

STAND ALONE SMART AHU CONTROLLER

Specifications

Microprocessor/Embedded base touch screen display controller having MMI/HMI/POT on mshriy integrated powerful IO card designed to be perform a dedicated function an independent system for carry out computation for real-time operations in single frame. Integrated 2 x rs485 Modbus port, 1 x USB port/SD card port an Optional TCP/IP Ethernet port. 7"/4" Touch Screen display for 3D animation, live virtual operation, Easy Fault Diagnostic, Local Operation dedicated Page of Alarm, History & compatibility central BMS.

Covered in Vandal Proof CRCA Powder coated ahu/wall mounted cabinet IP55 Necessary breaker, Ai and AO Side fuse, power supply, terminal, DO Side Relay and wiring. Pre-loaded Mshriy AHU Application & Control Logic or customize logic base on AHU control philosophy.

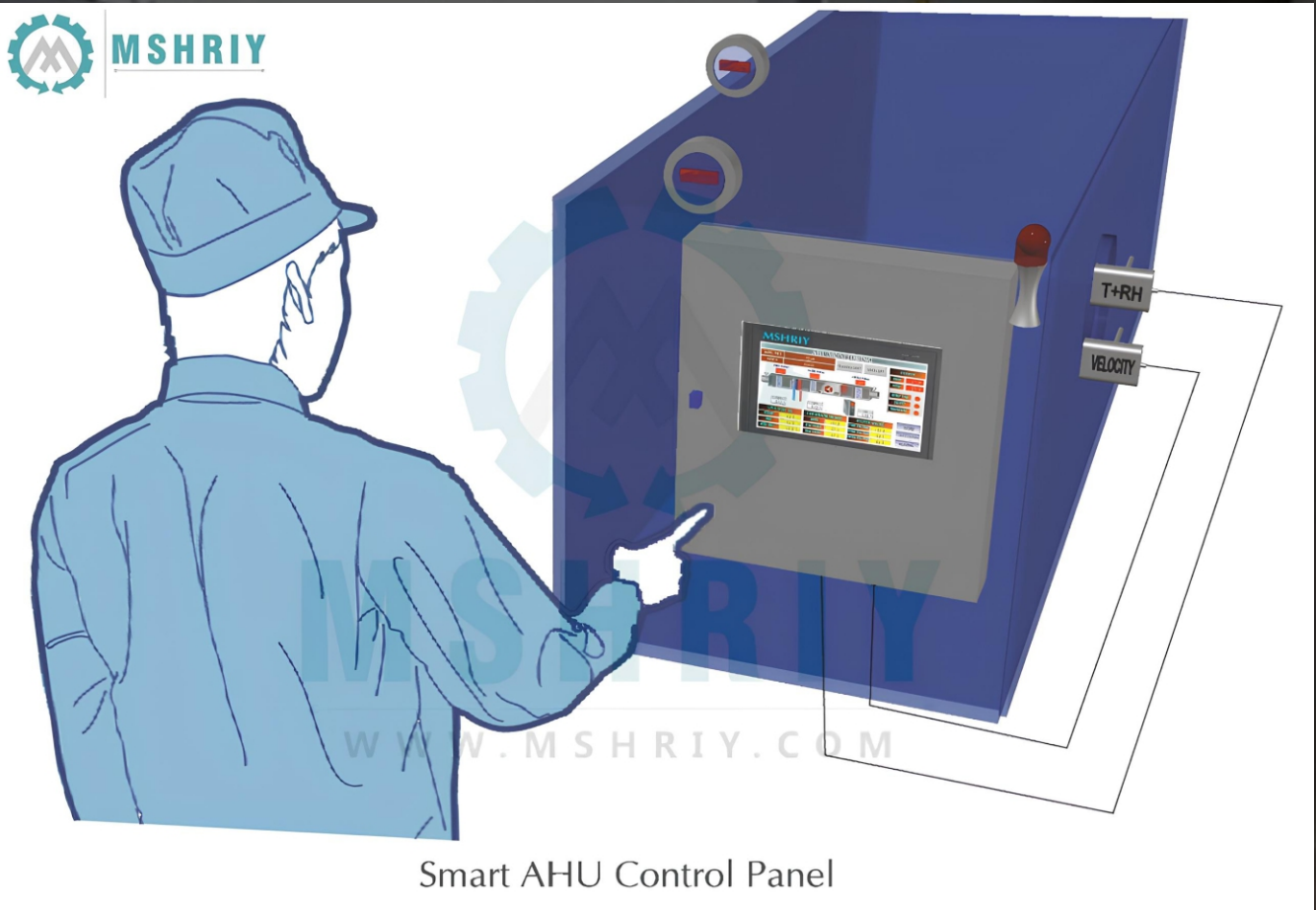
MSHRIY Smart Display Controller is the first combo PLC+HMI from the industry's OEM. Delivers affordability without compromise, because all of the features and functions are already built in.

Design engineers can now enjoy more versatility and more choices for their automation needs than ever before!

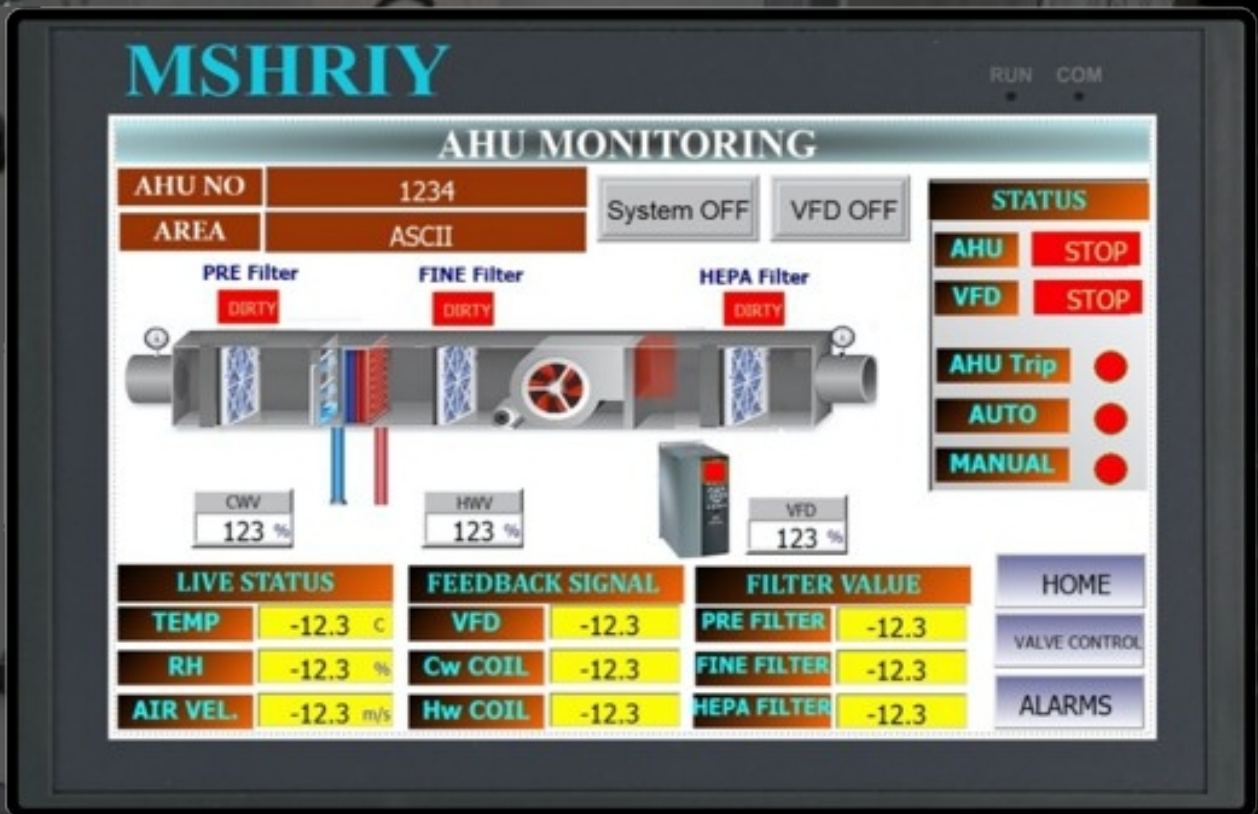


Overview

- Innovative touchscreen smart AHU controller designed for stand-alone AHU and HVAC applications.
- Flush-mounted installation adaptable to any panel.
- Features animated 3D mimic graphics with field adjustment capabilities.
- Provides cleanroom display, control, and monitoring functions.
- Equipped with a USB slot for data recording.
- Integrated with a powerful CORTEX A8 microprocessor for enhanced performance.
- Compatible with central BMS connectivity via MODBUS/BACNET protocols.
- Includes a detachable display with M controller for flexible operation.



