



Closed Loop Hall Current Sensor CYHCS-EC

This Hall Effect current sensor is based on closed loop compensating principle and designed with a high galvanic isolation between primary and secondary circuits. It can be used for measurement of DC and AC current, pulse currents etc. The output of the transducer reflects the real wave of the current carrying conductor.

| Product Characteristics | Applications |
|---|--|
| <ul style="list-style-type: none">• Excellent accuracy• Very good linearity• Small size and encapsulated• Less power consumption• Current overload capability | <ul style="list-style-type: none">• Photovoltaic equipment• General Purpose Inverters• AC/DC Variable Speed Drivers• Battery Supplied Applications• Uninterruptible Power Supplies• Switched Mode Power Supplies |

ELECTRICAL DATA

| Part number | CYHCS-EC50A | CYHCS-EC75A | CYHCS-EC100A | CYHCS-EC200A | Unit |
|---------------------------------|--|--|---|--|----------|
| Nominal current | 1-50 | 1.5-75 | 2-100 | 2-200 | A |
| Measuring range | 150 ($\pm 18V$, 82 Ω) | 225 ($\pm 18V$, 68 Ω) | 300 ($\pm 18V$, 51 Ω) | 500 ($\pm 18V$, 15 Ω) | A |
| Turns ratio | 1:1000 | 1:1500 | 1:2000 | 1:2000 | |
| Nominal analogue output current | 1 \pm 0.2%FS (1A) 50 \pm 0.2%FS (50A) | 1 \pm 0.2%FS (1.5A) 50 \pm 0.2%FS (75A) | 1 \pm 0.2%FS (2A) 50 \pm 0.2%FS (100A) | 1 \pm 0.2%FS (2A) 100 \pm 0.2%FS (200A) | mA |
| Secondary coil resistance | 30 | 45 | 50 | 55 | Ω |
| Supply voltage | $\pm 12 \sim \pm 18$ | | | | V |
| Current consumption | 20 + output current | | | | mA |
| Galvanic isolation | 50HZ, 1min, 3kV | | | | kV |

ACCURACY DYNAMIC PERFORMANCE

| | | |
|---------------------------------|----------------------------|------------|
| Zero offset current | ± 0.2 | mA |
| Thermal drift of offset current | -40°C ~ +85°C, ± 0.005 | mA/°C |
| Response time | <1 | μ s |
| Linearity | ≤ 0.1 | %FS |
| Bandwidth(-3dB) | DC...200 | kHz |
| di/dt following accuracy | >100 | A/ μ s |

GENERAL DATA

| | | |
|-----------------------|------------|----|
| Operating temperature | -40 ~ +85 | °C |
| Storage temperature | -40 ~ +125 | °C |

