

Room Control Hybrid Module

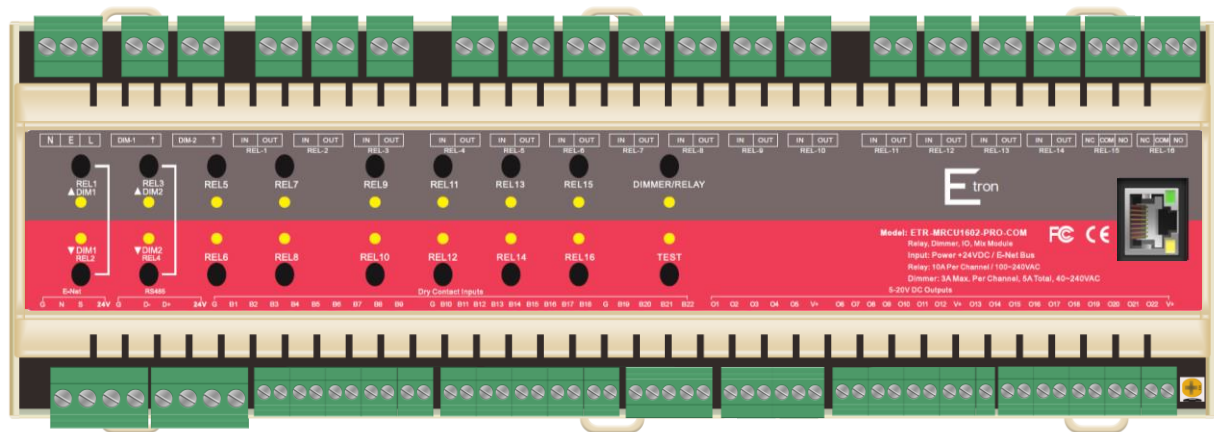
SDR-MRCU1602-COM (Basic Version)

SDR-MRCU1602-PRO-COM (Advanced Version)

Recently Edited: February 19, 2020

SDR-MRCU1602-PRO-COM

Room Control Hybrid Module

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The room control hybrid module (SDR-MRCU1602-COM, SDR-MRCU1602-PRO-COM) is a controller operating at the safe voltage of 24VDC with functions including relay output, SCR dimming output, dry contact input, and LED output.

Among them, 16 channel relay isolated independent input/output, 10A output per circuit, for lighting control, curtain control, etc.; 2 channel SCR dimming output, maximum 3A per circuit; 22 channel dry contact input; 22 channel 5-20VDC outputs for panel backlight control, etc.; 1 E-Net communication port; 1 standard RJ45 port which is acceptable under S-Net or Transnet protocol. 1 RS485 communication port is acceptable under PRO version only.

The device can operate the independent circuit control, pre-edited scene control and scene timing control with MarsWindow. Device data can be uploaded to the HRMS for device status management and statistical analysis, and the entire data transmission and device control is in accordance with the latest industrial standards.

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Isolated input/output channels

The 16-channel relay has independent input and output channels, forming a one-to-one circuit, all with independent transient surge protection circuits. Each relay standard resistive page load current of 10A, for lighting, curtain control, etc., through the control of an external AC contactor can also indirectly support the controlled socket and air-conditioning power control. The control of each loop can be configured through the software. 15-16 circuits have 1NO and 1NC.

Dimmer circuit relay cut-off and output limit

Each circuit of dimming circuits has its own relay cut-off, to ensure that there is no SCR leakage after the circuit is closed which shall cause the lamps to flicker, and the minimum starting voltage and the maximum output voltage range can be set by software.

Dimming circuit over zero detection

The dimming circuit has a single-phase zero-crossing detection circuit, and the proprietary zero-crossing filter technology enables each opening/closing action of the module relay to be at the zero-crossing point of the frequency, thus extending the service life of the device, reducing the flicker of the lighting fixture, and compensating the voltage and frequency fluctuations of the circuit.

