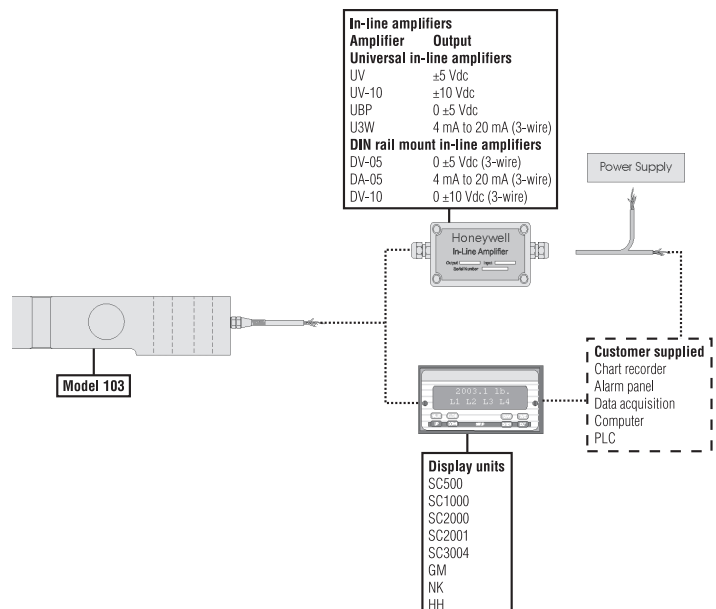
## WIRING CODES

Cable	
Red	(+) supply
Black	(-) supply
Green	(+) output
White	(-) output
Large black	shield

## RANGE CODES

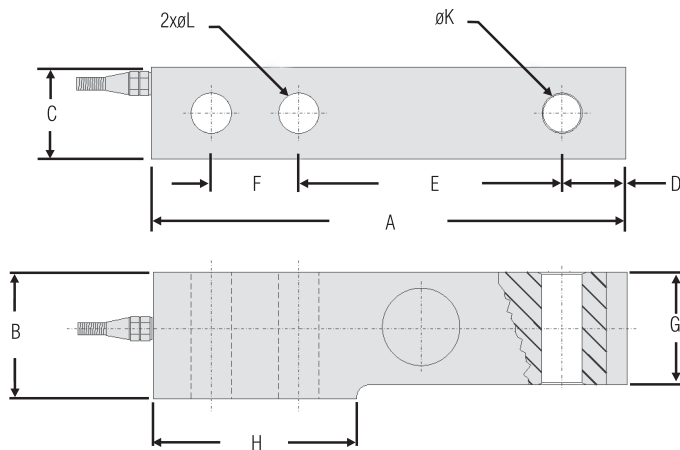
Range Codes	Range
LH	100 kg
LL	250 kg
LM	300 kg
LN	500 kg
LQ	1000 kg
LS	2000 kg
LU	5000 kg
LW	10000 kg

## TYPICAL SYSTEM DIAGRAM



### MOUNTING DIMENSIONS

Load (kg)	A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	F mm [in]	G mm [in]	H mm [in]	L mm [in]	M mm [in]	Recommended bolt torque (N-m)
100 to 300	135 [5.31]	36 [1.42]	26 [1.02]	18 [0.71]	75 [2.95]	25 [1.0]	32 [1.26]	58 [2.28]	11,5 [0.45]	11,5 [0.45]	60
500 to 2000	135 [5.31]	38 [1.5]	30 [1.18]	18 [0.71]	75 [2.95]	25 [1.0]	34 [1.34]	58 [2.28]	13,5 [0.53]	13,5 [0.53]	100
300 to 5000	170 [6.69]	48 [1.89]	38 [1.5]	20 [0.79]	85 [3.35]	50 [2.0]	39 [1.54]	79 [3.11]	18 [0.71]	18,5 [0.73]	255
10000	263 [10.35]	60 [2.36]	60 [2.36]	30 [1.18]	118 [4.65]	90 [3.54]	52 [2.05]	134 [5.28]	26 [1.02]	26 [1.02]	860



## NOTES

1. Allowable maximum loads – maximum load to be applied without damage<sup>2</sup>.
2. 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.
3. This unit is calibrated to Metric (non-Imperial) 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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 **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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