



An ISO 9001:2000 Certified Company

# Nippon Technologies



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## Nippon's ENERGY SAVERS

The new millennium has dawned with thrust on ENERGY SAVING. The interaction with Process, Plants, Engineers and Energy Auditors is passion at *Nippon*.

*Nippon*, now has an answer to escalating cost of electricity. The concepts and products designed are MUST and CORE in today's scenario of recession and dwindling bottomline.

## Nippon's $\Delta T$ CONTROLLERS

### FEATURES

$\Delta T$  controllers are use for COOLING TOWERS.

ENERCON2000 is a state of art microcontroller based instrument widely used for energy saving In cooling towers. The cooling tower fan is switched ON & OFF as per the logic designed and Incorporated by ENERCON2000. This leads to tremendous saving of electricity bill.



### SPECIFICATIONS

<b>Input</b>	: 3 channels; T(Inlet), T(Outlet) and T(Ambient)
<b>Sensor</b>	: Pt100, 3 wire R.T.D.'s
<b>Range</b>	: 0-60 °C
<b>Setpoint</b>	: 2 set points T(F) and T(Ref)
<b>Output</b>	: 1Relay rated 230 V, 6 Amp.
<b>Setting</b>	: By soft touch membrane key pads
<b>Supply</b>	: 90-260 VAC , 50 Hz
<b>Box</b>	: 96(H) x 192(W) Din size ABS molded box
<b>Logic</b>	: T(Inlet) is Input to cooling tower, T(Outlet) is cold water coming out from cooling tower
	T(Inlet) - T(Outlet) > T(F) fan ON
	T(Inlet) - T(Outlet) < T(F) fan OFF
	T(Ambient) > T(Ref) fan ON
	T(Ambient) < T(Ref) fan OFF

THE LOGIC LEADS TO OPTIMUM USE OF COOLING FAN. Results in saving of Electricity bill.  
Delay time (t1) also available to avoid frequent on-off of cooling fans. The delay time (t1) is programmable.  
This helps to improve life of cooling fan. TIME TOTALISER is provided for fan on time calculation.

**NOTE** Depression of WET BULB is also used for above application.

## Nippon's CONTROLLERS FOR COMPRESSORS

### FEATURES

Compressors are integral part of plants and consumes lot of electricity. Efficient process Controls saves electricity.

TEMP/TIME Based controls is the principle of operation.

UN2000 is used in this method. The instrument is designed for single or double stage compressors. The antifridge and capacity control are important temperature points. Compressor is switched ON & OFF considering these points. This leads to optimum use of compressor intern saving in electricity bill. Also DELAYTIME is introduced to avoid frequent ON/OFF. Once the compressor gets off & if temperature increases above set point it can get ON only after the DELAY TIME. The delay time is also programmable.

THE TIME & TEMPERATURE MONITORING AND CONTROL LEADS TO OPTIMUM USE OF COMPRESSORS.



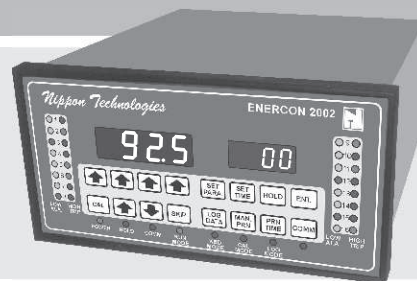
## Nippon's TR INDICATORS FOR COMPRESSORS

### FEATURES

ENERCON2002 is used for monitoring the efficiency of compressors.

For subzero temperature BRINE is used for cooling.

The process parameters temperature, flow and density are used for measuring **TR**.



### SPECIFICATIONS

- Inputs** : I. 4-20 mA form Volumetric Flow meters---(A)  
II. The temperature of inlet and outlet of compressor is measured  
Two R.T.D.'s(T1-T2)---(B)
- Range** : -40 to 0 °C
- Supply** : 90-260 VAC , 50 Hz
- Logic** : One constant is to be derived depending on density  
and viscosity of BRINE---(C )  
**A\*B\*C** Is the **TR** of Compressor

**TR** INDICATOR HELPS IN MONITORING EFFICIENCY OF COMRESSORS AND GUIDES TO TAKE CORRECTIVE MEASURE.

ENERCON2000, UN2000 & ENERCON2002 are having RS232 / RS485 port for computer connectivity. These products are interfaced to Data Logging software **NIPPOLOG** for energy management. **NIPPOLOG** stores the plant datas in tabular and graphical formats. These helps to monitor the compressors and cooling towers efficiency. **NIPPOLOG** also has powerful data archival, it helps to analyze and improve the equipments and process.

**NIPPOLOG** is indigenously developed software, easy to use and user interactive.

Contact factory for ENERGY SAVING DRIVES for blowers, fans, agitators, refrigeration compressors,Pumps and HVAC systems.

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