



Configuring the NI CB-68LP Screw Terminal Block for use with 62xx M-Series Boards for MiDAS DA

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Abstract

This application note contains charts for wiring a National Instruments CB-68LP screw terminal block for MiDAS DA hardware. This information applies to National Instruments 62xx M-Series devices. Connections can be made for as many as 8 differential sensors or 16 single-ended sensors. This document also provides instructions for wiring trigger and sync out connections.

Note: For information on the NI 6255 board, refer to Application Note 165, Configuring the NI CB-68LP Screw Terminal Block for use with a 40-channel PCI/PXI-6255 Board for MiDAS DA.

Note: The information in this document does not apply to National Instruments M-Series devices 6210 – 6218.

Wiring Sync Out and Trigger Connections on Terminal Blocks

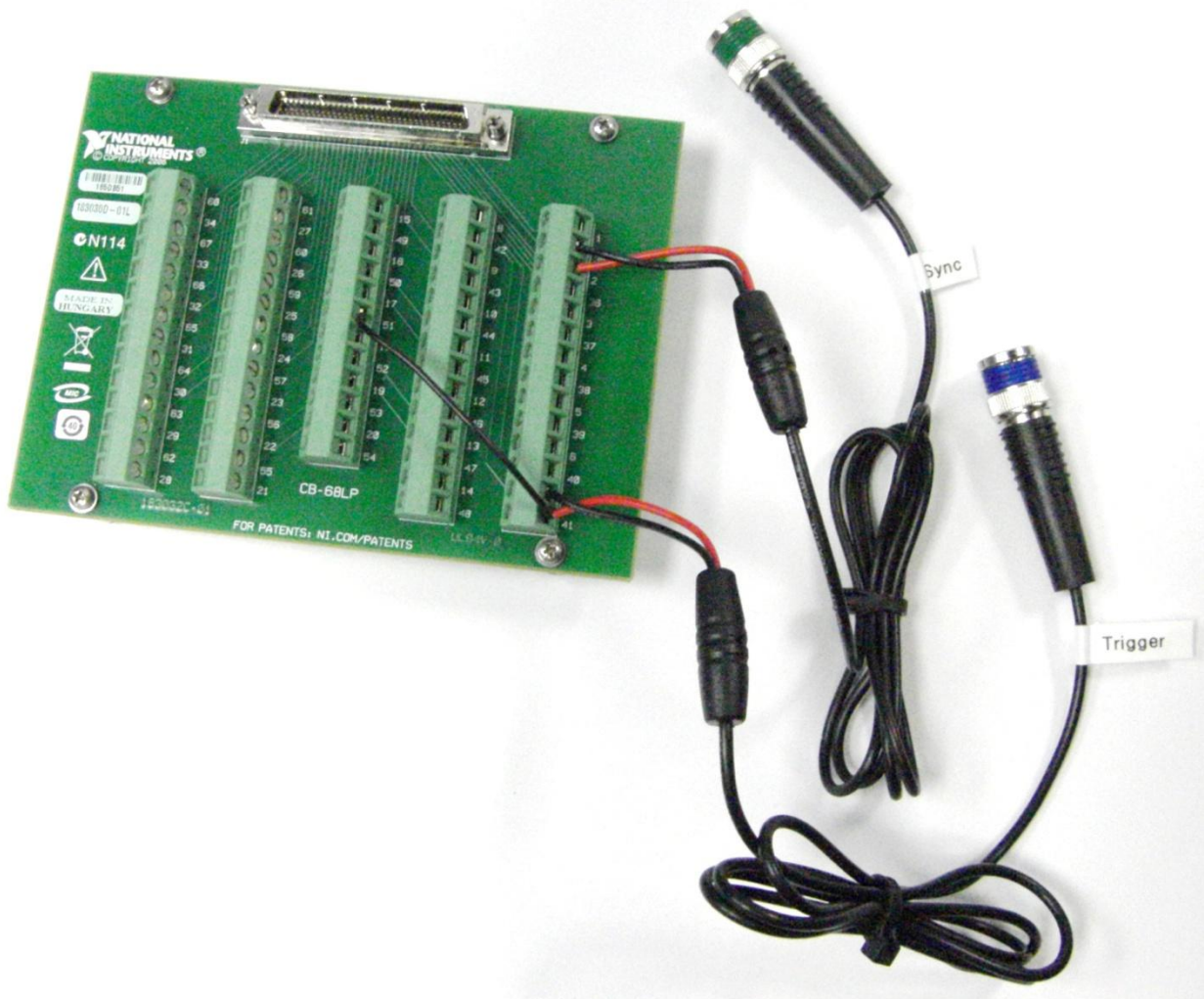
When using a screw terminal block, you must perform some wiring modifications to access the sync out pulse and the trigger. Use a BNC pigtail to connect two terminals into a BNC connector for the sync out line, and another pigtail to connect two terminals as the trigger line. The connections are wired as follows on the screw terminal block. Pin connector numbers are shown in parentheses.

Sync out: Connect **PFI 12** (2) to **DGND** (35 or 36)

Trigger: Connect **PFI 4** (41) to **DGND** (7)

Trigger jumper: Connect **P0.5** (51) to **PFI 4** (41)

Note: For more information, please refer to the image on the following page and the MiDAS DA User Guide.



Connecting Sensors with your DAQ Hardware

You should have the following hardware components:

- one PCI/PXI board (62xx M-series) installed in your computer
- one cable connecting the installed data board to the screw terminal block
- one CB-68LP screw terminal block

This configuration allows for 8 differential or 16 single-ended sensors. The chart on the following pages shows the wiring for the Screw Terminal Block.

Note: For single-ended sensors, only the positive (+) connections are listed. The negative (-) connections must be wired to one of the AI GND connections listed at the bottom of the chart.

Screw Terminal Block

Sensor #	Positive / Negative	Differential		Single-Ended	
		Pins	DA	Pins	DA
1	+	68	AI 0	68	AI 0
	-	34	AI 8		
2	+	33	AI 1	33	AI 1
	-	66	AI 9		
3	+	65	AI 2	65	AI 2
	-	31	AI 10		
4	+	30	AI 3	30	AI 3
	-	63	AI 11		
5	+	28	AI 4	28	AI 4
	-	61	AI 12		
6	+	60	AI 5	60	AI 5
	-	26	AI 13		
7	+	25	AI 6	25	AI 6
	-	58	AI 14		
8	+	57	AI 7	57	AI 7
	-	23	AI 15		
9	+			34	AI 8
10	+			66	AI 9
11	+			31	AI 10
12	+			63	AI 11
13	+			61	AI 12
14	+			26	AI 13
15	+			58	AI 14
16	+			23	AI 15
AI GND: 24, 27, 29, 32, 56, 59, 64, 67					

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Xcitex Inc.
25 First Street, Suite 105
Cambridge, MA 02141 USA

