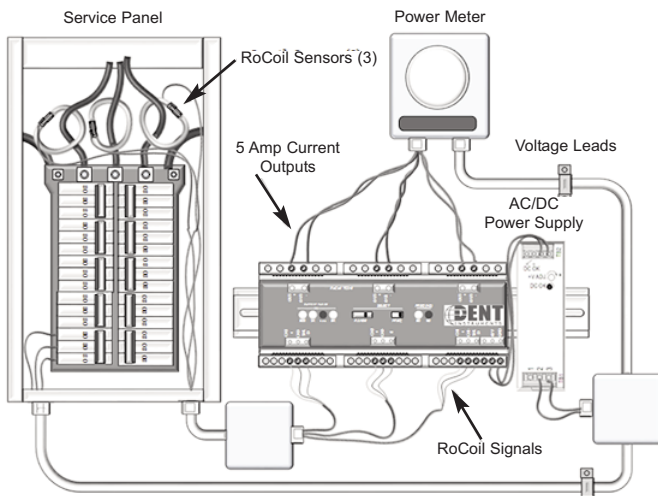


Power Monitor Current Transformer

RoCoil TCA-5™

Flexible Current Transformers with a 5A Output



RoCoil TCA-5 recommended installation

Current Range Setting	Min. Current @1% Error	Max Current
500A	5A	500A
1000A	10A	1000A
2500A	25A	2500A
5000A	50A	5000A

RoCoil TCA-5 Current Ranges

Wire AWG	mOhms per foot	Max Meter Distance (ft)
12	1.588	20.5
14	2.525	12.8
16	4.016	8.1
17	5.064	6.4
18	6.385	5.1
20	10.15	3.2

RoCoil TCA-5 Output Impedance/Burden Table

Since pioneering the use of flexible RoCoil CTs in energy measurement, we have been asked to provide a flexible coil with a 5 amp output. We are pleased to announce that the RoCoil TCA-5 now fulfills this requirement in the marketplace. Those who use 5 amp current input power meters will now be able to take advantage of the easy installation and broad current range coverage offered by RoCoil flex probe CTs.

The RoCoil TCA-5 is a three-channel integrating transconductance amplifier (TCA) that converts the 131mV/1000A electrical output signal from the RoCoil current sensor to a 5 amp AC current, emulating a traditional current sensing transformer.

The RoCoil TCA-5 is factory-calibrated to work with DENT RoCoil CTs (131mV/1000A). The unit can be DIN or panel mounted and a 10" section of TS35/7 DIN rail is included with the kit.

Operation

AC/DC 48V Power Supply

The RoCoil TCA-5 requires an external 48 VDC power supply for operation. Two versions of the power supply are available: a 120/240VAC "low voltage" version and a 200/500VAC "high voltage" version. The power supply is provided as part of the RoCoil TCA-5 kit or may be ordered separately.

Selectable Current Ranges and Frequency

The RoCoil TCA-5 has four selectable current ranges: 500, 1000, 2500, and 5000A. The range is changed using a switch on the front of the device. See Current Ranges table (left) for current range information.

A separate switch on the front is used to change the frequency between 50 and 60 Hz.

Output Impedance/Burden

The wire that connects the RoCoil TCA-5 to the power meter is supplied by the user. Linearity and precision are maintained by using the correct output wire size.

The maximum allowable output impedance (or burden) of 70 m-ohm plays a critical role in the selection of output wire size and the allowable distance between the power meter and the RoCoil TCA-5. The Output Impedance/Burden Table (left) has been generated assuming that the meter burden is 5 m-ohms leaving 65 m-ohms for the wire. Note that the meter distance is half the wire length.

The voltage drop allowed by the output circuitry (i.e., the voltage drop due to current flowing through the sum of the wire resistance and meter burden) is 350 mV RMS or 1.75 VA.

Installation

The RoCoil TCA-5 is intended to be wall mounted with the output terminals facing up. Three RoCoil current sensors will typically be installed inside the service panel at the feeder or around the branch circuit of interest. The RoCoil TCA-5 can be mounted as a panel unit using slide-out tabs on the back or mounted on a 35 mm width DIN rail (a 10" section of DIN rail is included when ordered as a kit). The diagram is of a typical, recommended installation.

What's New!