Multifunctional IO channels

The device supports third party switch panel access and debugging for bus program, with 22-channel dry contact inputs, 22-channel LED outputs, and 5 20VDC output voltage. The universal third-party button portal can be used in a variety of scenarios, working in custom-style settings such as homes, offices and hotel rooms where a large number of buttons and indicators are required. It also supports various third-party all-in-one hotel door signs, door bells, door and window magnets, etc., which can be simply adjusted to complete the functions of Sweeping/No Disturbing/Energy Daving, etc.

Agreement Conversion

The standard RJ45 port supports either the S-Net or Transnet communication protocols. When using the Transnet communication protocol, third parties are supported to use the port for interfacing with Schideron bus equipment systems.

S-Net bus-based modular design

The device is designed as MCU (Micro Control Unit) with pure hardware architecture, which has local data processing and channel control for timely task processing. The device communicates via a dedicated bus, S-Net, to ensure the stability and reliability of data transmission. Each device has a corresponding physical address, and the address of the device can be set via DIP dialer to ensure that each device can operate correctly, and that commands transmitted from S-Net can be accurately received and executed for APP control and Schideron bus panel connection.

DIN rail mounting

The modular device is flexible for installation and application in real-world environments. The device is mounted on a standard 35mm DIN rail, providing easy installation and maintenance for users.

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Product Introduction

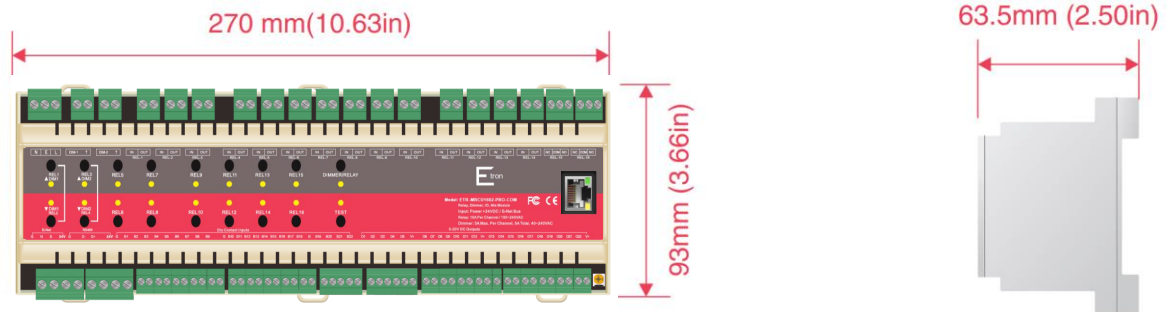
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Appearance and Structure Specification



Appearance Characteristics

Materials: Environmentally friendly fireproof ABS, fireproof grade UL94-V0 5VA (2.0mm), temperature resistance;
Terminals: PA66, fire rated UL94-V0 5VA (2.0mm), high temperature resistance;
Occupancy: 15PDIN module space
Length: 270mm (10.63in)
Width: 87mm (3.43in)
Height: 63mm (2.48in)
Weight: 455g

Indicator Light and Button

RELAY: <1> button to switch the Relay local control page, and the corresponding LED is on;
DIMMER: <1> button to switch the Dimmer local control page, and the corresponding LED is on;
1DIM1-2: <2> button, long press the local control to lighten; for green LED, ON represents the circuit closed, OFF represents the circuit disconnected;
1DIM1-2: <2> button, long press the local control to dim until the circuit is disconnected;
REL1-16: <16> button, local control of switching relays; for green LED, ON represents the circuit closed, OFF represents the circuit disconnected;
▲ DIM: Local control long press to dim all dimming circuits; DIM: Local control long press to dim all dimming circuits.

