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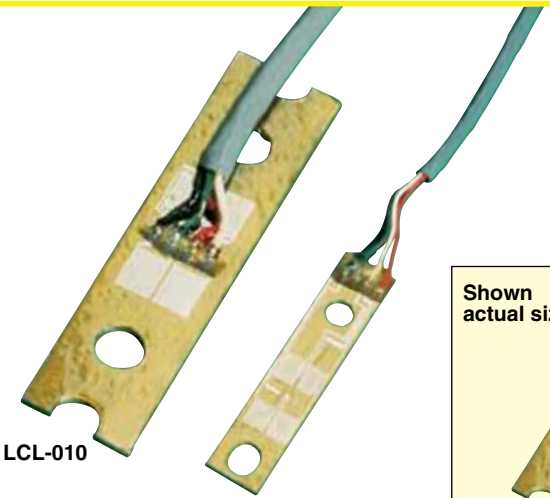
Find the *OMEGA LCL-227G* at our website: *Click HERE*

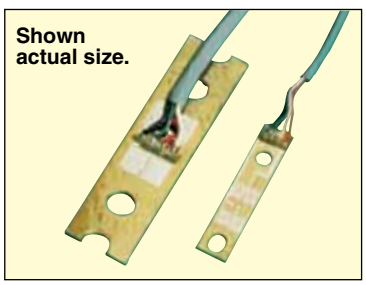
# FULL-BRIDGE THIN-BEAM LOAD CELLS
## FOR LOADS 0-113 g to 0-18 kgf

### LCL Series

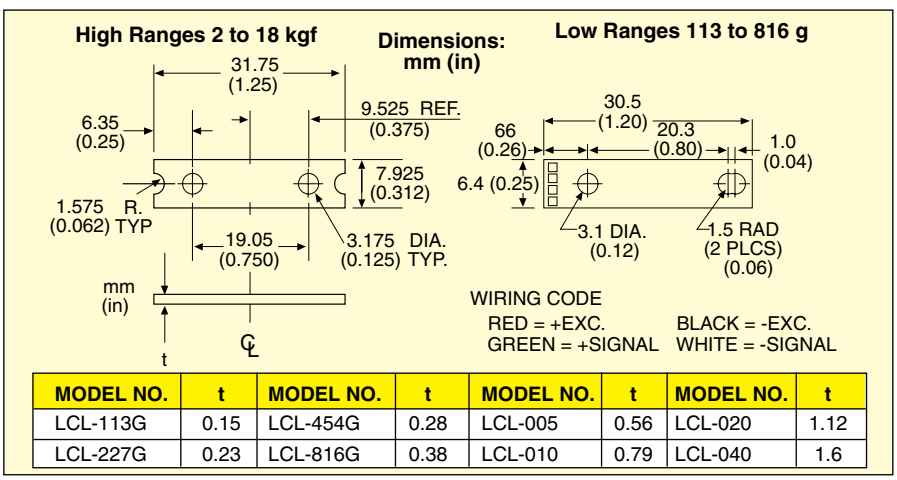
MADE IN USA RoHS

- **Measures Force or Displacement**
- **Thermally Matched, Fully Active, Full-Bridge Gage for Optimal Temperature Tracking**




When frequent small-load measurements are required, OMEGA® LCL Series thin-beam load cells are the answer. The LCL Series is designed to measure many different parameters found in medical instrumentation, home appliances, process control, robotics, automotive, and other high-volume applications.
A specially developed integrated strain gage includes all balancing, compensating, and conductive elements and is laminated to the beam to provide excellent stability and reliability.




| MODEL NO. | t | MODEL NO. | t | MODEL NO. | t | MODEL NO. | t |
|---|---|---|---|---|---|---|---|
| LCL-113G | 0.15 | LCL-454G | 0.28 | LCL-005 | 0.56 | LCL-020 | 1.12 |
| LCL-227G | 0.23 | LCL-816G | 0.38 | LCL-010 | 0.79 | LCL-040 | 1.6 |