For more information on this product, please contact:
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RoCoil TCA-5 Flexible CTs with 5A Output

The DENT RōCoil TCA-5 delivers the flexibility and ease-of-installation of the RōCoil current sensors to applications using power meters with 5A current transformer inputs. Used with standard RōCoil flex CTs, the TCA-5 is a three-channel integrating transconductance amplifier that translates the electrical output signal from the RōCoil current sensor to a 5 amp AC current, emulating a traditional current sensing transformer.

The RōCoil TCA-5 is a DIN rail or panel mounted device requiring an external 48 VDC power supply. The RōCoil TCA-5 has four selectable current ranges: 500, 1K, 2.5K, and 5K amps and selectable frequency for both 50 and 60 Hz systems.

KEY SPECIFICATIONS

Input Measurement Voltage	0—655 mV (RMS)
Reference Conductor Current Range	0.5—5000 Amps (80 dB Signal Range)
Output Current	0—5.00 Amps (RMS)
RōCoil Sensing Ranges	500, 1K, 2.5K, 5K Amp (Select)
Maximum Burden	1.75 VA per channel
Maximum Output Impedance	70 m-ohms
Measurement Channels	3 (3-phase or single-phase)*
Frequency	50/60 Hz Select
Accuracy	+/- 1%**
Channel Cross Talk	< 60 dB
Maximum Operating Temperature	60 °C (140 °F)

POWER REQUIREMENTS

TCA Supply Voltage	48 VDC +/- 10%, 30 Watts
TCA Supply Current	0.6 Amps DC @ 48 VDC

Accessories

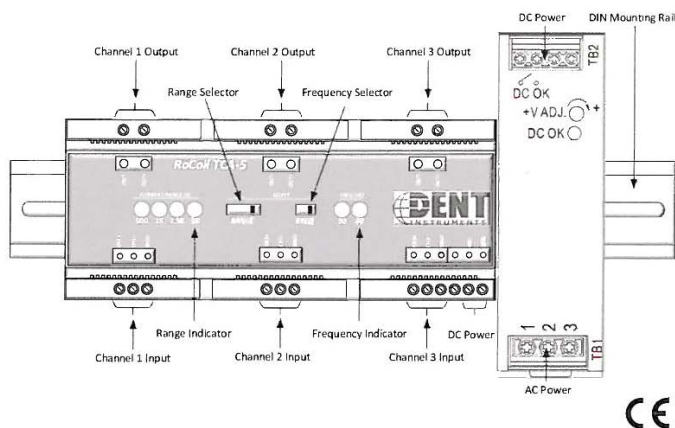
AC/DC Power Supply, 48 VDC	Low Voltage: 120/240 VAC High Voltage: 200/500 VAC
Mounting Rail	TS35/7 DIN Rail

DIMENSIONS/MOUNTING

Width—Base Unit	15.7 cm (6.2")
Width—As Assembly	25.0 cm (9.8")
Height—Base Unit	9.0 cm (3.5")
Height—As Assembly	12.6 cm (5.0")
Mounting	TS35/7 DIN Rail or Panel
Input Wire Connection	18—28 AWG
Output Wire Connection	12—18 AWG (length dependent)

*Only 4.5 Amps are available on single-phase loads if all three channels are on the same phase.

**All accuracies specified at 20°C (±2°C) with RōCoil™ centered on conductor.



Current Range Setting	Min Current @ 1% Error	Max Current
500 A	5 A	500 A
1000 A	10 A	1000 A
2500 A	25 A	2500 A
5000 A	50 A	5000 A

RōCoil TCA-5™ PART NUMBERS

Part Number	Description
TCA-5-AO	RōCoil TCA-5™ For use with DENT RōCoil CTs. Does not include power supply or RōCoil CTs.
TCA-5-HV-KIT	RōCoil TCA-5. For use with DENT RōCoil CTs. Includes 48 VDC High Voltage (200/500 VAC) power supply for use on 3-phase services, wiring harness, and TS35/7 DIN rail. Does not include RōCoil CTs.
TCA-5-LV-KIT	RōCoil TCA-5. For use with DENT RōCoil CTs. Includes 48 VDC Low Voltage (120/240 VAC) power supply for use on 1-phase services, wiring harness, and TS35/7 DIN rail. Does not include RōCoil CTs.
TCA-HV-POWER	48 VDC High Voltage power supply for use on 3-phase services. Use with RōCoil TCA-5.
TCA-LV-POWER	48 VDC Low Voltage power supply for use on single-phase services. Use with RōCoil TCA-5.



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For more information and certifications, please contact:

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