

eGauge CT Extension Kit

The eGauge CT Extension Kit (ESH044) allows up to four CTs to be connected to an eGauge located within 100'/33m of the CT Extension Kit. The CT Extension Kit is designed to be installed in a separate junction box outside the breaker panel, and requires an Ethernet run back to the eGauge meter. With the CT Extension Kit, it's no longer necessary to extend CT leads by hand, reducing issues with improperly spliced or extended wiring.

The eGauge CT Extension Kit is compatible with all eGauge meter models (eGauge2, EG30xx, EG4xxx). However, firmware updates may be require to add support for certain types of CTs.

eGauge CT Extension Kit

Specifications

Full specs (data-sheet PDF)

- ABS
- 75 x 50 x 21 (mm)
- 3 x 1.8 x 0.8 (in.)
- 2 breakway mounting tabs for 5mm fasteners
- 2 Dimple 4mm in coarse thread screw holes, 4mm depth in back (compatible with EG4xxx meter mounting kit)
- -30 °C to 70 °C
- Humidity range: Up to 80%
- 47 CFR Part 15, Subpart B - Unintentional Radiators, Class B for Home or Commercial use

Hardware included



- 1x **Sensor Hub**
- RJ-45 coupler
- 19" RJ-45 to 2-pin breakout cable

Assembly/installation information

Do not connect the Sensor Hub Ethernet port to an Ethernet network. It is only used to carry signals from the 2-pin inputs on the Sensor Hub to the eGauge 2-pin ports.

The CT Extension Kit consists of three components:

1. Extension Hub (Sensor Hub)
2. Hub RJ-45 to 2-pin breakout cable (whip)
3. RJ-45 Coupler

1. Extension Hub (Sensor Hub)

This is the main unit.

The RJ-45 jack is used to connect the hub to the eGauge. The four switches A through D on the face of the unit must be set to the right most position. The hub does not require power.

2 Hub RJ-45 to 2-pin breakout cable (whip)

This connects the hub to the eGauge

The eGauge to hub connector splits the RJ-45 cable into four sensor channels. To install, connect the two pin CT plugs to CT ports on the eGauge. Connect the RJ-45 plug to the Extension Hub (either directly or using the coupler).

Note that the wire colors on the two pin plugs correspond to the colors on the front of the Extension Hub. For example, the two pin plug with orange wires would be input "A" on the hub.

Do not connect the RJ-45 plug to an Ethernet port on the eGauge or any other hardware. **Damage may result.**

3 RJ-45 Coupler

This can be used to extend the distance between the eGauge and the Extension Hub.

The coupler provides a convenient means to extend the wiring between the eGauge and Extension Hub. It does not require power. The RJ-45 plug on eGauge to hub connector (whip) is connected to one side, and a standard CAT5 cable is connected between the coupler and the Extension Hub on the other side.

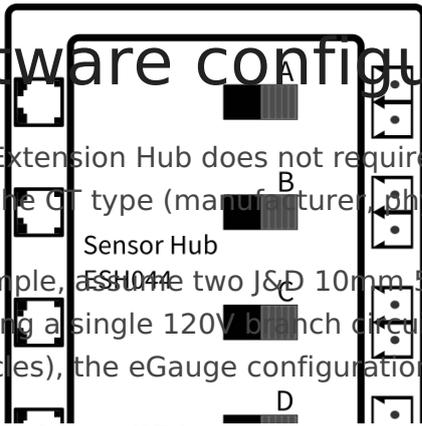
An extension of up to 100/55m may be used. Longer runs may work, but could also lead to a loss of accuracy. Care should be taken to ensure the extension is wired to the T568B CAT5 standard to avoid mixing up sensor inputs. If in doubt, compare the wiring of the extension to the color key located above the Extension Hub RJ-45 port.

Diagrams

The image below shows a simplified CT Extension kit wiring diagram. The Extension Hub must be installed in a separate enclosure. Always adhere to code requirements during installation.

Multiple CT Extension Hubs can be connected to a single eGauge meter. Care should be taken to identify the hubs correctly, in order to avoid mixing up CTs.

Software configuration Information



The CT Extension Hub does not require any special configuration when used with CTs. Simply specify the CT type (manufacturer, physical diameter, amperage) and create registers as normal.

For example, assume two J&D 10mm 50A CTs on CT ports one and two. Assuming they are each monitoring a single 120V branch circuit (eg. CT1 is monitoring lights and CT2 is monitoring receptacles), the eGauge configuration might look like this:

Current Transformers (CTs):

CT1	JD JS 10mm/0.39" 50A	x 1	CT2	JD JS 10mm/0.39" 50A	x 1	CT3	
CT4			CT5			CT6	
CT7			CT8			CT9	
CT10			CT11			CT12	

Related Information

Remote Devices:

- [Current Transformers \(CTs\) and Sensors](#)
- [Selecting the correct CT](#)

Registers (2 of 128 in use):

Name:	Recorded value/formula:	
Lights	$P = CT1 \times L1$	Add Component
Receptacles	$P = CT2 \times L2$	Add Component

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CTs to 2-pin plug breakout