## SPECIFICATIONS

**Excitation:** 5 Vdc, 12V max
**Rated Output:** 2 mV/V ±20% (to minimize ±20% tolerance, end user must calibrate with a known weight)
**Zero Balance:** 0.3 mV/V
**Combined Error:** 0.25% FS
**Operating Temperature:** -54 to 93°C (-65 to 200°F)
**Compensated Temperature:** -7 to 49°C (20 to 120°F)
**Temperature Effects:** Zero balance 0.02% FS/°F; output 0.02%/°F
**Resistance (Input and Output):** 1200 ±300 Ω
**Insulation Resistance:** 1000 @ 50 Vdc
**Seal:** Urethane coated
**Safe Overload:** 150% FS
**Full Scale Deflection:** 0.25 to 1.27 mm (0.010 to 0.050")
**Lead Wire:** 9" shielded PVC 4-conductor 30 AWG
**Material:**
**>816 gf (2 lb):** 301 SS
**≤816 gf (2 lb):** Beryllium copper

## To Order *Visit omega.com/lcl for Pricing and Details*

| CAPACITY | | MODEL NO. | COMPATIBLE METERS |
|---|---|---|---|
| 113 gf | 0.25 lb | **LCL-113G** | DP2000S5, DP25B-S, DPiS |
| 227 gf | 0.5 lb | **LCL-227G** | DP2000S5, DP25B-S, DPiS |
| 454 gf | 1 lb | **LCL-454G** | DP2000S5, DP25B-S, DPiS |
| 816 gf | 2 lb | **LCL-816G** | DP2000S5, DP25B-S, DPiS |
| 2.27 kgf | 5 lb | **LCL-005** | DP2000S5, DP25B-S, DPiS |
| 4.54 kgf | 10 lb | **LCL-010** | DP2000S5, DP25B-S, DPiS |
| 9.07 kgf | 20 lb | **LCL-020** | DP2000S5, DP25B-S, DPiS |
| 18.14 kgf | 40 lb | **LCL-040** | DP2000S5, DP25B-S, DPiS |

**MOUNTING HARDWARE**

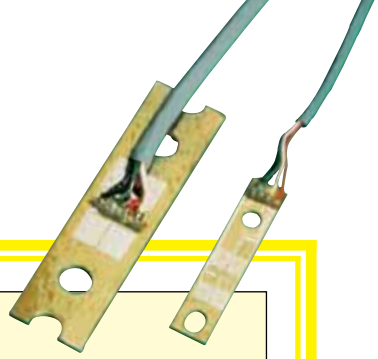
| MODEL NO. | MOUNTING BRACKETS |
|---|---|
| **LCL-CL1** | For LCL-113G through LCL-816G |
| **LCM-CL1** | For LCL-005 through LCL-040 |

***Ordering Examples: LCL-113G,** beam and **LCL-CL1,** mounting bracket.*
***LCL-020,** beam lead cell and **LCM-CL1,** mounting bracket.*



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# INSTALLATION CONSIDERATIONS FOR THIN-BEAM LOAD CELLS



Careful design considerations must be taken into account when mounting OMEGA's LCL Series thin-beam load cells. The sensor's performance depends on the mechanical interface. All thin-beam load cells require mounting clamps to create a "double bend" during loading, as shown in Figure A. This illustration is exaggerated to show the clamp's effectiveness in producing opposing moments that create the double bend. An electrical output is generated as the double bend causes tension and compression on the sensor strain gage.

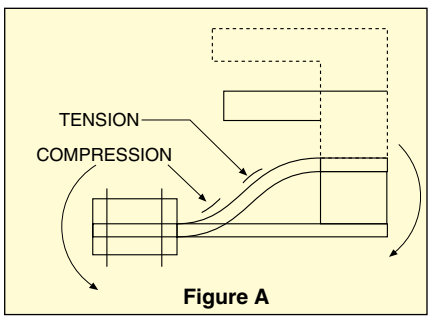
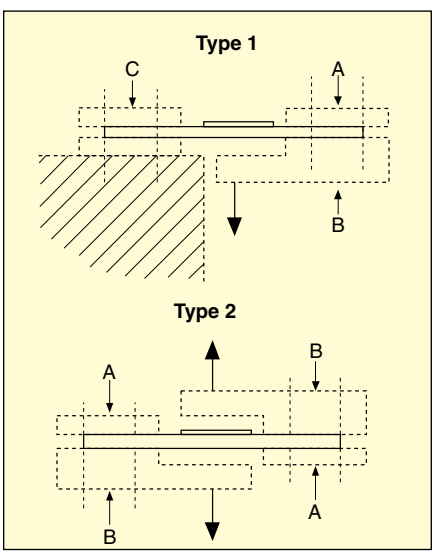