* Indicator and button functions are only supported by PRO version

Specifications

Communication type: S-Net;
Relay channel: 16-channel, resistive load current 10A, inductive load current 5A, input 100 240VAe (50/60Hz);
Dimming channel: 2-channel SCR dimming, single-channel maximum 3A, total 5A. input 100 240VAe (50/60Hz);
IO Channels: 22-channel dry contact input, 22-channel 5 20VDC output, single output max 70mA, total about 400mA;
Operating voltage: 24VDC;
Operating current: 360mA;
Operating temperature: 0°C 40 ° e (32 104 ° F);
Storage temperature: -10°C 50°C (14 122 ° F);
Storage humidity: frost-free environment 10% 90% RH;

Device Terminal Description

1. <S-Net>: S-Net communication and DC power input, 5.08-4pin separable terminal;
2. <NEL>: Zero-crossing detection input, 5.08-3pin fixed terminal;
3. <DIM1 t> <DIM2 t>: 2-channel 100 240VAC SCR dimming output, 5.08-2pin fixed terminal;
4. <REL-1> <REL-14>: 14-channel 100 240VAC electrical independent input/output interface, 5.08-2pin fixed terminal;
5. <REL-15> <REL-16>: 2-channel 100 240VAC electrical input and output interfaces with 1NO1NC, 5.08-3pin fixed terminal;
6. <Dry Contact Inputs>: Dry contact input interface, dry contact panel/sensor input, 3.81 separable terminal;
7. <Voltage Outputs>: 5-20VDC output interface, 3.81 separable terminal;
8. <LAN>: Standard RJ-45 Ethernet interface, 10/100Mbps;
9. <RS485>: RS485 communication port, reserved for protocol type plug-in card power or air-conditioning use, 5.08-4pin detachable terminal, only PRO version supporting.

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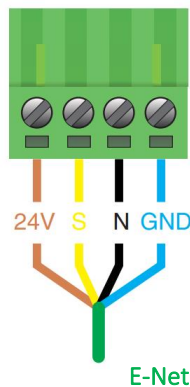
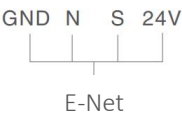
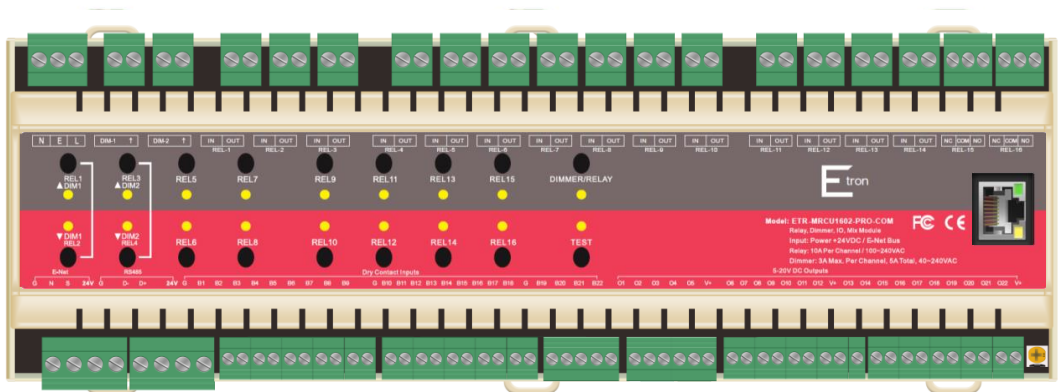
Available Models and Accessories

Product Model:
SDR-MRCU1602-COM: room control hybrid module;
SDR-MRCU1602-PRO-COM: Room control hybrid module, enhanced 10,1 RS485 communication ports, support circuit local control;

Available Accessories:
S-Net bus: one RVVP4X0.75 cable; Function: To provide 24V working voltage and S/N two-channel communication signals;

Product Wiring and Operation Instructions

S-Net Communication Network
The Schideron intelligent control system uses a private network as the communication protocol for its communication network. According to the definition of S-Net, each segment of the communication network can support 32 nodes. When the number of segment communication network devices exceeds 32, network bridges need to be added; if it does not exceed 32, but the total communication distance exceeds 400 meters, network bridges need to be added to extend the communication distance. The communication network (S-Net) of Schideron control system applies Rvvp4x0.75 as the communication cable.



