

JZ20-R10

6 Digital Inputs, 4 Relay Outputs

JZ20-R16

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.

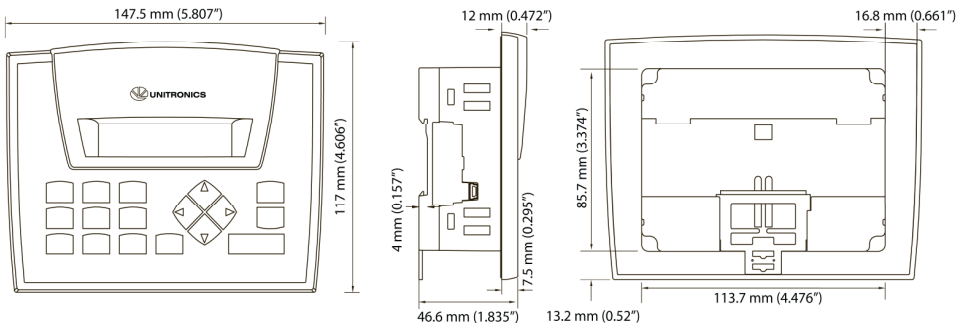
- Ventilation: 10mm space required between the OPLCs' top/bottom edges & enclosure walls.



- 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



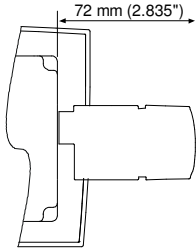
Using an Add-on modules or the integrated USB Port

The JZ20 features a built in USB port that can be used for programming; alternatively, different Add-On modules (not supplied with the JZ20) can be used for communication, unit cloning or programming.

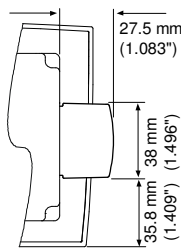
Note that the installation of the Add-On module requires sufficient clearance space

The USB port and the Add-On module cannot be used simultaneously.

Add-on During installation



Add-on After installation

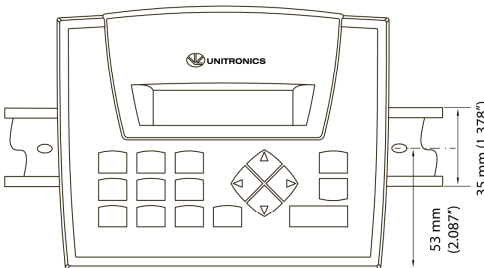
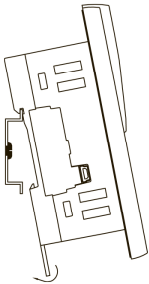


USB Port



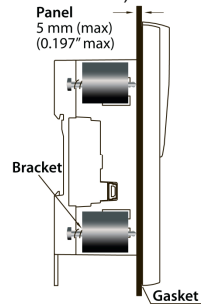
DIN-rail mounting

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 mm²-3.31 mm²).

1. Strip the wire to a length of 0.250-0.300 inches (7±0.5mm).
2. Unscrew the terminal to its widest position before inserting a wire.
3. Insert the wire completely into the terminal to ensure a proper connection.
4. 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

1. Both JZ20-R10 and JZ20-R16 comprise I0-I5; these digital inputs are arranged in a single group. Via wiring, the entire group may be set to either pnp or npn.

The following information concerns JZ20-R16. In addition to I0-I5, these comprise the following:

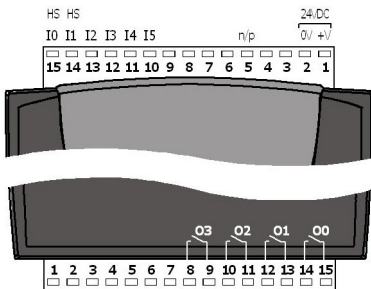
2. I6 and I7 may be wired as either digital or analog inputs. These may be wired as either:
 - npn digital inputs
 - pnp digital inputs
 - analog (voltage) inputs

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.

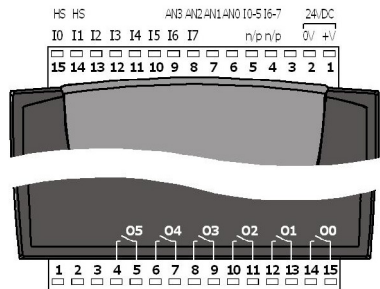
3. AN0 and AN1 are analog (voltage) inputs.

