

Conversion Instructions for QS-1300/1400 Conversion Accessory to MODCELL 2050 Accessory Part Numbers: 2050FZ00000A, 2050FZ00001A

INTRODUCTION

The MODCELL 2050 conversion accessory allows MODCELL 2050 to fit into an existing QS-1300 or QS-1400 Slide-Guide installation. No external equipment such as instrument cables, power supplies or termination panels are required. These instructions cover the procedure for the physical installation of the QS-1300 conversion brackets onto a standard MODCELL 2050 housing, Slide-Guide installation and limited electrical instructions.

Pages 3 through 10 include instructions for installation of the Direct Connect Cable when a 2050FZ00001A kit is being used. This feature provides the quickest installation while retaining the original instrument cable. Ignore pages 3 through 10, if you are using the 2050FZ00000A conversion kit.

- Parts Required:** 2050FZ00000A or 2050FZ00001A Conversion Accessory
- metal brackets (3)
 - 1/8" pop-rivets (6)
 - Direct Connect Cable (1) [available in the 2050FZ00001A kit only]
- MODCELL 2050 Single Loop Controller (1)

Tools Required: Pop-rivet gun

PROCEDURE

Removal of the MODCELL 2050 instrument from the instrument housing is not required.

1. Remove the brackets and pop-rivets from the package. Be sure all parts are present.
2. Secure the three brackets to the MODCELL 2050 using the pop-rivet gun, and 1/8" pop-rivets supplied in conversion the kit (see Figure 1). All six rivets are inserted through the bracket and into the housing.
3. Remove the QS-1300/1400 instrument from the Slide-Guide. Insert the MODCELL 2050 in place of the old instrument. MODCELL 2050 should latch in place like the QS-1300/1400 instrument did.
4. Connect wiring. When using kit number 2050FZ00000A, field I/O wiring for MODCELL 2050 may be accomplished by cutting off the QS-1300 instrument connector and wiring directly to the MODCELL 2050 termination block. See Table 1 for most common I/O configurations.

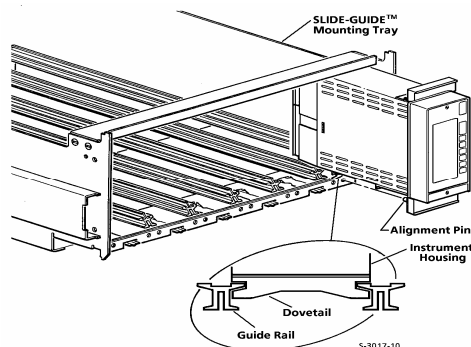


Figure 1. Mounting 2050R in Slide Guide

2050F Conversion Instructions**WARNING**

Avoid electrical shock. AC power wiring must not be connected at the distribution panel (ac source) until all wiring procedures are complete.

Table 1. Common I/O Configurations

QS-1300 TB Number	Wire Color	Signal Type	MODCELL 2050 Terminal Number	Notes
4 Note 1	Blue of Blu/Blk	Transmitter Power Supply - Positive	15	
5 Note 1	Black of Blu/Blk	Transmitter Power Supply - Negative	Not Used	
6 Note 2	Black of Blk/Red	Process Input - Negative	11	Configure 2050 process analog input for .25 to 1.25 Vdc
7 Note 2	Red of Blk/Red	Process Input - Positive	14	
8 Note 3	White of Wht/Blk	Controller Output - Positive	10	
9 Note 3	Black of Wht/Blk	Controller Output - Negative	9	
16 Note 4	Green of Grn/Blk	Remote Set-Point - Positive	7	Configure 2050 second analog input for .25 to 1.25 Vdc
17 Note 4	Black of Grn/Blk	Remote Set-Point - Negative	4	
19 Note 5	Yellow of Yel/Red	Alarm Out #2 - Common (C)	45	
20 Note 5	Red of Yel/Red	Alarm Out #2 - Normally Closed (NC)	46	
21 Note 5	Orange of Org/Red	Alarm Out #2 - Normally Open (NO)	44	
24 Note 5	Red of Brn/Red	Alarm Out #1 - Common (C)	48	
25 Note 5	Blue of Blu/Red	Alarm Out #1 - Normally Closed (NC)	49	
26 Note 5	Red of Blu/Red	Alarm Out #1 - Normally Open (NO)	47	

Notes:

1. Used as a transmitter power supply on 1300R through 1380R, 1310C through 1330C, 1301K-1302K, 1340N-1341N instruments only.
2. Used as a process input on 1300R through 1380R, 1310 through 1330C, 1301K instruments only.
3. Used as controller output on 1300R through 1380R, 1310C through 1330C instruments only.
4. Used as remote set-point on 1300R, 1310R, 1340R, 1350R, 1320C, 1330C series instruments only.
5. Used as alarm relays on 1300R, 1310R series instruments only.