Terminal labeling	24V	S	N	GND
Terminal color	Brown	Yellow	Black	Blue

SDR-MRCU1602-PRO-COM Room Control Hybrid Module

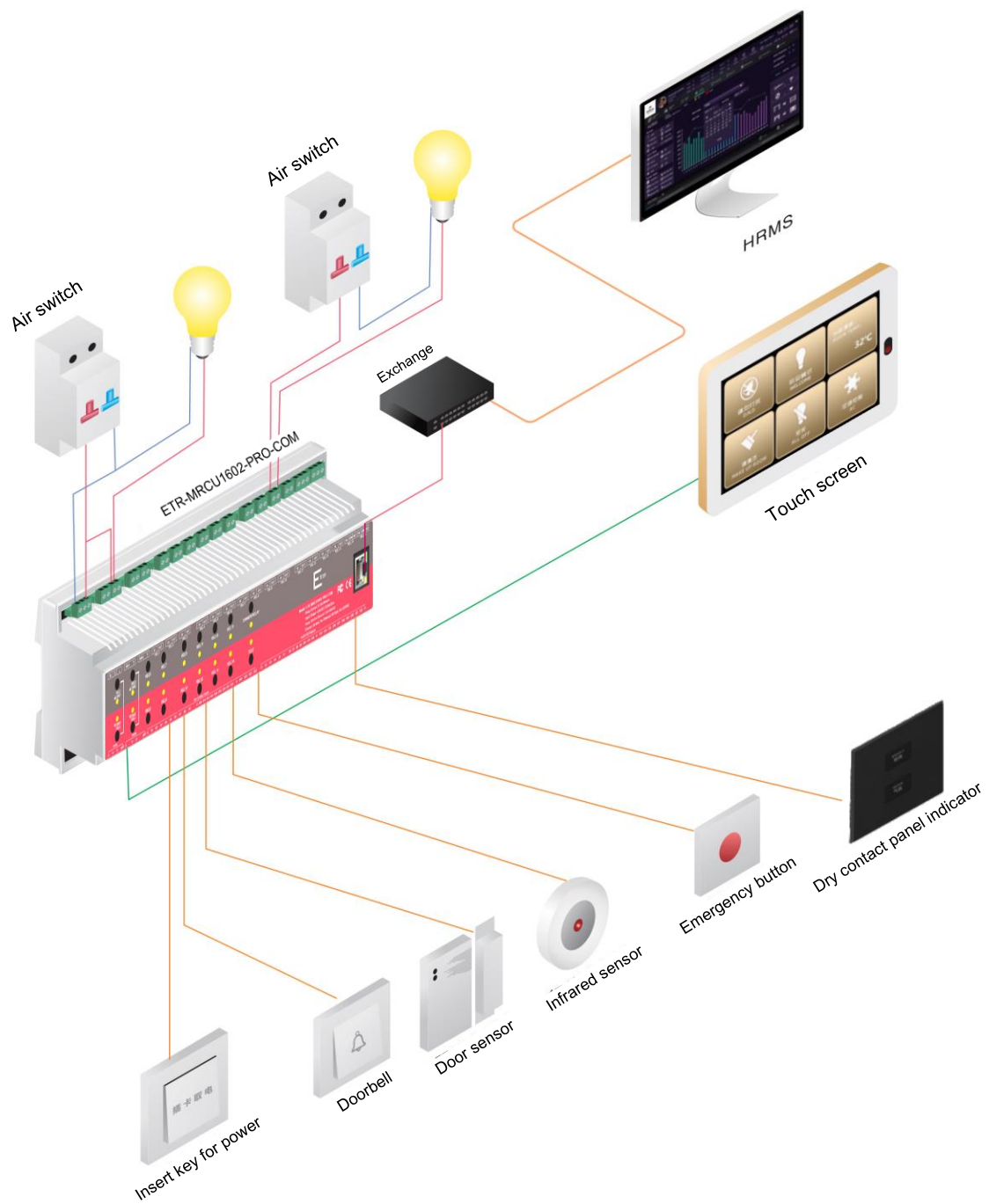
Product Introduction

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E-Net (Bus) :

Signal Line:

Fire Line:

Null Line: