DCSA SERIES

Current Transducers

Description
The DCSA Series is a loop-powered, linear output current transducer that provides an output that is directly proportional to the RMS AC current passing through the LCSC10T12 sensor. The DCSA Series provides either an analog current or voltage: 4-20 mA, 1 to 5VDC, or 2 to 10VDC. Each unit is factory calibrated for monitoring (with the LCSC10T12 connected) in one of four ranges; 0-5, 0-10, 0-20, or 0-50A. Zero and span adjustments allow field calibration if needed. The DCSA Series mounts on both DIN 1 and DIN 3 rails.

Operation
The DCSA Series varies the effective resistance of its output in direct proportion to the current flowing in the conductor monitored by the LCSC10T12. Connecting the power supply to terminals C & D provides a 4 to 20mA DC current. Connect the power supply to terminals C & A to get 1 to 5VDC at terminal D. Connect the power supply to terminals C & B to get 2 to 10VDC at terminal D.

Features
- Mounts on DIN 1 or DIN 3 rail
- 0-50A in 4 ranges using LCSC10T12 sensor
- Loop powered from 10 to 30VDC
- Linear output from 4-20mA, 1-10VDC
- Zero & span adjustments
- Separate sensor & control unit

Accessories
LCSC10T12 Toroidal Current Sensor
Remote monitoring of currents up to 50A.

Ordering Information

<table>
<thead>
<tr>
<th>MODEL</th>
<th>CURRENT RANGE WITH LCSC10T12</th>
<th>INPUT RANGE (F TO E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCSA5</td>
<td>0-5A</td>
<td>0-5mA AC</td>
</tr>
<tr>
<td>DCSA20</td>
<td>0-20A</td>
<td>0-20mA AC</td>
</tr>
<tr>
<td>DCSA50</td>
<td>0-50A</td>
<td>0-50mA AC</td>
</tr>
</tbody>
</table>

If you don’t find the part you need, call us for a custom product 800-843-8848
Specifications

Input
Ranges (without LCSC10T12 connected)
4 factory calibrated ranges in mA AC
- 0 - 5mA, 0 - 10mA, 0 - 20mA, or 0 - 50mA AC
Factory calibration ±0.5% of full scale
Repeat Accuracy ±0.25% of full scale under fixed conditions
Response Time ≈ 300ms
Temperature Coefficient ±0.05%/°C
Input to Output Not isolated

Output
Type Analog
Range Current directly proportional to input current 4 - 20mA, or 1 to 5VDC or 2 to 10VDC
Supply Voltage* 10 to 30VDC
Momentary Voltage 40VDC for 1m
Zero Adjust ≈ 3.75 - 4.25mA
Span Adjust 18mA - 22mA
Adjustment Mini-screw, multi-turn potentiometer

Protection
Dielectric Breakdown ≥ 2500V RMS terminals to mounting surface
Insulation Resistance ≥ 100 MΩ
Polarity Units are reverse polarity protected

Mechanical
Mounting DIN 1 & DIN 3 rail mounting
Termination Wire clamp For 22 - 14AWG (.336 mm² ... 2.5 mm²)

Environmental
Operating/Storage Temperature -30° to 60°C / -40° to 85°C
Humidity 95% relative, non-condensing
Weight ≈ 1.6 oz (45.4 g)

Accessory - LCSC10T12 Toroidal Sensor
Number of Turns 1000
Nominal Output Current 0 - 50 mA
Full Range 0 - 50 mA
Maximum Allowable Current Steady 50A turns; Inrush 300A turns for 10s
Burden ≤ 0.5 VA
Frequency 0 - 20A / 21 - 50A 20/100 Hz / 30/100 Hz
Sensor Hole 0.36 in. (9.14 mm) for up to #4 AWG (21.1 mm²) THHN wire
Weight ≈ 1 oz (28.3 g)

*Minimum loop-power supply voltage equals the minimum sensor voltage 10VDC plus the voltage drop developed across all the other loop devices at 20mA.

Monitored Current Amps Diagram

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