AITRONIC
ENERGENIUS

New!!

AITRONIC IIOT
(INDUSTRIAL INTERNET OF THING)

Changing Old to Smart Machine
Reducing Maintenance and Energy cost

Energenius Co.,Ltd.

Tel. 02-960-0004
092-901-0685
092-451-1460

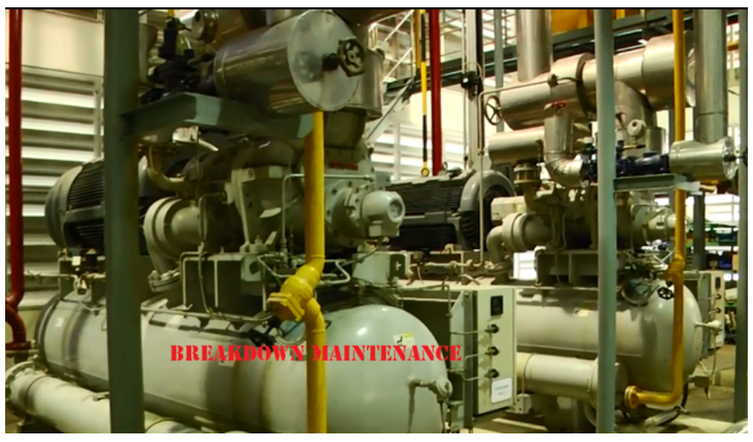
ENG
ENERGENIUS

CONTENT

- Benefit of IIoT
- Application
- AIT-4PT-4A
  - › Feature
  - › Specification

BENEFIT OF IIOT

- **Changing from Break-down, preventive to Condition Base Maintenance**
- **Reducing maintenance costs more than 10%**
- **Monitoring and precaution energy consumption**
- **Reducing energy costs more than 15%**

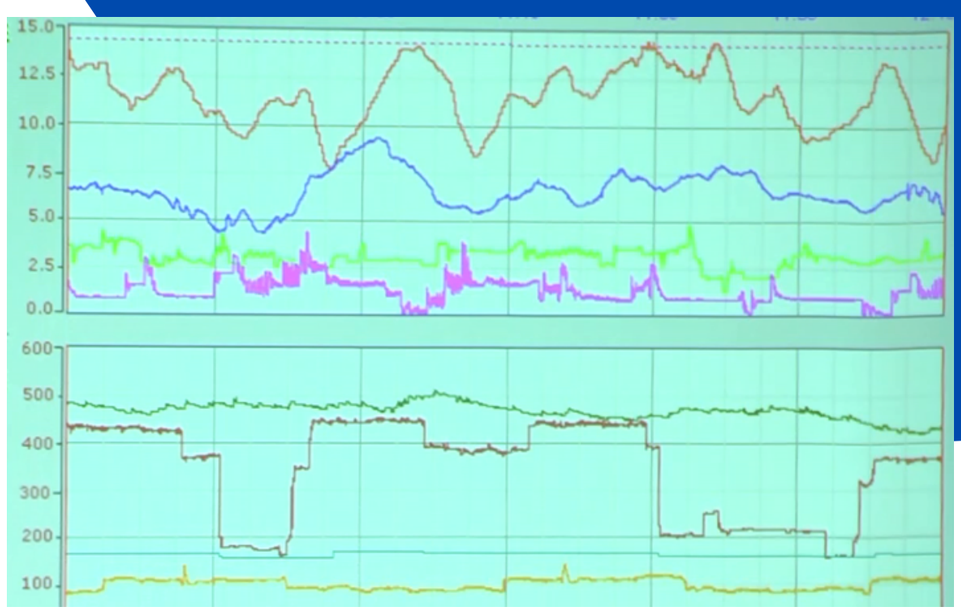


APPLICATION

- **Air Compressor and Compressed Air System**
- **Chiller and Chilled Water System**
- **Boiler and Steam System**
- **Air Conditioning System**
- **Heating and Cooling Exchanger**
- **Utilizes System**