2050F Conversion Instructions

**Conversion Instructions for QS-1300
Conversion Accessory to MODCELL 2050
when using the Direct Connect Cable Option**

The Direct Connect Cable is found in the 2050FZ00001A Conversion Accessory kit only. This provides the quickest conversion change out while retaining the original QS-1300 instrument cable. Table 2 provides termination identification for wiring the Direct Connect Cable to the MODCELL 2050.

It is best to install the Direct Connect Cable to the MODCELL 2050 at the bench prior to installation of the instrument at the control panel site. Kit hardware mounting and configuration should be concluded at that time as well. If this is accomplished, front of panel instrument change out will only take a few minutes. Use Table 2 as a reference when installing the Direct Connect Cable option for the Quick-Scan conversion accessory as detailed in the following pages.

Table 2. I/O Wiring Configuration for Direct Connect Cable

Quick-Scan 1300 Series Connections			MODCELL 2050	
Terminal Block #	Extended Cable Color	J101 Connections	Direct Connect Cable Colors	Term. No.
1*	Black	B (ac), C (dc)	Black	L1
2*	Green	A	Green	Stud
3*	White	D	White	L2
4	Blue	M	Blue	15
5	Black	N	N/C	
6	Black	F	Black	11
7	Red	E	Red	14
8	White	J	White	10
9	Black	H	Black/White	9
10	Brown	P	N/C	
11	Black	R	N/C	
12	Yellow	T	Orange/Black	3
13	Black	S	Black/White/Red	2
14	White	16	N/C	
15	Red	15	N/C	
16	Green	K	Green	7
17	Black	L	Black/Red	4
18	Green	3	N/C	
33	White	4	N/C	
19	Yellow	11	Orange/Red	45
20	Red	12	White/Black	46
21	Orange	7	Orange	44
22	Red	8	N/C	
23	Brown	10	Green/Black	N/A
24	Red	9	Red/White	48
25	Blue	13	Blue/White	49
26	Red	14	Red/Black/White	47
27	Blue	5	Blue/Red	N/A
28	Green	6	Green/White	N/A
29	Black	U	N/C	
30	Orange	V	N/C	
31	Red	17	N/C	
32	Green	18	N/C	
34	Unused			
35	Unused			
36	Unused			
37	Unused			

* Positions 1,2 & 3 are wires located in the 3-conductor power cable.

