

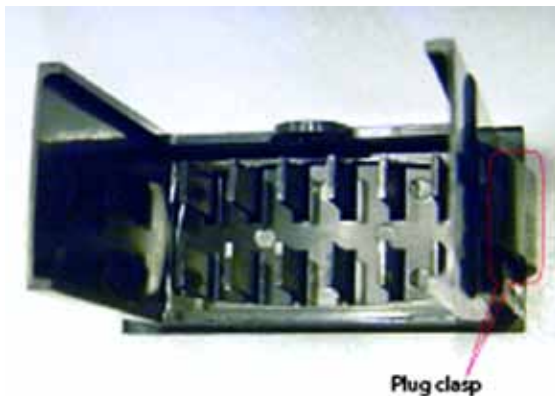


Installation Instructions for Motor Torque Module (MTM) in a 4848 Reactor Controller

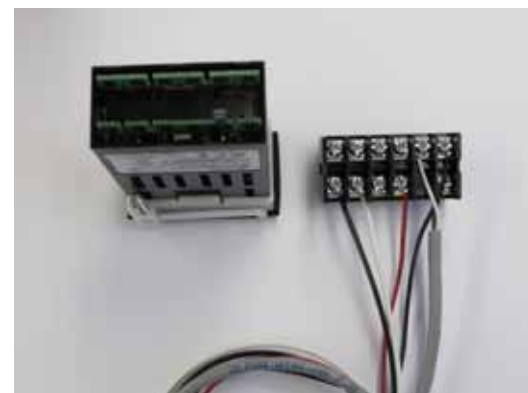
Warning: The Motor Torque Module can only be used in conjunction with a Motor Control Module (MCM). The MCM must be installed before installation of the Motor Torque Module. For Motor Control Module installation, see Field Installation Manual 555M.

Meter Installation in 4848 Reactor Controller

1. Unplug the power cord of the 4848 Controller. Remove the (2) screws located on the top/front cover at the rear corners of the controller. Gently lift the cover forward, which is hinged at the bottom, taking care not to apply tension on any internal wiring.
2. If applicable, remove and discard the black hole plug on the sloped front panel above the "PRESSURE" or "TEMPERATURE" text. This can be done by pinching the clasps on the back of the plug from the inside of the front plate. Place "MOTOR OUTPUT" label over existing text.

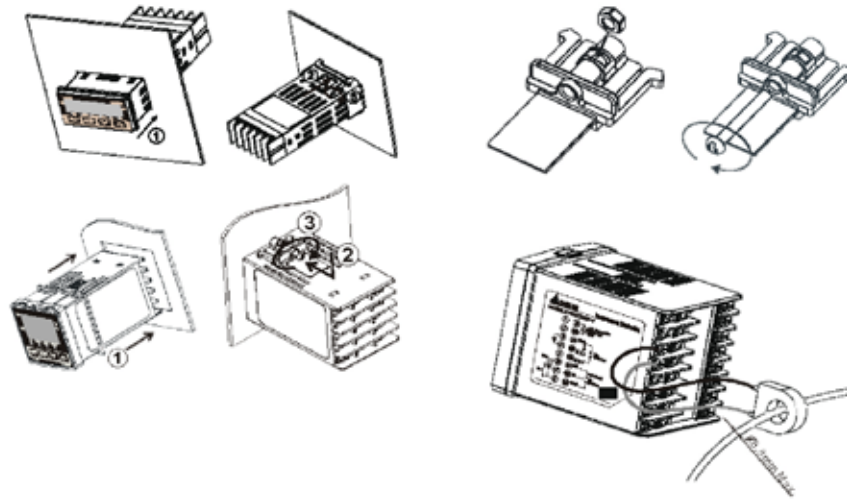


3. Insert the MTM module (2084E) through the panel cutout, from outside in, making sure the rubber gasket is on the outside of the controller front panel. (If wires are preinstalled, remove the terminal connector by releasing the tabs on the sides of the module and gently pulling the terminal connector off. Reference photos below.) Slide the white mounting bracket onto the module with the mounting screws pointing towards the front panel. Slide the mounting bracket forward until it touches the controller panel. The clasps on the mounting bracket should align with the groves on the module. Gently tighten the screws until the module is held into place. (If removed, reattach the terminal connector.)