CONDITION BASE MAINTENANCE

- ✅ Thermography analysis
- ✅ Vibration analysis
- ✅ Pressure analysis
- ❎ Ultrasonic analysis
- ❎ Oil analysis



ENERGY MONITORING AND PRECAUTION

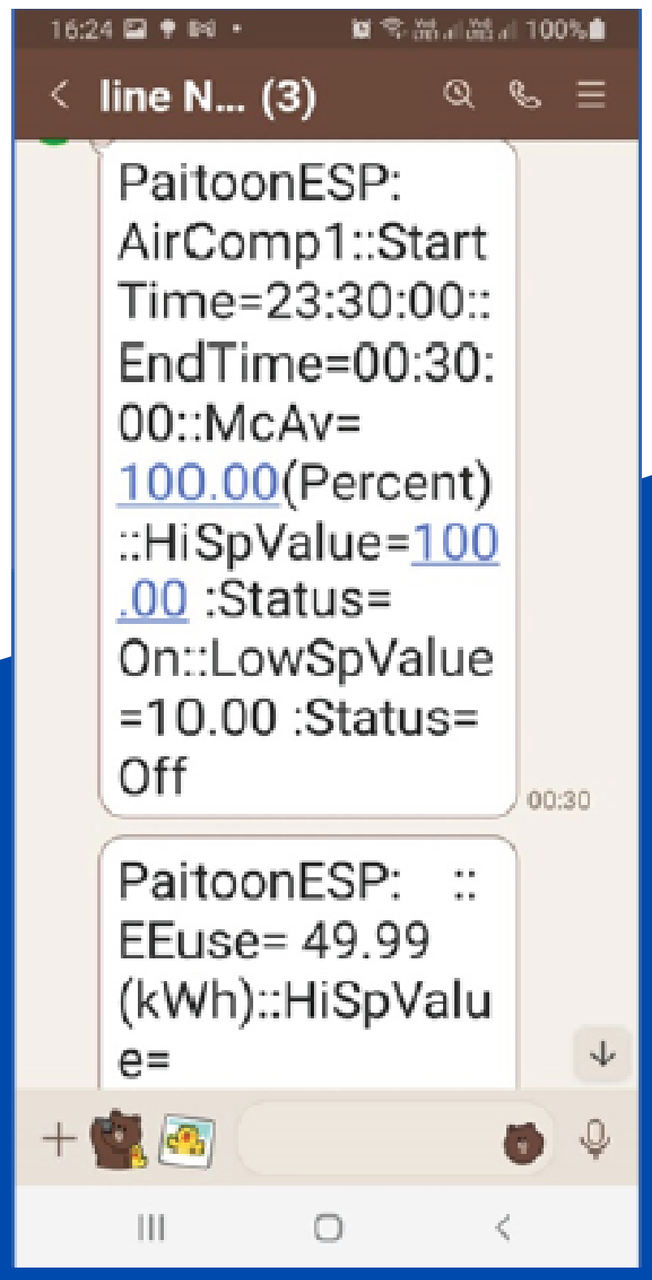
- Shift or Daily Energy Monitoring
- Time, Shift or Daily Energy Precaution via Line Notification
- Various Energy monitors and precaution

