

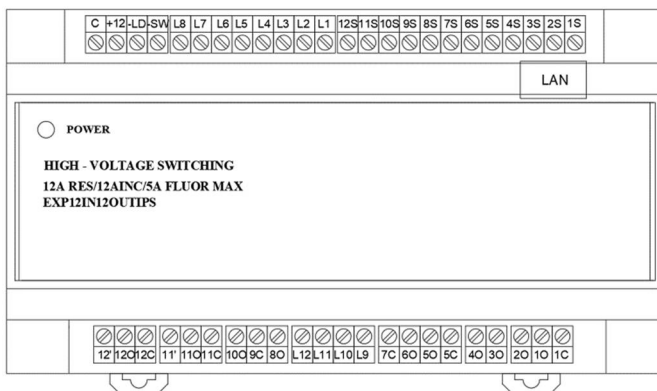
EXP12IN12OUTIPS - Central controller unit

- > *Direct controller-class, Programmable separate operations or system connections*
- > *The control signal completely isolates the power source to safety for user*
- > *AST-Series® Control Engine substantially faster and more powerful than other controller*
- > *Exclusive programming architecture and module coupling*
- > *Onboard RAM & Flash memory*
- > *Industry-standard RJ45-NET connect PC to programming and RF remote receiver, ASTbus wired communications with other controllers*
- > *12 channels of power switching supports 16A - 24VDC or 110 to 240 Volt 50/60 Hz*
- > *12 voltage-driven isolated digital inputs*
- > *Connection for ethernet support up to 12 control buttons*
- > *Easy programming with discovery and libraries available in sever*
- > *9M wide DIN rail mounting*

The EXP12IN12OUTIPS is an 12-channel Multifunction control module designed to support non-dimmable lighting and fan switching. The EXP12IN12OUTIPS features two pulse outputs to support ON/OFF lighting and many the other devices. In addition, the EXP12IN12OUTIPS features support up to 12 control buttons allowing standard momentary switches to trigger events with or without a control system.

Safety for the user

The control signal completely isolates the power source to provide the user safety. The control signal is pulled from the controller to the switches via the cable (CAT5/6) which is low voltage, very safe for the user. The power supply for 212VAC load is pulled to the next device without the switch



Relay Output

A single model supports 24VDC or both 110 and 212-

240 Volt applications up to 12 channel. Each channel handles incandescent loads up to 16 Amps, fluorescent loads up to 3 Amps, and 1/2 HP motor loads.

Override Buttons

An override buttons is provided to momentarily override the control system program and set each channel output to its override preset state. States can be set and saved locally from the front panel or remotely via software.

Isolated Local Inputs

The EXP12IN12OUTIPS provides 12 isolated local inputs, allowing momentary pushbutton keypads to be used. By default, a momentary voltage applied to each input will cause the associated relay to toggle on/off. In addition, the attached Unisstant control system can override this behavior and create 12 general-purpose inputs. In this mode, pushbutton keypads can be programmed to provide customized functionality.

DIN Rail Mounting

The EXP12IN12OUTIPS is designed to snap onto a standard DIN rail for installation in a wall mount enclosure. Wiring connections are made using screw terminals positioned along the top and bottom, clearly accessible from the front for easy installation and servicing.

DIN rail mounting affords a very space-efficient, cost-effective, and modular solution for configuring complete automation systems using the DIN-AST along with additional Unisstant and third-party DIN rail mountable devices.

All setup controls and indicators are positioned on the center front panel. When installed in an enclosure utilizing 45 mm cutouts, the EXP12IN12OUTIPS front panel stays accessible while the connections are concealed.

