

# Spinlab Demagnetization Circuit for Current Transformers

**Now, along with identifying the source of lost revenue, you can fix one of the most common failures of a meter circuit in a matter of minutes, without taking anything out of service!**

Many of you have seen a measured ratio reading of a CT that was not what it should be: For example, a 200:5 CT that measured out to be 212:5 but passed the burden test. This is a magnetized CT. And what can you do about it? Either nothing or change out the CT. Now there is a 3<sup>rd</sup> option: The Spinlab Demag Circuit used in tandem with the Bird Dog Plus. Of the 32 failure modes of a meter circuit, magnetized CTs are by far the most common ones after installation errors. A magnetized CT can be caused by a lightning strike, ground fault, or open circuiting a CT. With this shoebox size device, you simply attach the duckbill connector to the phase of the test switch you want to demagnetize, turn the unit on, press the **Demag** button, and in less than 1 minute your CT will be demagnetized. It is that easy, and you don't have to take anything out of service! Never has increasing the accuracy of a CT-metered site been easier. Here's more about the Demag circuit:

- Works on any CT-rated site—primary or secondary
- Works on secondary current from 0.2 to 10 amps
- Safety lockouts built in for excessive current, voltage, and temperature readings
- Interfaces directly to the Bird Dog Plus for easy before and after monitoring to prove results
- Compact size and weight allows you to carry it easily from site to site
- Automatically predetermines the extent of the test needed to demagnetize a CT based on load and degree of magnetization
- Demagnetizes a CT normally in less than 1 minute
- No batteries to maintain—works from site power



DEMAGNETIZATION CIRCUIT

CT BURDEN AND RATIO	
→ WIRE VERIFY	CORRECT
CT RATIO (NO BURDEN)	212.0
BURDEN	AS RATED
SELECT	NEXT ITEM MORE OPTN

Before Demag

CT BURDEN AND RATIO	
→ WIRE VERIFY	CORRECT
CT RATIO (NO BURDEN)	200.2
BURDEN	AS RATED
SELECT	NEXT ITEM MORE OPTN

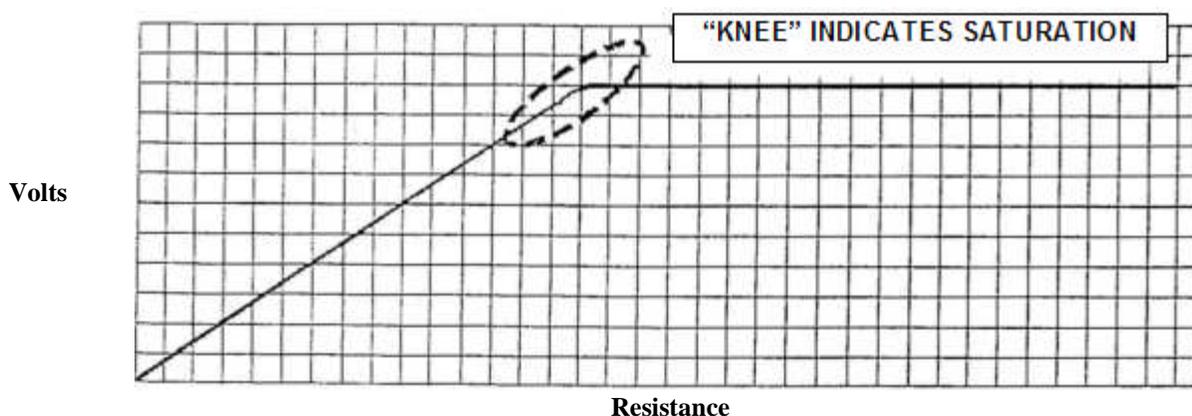
After Demag

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## How the Demag Circuit Works

CT Magnetization is caused by a lightning strike, ground fault, or opened CT. Depending upon the orientation of the molecules, the ratio reading may be subsequently higher or lower than the rated ratio, causing your metering to be significantly inaccurate. The purpose of the Demag circuit is to re-orient the molecules in the iron core so that the core is no longer magnetized. To do this, resistance is added selectively to the secondary circuit causing the CT to go in and out of saturation multiple times—beyond the knee and back. All this is done with the customer's load, so nothing needs to be taken out of service. This process takes about 1 minute and will re-orient the molecules in the core and demagnetize the CT.

### Saturation Curve for a CT



### Specifications

<b>Input Power</b>	120-240 Volts AC
<b>Input Current Range of Secondary of CT</b>	.2 to 10 Amps
<b>Rated Burden of CT</b>	.1 to 4.0 Ohms
<b>Ratio of CT</b>	Up to 2000:5
<b>Voltage on CT</b>	Any
<b>Weight</b>	13 lbs
<b>Dimensions</b>	11 x 5.5 x 11.75 inches
<b>Display</b>	16 characters X 2 lines