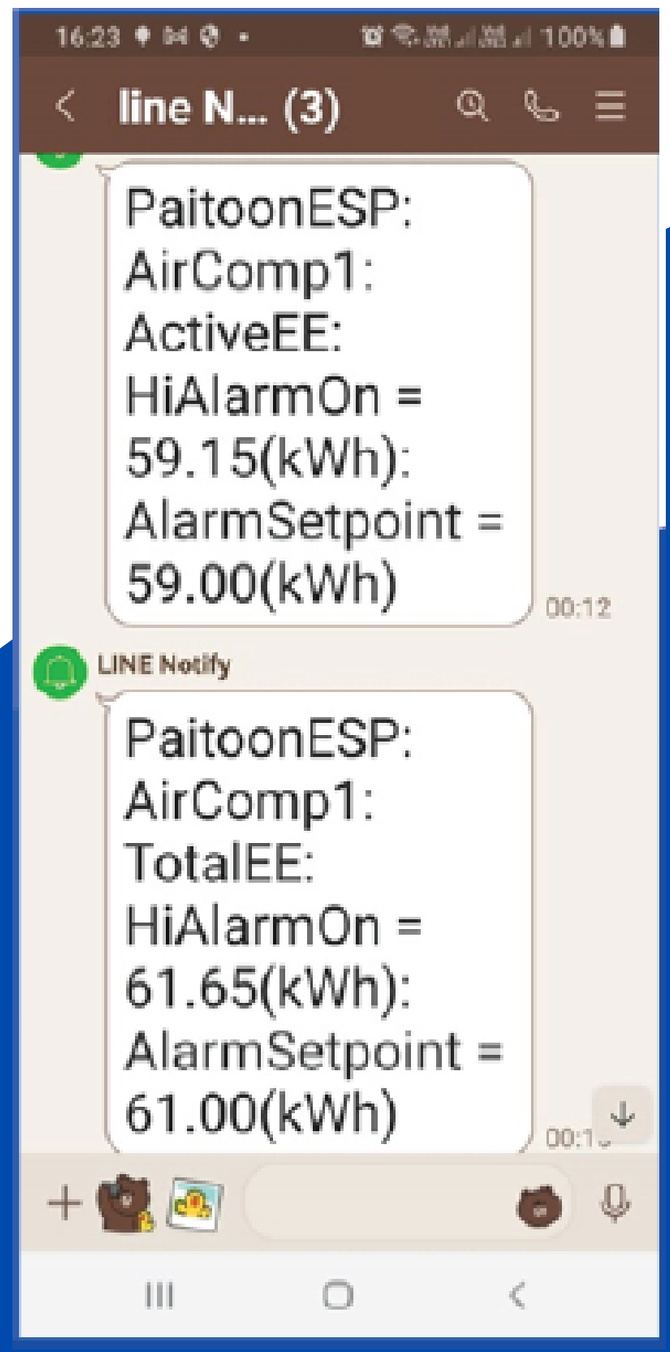
› Total Machine Energy Use

› Active Current Energy Use

› Unload Energy Ratio

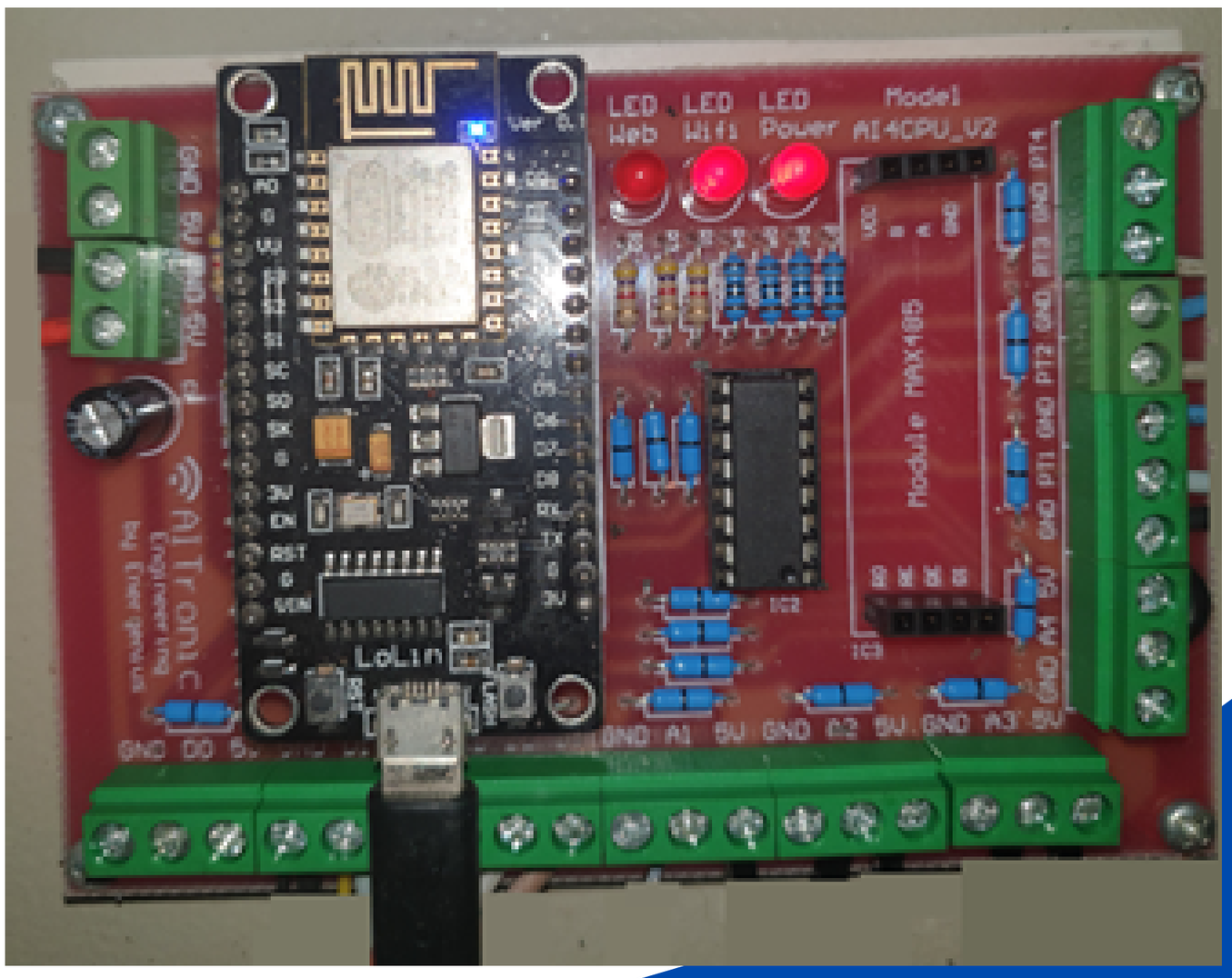
› Machine Available Ratio

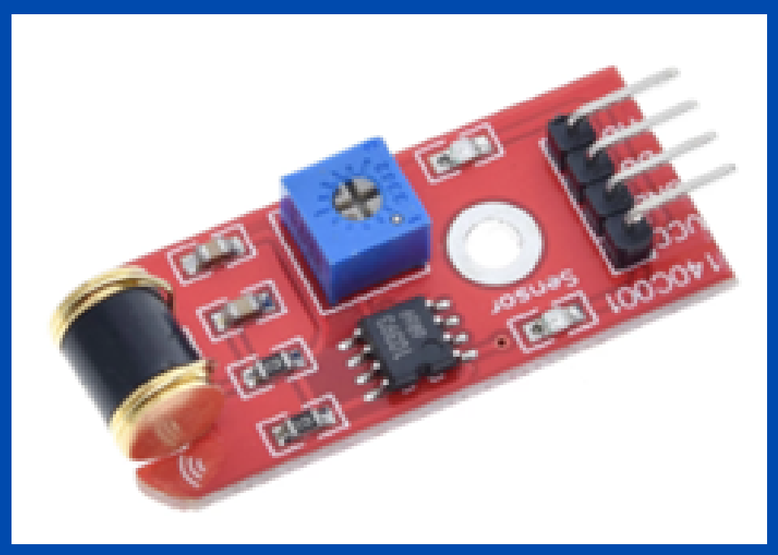




AIT-4PT-4A IIOT

- **AIT-4PT-4A is a revolutionary new technology in the industry. Transforming machines into smart machines, adding innovative capabilities such as proactive maintenance, saving energy, reducing cost and greenhouse gas emissions.**
- **AIT-4PT-4A is an embedded CPU.**
- **AIT-4PT-4A can measure machine temperature (both DS18B20 type (-55-125°C) and PT100 type)**
- **And Measuring Current and analog values (such as pressure, vibration, gas, up to 4 sensors)**





