

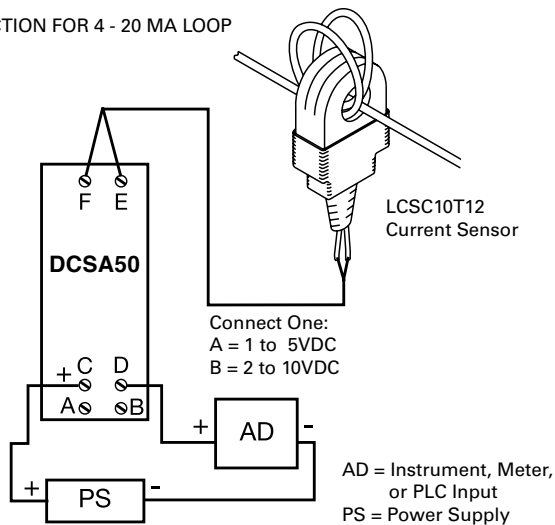
## DCSA SERIES

### Current Transducers



### Wiring Diagram

CONNECTION FOR 4 - 20 MA LOOP



### 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

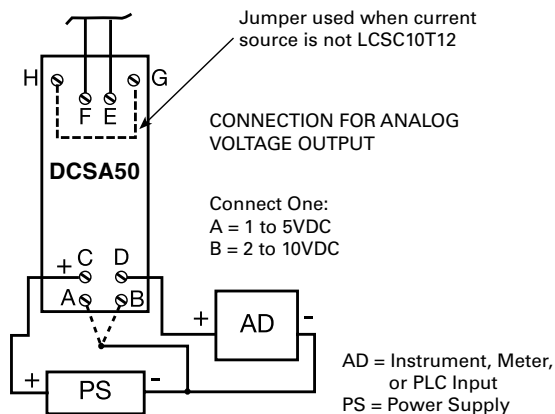
- Mounts on DIN 1 or DIN 3 rail
- 0-50A in 4 ranges using LCSC10T12 sensor
- Loop powered from 10 to 30VDC
- Linear output from 4-20mA, 1-10VDC
- Zero & span adjustments
- Separate sensor & control unit

### Accessories



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

To LCSC10T12 Current Sensor



### Ordering Information

MODEL	CURRENT RANGE WITH LCSC10T12	INPUT RANGE (F TO E)
DCSA5	0-5A	0-5mA AC
DCSA20	0-20A	0-20mA AC
DCSA50	0-50A	0-50mA AC

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## DCSA SERIES

### 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

Current directly proportional to input current

##### Analog

##### Range

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 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>)

#### 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**

**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

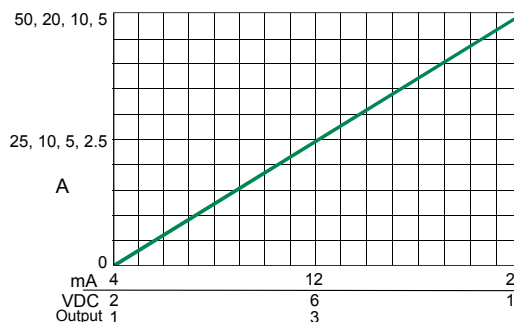
(21.1 mm<sup>2</sup>) THHN wire

≈ 1 oz (28.3 g)

**Weight**

\*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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