

WattsOn-Mark II Advanced Configuration

The WattsOn-Mark II features advanced configuration registers to alter the method used to calculate power and energy. Specifically, these registers may be used to reverse the sign of a specific phase, or to reassign the voltage channel to current channel mapping.

NOTE: It is **ALWAYS** recommended that the meter and CTs be wired correctly during the initial install, paying close attention to the CT orientation, CT polarity, current to voltage phase relationship, and CT wire pairing. Even if a problem is found after installation, it is recommended to correct the issue at the wiring. The reason for this is to avoid problems in the future in case the meter must be replaced with a new one.

However, if impractical to correct the wiring, the WattsOn-Mark II allows for advanced configuration to reverse the phase polarity, or to remap the voltage to current assignment. If these advanced configuration registers are used, it should be noted either on the meter, or in the installation, which software applied corrections were required post hardware installation. Technical Support for these functions is limited.

Reading and writing of these registers follows the same methodology as all other registers. Therefore, locking the meter should be considered to avoid tampering of these registers, as they affect the measurement methodology.

Name	Offset	Address	Size	Type	R/W	Default	Description
Force Quadrant 1	0x1400	45121	16	B	RW	False (0)	Forces all measurements as absolute (kW=+, kVAR=+)
Reverse CT A	0x1401	45122	16	B	RW	False (0)	Reverses the polarity of CT A
Reverse CT B	0x1402	45123	16	B	RW	False (0)	Reverses the polarity of CT B
Reverse CT C	0x1403	45124	16	B	RW	False (0)	Reverses the polarity of CT C
Reverse Active Power Sign A	0x1404	45125	16	B	RW	False (0)	Reverses sign of Active Power (kW), phase A
Reverse Active Power Sign B	0x1405	45126	16	B	RW	False (0)	Reverses sign of Active Power (kW), phase B
Reverse Active Power Sign C	0x1406	45127	16	B	RW	False (0)	Reverses sign of Active Power (kW), phase C
Reverse Reactive Power Sign A	0x1407	45128	16	B	RW	False (0)	Reverses sign of Reactive Power (kVAR), phase A
Reverse Reactive Power Sign B	0x1408	45129	16	B	RW	False (0)	Reverses sign of Reactive Power (kVAR), phase B
Reverse Reactive Power Sign C	0x1409	45130	16	B	RW	False (0)	Reverses sign of Reactive Power (kVAR), phase C
Current A to Voltage →	0x140A	45131	16	B	RW	0	Assign <i>current</i> wired to phase A with <i>voltage</i> A, B or C **
Current B to Voltage →	0x140B	45132	16	B	RW	0	Assign <i>current</i> wired to phase B with <i>voltage</i> A, B or C **
Current C to Voltage →	0x140C	45133	16	B	RW	0	Assign <i>current</i> wired to phase C with <i>voltage</i> A, B or C **

** For current to voltage mapping, the register value (0, 1, 2, 3) defines the current to voltage channel assignment. The default value of "0" assigns the default mapping for each channel (A to A, B to B, C to C).

The channel mapping may be overridden by assigning a value to each phase independently. Values are: 1, 2 or 3; representing voltage phase A, B or C respectively.

Example:

To swap phase A and B:

Write "2" ("Voltage B") to register 0x140A (Current A to Voltage B)

Write "1" ("Voltage A") to register 0x140B (Current B to Voltage A)

It is important to note that it is possible to assign the same voltage channel to multiple current channels. While this is not relevant for most installations, it may be useful in cases where the voltage phases are identical, and multiple circuits of the same voltage branch are being measured.