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Installation Instructions HM1734-LCP Load Cell Power Module

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Process Control Systems, Instruments and Transducers

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Helm HM1734-LCP Installation Instructions

Explosion Hazard

Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product. Substitution of components may impair suitability for Class I, Division 2.

Preventing Electrostatic Discharge

This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment.

Touch a grounded object to discharge potential static.

- Wear an approved grounding wrist strap.
- Do not touch connectors or pins on component boards.
- Do not touch circuit components inside the equipment.
- If available, use a static-safe workstation. When not in use, store the equipment in appropriate static-safe packaging.

Grounding

POINT I/O is grounded through DIN rail to chassis ground. Use zinc plated, yellow chromated steel DIN rail to assure proper grounding. Using other DIN rail materials (e.g. aluminum, plastic, etc.) which can corrode, oxidize or are poor conductors can result in improper or intermittent platform grounding.

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Introduction

The HM1734-LCP Load Cell Power Module is a self-contained power bridge designed to provide bridge excitation. The excitation voltage is +5 VDC. The HM1734-LCP power module is designed to attach to the din rail next to the HM1734-WM Weigh Scale module for easy user interface. The power module can accept up to eight load cells at 350ohm and is well suited for interface with load cells configured at less than 350ohm.

Classic Application

- 1.) HM1734-WM Weigh Module, Two Channels
- 2.) HM1734-LCP Load Cell Power Module
 - a. 4 Load Cells wired to channel one
 - b. 4 Load Cells wired to channel two
- 3.) With this arrangement two weigh stations can be monitored

Refer to wiring diagram (E1133W05A) in Appendix A.

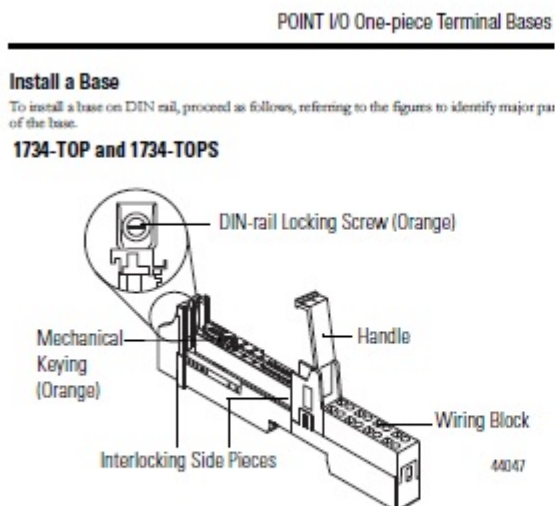
Note: Run jumper wire from HM1734-WM (- gage) to (- gage) terminal of LCP module.

Note: +5V Maximum load current = 150ma

Terminal Base Assemblies and RTBs

1734-TOP (screw-clamp) or 1734-TOPS (spring-clamp)

A POINT I/O one-piece mounting base, which includes integrated terminal locations. The I/O module plugs into the one-piece mounting base.



To install the mounting base on the DIN rail, proceed as follows.

1. Position the mounting base vertically above the installed units adapter, power supply or existing module.
2. Slide the mounting base down allowing the interlocking side pieces to engage the adjacent module or adapter.
3. Press firmly to seat the mounting base on the DIN rail. The mounting base will snap into place.
4. To remove the mounting base from the DIN rail, remove the module, and use a small bladed screwdriver to rotate the base locking screw to a vertical position. This releases the locking mechanism. Then lift straight up to remove.

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1734-TB (screw clamp) and 1734-TBS (spring clamp) with removable terminal block

A Terminal Base Assembly consists of a POINT I/O mounting base and a separate removable terminal block (RTB) that plugs into the mounting base. The base mounts directly on the DIN rail, either vertically or horizontally, and includes user-selectable mechanical keying to prevent incorrect I/O module placement. The RTB plugs into the mounting base and provides the terminal locations for field wiring. It also provides vertical access to wire and screw terminations. The I/O module plugs into the mounting base above the RTB. The RTB separates independently from the mounting base and I/O module to facilitate rapid installation and commissioning of the system. Spare or replacement RTBs can be ordered separate from the terminal base assembly.

Installing the Removable Terminal Block (RTB)

If using 1734-TB or TBS, a removable terminal block is supplied with your wiring base assembly. To remove, pull up on the RTB handle. This allows the mounting base to be removed and replaced as necessary without removing any of the wiring. To reinsert the removable terminal block, proceed as follows.

1. Insert the end opposite the handle into the base unit. This end has a curved section that engages with the wiring base.
2. Rotate the terminal block into the wiring base until it locks itself in place
3. If an I/O module is installed, snap the RTB handle into place on the module.

When you connect or disconnect the RTB with field side power applied, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

Removing a Mounting Base

To remove a mounting base, you must remove and installed module, and the module installed in the base to the right. Remove the removable terminal block (if wired).

1. Unlatch the RTB handle on the I/O module.
2. Pull on the RTB handle to remove the removable terminal block.

When you connect or disconnect the RTB with field side power applied, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

3. Press on the module lock on the top of the module.
4. Pull on the I/O module to remove from that base.

When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

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Installing the I/O Module

The module can be installed before, or after base installation. Make sure that the mounting base is correctly keyed before installing the module into the mounting base. In addition, make sure the mounting base locking screw is positioned horizontal referenced to the base.