Smart AHU Control Panel



Feature and Benefit

- Compact Design: Space-saving without sacrificing performance.
- Real-Time Monitoring: Continuous system oversight for immediate issue detection.
- Energy & Cost Savings: Up to 25% savings through optimized performance.
- Low Noise: Quiet operation ensures no disturbance.
- High-Efficiency Components: Optimized fans and motors reduce energy use.
- 24/7 Management: Round-the-clock operation and control.
- AHU Control System: Seamless integration with chiller, boiler, and third-party equipment.
- Modbus Protocol: Easy communication with BMS, PLC, and DDC systems.
- Graphics Display: Simplified, real-time control of all equipment.
- Enhanced Precision: Accurate monitoring and control for optimal performance.
- Improved Comfort: Ensures ideal conditions for building occupants.
- Customizable I/O with Analytics: Tailored configurations and insights.
- Efficient & Silent Operations: Power-saving with low noise.
- Hygienic Conditions: Maintains clean air quality standards.
- Versatile Control: Manages humidity, temperature, air flow, and IAQ.
- Comprehensive Monitoring: Tracks filters, dampers, and safety alarms effectively.

Technical Specification

Analog Input	Built in minimum 2 to Maximum up to 14 input (12 bit) (0-10VDC/0-5VDC or 4-20ma/0-20ma)
Analog Output	Built in minimum 2 to Maximum up to 10 output (12 bit) (0-10VDC/0-5VDC or 4-20ma/0-20ma)
Digital Input	Built it Minimum 2 to maximum 25 Input (NPN – PNP Type)
Digital Output	Built it Minimum 2 to maximum 25 Input (Relay or transistor)
Communication	Modbus Rs485 and Rs232 Serial.
Port	USB port for data logging and MINI USB for HMI programming.
Ethernet	RJ45 - MODBUS TCP/IP. (Optionally)
Programming frame	Mitsubishi GX-works and GX-Developers
High Speed Counting	At most 6 single counting can be customized (4 100KHz,2 10KHz) Or 3 AB phase counting (2 100KHz□1 10KHz) or 3 ABZ counting (1 100KHz □2 5-10KHz)
Optional Module	Wifi,GSPRS, GSM 3G/4G, Remote I/O Module.

Display Specifications

Size of Screen	4.3", 5", 7" and 10" Available
RAM and ROM	128MB Optional 256MB
Power	12-24VDC $\pm 10\%$ <1 amp on full load
Protection Level	Front Ip65
Operating Temp	-20 °C to +80 °C
Operation humidity	0-100%Rh
Shock Proof test	10-25Hz
Touch type	4-wire resistanc type network
Weight	0.54kg
CPU	Cortex AX
Port	USB port for data logging and MINI USB for Graphical display programming

Instrumentation Kit (optional)

- MSHRIY3G Series AHU Controller having 6AI-6AO-16DI-16DO Display 7" Touch screen with 2 user privileges.
- 2 x RS485 Modbus
- 1 x USB (Program upload/download)
- 1 x TCP/IP (Optional)
- Duct T+RH Sensor MCE-T1-H1
- ($\pm 2\% \text{ rH}$ @ 10 ... 90 % rH & $\pm 3\%$ @ Range $\neq$ 10 ... 90 % rH)
- ($\pm 0.3 \text{ K}$ @ 0 ... 50 °C & $\pm 0.5 \text{ K}$ @ Range $\neq$ 0 ... 50 °C)
- Air Flow Sensor with nozzle kit MCE-DPT-R8 (Pressure > 125 Pa = 1 % + ± 1 Pa)
- Dirty/Clog Status Air Switch Across filter (20-300PA)
- Chilled water line immersion temp sensor
- Fire Damper Spring return actuator running time MDS 80 s for 90°
- IAQ Touch Point Room Glass Panel (temperature, CO₂ , and humidity)
- Electro-Mechanical MVE Actuator for 2Way and 3 Way Line as per KVS.

Note

- Please buckle the fixed snaps into the installation holes of the case sides. While handling the screw holes and connecting the wires, do not let the metal particle or wire bents fall into the air vent of the controllers. This may give rise to malfunction and mis-operation.
- Avoid wiring or handling cable plugs with charge which may cause electric shock or damage the circuits