

INSTALLATION NOTES

Applicable for the following catalog numbers*:

- MC5 240VYXCL1006R1 (CDN 1EL/06M 240/416VX)
- MC5 240VYXCL1012R1 (CDN 1EL/12M 240/416VX)
- MC5 240VYXCL1018R1 (CDN 1EL/18M 240/416VX)
- MC5 240VYXCL1024R1 (CDN 1EL/24M 240/416VX)

*These instructions are also applicable when the same meter model number has the suffix: -E, -P or EP.

CRITICAL: The installation of the current transformer must be correct or the meter will not read properly. The load-current carrying wires must pass through the CT in the correct orientation, and the CT wires must be connected to the proper MCI screw terminals. Please see wiring diagram for reference.

Current transformers (CTs) are used to measure the current drawn by the loads to be metered. Within the meter, the current reading from the CT is combined with the voltage reading for the correct voltage phase to calculate the energy reading. CTs must be in phase with the reference voltage. The MCI inputs are each associated with a particular voltage phase in an A-B-C order. Input 1 is a phase A CT, input 2 is a phase B CT, input 3 is a phase C CT, input 4 is a phase A CT, and so on in A-B-C-A-B-C order.

For example, a CT which measures a load supplied by phase A must be installed on CT1, CT4, CT7, etc.. Current transformers which measure a load supplied by phase B must be installed on CT2, CT5, CT8, etc.. Lastly, current transformers which measure a load supplied by phase C must be installed on CT3, CT6, CT9, etc.

1. For the catalog numbers specified above, each A, B, and C phase is a single meter point (see Table 1 for full listing):
 - Meter #1 (M#1) is CT1
 - Meter #2 (M#2) is CT2
 - repeat for M#3 to M#24
2. After completing all CT terminations, connect the four (4) current connectors and then remove the the twenty-four (24) shorting links.
3. Follow local codes for installation requirement, e.g. conduit, fused disconnect, distance, and wiring.



CAUTION: If breakers are energized, shorting links must be installed before:

