


# JZ10-11-R16

## Micro-OPLC Installation Guide

6 Digital, 2 Analog/Digital, 2 Analog Inputs, 6 Relay Outputs

- Before using this product, the user must read and understand this document.
- For additional information regarding this product, refer to the user guide and technical specifications.
- All examples and diagrams are intended to aid understanding, and do not guarantee operation. Unitronics accepts no responsibility for actual use of this product based on these examples.
- Please dispose of this product according to local and national standards and regulations.
- Only qualified service personnel should open this device or carry out repairs.

 Failure to comply with appropriate safety guidelines can cause severe injury or property damage.

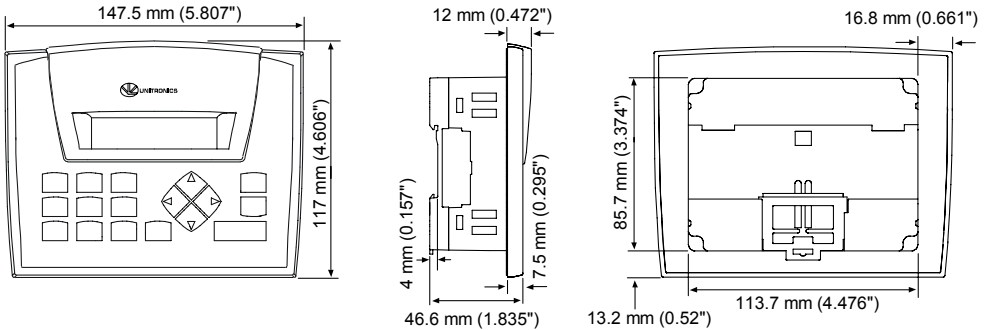
- Do not attempt to use this device with parameters that exceed permissible levels.
- To avoid damaging the system, do not connect/disconnect the device when power is on.

### Environmental Considerations

- Do not install in areas with: excessive or conductive dust, corrosive or flammable gas, moisture or rain, excessive heat, regular impact shocks or excessive vibration.
- Ventilation: 10mm space required between the OPLCs' top/bottom edges & enclosure walls.
- Do not place in water or let water leak onto the unit.
- Do not allow debris to fall inside the unit during installation.

### Mounting

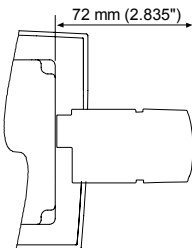
#### Dimensions



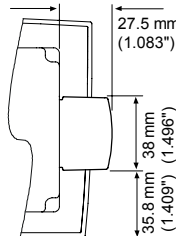
#### Add-on modules

Take into account that installing an add-on module requires sufficient clearance space.

#### During installation

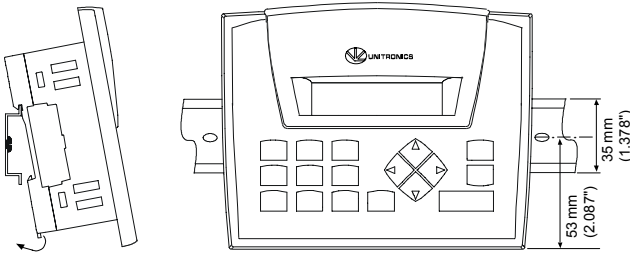


#### After installation



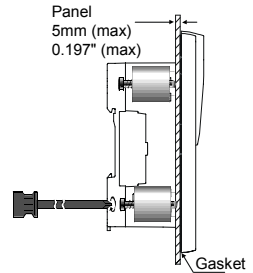
## DIN-rail mounting

Snap PLC onto the DIN rail



## Panel mounting

Cut-out: 117 x 89mm (WxH)  
4.606" x 3.504"



## Wiring

**Note:** All diagrams are based on the rear view of the OPLC.



- Do not touch live wires.

- Install an external circuit breaker. Guard against short-circuiting in external wiring.

- Use appropriate circuit protection devices.



- Unused pins should not be connected. Ignoring this directive may damage the device.

- Double-check all wiring before turning on the power supply.

- To avoid damaging the wire, do not exceed a maximum torque of 0.5 N-m (5 kgf-cm).
- Do not use tin, solder, or any substance on stripped wire that might cause the wire strand to break.
- Install at maximum distance from high-voltage cables and power equipment.

Use crimp terminals for wiring; use 26-12 AWG wire (0.13 mm<sup>2</sup>–3.31 mm<sup>2</sup>).

- Strip the wire to a length of 7±0.5mm (0.250-0.300 inches).
- Unscrew the terminal to its widest position before inserting a wire.
- Insert the wire completely into the terminal to ensure a proper connection.
- Tighten enough to keep the wire from pulling free.

- Input or output cables should not be run through the same multi-core cable or share the same wire.
- Allow for voltage drop and noise interference with input lines used over an extended distance. Use wire that is properly sized for the load.

## Inputs

This model comprises a total of 10 inputs in 3 groups.

