

# Simplified *Transformer Advantage* Selector Guide

Basic Functions:

- ★ Monitor Temperatures on Oil-Filled Transformers
- ★ Control Cooling Fans & Pumps
- ★ Generate Alarms
- ★ Communicate Status and Data to SCADA Network

## Feature

Digital Temperature Readout  
  
Flexible Cooling Control, Programmable Alarms  
  
Digital Communication  
Low Cost, Easy Installation

## Benefit

10X analog accuracy, better reliability  
  
Improved thermal management utilizes maximum transformer capacity & extends transformer life  
  
Reduced maintenance cost  
Fast payback

## How Achieved

Platinum RTD, digital electronics, self diagnostics  
  
Multiple sources, adjustable delays, hysteresis, timers, cooling readback, etc  
  
Data storage & remote monitoring  
NEMA 4X case, probes fit existing wells, replaces up to 4 analog gauges



Installation:

- Mount Advantage on transformer or control cabinet
- Install probe(s) in transformer thermowell & connect to Advantage
- Wire power, relays, communication, etc
- Enter setup values (if not factory set)

### Measurement Method

For	Simulated Winding Temperature (heated well)	Calculated Winding Temperature (winding current)
	New Transformer	Available
Existing Transformer	Recommended	Available

Need calibrated thermowell heater

Need hot spot temperature rise from transformer test report

### Select Model to measure:

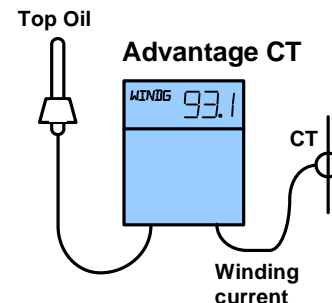
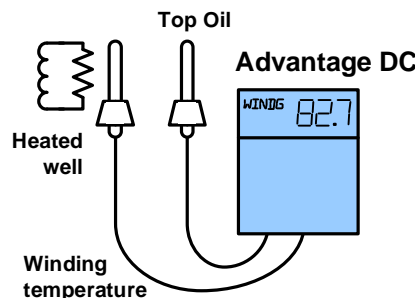
Oil temperature + 1 winding temperature  
Oil temperature + 2 winding temperatures  
Oil temperature + 3 winding temperatures  
Oil + 1 winding + ambient temperature  
Oil + 3 windings + ambient temperature  
Oil + 1 winding + LTC temperature  
Oil + 3 windings + LTC temperature

Advantage DC  
Advantage TC  
Advantage SC + Advantage TC  
Advantage TC  
Advantage DC + Advantage TC  
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Advantage CT  
Advantage CT w/ 3-winding option  
Advantage CT w/ 3-winding option  
Advantage CTX  
Advantage CTX w/ 3-winding option  
Advantage CT/LTC  
Advantage CT/LTC w/ 3-winding option

See data sheet for other combinations

### Oil Temperature + 1 Winding Temperature:



\* Use magnetic sensor for oil or LTC temperature if thermowell not available.

\*\* Use clamp-on transducer to sense winding current on existing transformers. Use direct connect on new transformers.

Each Weschler Transformer Advantage is built to order, as specified by a 15 digit part number. Use the following information and the data sheet's configuration guide to specify a unit for your exact requirements.

**Power Source** to run the Advantage: AC: 120V 240V DC: 32V 48V 125V 250V

**Setpoint Relays** for cooling control and alarms: choose 2, 4, 5, 8 or 11 relays

Relays are form C (change-over) with selectable non-alarm state (normal or fail-safe).  
The most popular relay quantity is 8. The typical analog gauge has 2 or 4 setpoint switches.

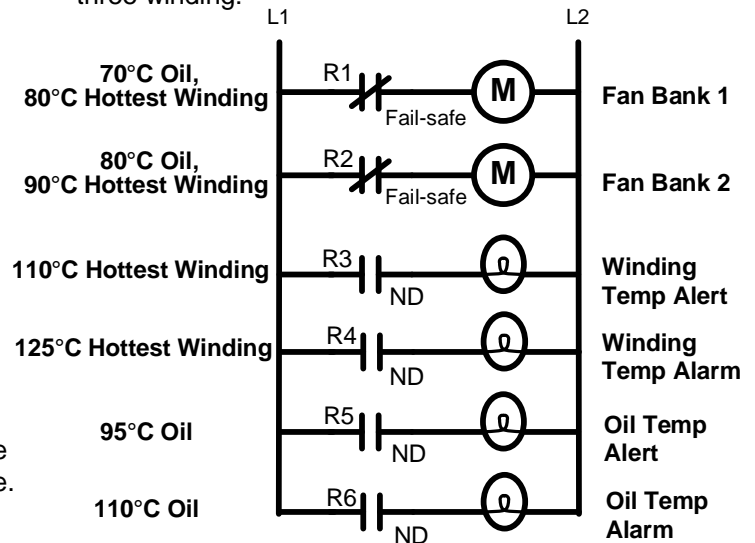
Four switches in an oil gauge and four in a winding gauge can be replaced with six Advantage relays:

- cooling stage 1 (activate on oil or winding temp)
- cooling stage 2 (activate on oil or winding temp)
- oil temp alarm
- oil temp trip
- winding alarm
- winding trip

Use extra relays to alarm on LTC temperature, ambient temperature or cooling stage failure (with cooling readback option). Or to activate additional cooling stages.

All models include internal diagnostics and a separate watchdog relay to alarm on a sensor or internal failure.

No additional relays are required to monitor three winding:



**Digital Communication** ASCII protocol is standard. Need Modbus or DNP3? YES NO

**Analog Retransmit** mA outputs: choose 0, 1, 3 or 3 isolated  
Recommend 3 isolated if outputs go to different devices

**RTD Probes** Choose quantity of each type needed: Thermowell \_\_\_\_\_ Magnetic \_\_\_\_\_ Ambient \_\_\_\_\_  
(max 1, 2 or 3 total, depending on model)

Select cable length: 25 ft 50 ft custom \_\_\_\_\_

For thermowell probes, also specify: length to fit well (minimum is well depth plus 2"): 8" 12" 18"  
adapter to fit well inside diameter: 3/8", 7/16", 0.490", 5/8"  
fitting to match well threads: 7/8" UNF, 1/2" NPT, 3/4" NPT

If well ID & threads unknown, order U kit to fit all sizes listed here.

Most common thermowell probe size is 8" long, 0.49" ID, with 7/8" UNF fitting.

**Cooling Readback** Option to detect fan or pump failure: Order 2 or 5 auxiliary analog/digital inputs  
(Need 1 input for each cooling stage).

For additional information on selection & configuration, see the Transformer Advantage Data Sheet & Owners Manual (available at [www.weschler.com/advantage](http://www.weschler.com/advantage)). Or call 440-238-2550 to speak to an Advantage applications specialist.

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