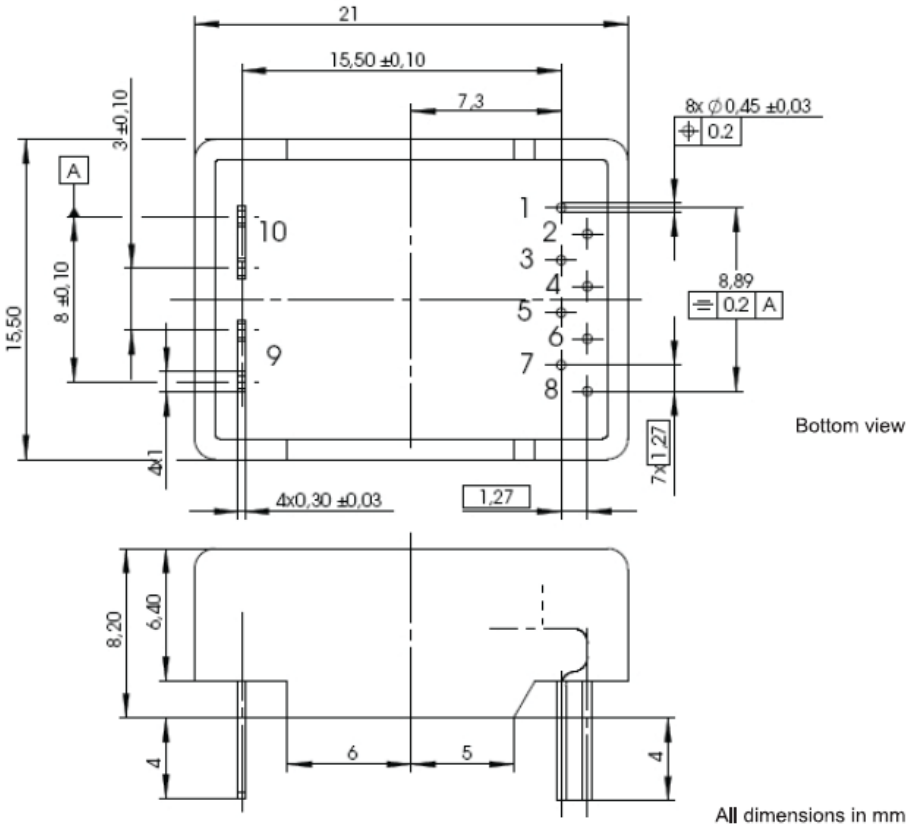
Current sensors
CDS 4000 series

The CDS4000 current sensor family is designed for highly dynamic electronic measurement of DC, AC, pulsed and mixed currents with integrated galvanic isolation. The Magneto resistive technology enables an excellent dynamic response without the hysteresis that is present in iron core based designs. The system accuracy can be improved by using either the internal or an external reference voltage. This further reduces temperature drift and several sensors can share the same reference voltage. The adjustable overcurrent detection enables a fast response in overload situations to prevent damage to the power units. The CDS 4000 product family offers PCB-mountable THT current sensors from 10 A up to 150 A nominal current for industrial applications.



Features

- Excellent accuracy
- Low temperature drift
- Very small size
- Highly dynamic response
- External reference possible
- Low primary inductance
- Negligible hysteresis
- Adjustable overcurrent detection
- Based on AMR effect
- Galvanic isolation
- Single 5 V power supply

Applications

- Solar power converters
- AC variable speed drives
- Converters for DC motor drives
- Uninterruptible power supplies
- Switched mode power supplies
- Power supplies for welding applications

Contact

OECO
4607 SE International Way
Milwaukie, OR 97222
USA

Tel: +1 (503) 659-5999

www.meggitt.com
www.fwbell.com
www.oeco.com

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Specifications

Model:	CDS-4010	CDS-4015	CDS-4025	CDS-4050	CDS-4100	CDS-4125	CDS-4150
Nominal current	10 A	15 A	25 A	50 A	100 A	125 A	150 A
Measuring range	−30 to 30 A	−45 to 45 A	−75 to 75 A	−150 to 150 A	−300 to 300 A	−375 to 375 A	−450 to 450 A
Maximum peak current	100 A	150 A	250 A	500 A	1000 A	1250 A	1500 A
Nominal output current	2 mA	2 mA	2 mA	2 mA	2 mA	2 mA	2 mA
Maximum output current	6 mA	6 mA	6 mA	6 mA	6 mA	6 mA	6 mA
Supply voltage	5 V	5 V	5 V	5 V	5 V	5 V	5 V
Nominal current consumption	50 mA	50 mA	50 mA	50 mA	50 mA	50 mA	50 mA
Reaction time	650 ns	650 ns	650 ns	650 ns	650 ns	650 ns	650 ns
Response time	850 ns	850 ns	850 ns	850 ns	850 ns	850 ns	850 ns
Operating temperature	−25 to 85 °C	−25 to 85 °C	−25 to 85 °C	−25 to 85 °C	−25 to 85 °C	−25 to 85 °C	−25 to 85 °C
Storage temperature	−25 to 100 °C	−25 to 100 °C	−25 to 100 °C	−25 to 100 °C	−25 to 100 °C	−25 to 100 °C	−25 to 100 °C
Weight	3.6 g	3.8 g	4.1 g	4.4 g	9.8 g	10.8 g	10.8 g
Overall accuracy	0.8% of I_{PN}	0.8% of I_{PN}	0.8% of I_{PN}	0.8% of I_{PN}	0.8% of I_{PN}	0.8% of I_{PN}	0.8% of I_{PN}
Upper cut-off frequency	200 kHz	200 kHz	200 kHz	200 kHz	200 kHz	200 kHz	200 kHz

Note: Due to continuous process improvement, specifications are subject to change without notice