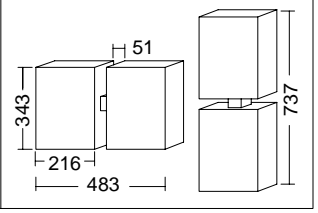
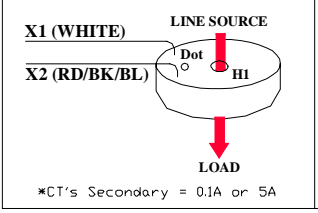
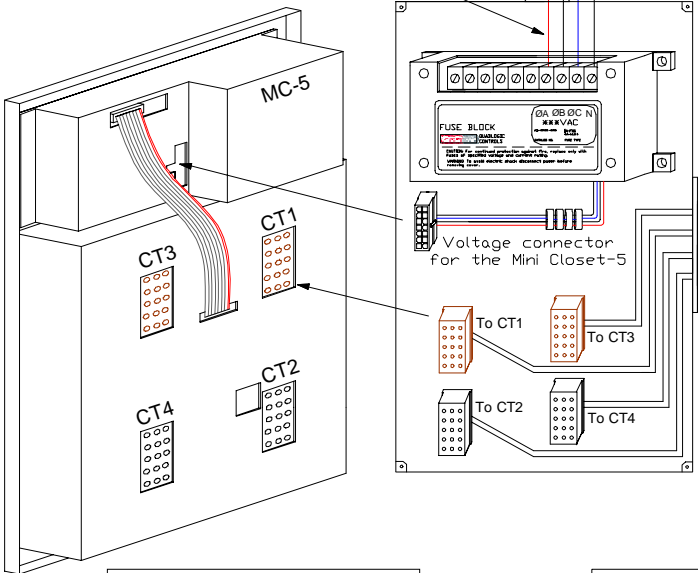
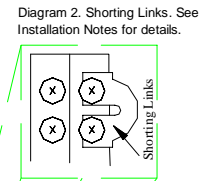
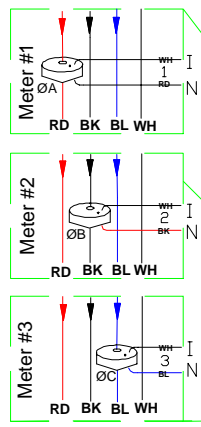
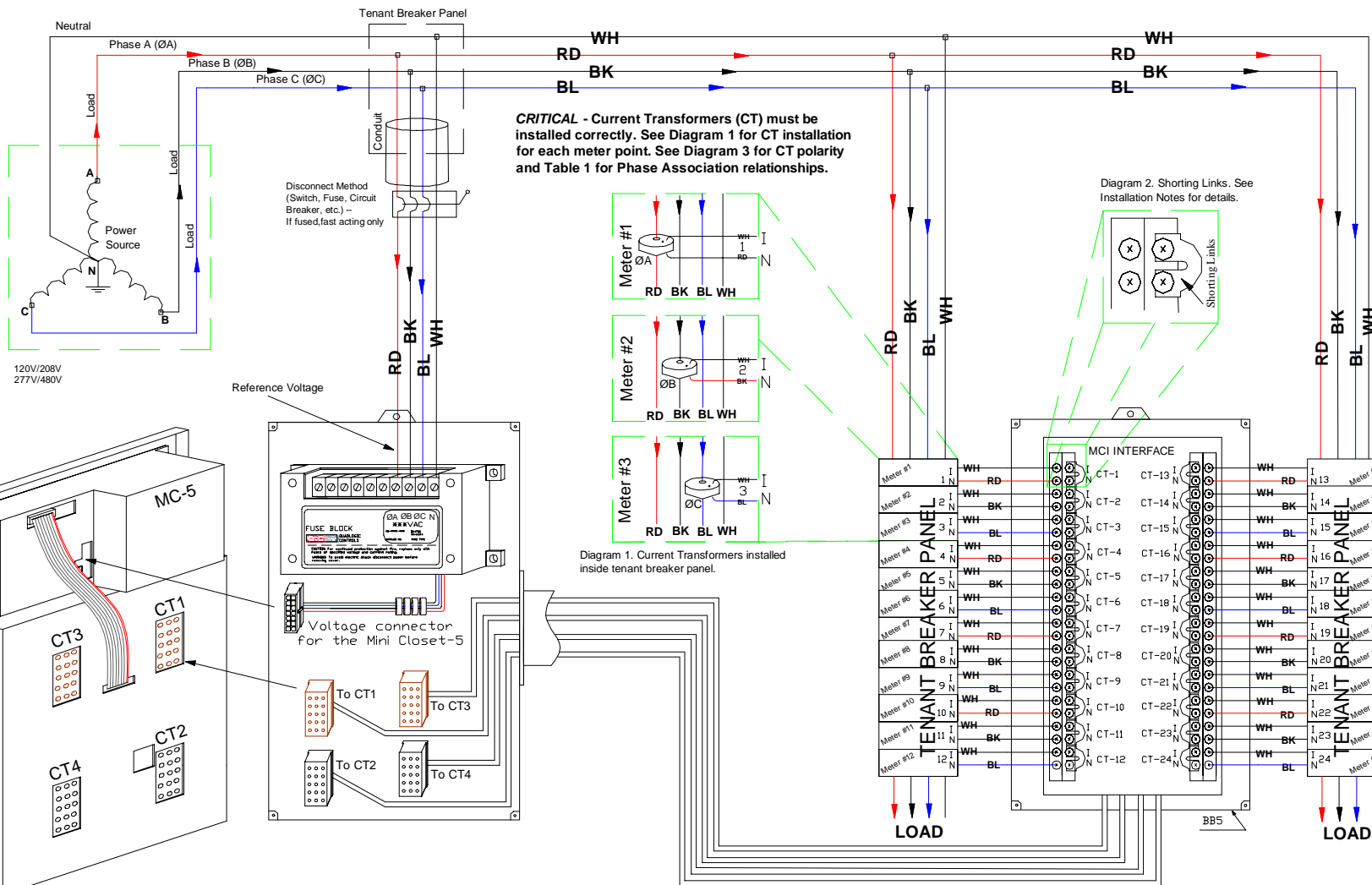
- a) disconnecting the CT headers or
- b) replacing or installing meter heads on the panel.