**Figure A**

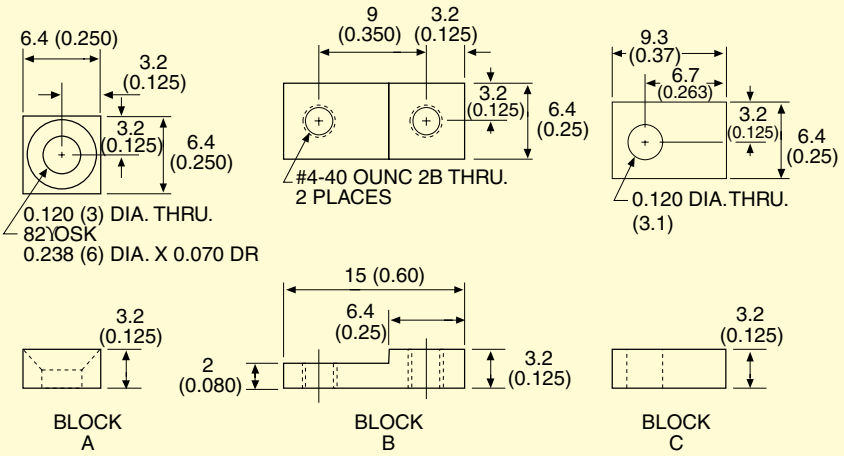
Two typical mounting arrangements are shown below. For high-accuracy applications, reinforcement plates should be slightly harder than the beam material, and the interfacing corners should be sharp. Because of low loads and sensor construction associated with the LCL113G through LCL-816G, in-line loading (Type 2) is not recommended.




## LCL-CL1 Mounting Kit

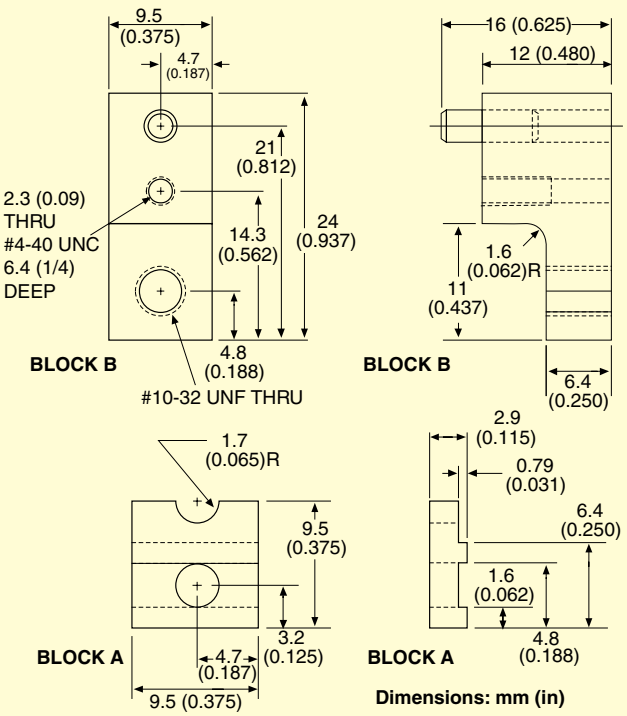
Mounting kit LCL-CL1 for thin-beam sensors LCL-113G through LCL-816G, Type 1 mounting only. Kit includes mounting blocks A, B, and C.

**Dimensions: mm (in)**




## LCM-CL1 Mounting Kit

Mounting kit LCM-CL1 for thin-beam sensors LCL-005 through LCL-040. Kit includes 4 mounting blocks, 2 each of blocks A and B. Type 2 mounting only.








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