AIT-4PT-4A IIOT FEATURE

- Measuring data and logging every minute.
- You can set
  - › temperature and temperature difference (such measure the efficiency of the heating or cooling exchanger)
  - › higher-lower alarm level and notify via LINE application and logging.
  - › current and various types of energy used can also be set alarm level and notified via LINE application.
  - › Analogue sensors (such as pressure, vibration, gas, etc.,) can also be set alarm level and notified via LINE a application

AIT-4PT-4A IIOT SPECIFICATION

Temperature Sensors

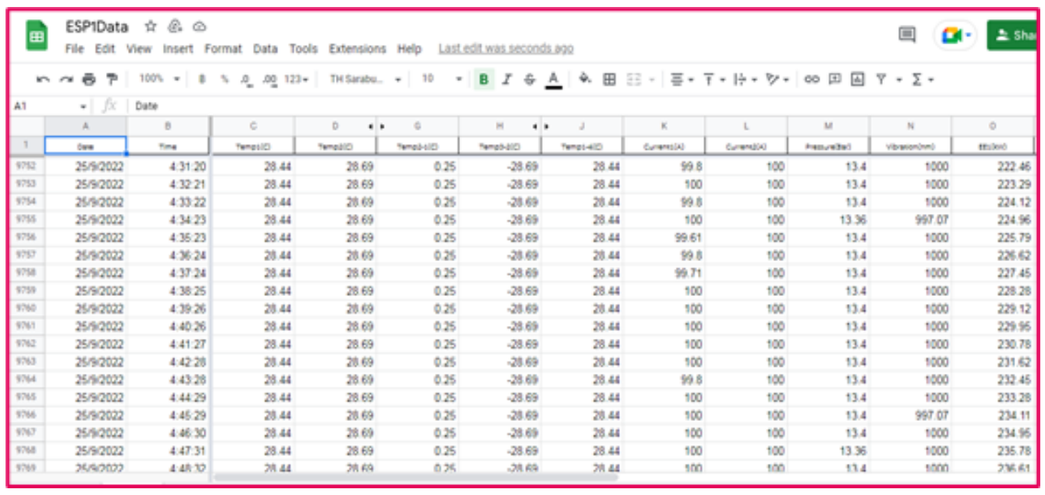
- DS18B20 : 4 Channels (-55 C – 125 C)
- PT100 : 4 Channels (0 C – 500 C)
- Can be set Temperature and Temperature Differential (For Heating and Cooling Exchanger Efficiency Monitoring) High-Low Alarm and send to Line Notify and data logging
- Shift or daily Average -Max-min Temperature and Occur Time Report

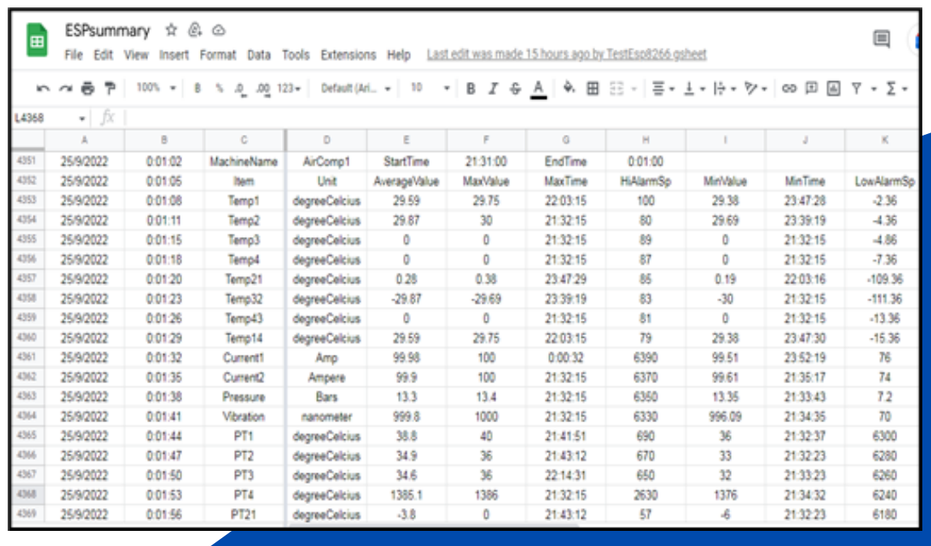
AIT-4PT-4A IIOT SPECIFICATION

Current and Analog sensors

Current Sensor (0-100 A)

