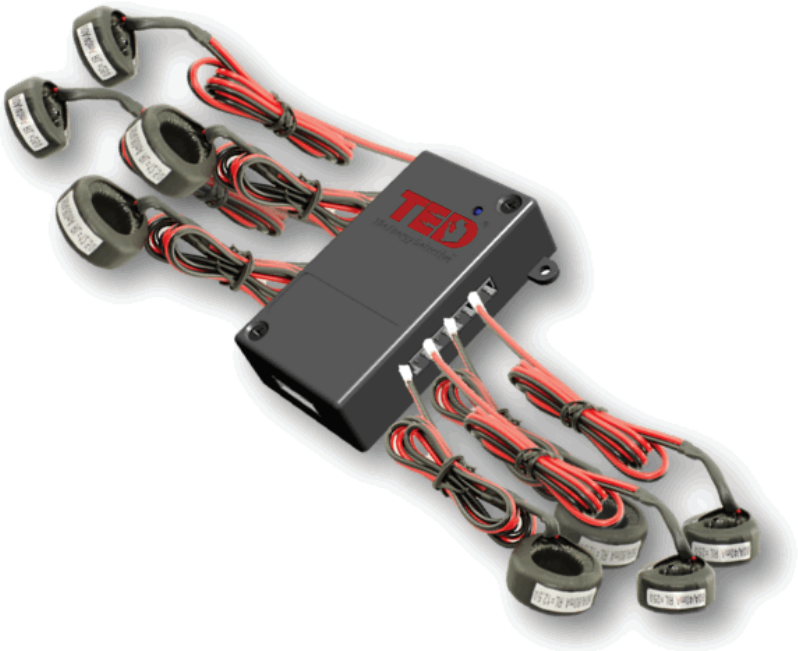
Installation Instructions for TED Spyder



The Energy Detective™

Rev 1.2

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SAFETY WARNING

TED SPYDER is a low voltage device. However, as the Spyder is installed in the service panel, only qualified electrical professionals or persons trained in the electrical hazards associated with electrical installations should proceed with installation.

Tools needed: screwdriver, flashlight, double-sided tape for attaching to panel (if allowed by Code in your area)

Installation Procedure

Safety warning: Turn the main breaker OFF

1. Remove power from the MTU by disconnecting grey power cable.
2. Connect either end of the data cable from the data port on the MTU, to the port marked “SPY IN” on the Spyder.
3. Choose the circuit to be monitored.
4. Note the amperage of the circuit breaker and verify Spyder CT has a rating equal-to-or-greater than the circuit being measured.
5. Turn off the breaker for the circuit to be measured.
6. Loosen screw and remove wire from circuit breaker.
7. Slide CT onto wire. Orientation of CT does not matter.
8. Reinsert wire into breaker and tighten screw.
9. **(IMPORTANT)** Determine the type load to be measured.
   - **a.** In the case of 2-phase or 3-phase loads that are ***not*** balanced, you will need to install a CT over each power wire. For example: a subpanel. You would need to install one CT over each phase wire.
   - **b.** In the case of a balanced load, (for example: a motor or heater), you can simply install one CT over any of the power wires and apply a multiplier of 2 or 3 (select ‘3’ if 3-phase) in the Footprints Spyder setup.
   - **c.** On a 2-3 pole breaker, do not place multiple conductors through 1 CT.
10. Repeat for all circuits to be measured.
11. Connect each CT to a Spyder Input. Note the Input labels on the following page.

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(You may connect up to 2 Spyders to each MTU)

a. Connect second data cable from “SPY OUT” of first Spyder to “SPY IN” of second Spyder.
b. Repeat the steps above for connecting the CTs from the circuits to the second Spyder.

12. Verify power cable and data cables are securely connected to MTU and Spyder.
13. Turn all power back on.

NOTE 1. You don’t have to use all 8 CTs.
NOTE 2. The Spyder Software will allow you to add Spyder CT inputs together to get a total. For example, if you want to add your HVAC compressor-circuit with the Air Handler-circuit to get a total for your HVAC system, you can. This will be done during Spyder Setup in Footprints.

*For comparison of the Spyder to an additional MTU, more examples of applications, as well as instructions on configuring the Spyder in Footprints software – go to:
www.theenergydetective.com/Spydermtucomparison

Inputs 1, 3, 5, 7 on the left side

Inputs 2, 4, 6, 8 on the right side

Spyder Setup in TED Footprints

Go to this link for step-by-step instruction on setting up your TED Spyder:
http://www.theenergydetective.com/downloads/spyder.pdf

Fill in the following reference table when configuring your system:

Connected to MTU ID _____ SPY1 □ or SPY2 □

Left Side				
Spyder CT Input Number	Description of Load	Circuit Breaker Number	Balanced load or multiplier 1,2, or 3	CT Input Numbers to combine*
1				
3				
5				
7				
Right Side				
Spyder CT Input Number	Description of Load	Circuit Breaker Number	Balanced load or multiplier 1,2, or 3	CT Input Numbers to combine*
2				
4				
6				
8				

* Inputs can be added together in System Setup to provide a 'combined' reading, i.e. a panel has a mother-in-law apartment with 3 Inputs; use this form to indicate which inputs should be combined.

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