S&C ELECTRIC COMPANY

Excellence Through Innovation

6601 North Ridge Boulevard
Chicago, Illinois 60626-3997
Telephone (773) 338-1000
Fax (773) 338-3657

Module Integration Instructions

To integrate the TSIICONTRL2 module in a host product the following instructions need to be followed

- Power requirements:

  o When powering the unit from the CT terminals, the maximum input current should not exceed 1.6Arms @50/60 Hz continuously.

    Note:

    - This module can take up to 105Arms @50/60Hz input surge current up to 0.5 seconds

    - Once the module is fully charged the CT input terminals will be shorted as a virtue of this design. The charging level can be controlled by software

  o When powering the unit from the SEPIC terminals, the input voltage limits should not exceed 25V (upper limit) or be lower than 5V (lower limit). The module can draw currents as high as 1A. Input voltage polarity is not critical for the proper functionality of the module.

- Grounding requirements:

  o The module's box is metalized and connected to the ground reference of the electronics.

  o Current sensing terminals are floating with respect to the internal grounds (differential input). Special care should be taken to reduce induced noise in the system (sensor and CT shielding is recommended)

- Environment requirements:

  o The module is not sealed from the environment point of view. It relies on the host product to provide protection against water entry and condensation. Host equipment is fully tested at all environmental conditions to protect control module residing inside.

- Communication requirements:

  o This module is designed operate in the presence of interface

  o This module is also designed to coexist with other 2.4GHz products, even multiple modules in the nearby area

- Input/output signals:

  o Sensing signals

    - Only the current sensing have a differential input and its input should not exceed +/-10V

    - All other sensing signals are single ended.

  o Drivers: The main two drives can put out voltage in the +/-225V range (peak voltage of the PWM technique) with currents as high as 10A

- Display:

  o When handling the module, avoid applying any pressure on the LCD

  o Protect the LCD against 380 nm UV wavelengths.

S&C ELECTRIC COMPANY
Excellence Through Innovation

6601 North Ridge Boulevard
Chicago, Illinois 60626-3997
Telephone (773) 338-1000
Fax (773) 338-3657

- Connections: The module has 4 connectors distributes as follows

Signal Name	Connector	Pin
Current sensor input	J12/TE Connectivity	1
Current sensor input	J12/TE Connectivity	2
CT input terminal	J2/TE Connectivity	1
CT input terminal	J2/TE Connectivity	2
Driver 1_P	J8/Molex	1
Position Sensor	J8/Molex	2
Drive 1 N	J8/Molex	3
Driver 2 P	J9/Molex	1
Driver 2 N	J9/Molex	2
13V	J10/TE Connectivity	1
External Sensor	J10/TE Connectivity	2
AGND	J10/TE Connectivity	3
SEPIC input	J10/TE Connectivity	4
SEPIC input	J10/TE Connectivity	5

This module is primarily designed to work with S&C's host products.