Modular structure design

Designed for enhanced scalability, the EXP12IN12OUTIPS affords high-speed, exact time multi-tasking to seamlessly run multiple programs simultaneously. This exclusive modular programming architecture lets programmers independently develop and run device-specific programs for lighting, shades, HVAC, security..., allowing for the optimization of each program, and allowing changes to be made to one program without affecting the whole. The end benefit is dramatically simplified upgradability with minimal downtime

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SPECIFICATIONS

Control Engine

Unisstant AST-Series; real-time, preemptive multi-threaded/multitasking kernel; supports up to 5 simultaneously running programs

Memory

CPU: Xtensa dual-core (or single-core) 32-bit LX6 microprocessor, operating at 160 or 240 MHz and performing at up to 600 DMIPS

Ultra low power (ULP) co-processor

Memory: 512 KiB SRAM

Wireless connectivity:

Wi-Fi: 802.11 b/g/n

Bluetooth: v4.2 BR/EDR and BLE (shares the radio with Wi-Fi)

Ethernet: 100Mbps to sever controller

Communications

ASTbus: ASTbus mode USART up to 96k baud with hardware and software handshaking

RF remote: Support RF receiver connection up to 15 control buttons

Load Ratings

Switch Channels: 12

Maximum Per Channel: 16A - 110 to 240 Volts AC, 50/60 Hz;

16 Amps at 30 Volts DC;

16 Amps Resistive

Load Types: Incandescent, magnetic low-voltage, electronic low-voltage, neon/cold cathode, fluorescent, motor

Connections

P+,0V,PE: 1 Sets of 3 captive screw 5.0mm terminals; 12VDC power supply and grounding wire

Output 1-10: 10 Sets of 2 captive screw 5.0mm terminals; Isolated Class 1 SPST form A relay switch circuits;

Maximum Wire Size: 12 AWG (2.5 mm²)

Input 1S – 12S: 5.0 mm detachable terminal blocks (inputs 1-12, common is shared with power supply 12VDC referenced to GND);

Normally closed contacts (NC), normally open (NO) contacts or push buttons, with pull-up resistors up to 12VDC positive low referenced to GND; Input

Impedance: 4.7k Ohms

Output led status L1 – L12: 5 mm detachable terminal blocks,

Output 10 – 12O: 5 mm detachable terminal blocks,

Controls & Indicators

Status: 1 red color LED - 1 green color LED, indicates operating power supplied from lan network or power supply, brightness/turn off at 4 seconds each time (brightness during 3 seconds and turn off during 1 second) when the device is operating normally, continuous brightness when device is faulty, turn off when power loses or while booting

Enclosure

Light gray polycarbonate housing with polycarbonate label overlay, UL94 V-0 rated, 35 mm DIN EN 60715 rail mount, DIN 43880 form factor for enclosures with 45 mm front panel cutout, occupies 9 DIN module spaces (162 mm)

Power supply

Supply voltage: 11.5-13.5VDC

Supply current: max 1A

Environmental

Temperature: 32° to 104° F (0° to 40° C)

Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: 35 BTU/hr

Dimensions

Height: 93 mm

Width: 159 mm

Depth: 59 mm

Weight

Weight 550g

MODELS & ACCESSORIES

Available Models

EXP12IN12OUTIPS: AST- Central control unit

Available Accessories

EXP20IN20OUTIPS: AST- Central control unit

AST-PS60: 60 Watt AST Power Supply

AST-EMI10: Ferrite Core EMI Filter 18x10x28mm Cores Ring Anti-Parasitic Toroidal Bead Coil Ferrites Ferrous Suppression

04DIMPLS: CDU - Socket control unit brightness

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Notes:

This product may be purchased from an authorized Unisstant dealer. To find a dealer, please contact the Unisstant sales representative for your area. A list of sales representatives is available online Unisstant-eu.com

The specific patents that cover Unisstant products are listed online at: Unisstant-eu.com

Certain Unisstant products contain open source software. For specific information, please visit Unisstant-eu.com

