

## FAQs

# HIGH ACCURACY CURRENT SENSORS (HACS)



### *What is the difference between HACS and regular CT?*

HACS stands for High Accuracy Current Sensor which has three major advantages over conventional CTs:

- Better accuracy than commonly used CTs
- Internal short circuit method which allows it to be left opened without shorting bars
- Low current output that allows to use cables with small cross section

### *Can I use conventional CTs?*

The inputs are designed for our HACS and do not include protection against hazards that are typical with CTs. Since that SATEC does not provide product warranty when used with non SATEC HACS

### *What is the maximum distance between the HACS and the meter?*

The HACS are provided with 2m cable, but can be extended up to 200m while keeping the high accuracy class. For larger quantities we can offer longer cables (delivery time 6-9 weeks).

### *What is the difference between nominal, maximum and overload current?*

**Nominal** current - the current to which the meter is calibrated to, in which it provides the highest accuracy

**Maximum** current - the highest current that the meter can measure

**Overload** current – the highest current that the meter can withstand without damage. There are few levels, depending on the time.

When stating 1A or 5A, it is the nominal current and, unless otherwise stated, the maximum current is twice this value (2A or 10A). When stating higher current values it the maximum current and, unless otherwise stated, the nominal current is half of this value (i.e., EM133-100A is calibrated to 50A).

### ***What are the difference current inputs for PM130 and PM135?***

There is a selection of 4 current inputs:

- 1A – for use with ../1A conventional CT, typically in MV and HV applications
- 5A – for use with ../5A conventional CT. when used with ../1A CT, we recommend making few turns in order to improve the accuracy
- RS5 – similar operation and performance to the 5A, but with remote split core sensors for easy retrofit installation. The added price includes set of 3 Split Core HACSeS
- HACS – PM130 that is designed for use of various HACSeS, from 100A to 1200A. It is required to purchase 3 HACSeS for this product, either solid core or split core

### ***What are the different current inputs for EM132 and EM133?***

The EM132 and EM133 has four current input channels – 1A, 5A and HACS are similar to the PM130, plus direct connection of 100A.

### ***What are the different current inputs for PM175?***

The PM175 has five different current inputs – four as the PM130 (1A, 5A, RS5 and HACS) plus special design for pole-top sensors.

### ***What are the different current inputs for PM174?***

The PM174 has six different current inputs – five as the PM175 plus a special model name DFR, which stands for Digital Fault Recorder. It includes a set of 3 split core 100A HACSeS which are calibrated to 5A, plus software

modifications to records faults of up to 100A using the same current channels.

### ***What are the different current inputs for SA320 ezPAC?***

The SA320 has **one** set of current inputs, which internally are split between measurement channels and protection CT inputs. There are 3 options:

- 1A – the measurement channels are calibrated for 1A and the protection channels to 20A
- 5A – the measurement channels are calibrated for 5A and the protection channels to 150A
- CS1S –remote connection of 100A split core HACS, calibrated to 5A (measurement) and 100A (protection)

### ***What are the different current inputs for SA330 ezPAC?***

The SA330 has **two** set of current inputs: measurement channels and protection CT inputs, each one with different select as follows:

- Measurement inputs:
  - 1A - the measurement channels are calibrated for 1A
  - 5A - the measurement channels are calibrated for 5A
- Protection CT inputs:
  - 150A (leave the second selection in the order string empty) - connection of protection CT secondary of up to 150A to the terminals
  - CS1S - remote connection of 100A split core HACS designed to be connected around the secondary of protection CTs of up to 100A