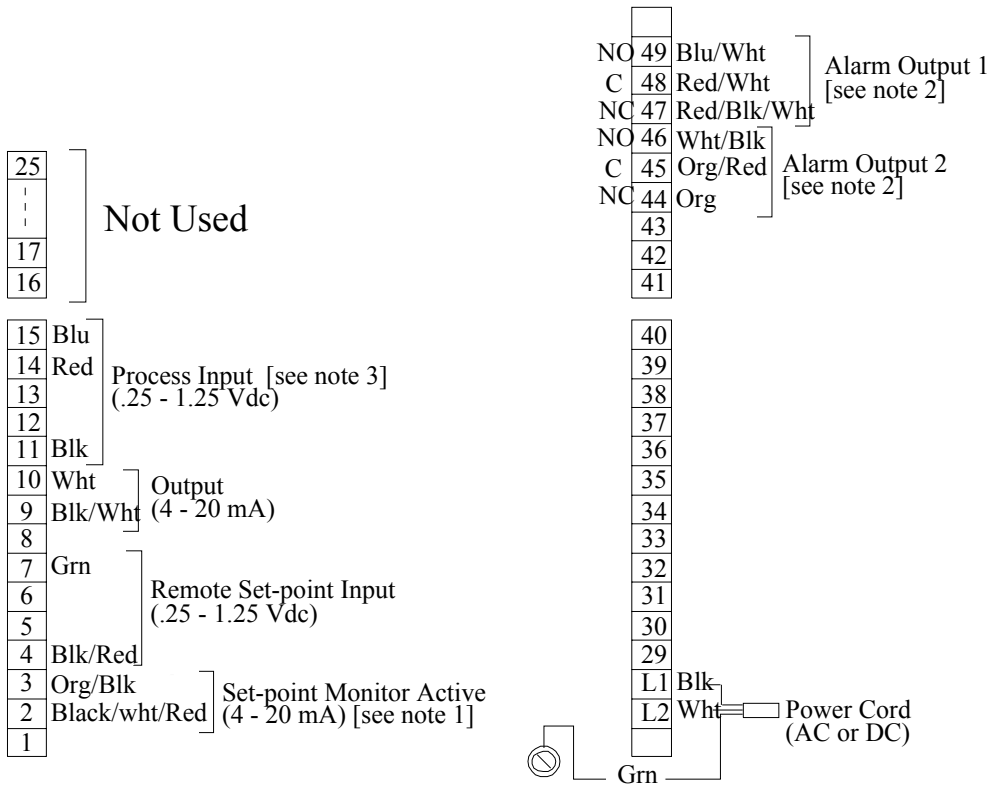
2050F Conversion Instructions

MODCELL 2050 to Quick-Scan 1300R &1310R Series
 Direct Connect Cable Option
 Termination Connections to MODCELL 2050

This instruction sheet provides termination identification and locations for wiring the Quick-Scan Direct Connect Cable to a MODCELL 2050 when replacing a 1300R/1310R Series instrument. Little or no wiring changes need to be made on the Quick-Scan 1300 terminal block. Please read the application notes, limitations and configuration specific instructions located at the bottom and back of this page before proceeding. Other signals from or to MODCELL 2050 may be used via spare wires in the quick connect cable.

WARNING
 Avoid electrical shock. AC power wiring must not be connected at the distribution panel (ac source) until all wiring procedures are completed.

MODCELL 2050 Termination Block



Limitations:

The following signals are not supported by this kit and/or MODCELL 2050; deviation monitor (± 10 Vdc), external feedback (± 10 Vdc), alarm input (.25-1.25 Vdc or ± 200 mV), upper and lower alarm light (24 Vdc).

Notes:

- The Set-point Monitor signal from MODCELL 2050 will be 4-20 milliamps. A 62.5 ohm precision resistor across the Quick-Scan terminal block, positions 12 to 13 is required for .25 - 1.25 Vdc.

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2. When MODCELL 2050s relays are configured for use as alarms, the relay will be on (fail-safe condition) in a non-alarm condition . For this reason the termination assignment for the alarm outputs are reverse from that of the Quick-Scan assignment.
3. This input configuration is for .25 - 1.25 Vdc where the controller supplies 24Vdc to the transmitter (2-wire transmitter). If the controller does not supply power to the transmitter, the blue wire is not required to be connected.
4. The controller must be equipped with a 2nd analog I/O option card.

Configuration Specifics:

The input types must be configured for volts in the "BASE CFG **MENU**". The analog input for both process and remote set-point must be configured for .25 to 1.25 Vdc in the "INPUTS **MENU**". Both the control and retransmission outputs must be configured for 4 - 20 mA in the "MA. OUTPT **MENU**". Relays A and B must be set up for alarms in the "RELAYS **MENU**" if the alarm outputs are to be used.

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MODCELL 2050 to Quick-Scan 1320R &1330R Series
 Direct Connect Cable Option
 Termination Connections to MODCELL 2050

