

THD Registers

THD is a measurement of the harmonic distortion of a signal given its fundamental frequency, and thus may be larger than 100%. If there is insufficient amperage on a CT or the circuit is not active, the noise may calculate to high percentages.

THD is typical on current waveforms depending on the load and is not always a cause for concern.

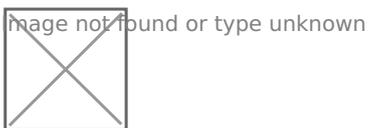
The eGauge can calculate Total Harmonic Distortion (THD) on a given CT or voltage reference. Each THD measurement will use one physical register.

The eGauge can measure up to the 10th harmonic. To measure THD,

1. Navigate to **Settings -> Installation**
2. Under **Registers**, click the "Add Registers" button
3. Name the register as appropriate
4. Using the dropdown menu, change the register type from **P** to **=**
5. A second dropdown menu will appear. Select the unit type to "total harm. dist" or "THD [%]"

In the formula field, enter the following: `THD(Hz, chan("XX"))` where **Hz** is the system frequency in Hz and **XX** represents either a CT (CT1, CT2, CT3, etc) or a voltage reference (L1, L2, L3).

Click "Save" at the bottom of the page when finished (valid credentials required)



Sample THD Register for CT1 on a 60Hz system

Firmware 4.0 and later:

CTx channel names have been replaced with Sx channel names. Thus, instead of using `chan("CT1")`, use `chan("S1")`. Configuration is otherwise identical:

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See also

- [eGauge Waveform View](#)

Please visit kb.egauge.net for the most up-to-date documentation.