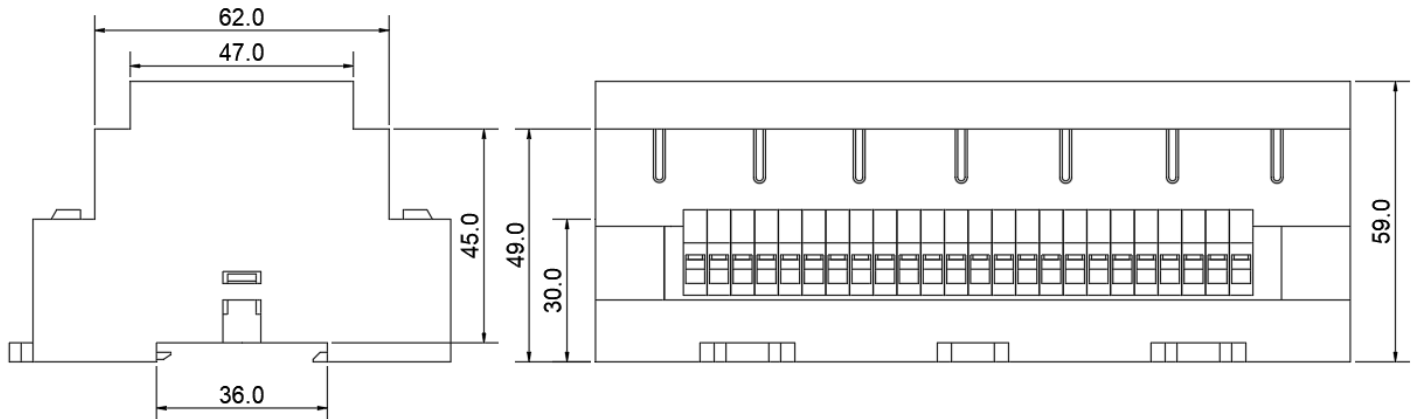
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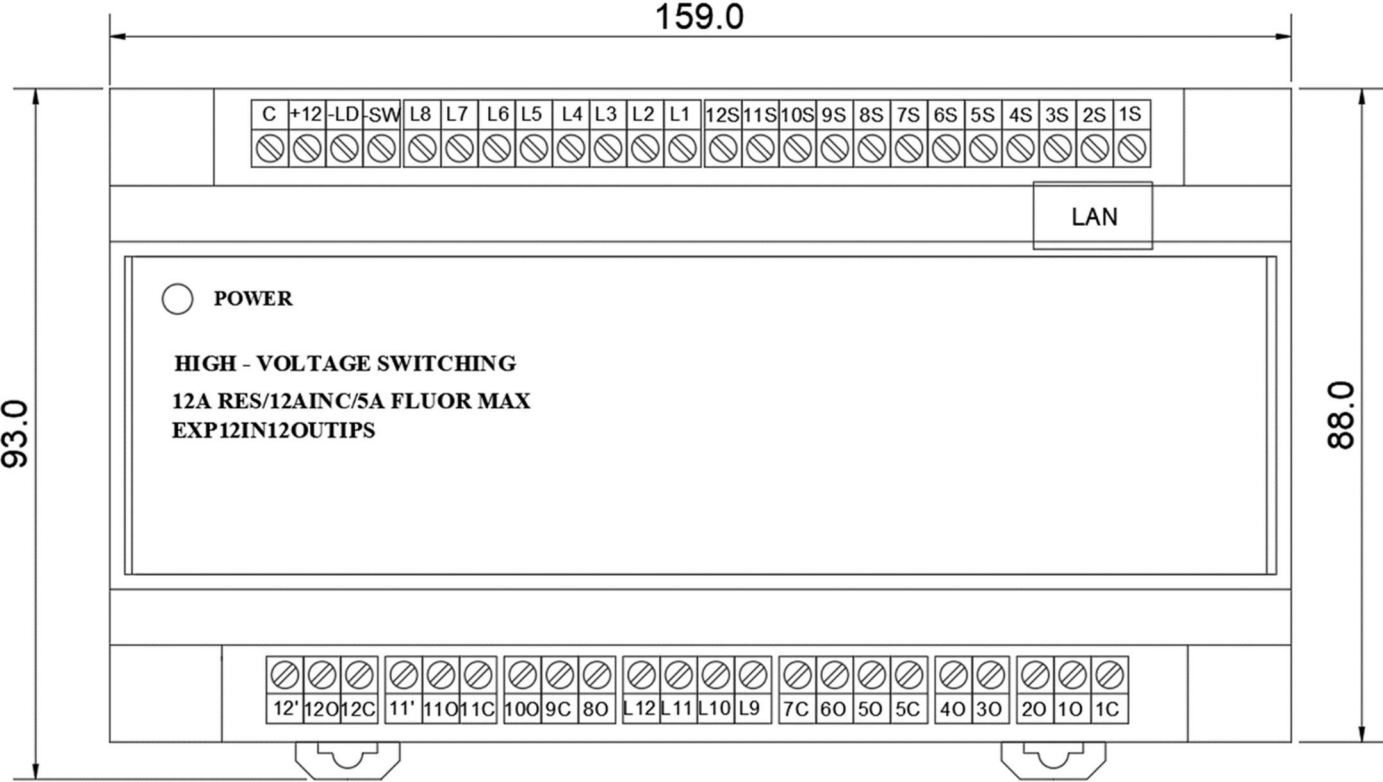
Limited liability

