### Honeywell

# **Model 102**

# Load Cell



#### **DESCRIPTION**

The Model 102 load cells combines both a compact form and high precision to offer a superior tension force transducer. The one-piece S-shaped design achieves a maximum non-linearity of 0.02 % full scale for load ranges from 20 kg to 1000 kg. Additional features include minimal temperature effects on zero and span of 0.002 %/°C and 0.002 %/°C, respectively.

#### **FEATURES**

- 20 kg to 1000 kg range
- ±0.02 % accuracy
- One-piece, nickel-plated alloy steel construction
- Integral cable
- Cost efficient

# **Model 102**

### PERFORMANCE SPECIFICATIONS

Characteristic	Measure	
Load ranges <sup>3</sup>	20, 50, 100, 200, 300, 500, 1000 kg	
Accuracy	±0.02 % full scale	
Output	2.0 mV/V	
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 131 °F]	
Temperature effect, zero	±0.02 % full scale/10 °C	
Temperature effect, span	±0.02 % full scale/10 °C	
Protection class	IP67	

#### **ELECTRICAL SPECIFICATIONS**

Characteristic	Measure	
Strain gage type	Bonded foil	
Excitation (acceptable)	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)	3 m [9.84 ft] flying leads	

### **MECHANICAL SPECIFICATIONS**

Characteristic	Measure
Maximum allowable load	150 full scale <sup>1</sup>
Material	Nickel plated alloy steel or stainless steel
Deflection	Less than or equal to 0,5 mm [0.02 in]

#### **WIRING CODES**

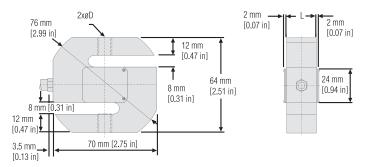
Cable	
Red	(+) supply
Black	(-) supply
Green	(+) output
White	(-) output
Large Black	Shield

### **RANGE CODES**

Range codes	Range
LD	20 kg
LE	30 kg
LF	50 kg
LG	75 kg
LH	100 kg
LJ	150 kg
LK	200 kg
LL	250 kg
LM	300 kg
LN	500 kg
LQ	1000 kg

#### **MOUNTING DIMENSIONS**

Load	D (thread)	L
20 kg to 150 kg	M8 x 1.25	12 mm [0.47 in]
200 kg to 500 kg	M12 x 1.75	20 mm [0.79 in]
700 kg to 1000 kg	M12 x 1.75	25 mm [0.98 in]

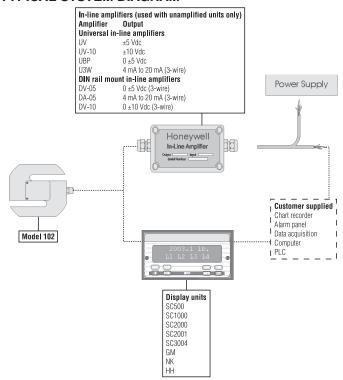


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#### **NOTES**

- Allowable maximum loads maximum load to be applied without damage.<sup>2</sup>
- Without damage loading to this level will not cause excessive zero shift or 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.

#### TYPICAL SYSTEM DIAGRAM



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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Sensing and Control
Automation and Control Solutions
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422 USA
+1-815-235-6847

Honeywell