WARNING: Bodily injury or damage may result if shorting links are not installed.

Meter # (M#)	MCI Board CT #	Reference Voltage Phase
1	1	A
2	2	B
3	3	C
4	4	A
5	5	B
6	6	C
7	7	A
8	8	B
9	9	C
10	10	A
11	11	B
12	12	C
13	13	A
14	14	B
15	15	C
16	16	A
17	17	B
18	18	C
19	19	A
20	20	B
21	21	C
22	22	A
23	23	B
24	24	C

Table 1. Phase Association Table

		Quadlogic Controls Corporation TITLE: 3-PHASE, 4-WIRE 1EL WIRING DIAGRAM 
SIGNATURES		DATE
MODEL	JREA	11/27/07
DETAIL		
APPROVED	JKIM	04/24/07
APPROVED		
SIZE: DRAWING		REV
17-MC53P4W1ELCDN2R		2.0.R
SCALE:		SHEET 1 of 3



SILC QUAD LOGIC		Quadlogic Controls Corporation	TITLE	
SIGNATURES		DATE	3-PHASE, 4-WIRE 1EL WIRING DIAGRAM	
MODEL	JREA	11/27/07	SIZE DRAWING	17-MC53P4W1ELCDN2R
DETAIL			REV	2.0.R
APPROVED	JKIM	04/24/07	SCALE:	
APPROVED				SHEET 2 of 3

BEFORE READING THE DISPLAY FOR ANY MC5 PRODUCT

CAUTION: When reading the meter display, all consumption and demand values must be multiplied by the correct multiplier to calculate true value. This includes all register values (kWh, kW, kVARHLg, kVARHLd, etc.) and Phase Diagnostic values (real time Amps, Watts, etc.).

Volts, phase angle, frequency and power factor are displayed on the LCD as their true values and should not be multiplied.

The multiplier value is dependent upon the ratio of the external Current Transformers (CTs) and can be different for different meter points. Please consult Table 1 CT Multipliers for the appropriate value dependent upon the rating (or size) of the CT.

HOW CT MULTIPLIERS ARE CALCULATED:

0.1AMP CTs

The multiplier values for CTs with 0.1A secondary ratings are derived by dividing the primary side rating by 100. For example, a 50:0.1A-rated CT will have a multiplier of $50 \div 100$, which is 0.50. A 100:0.1A rated CT will have a multiplier of $100 \div 100$ which is 1.)

5AMP CTs

For CTs with 5A secondary ratings, the multipliers are derived by dividing the primary side rating by 5. For example, a 200:5A-rated CT will have a multiplier of $200 \div 5$, which is 40.

EXAMPLE:

Meter point with 400:0.1A CT

LCD reading for meter is 3422.119kWh

The correct cumulative consumption (kWh) for this meter is **13688.476** kWh.

($400 \div 100 = 4$. Multiply face value for consumption and demand values by 4. $3422.119 \times 4 = 13688.476$)

NOTE: Failure to use the appropriate multiplier will result in an incorrect diagnosis of the meter's functionality and incorrect revenue billing.



Meter Voltage Ratings	CT Rating	Multiplier for 5.0A CT
FOR 120V, 208V, 277V, 347V, 480V, 600V	200A	x40.0
	400A	x80.0
	600A	x120.0
	800A	x160.0
	1200A	x240.0
	1500A	x300.0
	1600A	x320.0
	2000A	x400.0
	3000A	x600.0
	3200A	x640.0
4000A	x800.0	

FOR 240V	100A	x20.0
	200A	x40.0

Note: Contact Quadlogic for 0.1A CT multipliers.

Table 1. CT Multipliers

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

		TITLE 3-PHASE, 4-WIRE 1EL WIRING DIAGRAM 	
SIGNATURES		DATE	
MODEL	JREA	11/27/07	
DETAIL			
APPROVED	JKIM	04/24/07	
APPROVED			
SIZE		DRAWING	
		17-MC53P4W1ELCDN2R	
SCALE:			
			REV 2.0.R
			SHEET 3 of 3