The safety features of this solution are to prevent electric accidents rather than to use them. These safety features should be checked every 6 months to ensure proper operation. Users should not self-test this safety feature. Equipment testing should be carried out by qualified technicians.

The manufacturer / distributor of the equipment is responsible for the warranty of the device during the warranty period, and is not responsible for any damages caused by the equipment failure or incident related to the device.



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Installation

CAUTION: This equipment is intended for indoor use only. Mount the EXP12IN12OUTIPS in a well-ventilated area. The ambient temperature must be 0 °C to 40 °C (32 °F to 104 °F). The relative humidity must be 10% to 90% (noncondensing).

CAUTION: To prevent overheating, do not operate the EXP12IN12OUTIPS in an area that exceeds the environmental temperature range listed above. Consider using forced air ventilation to reduce overheating. Also use caution if installing the control system in a closed or multiunit rack assembly, since the operating ambient temperature of the environment may be greater than the room ambient temperature. Contact with thermal insulating materials on all sides of the unit should be avoided.

NOTES: Observe the following guidelines:

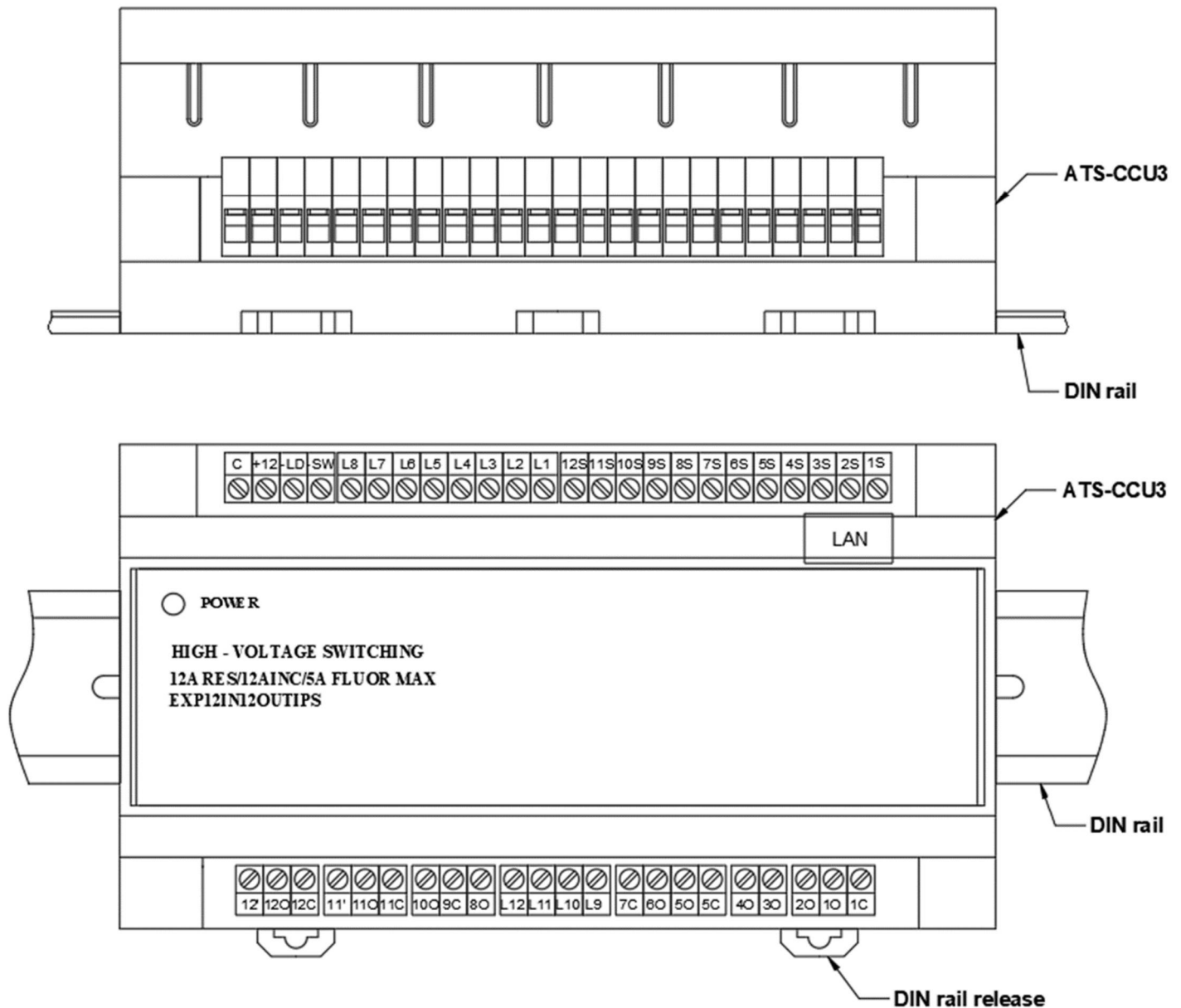
- Install and use the EXP12IN12OUTIPS in accordance with appropriate electrical codes and regulations.
- When installing in an enclosure, group high-voltage devices separately from low-voltage devices.
- A licensed electrician must install this product.

