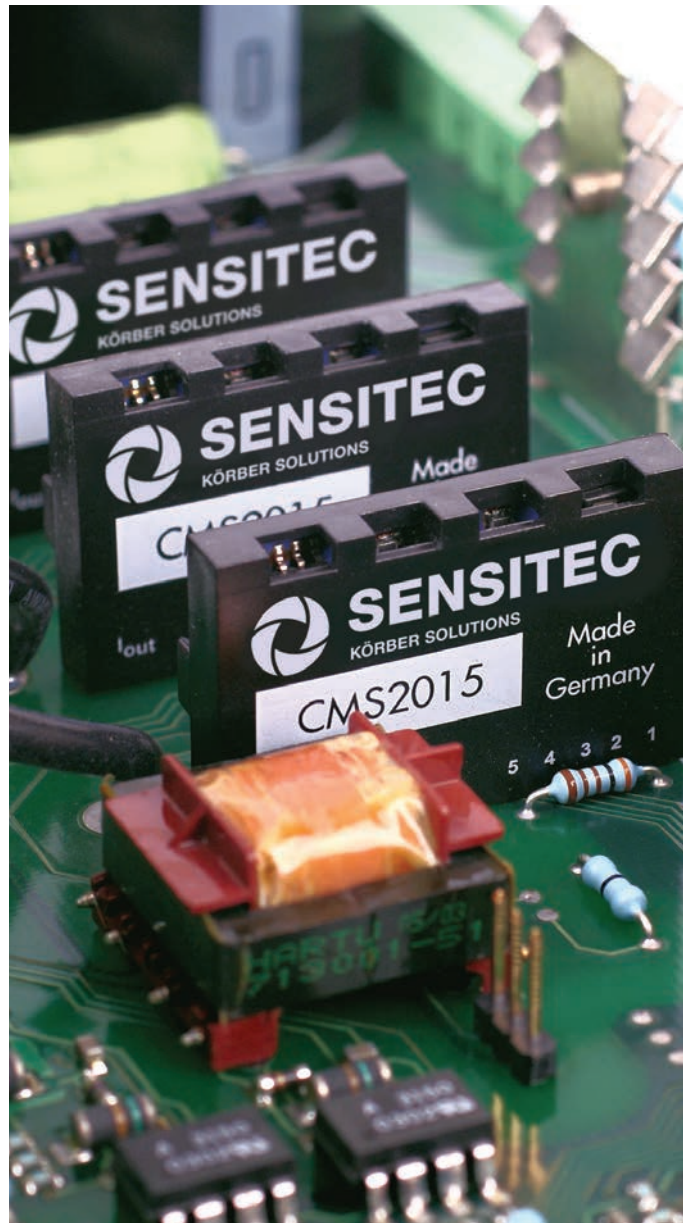


Current Sensors

CMS2000 / CMS3000

**Product discontinued.
Not to be used for new designs.**



1. Packaging

The Sensors are delivered in non-vacuum sealed ESD-conform trays. An empty tray is placed above the topmost sensors. A maximum of 6 full trays build a packaging unit.

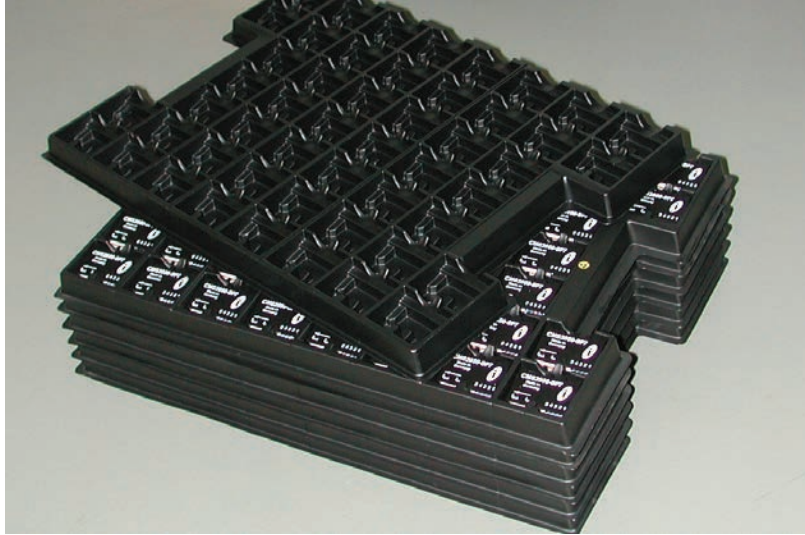


Fig. 1: CMS2000 packaged in trays.

2. Storage

The sensors can be stored without time limit in a temperature range of -20°C to $+80^{\circ}\text{C}$, limited by the temperature range of the trays.

The sensors shall be stored at 5° - 30°C and $<85\%$ relative humidity for a minimum of 2 days before further processing (similar to MSL 1).

Due to the magnetic sensitivity of the sensors, the direct environment of the storage location has to be kept free from magnetic fields that are stronger than 50 mT (e. g. caused by permanent magnets in motors).

3. Handling and Mounting

3.1. General Advice

The sensors are ESD sensitive. General ESD-precautions need to be observed.

Due to the ceramic substrate, the sensors are fragile and need to be handled with caution.

Removing the cover of the sensor is prohibited.

Usage of solvent-based cleaners may result in loss of the sensor labeling.

Sensors that have been exposed to strong mechanical shocks or vibrations (e. g. caused by dropping the sensor) shall not be used any further because the resulting damage (e. g. microcracks in the ceramic substrate) might not be recognizable optically.

Due to the open sensor design, especially metallic impurities (e. g. dust) adjacent to the sensor need to be avoided.

3.2. Before Soldering

Due to the sensor package, usage of THT assembly tools or assembly aids is generally recommended. Due to the ceramic substrate, the sensors are fragile and need to be handled with caution.

Punctual loads (e.g. caused by THT assembly tools or assembly aids) applied to the ceramic substrate of the sensor have to be avoided.

THT assembly aids that are used need to be attached and detached to the sensor without mechanical stress or strain. Moreover, mechanical loads have to be avoided especially during the cooling phase to avoid impacts to the adhesive bond between the ceramic substrate and the busbar.

3.3. After Soldering

Manual rework is only permitted for the signal pins. The specified soldering profile (<7sec @ 260°C) has to be adhered without applying any mechanical stress to the signal pins or the sensor (s. chapter 3.2). In this case it is recommended to pre-heat the printed circuit board to <100°C.

If coatings are used on the printed circuit board (e. g. lacquers for moisture protection), the sensor area needs to be kept open in order to prevent a contamination of the sensor due to the open sensor design.

Cleaning the printed circuit board after soldering by means of water- or solvent-based cleaners (including ultrasonic cleaning) is prohibited due to the open sensor design.

Due to the magnetic sensitivity of the sensors, usage of tools that emit magnetic fields stronger than 50mT (e.g. magnetic screwdrivers) in the direct environment of the sensors shall be avoided.



PLEASE NOTE THAT NONCOMPLIANCE WITH ONE OR MORE OF THE ADVICES MAY RESULT IN THE LOSS WARRANTY. SENSITEC GMBH SHALL BE IN NO CASE BE LIABLE FOR THE CONSEQUENCES THEREOF.

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