Terminal Connector Removal

Meter Installation in 4848 Reactor Controller (Continued)



Meter Installation Diagram

Side Panel Removal

The left side panel should be removed to get access to the isolation board. This is the panel on the left hand side of the controller when looking at it from the front.

This will require loosening the four nuts on the side panel using a nut driver (two on the bottom and two on the back), removing the top cross brace, and then pulling the panel away from the chassis.

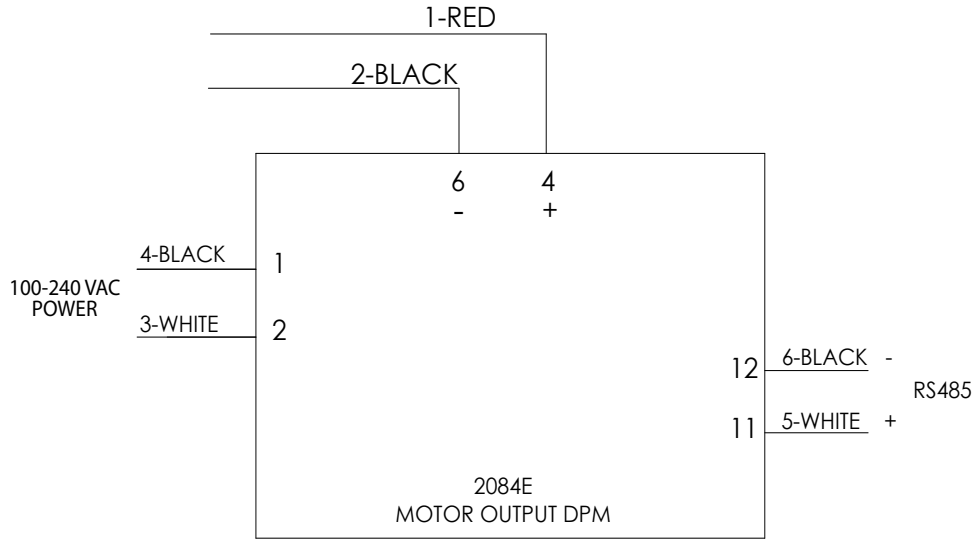


Panel to be Removed



Bottom Nut on Side Panel

Wiring Installation in 4848 Reactor Controller



Wiring Diagram for 2082E Meter



Picture of MTM Meter 2084E Pin Out

7	8	9	10	11	12
1	2	3	4	5	6

**2084E Pin Out
(Pin 5 is blank)**

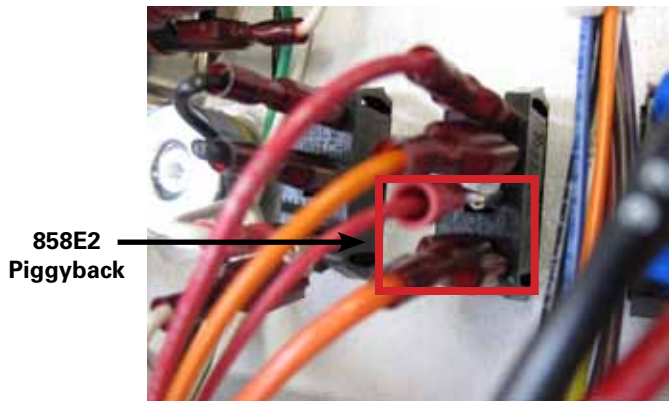
Wiring Installation in 4848 Reactor Controller (Continued)

1. Locate wire 1 (red) from the package. Take the stripped end of this cable and attach it to the 2084E meter. The meter's pins are labeled 1-12, as shown. Attach this wire in position 4.

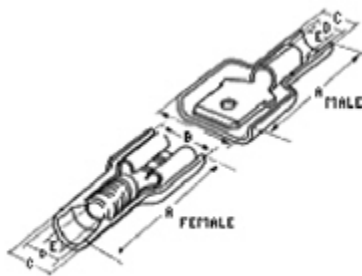
The other end has the 858E2 piggyback attachment which connects to the local/remote switch in the middle position.

Pull out this quick disconnect terminal connector and attach it to the male connection on the 858E2 piggyback.

Plug the 858E2 piggyback onto the local/remote switch in the middle position.



Local / Remote Switch (back view)



Quick Disconnect Terminals

2. Locate wire 2 (black). The stripped end of the 2 wire cable attaches to the 2084E meter in position 6. The other end has a snap spade terminal on it. This attaches to the 1588E isolation board.

