

## MC170-L Signal Conditioning Module Case

The MC170-L is a mobile module case for the MC170 family of signal conditioning modules. Standard MC170 series signal conditioning modules can be used with the MC170-L in any mix or combination. The standard output of the signal conditioning modules is +/-10 Vdc, suitable for input into a data acquisition system.

- Portable - Runs on Vehicle Power
- Cost-Effective for Small System Requirements
- 8 or 16 Slot Versions Available

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### Description

The MC170-L is available in 8 or 16-slot versions and operates on any DC power from 10 to 36 Vdc.

### Specifications

**Output Signal:** +/-10 Vdc, from signal conditioning modules

**Input Power Requirements:** 10 to 36 VDC, 8 slot: 20 W, 16 slot: 30 W

**Carrier Oscillator:** 5 Vrms @ 3 KHz, 2 W

### Size:

	Height	Width	Depth
<b>8 Slot</b>	3.45"	8"	9.45"
<b>16 Slot</b>	3.45"	12"	9.45"

**Weight:** 8-Slot 5 lbs, 16-Slot 6.5 lbs (empty)

Allow 4 Oz additional per plug-in module

### Operation

The MC170-L module case accepts MC170 signal conditioning modules, one per slot. The modules can be inserted or removed from the MC170-L while power is on. The signal conditioning modules plug into a backplane. Removal is facilitated with the plastic module extractor supplied with each MC170L..

The front panel power switch turns power on and off and has an LED indicator.

### MC170-L Accessories

**Part number 12900** - 9-pin D [mating connector](#) for sensor wiring input. 1 required per slot used.

**Part number 12901R** - 25-pin D mating [output connector](#) for round cable. 1 required for 8-channel box, 2 required for 16 channel box populated with dual channel modules.

**Part number 8609** - Extender Card for plug-in signal conditioning modules allows jumper settings, adjustments, etc to be made while module circuit boards are connected to the MC170-L.

**Part number 3000-4010** - AC Power Adapter. Allows operation of MC170L from 110 VAC wall power.

## Connections

### Power Connections:

Power can be furnished to the MC170-L in two ways:

1. By the AC power adapter which plugs into the jack on the rear panel.
2. By an external battery or DC power source that connects to the binding posts on the rear panel.

**Signal Input Connections** Signal input from sensors are via [9-pin D-sub connectors](#) on the rear panel. There is one 9-pin connector per MC170 slot. The actual pin connections are determined by the signal conditioning module that is plugged into that particular slot. The sensor wiring diagrams are part of the instruction manual for each module. An example of an input wiring diagram is shown [here](#)

**Output Connections** The analog output of each channel is available on the [25-pin D-sub connector](#) on the rear panel. For dual channel modules, the output connectors refer to Output A and Output B. Single output channel modules will always have their signals appear on the Output A connector. See Output connector pin assignments, below:

The pin assignments are as follows:

### 8-Slot Module Case Output Connector

- Pin 1** - Analog Gnd
- Pin 2** - Slot 2 Output A
- Pin 3** - Slot 3 Output A
- Pin 4** - Analog Gnd
- Pin 5** - Slot 6 Output A
- Pin 6** - Slot 7 Output A
- Pin 7** - Analog Gnd
- Pin 8** - Slot 2 Output B
- Pin 9** - Slot 3 Output B
- Pin 10** - Analog Gnd
- Pin 11** - Slot 6 Output B
- Pin 12** - Slot 7 Output B
- Pin 13** - Analog Gnd
- Pin 14** - Slot 1 Output A
- Pin 15** - Analog Gnd
- Pin 16** - Slot 4 Output A
- Pin 17** - Slot 5 Output A
- Pin 18** - Analog Gnd
- Pin 19** - Slot 8 Output A

**Pin 20** - Slot 1 Output B  
**Pin 21** - Analog Gnd  
**Pin 22** - Slot 4 Output B  
**Pin 23** - Slot 5 Output B  
**Pin 24** - Analog Gnd  
**Pin 25** - Slot 8 Output B

### **16-Slot Module Case Output Connections**

There are two output connectors for the 16 channel MC170-L. One connector carries the A output channels for each slot. The second output connector carries the B channels for those slots containing dual channel signal conditioning modules.

#### **Output Connector A**

**Pin 1** - Analog Gnd  
**Pin 2** - Slot 2 Output A  
**Pin 3** - Slot 3 Output A  
**Pin 4** - Analog Gnd  
**Pin 5** - Slot 6 Output A  
**Pin 6** - Slot 7 Output A  
**Pin 7** - Analog Gnd  
**Pin 8** - Slot 10 Output A  
**Pin 9** - Slot 11 Output A  
**Pin 10** - Analog Gnd  
**Pin 11** - Slot 14 Output A  
**Pin 12** - Slot 15 Output A  
**Pin 13** - Analog Gnd  
**Pin 14** - Slot 1 Output A  
**Pin 15** - Analog Gnd  
**Pin 16** - Slot 4 Output A  
**Pin 17** - Slot 5 Output A  
**Pin 18** - Analog Gnd  
**Pin 19** - Slot 8 Output A  
**Pin 20** - Slot 9 Output A  
**Pin 21** - Analog Gnd  
**Pin 22** - Slot 12 Output A  
**Pin 23** - Slot 13 Output A  
**Pin 24** - Analog Gnd  
**Pin 25** - Slot 16 Output A

#### **Output Connector B**

**Pin 1** - Analog Gnd  
**Pin 2** - Slot 2 Output B  
**Pin 3** - Slot 3 Output B  
**Pin 4** - Analog Gnd  
**Pin 5** - Slot 6 Output B  
**Pin 6** - Slot 7 Output B  
**Pin 7** - Analog Gnd  
**Pin 8** - Slot 10 Output B  
**Pin 9** - Slot 11 Output B  
**Pin 10** - Analog Gnd

- Pin 11** - Slot 14 Output B
- Pin 12** - Slot 15 Output B
- Pin 13** - Analog Gnd
- Pin 14** - Slot 1 Output B
- Pin 15** - Analog Gnd
- Pin 16** - Slot 4 Output B
- Pin 17** - Slot 5 Output B
- Pin 18** - Analog Gnd
- Pin 19** - Slot 8 Output B
- Pin 20** - Slot 9 Output B
- Pin 21** - Analog Gnd
- Pin 22** - Slot 12 Output B
- Pin 23** - Slot 13 Output B
- Pin 24** - Analog Gnd
- Pin 25** - Slot 16 Output B