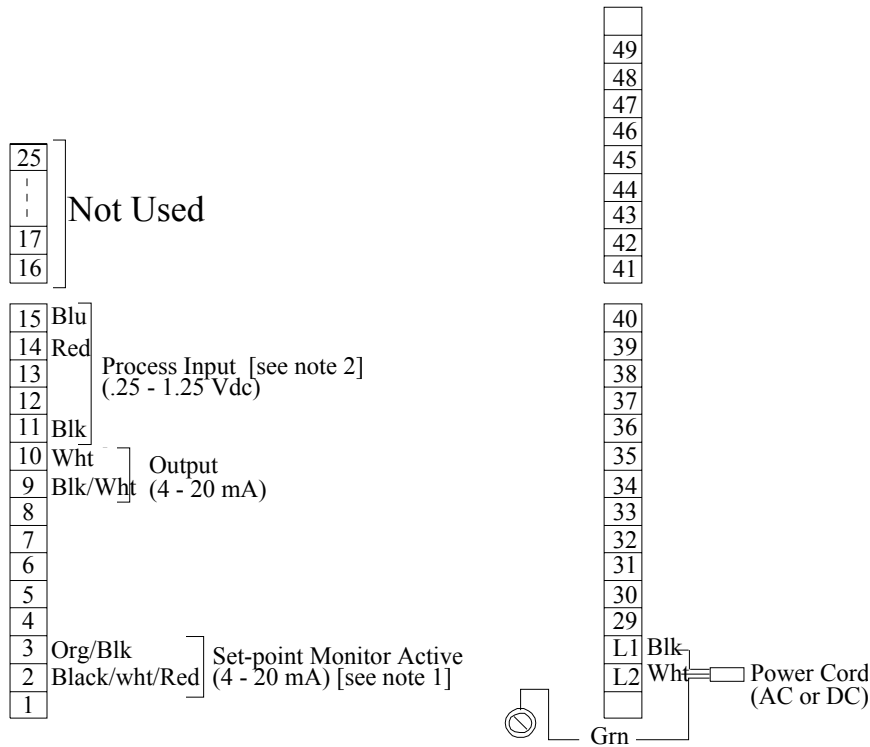
This instruction sheet provides termination identification and locations for wiring the Quick-Scan Direct Connect Cable to a MODCELL 2050 when replacing a 1320R/1330R Series instrument. Little or no wiring changes need to be made on the Quick-Scan 1300 terminal block. Please read the application notes, limitations and configuration specific instructions located at the bottom and back of this page before proceeding. Other signals from or to MODCELL 2050 may be used via spare wires in the cable.

Special Note

MODCELL 2050 does not support the pulse or gated inputs normally associated with Quick-Scan Supervisory Controllers. As an alternative set-point input, use the MODBUS serial communications or remote set-point input. See IB-23C650 for instructions on how to wire these input types via spare wires found in the direct connect cable of this kit.

WARNING
 Avoid electrical shock. AC power wiring must not be connected at the distribution panel (ac source) until all wiring procedures are completed.

MODCELL 2050 Termination Block



Limitations:

Pulse and gate inputs are not supported by this kit and/or MODCELL 2050. The alarm and status lights are not supported by this kit.

Notes:

- The Set-point Monitor signal from MODCELL 2050 will be 4-20 milliamps. A 62.5 ohm precision resistor across the Quick-Scan terminal block, positions 12 to 13 is required for .25 - 1.25 Vdc.

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2. This input configuration is for .25 - 1.25 Vdc where the controller supplies 24Vdc to the transmitter (2-wire transmitter). If the controller does not supply power to the transmitter, the blue wire is not required to be connected.
3. The controller must be equipped with a 2nd analog I/O option card.

Configuration Specifics:

The process input must be configured for volts in the "BASE CFG **MENU**". The process analog input must be configured for .25 to 1.25 Vdc in the "INPUTS **MENU**". Both the control and retransmission outputs must be configured for 4 - 20 mA in the "MA. OUTPT **MENU**".

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Limitations:

Float and lock commands, deviation monitor (± 10 Vdc) and external feedback (± 10 Vdc) are not supported by this kit and/or MODCELL 2050. The alarm lights are not supported by this kit. MODCELL 2050 offers integral alarming capabilities with local indication.

Notes:

1. The Ramped Set-point Monitor signal from MODCELL 2050 will be 4-20 milliamps. A 62.5 ohm precision resistor across the Quick-Scan terminal block, positions 12 to 13 is required for .25 - 1.25 Vdc.
2. This input configuration is for .25 - 1.25 Vdc where the controller supplies 24Vdc to the transmitter (2-wire transmitter). If the controller does not supply power to the transmitter, the blue wire is not required to be connected.
3. The controller must be equipped with a 2nd analog I/O option card.

Configuration Specifics:

The input types must be configured for volts in the "BASE CFG **MENU**". The analog input for both process and remote set-point must be configured for .25 to 1.25 Vdc in the "INPUTS **MENU**". Both the control and retransmission outputs must be configured for 4 - 20 mA in the "MA. OUTPT **MENU**".

2050F Conversion Instructions

The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice, or to make engineering refinements that may not be reflected in this bulletin. Micromod Automation assumes no responsibility for errors that may appear in this manual.

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