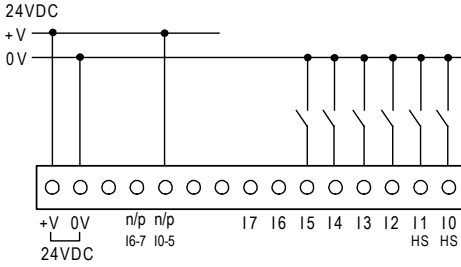
- I0 to I5 are digital inputs. They may be wired, in a group, as either npn or pnp.
- I6 and I7 may be wired as either digital or analog inputs. These may be wired as either:
  - nnp digital inputs
  - pnp digital inputs
  - analog (voltage) inputs

In addition, 1 input may be wired as a pnp input, while the other is wired as an analog input. Note that if 1 input is wired as an npn input, the other may not be wired as an analog input.

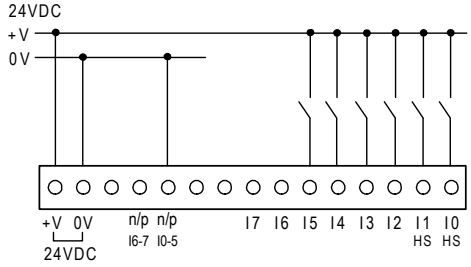
- AN0 and AN1 are analog (current) inputs that may be wired using 2, 3, or 4 wires.

## Digital Inputs

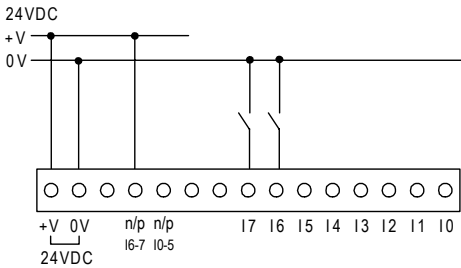
Input wiring (10-15), npn (sink)



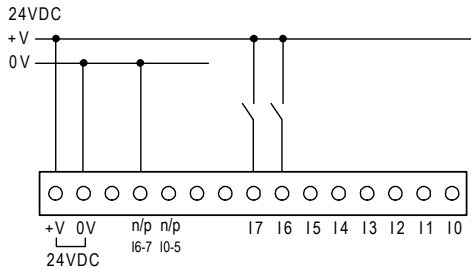
Input wiring (10-15), pnp (source)



Input wiring (16-17), npn (sink)

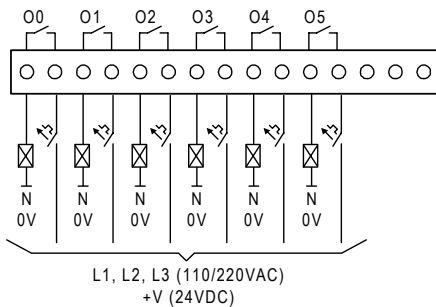


Input wiring (16-17), pnp (source)



## Digital Outputs

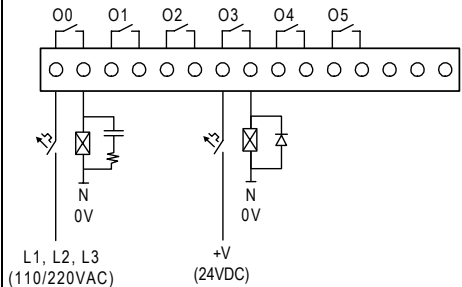
Output wiring



### Increasing contact life span

To increase the life span of your contacts and protect the unit from potential damage by reverse-EMF, connect:

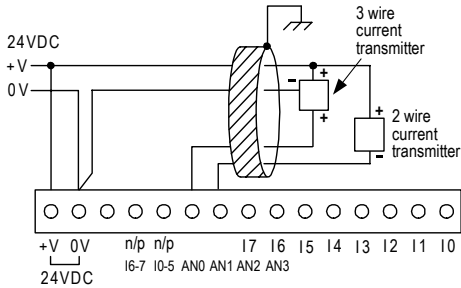
- A clamping diode in parallel with each inductive DC load
- An RC snubber circuit in parallel with each inductive AC load



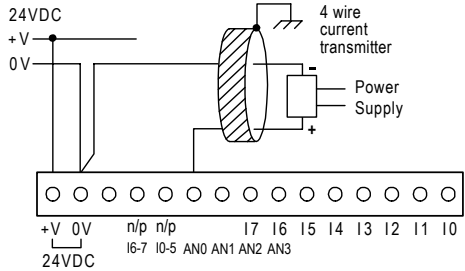
## Analog inputs

**Note:** Shields should be connected at the signal source.

Analog Input wiring, current, 2 or 3-wire,  
AN0 and AN1

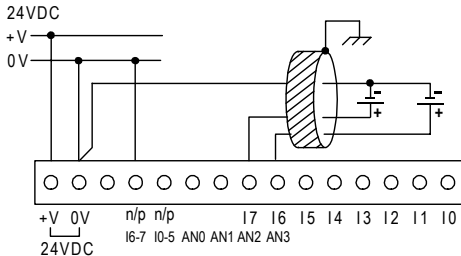


Analog Input wiring, current, 4-wire,  
AN0 and AN1



Analog Input wiring, voltage,  
AN2 and AN3

**Note:** If either I6 or I7 is wired as an npn digital input, the remaining input may not be wired as an analog input.



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