I/O Configuration

JZ20-R10

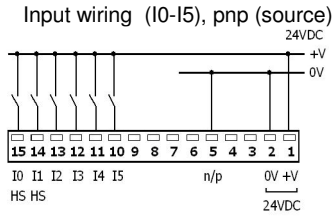
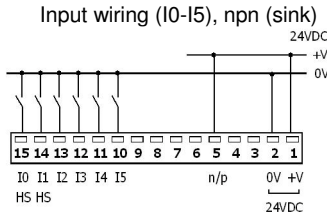


JZ20-R16



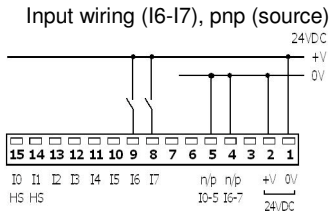
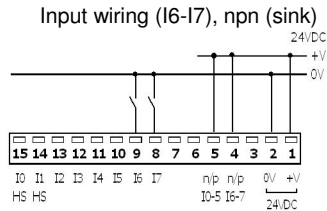
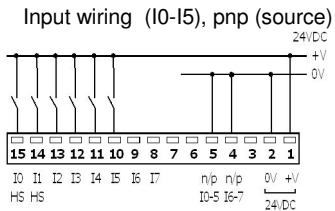
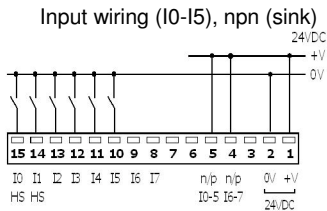
Digital Inputs, Controller's Power Supply

JZ20-R10



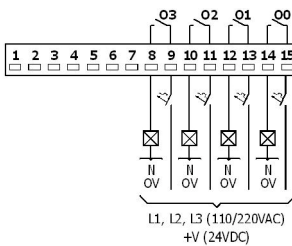
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Note: The inputs are arranged in two groups. You can wire one group as npn and the other as pnp, or wire both groups as npn, or as pnp. In either case, the npn/pnp pins **must be connected**.

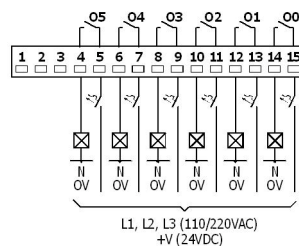


Digital Outputs

JZ20-R10



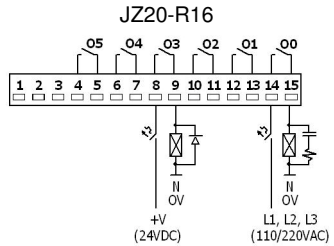
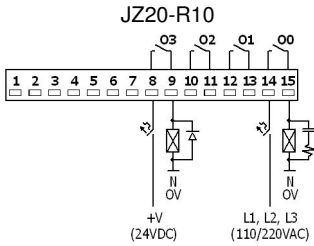
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Increasing contact life span

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

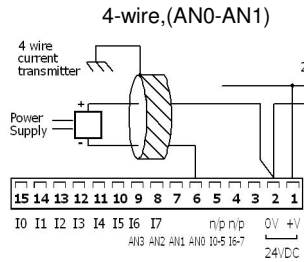
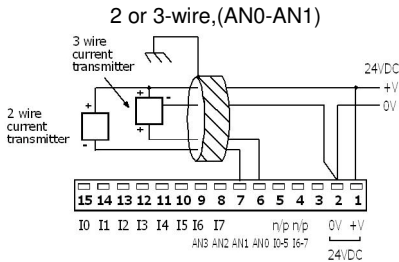
- A clamping diode in parallel with each inductive DC load
- An RC snubber circuit in parallel with each inductive AC load



Analog inputs

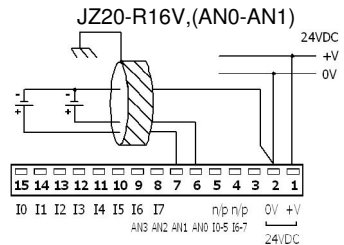
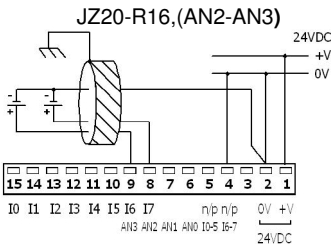
Note: Shields should be connected at the signal source.

Analog Input wiring, current (JZ20-R16 only)



Analog Input wiring, voltage

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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