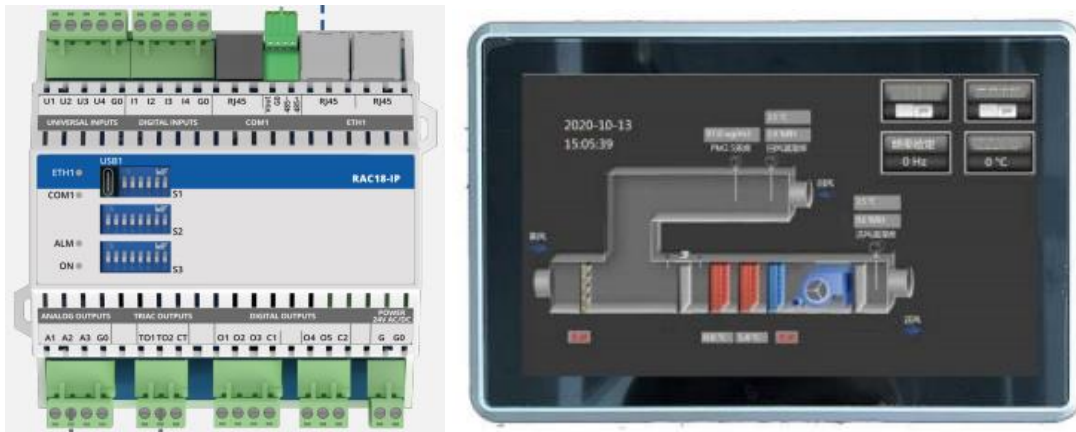# LABORATORY CONTROLLER (450)

Functional Description: Syannlab's **JNANA** Series Laboratory controller offers optimised nergy saving, enhanced safety and controlling, monitoring and usage trending. Provides necessary balancing and controlling of Laboratory Air Changes, Air Pressure (Pa) Temperature (T), Day Night switching (DN). The controller has 7" Touch Screen Interface. The controller has capability run completely on it own, without BMS, certainly running on web based on HTML5 specific application.

The controller should be a multifunctional device providing comfort control forn a single room or a zone in the building. 18 onboard I/O's with Ethernet and serial port make the controller a versatile system for comfort management, light and blind control, and integration and monitoring. The controller to have built-in nano EDGE ENGINE – the cutting-edge software that allows for constructing multiple applications and provides a set of libraries and components tailored to create cycle-driven user applications. The device has an automatic BACnet IP and Modbus TCP/IP exposure and allows for real-time programming. Maintenance and programming of the device are possible from anywhere in real time with a dedicated, free-of-charge tool. The controller ensures an easy replacement process with a system and applications on a removable SD card.

FEATURES

- Room and zone IP management
- Openness and reliability
- Seamless programming and maintenance
- Built-in nano EDGE ENGINE
- Cycle-driven multithreaded application
- Favourable licensing system
- Reference linking method
- Clear and logical structure
- 150 Data Points
- System and applications on SD card
- 2 fail-safe Ethernet ports with a built-in switch
- Native BACnet IP and Modbus TCP/IP or Modbus RTU
- Built-in real-time clock (RTC)
- Support for over 20 types of temperature sensors

• Digital inputs with fast pulse counter
• Triac outputs for thermal actuators

Technical features

Power supply: 24 V AC/DC ± 20%
Universal inputs Number of inputs: 4nos with Processing time 10m/sec (12bit)
Digital inputs: 4nos
Analog outputs: 3nos, 2-10vDC or4 to 20mA
Digital outputs: 5nos
Triac outputs: 2nos
COM1: RS485, Modbus RTU
ETH1: Ethernet Interface 2 ports, fail-safe protected
USB1: USB 2.0 USB type C
Mounting: DIN rail

7" Touch panel

Screen resolution：1024*600	Displayer：7"TFT
Memory：DDR3 1G	Touch type：Capacitive-type
System：LINUX	CPU：4 core 1.2GHZ
Flash：8GB	Power dissipation：≤8W
Power Supply：AC/DC 12V-24V	Port：1x Ethernet, 3x RS485 serial ports 1x RS232 serial port
Network： 1x High performance 100M/10M adaptive industrial network card, support AUTO MDI/MDIX	Weight：0.65kg Material：Aluminum alloy front shell Metal plate back shell

Controller Make: ABB / iSMA
HMI: MSHRIY