NOTE: Before using the EXP12IN12OUTIPS, ensure that the device is using the latest firmware. Check for the latest firmware for the EXP12IN12OUTIPS at Unisstant-eu.com.

Installing the EXP12IN12OUTIPS

Use the EXP12IN12OUTIPS in a well-ventilated area. The venting holes should not be obstructed under any circumstances. The EXP12IN12OUTIPS is designed for installation in a DIN rail. Refer to the following diagram when installing.

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Installing the EXP12IN12OUTIPS

Use the following procedure to install the EXP12IN12OUTIPS:

1. Use a flat object (such as a flat-head screwdriver) to pull the DIN rail release tab downward.
2. Place the top of the EXP12IN12OUTIPS's rail mount over the top of the DIN rail.
3. Tilt the bottom of the EXP12IN12OUTIPS toward the DIN rail until it snaps into place.

NOTE: When mounting DIN rail products, use a flat-head screwdriver to pull the DIN rail release tab while snapping the device onto the DIN rail.

To remove the EXP12IN12OUTIPS from the DIN rail, use a small, flat object (such as a flat-head screwdriver) to pull the DIN rail release, and then tilt the bottom of the EXP12IN12OUTIPS away from the DIN rail.

NOTE: Certain third-party DIN cabinets provide space for an informational label between each DIN rail row.

Hardware Connections

WARNING: Prior to connecting the EXP12IN12OUTIPS, turn off the power at the circuit breaker. Failure to do so may result in serious personal injury or damage to the device. Restore power after all connections have been made.

CAUTION: Connecting this device to the wrong type of load or short-circuiting the load can cause severe product damage. Test each load to identify a short-circuit condition prior to wiring the load to the module.

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NOTE: Install in accordance with all local and national electric codes.

NOTE: High-voltage connections accept 12 AWG (2.5 mm²) wire. Wire should be stripped to 1/3 inch (8 mm). Tighten terminal blocks to 5 in-lbs (0.5 Nm).