Notice that the isolation board has its pins numbered 1-10. Attach the snap spade terminal to position 9.

3. Find the 2 wire cable with white and black wires

that has both ends stripped, and attach one end to the 2084E meter. White wire #5 to terminal #11 and black wire #6 to terminal #12. (This may already be connected for your convenience.)

The other end of the white wire #5 attaches to terminal block position #4 and the black wire #6 attaches to terminal block position #3.

Note: The terminal block position can be opened up using a small flat head screw driver to release the tension from the spring inside the block so you can press the wire against the spring.



Wago Terminal Block

4. Find the remaining black wire #4 from the kit and attach one end to pin 1 on the 2084E meter. Take care not to apply too much torque which could cause the wire to break. (This may already be connected for your convenience.) The other end attaches to terminal block position #5.
5. Find the remaining white wire #3 from the kit and attach one end to pin 2 on the 2084E meter. Take care not to apply too much torque which could cause the wire to break. (This may already be connected for your convenience.) The other end attaches to terminal block position #2.

Final Steps

Reattach the side panel by slipping it back on and tightening the nuts.

Close the controller and replace the two screws on the top plate. Plug the 4848 controller back in, and turn it on. The MTM display should read approximately zero when the motor is not turning. It is useful to check that the settings on the display are set correctly. Check the settings in this installation guide against the settings on the controller.

Calibrating the MTM

1. Turn the knob to zero, flip the local/remote switch to "local", and turn the motor switch on. The MTM should show a value of zero. If it does not, adjust the "tPoF" setting (press set and then return until it shows tPoF) until it does read zero.
2. Turn the knob to full. The MTM should show a value of 100.
3. Flip the local/remote switch to "remote", and put in a setpoint equal to the maximum stirring speed on the Motor Control Module display. The MTM should show a value of 100.

Pin Outs:

2084E	Color:	Attaches to:
Pin 1	Black	Terminal Block 5 (power)
Pin 2	White	Terminal Block 2 (power)
Pin 3		
Pin 4	Red	local / remote switch (bottom position) (signal)
Pin 5		
Pin 6	Black	isolation board (pin 9) (signal)
Pin 7		
Pin 8		
Pin 9		
Pin 10		
Pin 11	White	Terminal Block 4 (RS-485)
Pin 12	Black	Terminal Block 3 (RS-485)

Factory Default Settings - MTM

Module

Keys command:

1. Press "SET" to select
2. Press return key move to next operation mode
3. Up/Down arrow keys to adjust value or select type

Main Screen: SV = 100

Press return key and release

Operation Mode	Select type/value	Comment
r-S	Run	Run/Stop
SP	1	Decimal point position
LoC	OFF	Lock mode (lock all keys or only up/down arrow able to use)

Press and hold down "SET" for 5-sec

Operation Mode	Select type/value	Comment
InPt	v10	Input type (v5 = 0-5V, v10 = 0-10V, nA0 = 0-20mA, nA4 = 4-20mA, nV =0-50mV)
tP-H	To be determined*	Upper-limit range
tP-L	0	Lower-limit temperature range
CTRL	ON/OFF	Control mode (ON/OFF, MANUAL, PID and PID PROG)
S-HC	Heat	Heat/Cool control
ALA1	0	Alarm mode
SALA	OFF	System alarm
CoSH	ON	Communication write function that able to use set point from software
C-SI	ASCII	Format type
C-no	See note**	Communication address
bPS	9600	Communication baud rate
Len	7	Data length setting

Operation Mode	Select type/value	Comment
PrtY	Even	Parity bit setting
StoP	1	Stop bit setting

- * For 90VDC motor, 115VAC, tP-H = 142.9
For 180VDC motor, 230VAC, tP-H = 120.4
For 90VDC motor, 230VAC, tP-H = 153.2

** First available communication port (3 or 4)

Press "SET" and release

Operation Mode	Select type/value	Comment
HtS	0	Hysteresis
TPoF	0	Inaccuracy adjustment
CrHI	0	Analog output low
CrLo	0	Analog output high



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Parr Instrument Company

**211 53rd Street
Moline, Illinois 61265-1770 USA
Phone: 1-309-762-7716 or 1-800-872-7720
Fax: 1-309-762-9453
E-mail: parr@parrinst.com
<http://www.parrinst.com>**