

INSTALLATION NOTES

Applicable for the following catalog numbers*:

- 45-MC5 240V 01A 12R (2EL/12M 240V 1P3W)
- 45-MC5 240V CL10 12R (2EL/12M 240V 1P3W)

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

CRITICAL: The line association and polarity of the current transformers must be followed or meter will not be installed correctly.

1. Each CT has a white side, small white dot, or "H1" marking on only one side of its exterior moulding. Locate this marking since it is critical that the wires are passed through the CT in the correct direction, assuring the correct polarity.

Two wires coming from the line side are passed through each CT.

Line 1 (Wire 1): Line 1 should be passed through the CT from the side with the white side, dot, or H1 marking.

Line 2 (Wire 2): Line 2 should be passed through the CT from the side WITHOUT the white side, dot, or H1 marking. Note that these are opposite polarities.

2. The MCI runs CT terminals CT#1 to CT#24 with each terminal connected to Meter #1 (M#1) to Meter #12 (M#12). The number of CT terminal and meter connections will depend on the number of suites available. For

example:

- M#1 connects to CT#1 and CT#2
- M#2 connects to CT#3 and CT#4
- repeat for M#3 to M#12

3. After completing all CT terminations, connect the four (4) current connectors and then remove the the twenty-four (24) shorting links.

4. Follow local codes for installation requirement, e.g. conduit, fused disconnect, distance, and wiring.

5. Installation of 0.1A inputs and CL10 or 5A inputs are the same.

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 Line*
1	1	LINE 1
	2	LINE 2
2	3	LINE 1
	4	LINE 2
3	5	LINE 1
	6	LINE 2
4	7	LINE 1
	8	LINE 2
5	9	LINE 1
	10	LINE 2
6	11	LINE 1
	12	LINE 2
7	13	LINE 1
	14	LINE 2
8	15	LINE 1
	16	LINE 2
9	17	LINE 1
	18	LINE 2
10	19	LINE 1
	20	LINE 2
11	21	LINE 1
	22	LINE 2
12	23	LINE 1
	24	LINE 2

*Note: Line #1 points toward DOT or H1 of CT
Line #2 points away Dot or H1 of CT

Table 1. Line Association Table

		Quadlogic Controls Corporation		TITLE	
SIGNATURES		DATE		1-PHASE, 3-WIRE 240V 2EL WIRING DIAGRAM	
MODEL	BKAU	07/17/06		SIZE DRAWING	
DETAIL				17-MC5 240R 2EL REV2	
APPROVED	JKIM	07/17/06		REV	2
APPROVED	BKAU	07/17/06		SCALE:	SHEET 1 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 0.1A CT	Multiplier for 5.0A CT
FOR 120V, 208V, 277V, 347V, 480V, 600V	50A	x0.5	x10.0
	100A	x1.0	x20.0
	200A	x2.0	x40.0
	400A	x4.0	x80.0
	600A	x6.0	x120.0
	800A	x8.0	x160.0
	1200A	x12.0	x240.0
	1500A	x15.0	x300.0
	1600A	x16.0	x320.0
	2000A	x20.0	x400.0
	3000A	x30.0	x600.0
	3200A	x32.0	x640.0
4000A	x40.0	x800.0	
FOR 240V	100A	x0.5	x20.0
	200A	x1.0	x40.0

Table 1. CT Multipliers

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
2	UPDATE CT MULTIPLIER TABLE	07/17/06	JKIM

		Quadlogic Controls Corporation TITLE: 1-PHASE, 3-WIRE 240V 2EL WIRING DIAGRAM
SIGNATURES		DATE
MODEL	BKAU	07/17/06
DETAIL		
APPROVED	JREA	07/17/06
APPROVED	JKIM	07/17/06
SCALE:		SIZE: DRAWING 17-MC5 240R 2EL REV2 REV 2 SHEET 3 of 3