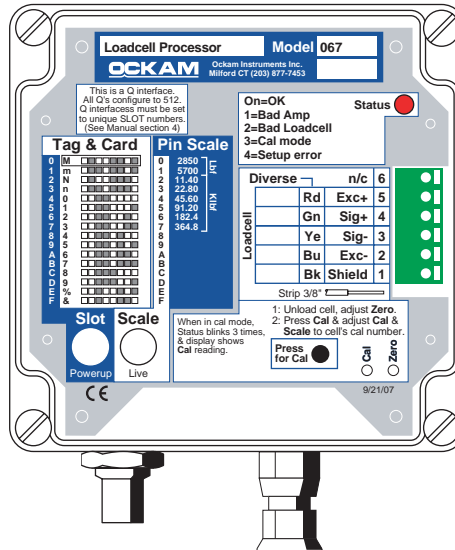


## 067 Loadcell Processor



The Model 067 Loadcell Processor is a complete loadcell amplifier and interface. No external amplifier box is needed. It accepts full-bridge loadcells with a nominal full-scale output of 1.75 millivolts/volt. The calibration is accomplished using the Diverse loadcell paradigm.

### SPECIFICATIONS

- Dimensions: 4-3/4" W x 3-1/2" H x 1-1/2" D
- Mounting: VELCRO pads (or 4 #10-24 x 5/8" screws)
- Weight: 1 Lb.
- Orientation: Any
- Power Requirements: 85 ma
- Fuse: 250ma Picofuse
- "Q" interface: Variable tag, any slot (default is slot 0, Tag "M"), 9 bytes buffer space
- Mating Connectors: Ockam Bus: BNC Male (UG-88/U)  
Loadcell: 5-wire terminal strip with shield.
- Compatibility: Full-bridge loadcells 320 to 5000 ohms. Drive is 5VDC.  
Calibration uses 100k ohm bridge resistor, compatible with Diverse loadcell calibration procedure.



The 067 Loadcell Processor complies with relevant sections of EU EN60945:1997 and EMC Directive 89/336/EEC.

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## INSTALLATION

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- 1 The **Slot/Tag** switch is normally supplied set to "0". This tells the processor which slot to use, and which tag the data is to be displayed on. By default, the slot is 0, outputting to tag "M", or the "Aux 1" channel. You should leave this switch alone unless you are installing multiple Load Cells or other Q interfaces (see Multiple Q Interfaces section).
- 2 Connect the load sensor to the processor.
- 3 Select a display to show the tag previously selected in step 1. There should be a number showing.
- 4 With the sensor unloaded, turn the **zero** adjustment for a zero reading.
- 5 Press the **Cal** button and adjust the **Cal** adjustment until the displayed number agrees with the calibration number supplied with the sensor. If the number cannot be achieved, go to successively higher **Scale** settings until it is.
- 6 Repeat steps 4 and 5 a couple of times if needed.

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## TROUBLESHOOTING

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- 1 If no number shows on the display, check the following:
  - The display and the processor are set to the same tag.
  - There are no other Q interfaces set to the same slot number. To check this:
    - Disconnect the Loadcell processor and all other known Q interfaces.
    - Check that the Configuration number divided by 512 is even.
    - If not, there are more Q interfaces to be found and disconnected.
    - Reconnect only the Loadcell Processor. The Configuration divided by 512 should now be odd.
    - Confirm you're getting a reading on the display.
    - Reconnect the other interfaces one at a time. Press the Cal button briefly to change the loadcell reading and check that the display changes.
    - If you connect an interface and the display stops responding, the last interface is conflicting with the loadcell processor.
- 2 If the display doesn't change when you press the **Cal** button, check the following:
  - Recheck the installation.
  - With the sensor connected, measure the voltage between **Exc-** and **Exc+**. It should be 10 volts DC. If low, disconnect the sensor and measure again. If the voltage returns to 10 volts, the sensor or wiring is shorted.

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## INSTALLING MULTIPLE LOAD CELL OR OTHER Q INTERFACES

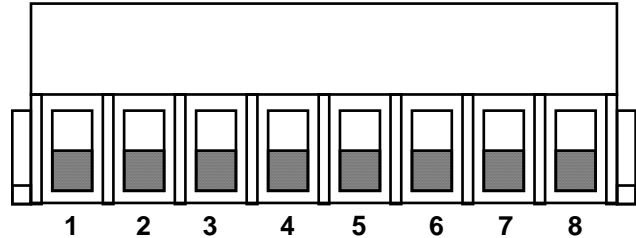
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The Loadcell Processor is a so-called Q interface. The Ockam System can accommodate up to 16 (depending on how many resources they require) of these interfaces at the same time. The slot designation allows the CPU to differentiate amongst the Q interfaces by giving each a different "address". Each interface is required to occupy a different "slot"; it doesn't matter which (to the CPU at least), as long as they are all different.

Naturally enough, the slot designation **is** important. It determines which display card "tag" (i.e. magnet pattern) the data is to be sent on. The tag information is carried inside the Q interface

itself, and in some interfaces, can be changed by selecting a different slot. Some interfaces have a fixed tag value, and some (like the Loadcell Processor) have a choice of tags.

If you have multiple Q interfaces (including Loadcells), you need to select a Slot switch setting so that all are different, and also designate different tags. You also need to check that the tags you select are matched by the magnet patterns of the display cards you expect the readings to appear on.



**MODEL 067 LOAD CELL**

| rdg        | Slot     | Tag      | Normal Use                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|----------|----------|--------------------------------|---|---|---|---|---|---|---|---|
| <b>115</b> | <b>0</b> | <b>M</b> | <b>Load Cell #1 (Supplied)</b> |   | • |   |   | • | • |   | • |
| 155        | 1        | m        | Load Cell #2                   |   | • | • |   | • | • |   | • |
| 116        | 2        | N        | Trim Q interface               |   | • |   |   | • | • | • |   |
| 156        | 3        | n        | Load Cell #4                   |   | • | • |   | • | • | • |   |
| 060        | 4        | 0        | User 0, Polar output           |   |   | • | • |   |   |   |   |
| 061        | 5        | 1        | User 1                         |   |   | • | • |   |   |   | • |
| 062        | 6        | 2        | User 2                         |   |   | • | • |   |   | • |   |
| 063        | 7        | 3        | User 3                         |   |   | • | • |   |   | • | • |
| 064        | 8        | 4        | User 4                         |   |   | • | • |   | • |   |   |
| 065        | 9        | 5        | User 5                         |   |   | • | • |   | • |   | • |
| 067        | A        | 6        | User 6                         |   |   | • | • |   | • | • |   |
| 067        | B        | 7        | User 7                         |   |   | • | • |   | • | • | • |
| 070        | C        | 8        | User 8                         |   |   | • | • | • |   |   |   |
| 071        | D        | 9        | User 9                         |   |   | • | • | • |   |   | • |
| 044        | E        | \$       | None                           |   |   | • |   |   | • |   |   |
| 043        | F        | #        | None                           |   |   | • |   |   |   | • | • |

**MODEL 067 LOADCELL PROCESSOR REVISION HISTORY**

| REV | DATE    | CHANGE   |
|-----|---------|--|
| D2  | 8/1/07  | 067 IN DEVELOPMENT – INT. MANTRACOURT AMPLIFIER              |
| D3  | 9/21/07 | Using 067 model number again; Mantracourt amp. with code fix |