

## Dc Current Transducer v4 DCT247



The DCT247 is for monitoring of DC and true RMS AC currents from 5 to 6000A and provides a standard process signal output. Internal coding plugs are used to use to program the output measurement range from 10 to 100% of the CT used. Current is detected by means of a toroidal Hall Effect sensor, providing total isolation and true waveform transfer. This is particularly useful for low voltage systems, where the traditional DC-Shunt method is not acceptable. To accommodate pulsing current or high harmonic contents the filter constant can be set by coding plugs. The input output and supply are fully isolated.

### DCT247 – X X X X X

#### Power Supply:

4 = 8-60Vdc / 15-42Vac 50/60Hz

\*) 5 = 80-300Vdc / 80-280Vac 50/60Hz

#### Input: (one turn)

\*) 1 = 50A (5A steps in selection).

\*) 2 = 100A (10A steps in selection).

3 = External CT specify type and calibration.

HCT016 = 0-50A 21mm hole

HCT017 = 0-100A 21mm hole

HCT018 = 0-400A 42mm hole

HCT019 = 800 to 6000A 150 x 40mm

\*) 9 = Other (specify).

#### Output:

\*) 0 = N/O relay contact (See new product DCA218)  
(Use OFFSET trim to adjust trip point).

3 = 0 - 10mA. (1.2k).

4 = 0 - 20mA. ( 600Ω )

5 = 4 - 20mA. ( 600Ω ) .

6 = 0 - 5V. (100k).

7 = 1 - 5V. (100k).

8 = 0 - 10V. (100k).

\*) 9 = Other (specify).

\*) B = Bipolar specify (+/-10V max, 5mA)

#### Action:

1 = Direct.

#### Measurement:

0 = DC current.

\*) 1 = True RMS AC current.

\*) 9 = Other (specify)

#### Input Current Range Selection

| Full Scale | JP 2 Selection |   |    |    |    |
|------------|----------------|---|----|----|----|
|            | R              | 5 | 10 | 15 | 20 |
| 10%        | X              | - | -  | -  | -  |
| 20%        | -              | X | -  | -  | -  |
| 30%        | -              | - | X  | -  | -  |
| 40%        | -              | - | -  | X  | -  |
| 50%        | X              | - | -  | X  | X  |
| 60%        | -              | X | -  | X  | X  |
| 70%        | -              | - | X  | X  | X  |
| 80%        | X              | - | X  | X  | X  |
| 90%        | -              | X | X  | X  | X  |
| 100%       | X              | X | X  | X  | X  |

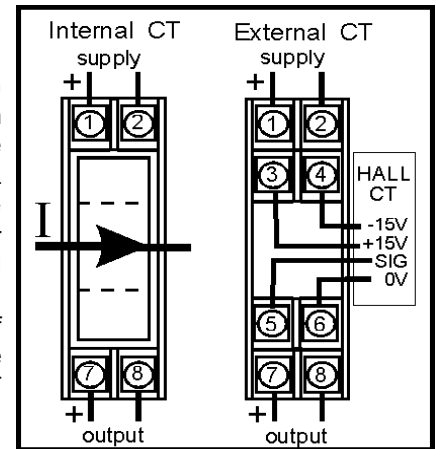
For inputs currents lower than 5A use several turns through the toroid, e.g. for 0-1Adc input use 5 turns and set coding plugs to 5 amps.

#### Input Filter Selection (T90)

| JP1   | A | B |
|-------|---|---|
| 10ms  | - | - |
| 250ms | X | - |
| 500ms | - | X |
| 800ms | X | X |

#### External CTs

The top mounted CT models have an aperture of 12.5mm x 7mm. The external HALL effect CTs can be used with larger conductor sizes and higher currents. Drawings of external CTs are available via the CT part number.



#### Specifications

|                          |                            |
|--------------------------|----------------------------|
| Size:                    | 22.5W x 68H x 130D (mm)    |
| Mounting:                | Clip for 35mm DIN-Rail.    |
| Housing material:        | Polycarbonate.             |
| Connection:              | Screw terminals.           |
| Weight:                  | 104 gr.                    |
| Accuracy class:          | AS-1384-1973, Class 0.2.   |
| Response time:           | See table.                 |
| Input range:             | See input order code.      |
| CT Aperture:             | 12.5mm x 7mm               |
| Frequency range:         | DC to 100kHz               |
| Protection class:        | IP40 (IP65) optional.      |
| Cal. Accuracy:           | <0.2% Span                 |
| Linearity:               | <0.2% Span.                |
| Ambient operating temp:  | 0...+70°C.                 |
| Temperature drift error: | < 0.05% per °C.            |
| Load output effect:      | 0.1% up to RL max.         |
| Overload continuous:     | 150% of rated input.       |
| Short term (2 sec):      | 5 times rated input.       |
| Input/output isolation:  | 3kV r.m.s.                 |
| Power/output isolation:  | 2kV r.m.s.                 |
| EMC:                     | AS/NZS 4251.1 (EN 50081.1) |

\*) Price Extra.

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