- **Can be set High-Low Alarm and sent to Line Notify and data logging**
- **Shift or Daily Average-Max-Min Value and Occur Time Report**
- **Calculate Total Energy, Active Energy and set up a High-Low Alarm.**
- **Calculate Loading Factor (Alarm Idle Operation)**
- **Calculate Machine Available Rate, Unload Ratio and Alarm**





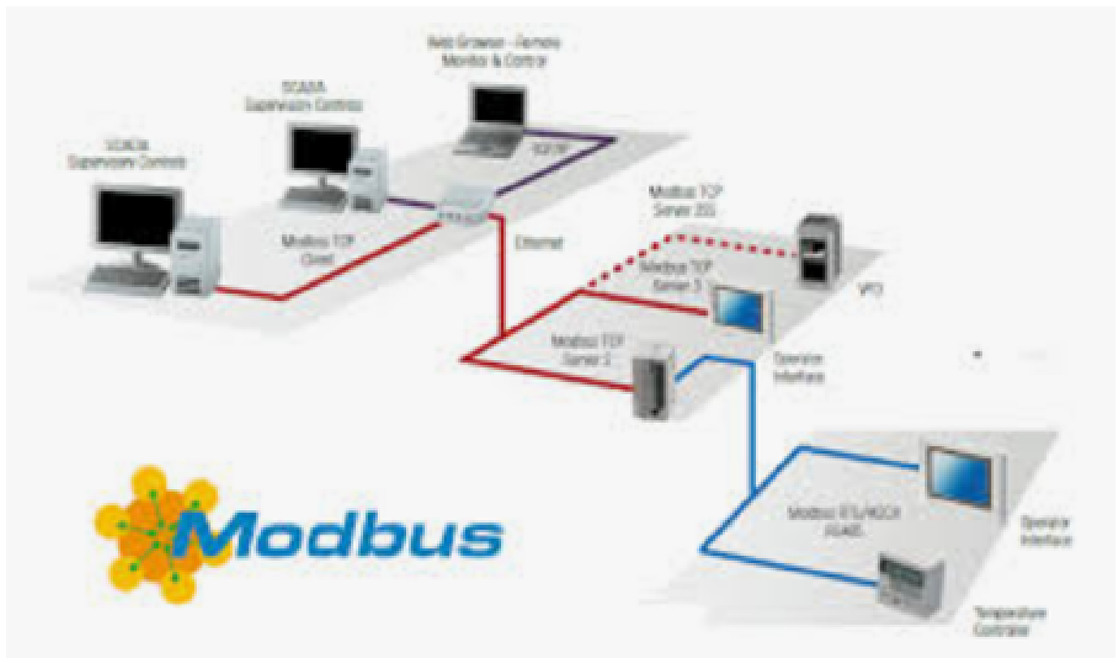
Analog Sensors

- **3 Analogue Sensors : 0-5 VDC (such as pressure, vibration, gas) can be monitored and set High-Low Alarm and sent to Line Notify and data logging**
- **Shift or Daily Average-Max-min Value and Occur Time Report**

AIT-4PT-4A IIOT SPECIFICATION

Modbus Communication (via TCP Modbus communication protocol)

- **Temperature, Current, Energy and sensor value display**
- **Alarm status display**
- **Alarm and parameter set point read-write data**
- **Communication to other devices such as PLC or SCADA program**



Environmental Limits

- **Operating Temperature Range: -40-85 degree celsius**
- **Operating Humidity: 5-95%**

AIT-4PT-4A IIOT

If you are looking for a system to replace your old machinery to be a smart machine. improving efficiency, reducing the operating costs and also greenhouse gas emissions....

AIT-4TP-4A is a system of choice!!!