When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

1. Using a bladed screwdriver, rotate the keyswitch (2) on the mounting base clockwise until the number required for the type of module being installed aligns with the notch in the base.
2. Make certain the DIN rail locking screw is in the horizontal position (you cannot insert the module if the locking mechanism is unlocked.)
3. Insert the module straight down into the mounting base and press to secure. The module will lock into place.

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Troubleshooting with the Indicator

Module Status:

Off	No power applied to device.
Green	Device operating normally.

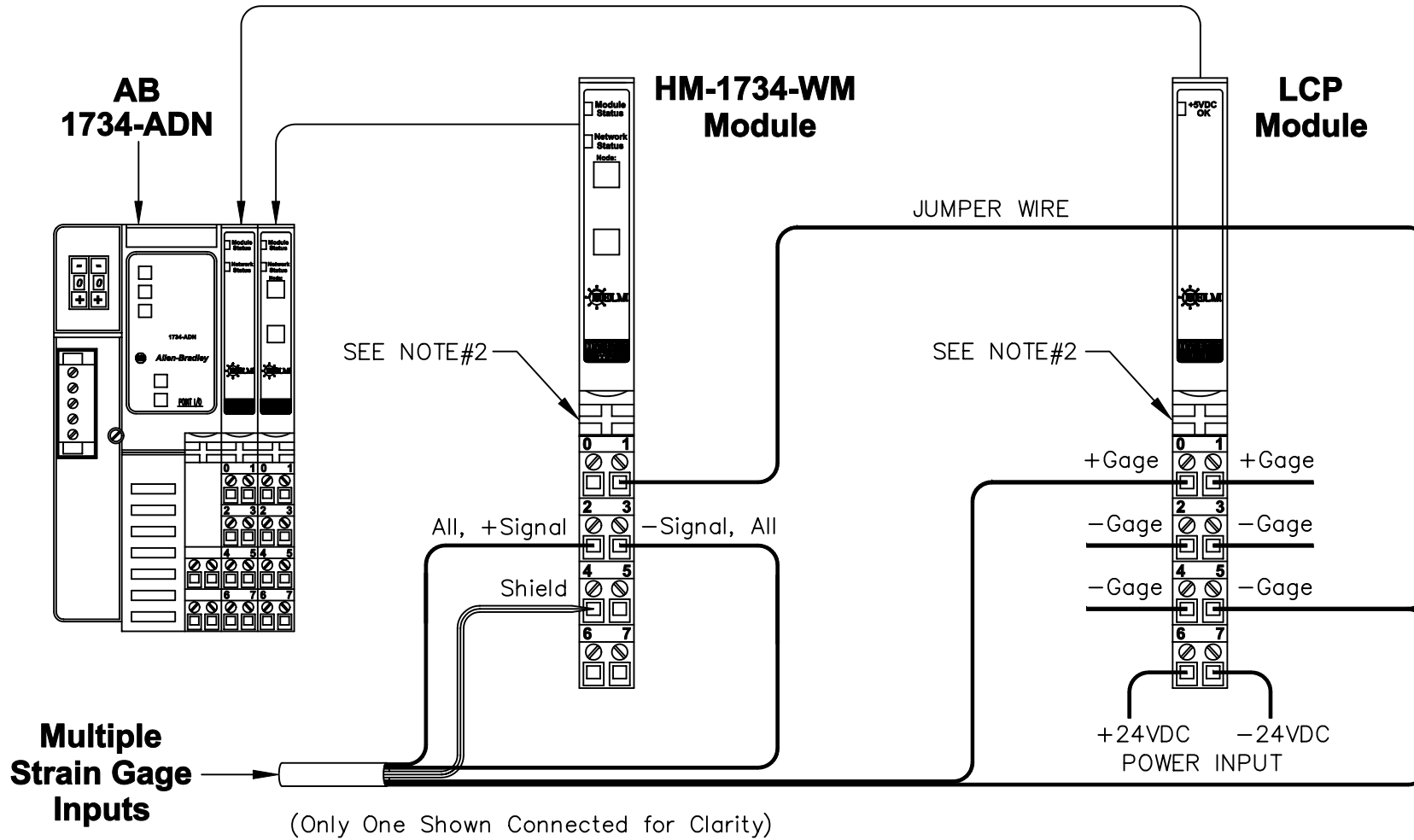
Specifications - HM1734-LCP Load Cell Power Module

Module Location	1734-TOP (screw-clamp) or 1734-TOPS (spring-clamp) or 1734-TB (screw-clamp) or 1734-TBS (spring clamp) with RTB
Gage Excitation Voltage	5V Maximum Load Current = 150 ma
Operating Temperatures	0°C to 60°C (32°F to 140°F)
Emissions	CISPR 11 Group 1, Class A
External Power	24V @ 80.0ma
Voltage Range	20-30 VDC
Dimensions	2.21H x 0.47W x 2.97L (Millimeters 56H x 12W x 75.5L)

- NOTES: 1.) SEE HELM HM-1734-LCP
DATA SHEET FOR SPEC'S.
2.) ROCKWELL PART No.1734-TOP.

HM-1734-LCP Wiring Connections

(One Channel with Multiple Sensor Inputs)



REV.	DESCRIPTION	BY	DATE
A	ADDED NOTE #2	N.F.N.	09/24/13



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SCALE: FULL	DESIGNED BY: N.F.N.	DRAWN BY: M.H.L.
DATE: 07/15/13	CHECKED BY: N.F.N.	APPROVED BY: R.J.G.
TITLE: WIRING CONNECTIONS, HM-1734-LCP (HELM)		
DRAWER:	DRAWING NUMBER: E1133W05A	