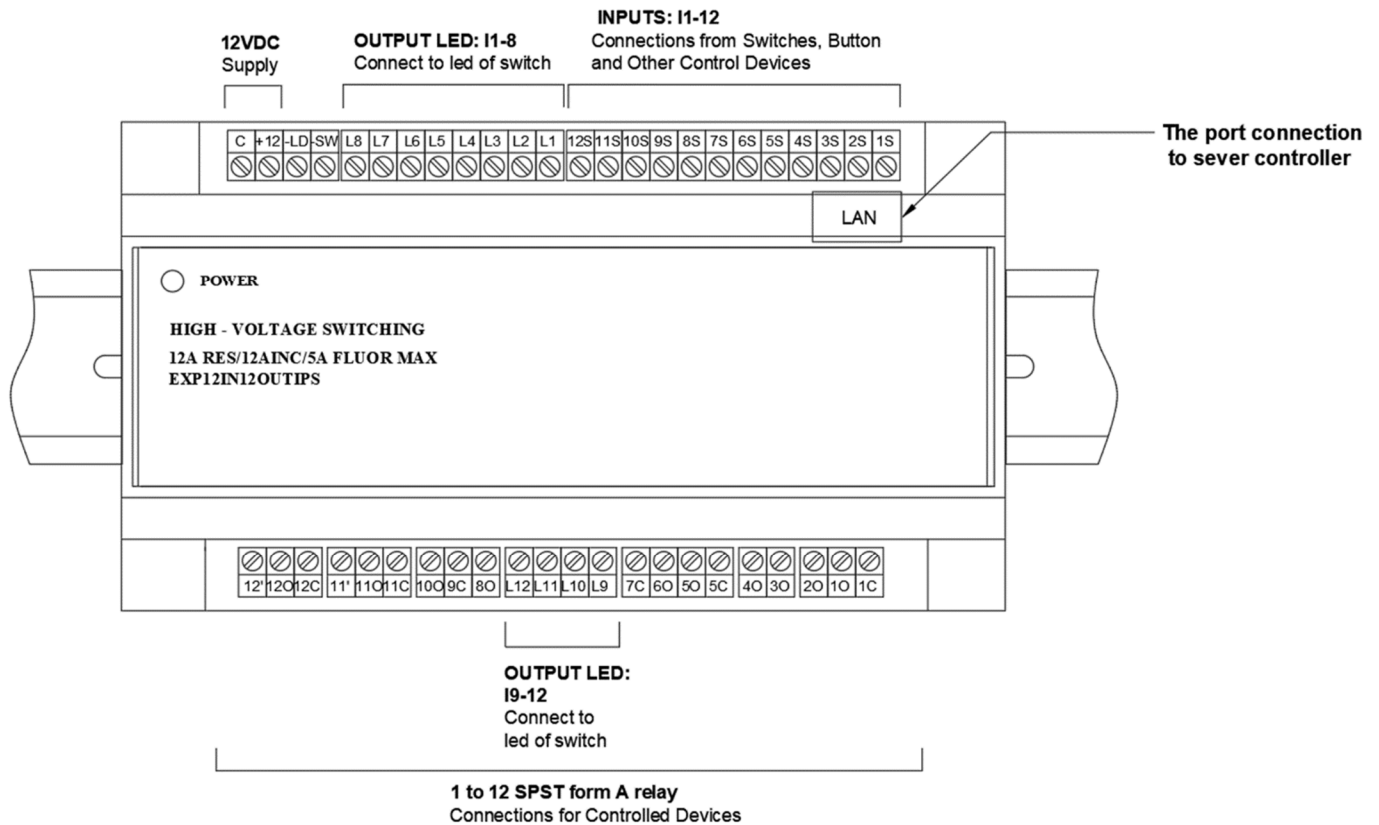
NOTE: Use copper wire only. For high-voltage connections, use wire rated for at least 75°C.

NOTE: Ensure the unit is properly grounded.

NOTE: Each switch leg of the EXP12IN12OUTIPS may be fed from a separate circuit breaker. Make the necessary connections. Apply power after all connections have been made.

When making power connections to the EXP12IN12OUTIPS, use a AST power supply.

Hardware Connections for the EXP12IN12OUTIPS



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Recommended connection diagram

