

# 852-013

TRANSFORMER OIL  
TEMPERATURE INDICATOR  
(ELECTRONIC OTI)



#### Standard Features

- › Entry level OTI
- › Protection, monitoring, control and alarm
- › 3 wire PT100 input
- › Oil temperature version
- › Data logging
- › Wide range universal power supply

#### Optional Features

- › PC set up and configuration software

#### Benefits

- › Easy to install and retrofit
- › Easy to set up using keypad or setup software
- › Long life

Transformer Oil Temperature Protection  
from Ashridge Engineering

National Grid Approved  
(Category 'A' Unrestricted as OTI)

# 852-013

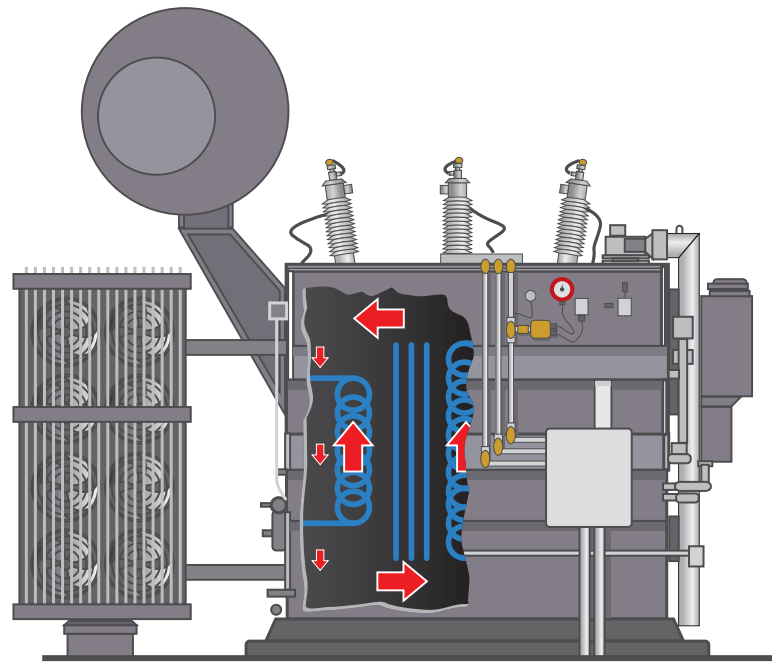


The 852-013 Oil Temperature Indicator is a high integrity protection, control and monitoring system for power transformers. This OTI is designed to ensure optimal asset life and protection for the transformer.

The OTI continuously calculates and displays the oil temperature in the transformer. This is achieved by measuring the top oil temperature with a precision PT100 probe. This measurement is combined with Ashridge's algorithm based on the IEC354 standard to provide accurate oil temperatures.

## The 852-013 provides:

- Relay outputs for alarm and trip functions
- Output for Internal system watchdog alarm
- Precision, RMS electronics
- High level Isolation
- SCADA outputs of Modbus RTU and DNP 3.0 available to connect to your SCADA system
- IEC61850 ready
- User configurable analogue output
- Long life and proven reliability
- Easy set up and install with special relay check mode (Ramp mode)



## Data and Event Logging

The 852-013 logs top oil temperatures every 30 minutes, as well as peak temperatures, system entries and power cycling.

## Software

Ashridge's configuration software utility can be used to connect to any 852 Series WTI / OTI to read and edit parameter settings. The software also provides a "compare settings with template" facility, in addition to downloading the settings for incorporation into documentation or archiving.

# National Grid Approval

(CATEGORY 'A' UNRESTRICTED AS OTI)



Wall Mounted Version

## Installation:

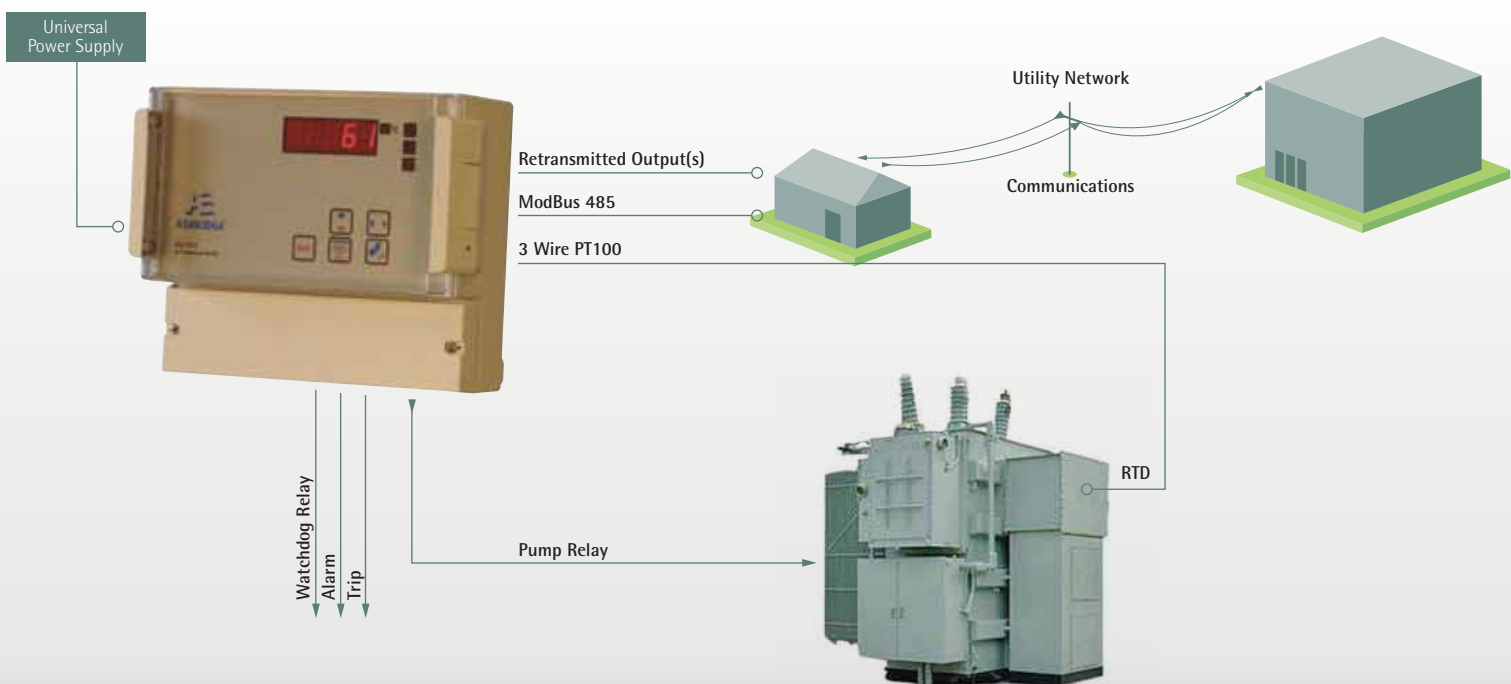
The 852-013 has been designed for easy installation of new and also retrofit systems. The wide range switch mode power supply allows the 852-013 to be connected to a variety of input voltages automatically.

## Setting Up:

The 852-013 is easily configured using the 5 key keypad on the front panel, with defined passwords for access to each section, maintaining security of settings. Non-volatile memory ensures that data is not lost in the event of power failure.

Alternatively, Ashridge's PC set up and configuration software utility can be used to connect to any 852 Series WTI / OTI to read and edit parameter settings. The software also provides a "compare settings with template" facility, in addition to downloading the settings for incorporation into documentation or archiving.

An easy to use, on site, dynamic teach mode facility ensures the fan and pump feedbacks are accurately calibrated.



## Series 852-013 Transformer OTI

### SPECIFICATION

<b>3 wire PT100 input:</b>	+/- 1°C @ 20°C, PT100 input to Analogue output: +/- 2°C @ 20°C, displayed range 0-200°C
<b>Analogue output:</b>	0-10, 0-20 and 4-20mA (user selectable). Maximum loop resistance 800Ω.
<b>Relay outputs:</b>	Watchdog pump, Alarm and Trip relays each with N/O or N/C volt free contacts (user selectable by links).
<b>Relay rating:</b>	Contact life (>10.5 operations): 5A Non inductive (Breaking: 100Vdc/0.4A, for inductive de-rate using L/R=7msecs, i.e. approx 0.2A@125Vdc).
<b>Power supply:</b>	Universal input, 44-265 Volts ac, 45-260 Vac and Vdc, power consumptions less than 6Va
<b>Memory:</b>	Non-volatile flash
<b>Weight:</b>	1.2Kg - wall mount
<b>Dimensions:</b>	241mm (W) x 185mm (H) x 105mm (D) - wall mount

### ENVIRONMENT:

Operating temperature range: -20 to 70°C and 0-95% RH Non condensing

Wall mounted enclosure to IP65.

Seismic to EN60255-21-3 (class 2).

Shock and vibration to IEC 68-2-6, 68-2-27, 68-2-29.

### ATMOSPHERIC:

EN60068-2-2, EN60068-2-1, EN68-2-56, EN68-2-1, NGTS 3.24.15 (8.26-8.28)

### EMC:

Meets the intent of Directive 89/336 and LVD 73/23/ECC

EN61000-4-5, NGTS 3.24.4 (7.7-11), EN61000-4-11, EN61000-4-4, EN61000-4-12, EN61000-4-2, EN61000-4-3, EN61000-4-6, EN61000-4-16, IEC 60255-22-7, EN 55022, NGTS 3.24.4 (7.65-7.69), EN61000-4-10, IEC 60255-5 (6.3 & 6.4), IEC 60255-5 (7.2),

### APPROVALS:

Firmware version t and hardware Mod b or above meets the intent of the following: NGTS WTI specification 3.3.09, Issue 1 and NGTS 3.24.15 for EMC and Environmental.



### ACCESSORIES:

 Ashridge Engineering provides:

#### Weather and Solar Shields

#### Platinum Resistance Thermometers:

- › Standard PT100
- › Custom PT100
- › Magnetic PT100

#### Stainless Steel Thermowells:

- › Standard Thermowell
- › Custom Thermowell

#### Cooling System Monitoring CT's:

- › Size A (10 Amps)
- › Size B (30 Amps)
- › Size C (60 Amps)
- › Custom CT with or without mounting feet

#### Conversion Mounting Plates:

- › Mounts directly onto C105 mounting holes

Please refer to the 852 Selection Guide document on our website for more information on the whole range of Ashridge WTI's at [www.ash-eng.co.uk/products](http://www.ash-eng.co.uk/products)

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