JZ10-11-PT15

3 Digital, 3 Digital/Analog, 3 PT1000/NI1000 Inputs,
5 Relay, 1 pnp/npn Outputs

Jazz Micro-OPLC Technical Specifications

Power supply

Input voltage	24VDC
Permissible range	20.4VDC to 28.8VDC with less than 10% ripple
Current Consumption	See Note 1.
Max. current consumption	125mA@24VDC
Typical power consumption	2.4W

Notes:

1. To calculate the actual power consumption, subtract the current for each unused relay output and LCD backlight (if unused) from the maximum current consumption value.

	Per relay output	LCD backlight
Max. current per element	8.3mA@24VDC	35mA@24VDC

Digital Inputs

Number of inputs	6 (two groups) See Notes 2 and 3.
Input type	pnp (source) or npn (sink)
Galvanic isolation	None
Nominal input voltage	24VDC
Input voltage	
pnp (source)	0-5VDC for Logic 0 17-28.8VDC for Logic 1
npn (sink)	17-28.8VDC for Logic 0 0-5VDC for Logic 1

	I0-I2	I3-I5
Input current	3.7mA@24VDC	1.2mA@24VDC
Response time	10mSec typical	20mSec typical

Input cable length	Up to 100 meters, unshielded
High speed inputs	Specifications below apply when wired as H.S.C. See Note 4.
Resolution	16-bit
Frequency	5kHz maximum
Minimum pulse width	80µs

Notes:

This model comprises a total of 9 inputs in 3 groups.

2. I0 - I2 are digital inputs. They may be wired, in a group, as either npn or npn.
3. I3-I5 may be wired as either digital or analog inputs. These may be wired as:
   - npn digital inputs
   - pnp digital inputs
   - analog (voltage) inputs

   In addition, any of these inputs may be wired as pnp, while others are wired as analog. However, if any input is wired as npn, the other may not be wired as analog.
4. I0 can function as either a high-speed counter or as a normal digital input. When used as a normal digital input, normal input specifications apply.

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Digital Outputs

Relay	
Number of outputs	5
Output type	SPST-NO (Form A)
Isolation	By relay
Type of relay	Panasonic JQ1AP-24V or compatible
Output current	5A maximum (resistive load)
Rated voltage	250VAC / 30VDC
Minimum load	1mA@5VDC
Life expectancy	50k operations at maximum load
Response time	10mS (typical)
Contact protection	External precautions required (see Increasing Contact Life Span in the product's Installation Guide)
Transistor	
Number of outputs	1 pnp/npn (source/sink) See Note 5.
Output type	pnp: P-MOSFET (open drain) npn: N-MOSFET (open drain)
Isolation	None
Output current	pnp: 0.5A maximum per output npn: 50mA maximum per output
Maximum frequency	Resistive load pnp: 2kHz npn: 32kHz Inductive load 0.5Hz
ON voltage drop	pnp: 0.5VDC maximum npn: 0.4VDC maximum
Short circuit protection	Yes (pnp only)
Short circuit indications	None
Power supply for outputs	
Operating voltage	20.4 to 28.8VDC
Nominal voltage	24VDC

Notes:

5. Can function as a high-speed output, or as a normal digital output.

Analog Inputs

Number of inputs	3
Input range	0-10VDC
Input impedance	20KΩ
Maximum input rating	28.8V
Galvanic isolation	None
Conversion method	Succesive approximation
Resolution	10-bit (0 to 1023)
Conversion time	20mSec, Synchronized to cycle time
Precision	± 3%
Status indication	Yes – if an analog input deviates above the permissible range, its value will be 1024.
Input cable length	Up to 30 meters, shielded twisted pair

RTD Inputs

Number of inputs	3
RTD type	PT1000/NI1000
Temperature coefficient α	PT: 385/392, NI: 618
Temperature unit	°C and °F
Temperature range	
PT1000	-50° to 400°C (-58° to 752°F)
NI1000	-50° to 210°C (-58° to 410°F)
Isolation	None
Measurement resolution	±0.1°C (0.1°F). See Note 6.
Conversion method	Successive approximation
Conversion time	200msec minimum per input, according to filter type
Input impedance	200kΩ typical
Auxiliary current	
PT1000/NI1000	180µA typical
Error Limit	0.6% of input value. See Note 7.
Status indicators	Yes. See Note 8.

Notes:

6. The input analog value represents the temperature value as follows:
   Analog value: 260 Actual measured temperature: 26.0°C
7. PT0 - PT2 are PT1000/NI1000 2-wire inputs. Note that the error limit does not include error caused by wire resistance, and that this error may result from using long, thin wires.
8. The temperature values can also indicate certain faults as shown in the following table.

Value	Possible Cause
32767	■ Input temperature exceeds the permissible range or ■ Sensor is not connected to input
-32767	■ Input temperature is below the permissible range or ■ Sensor is short-circuited

Display

Type	STN LCD
Illumination backlight	LED, yellow-green, software controlled (LCD backlight; enables the display to be viewed in the dark)
Display size	2 lines, 16 characters long
Character size	5x8 matrix, 2.95x5.55mm

Keyboard

Number of keys	16 keys, including 10 user-labeled keys
Key type	Metal dome, sealed membrane switch
Slides	Slides are installed under the operating panel faceplate. They label the keys and provide a logo picture. The unit is supplied with a set of slides already installed. A blank set is available by separate

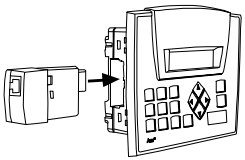
	order.
Program	See Note 9.
Ladder code memory	24K (virtual)
Execution time	46µSec for bit operations (typical)
Memory bits (coils)	256
Memory integers (registers), 16 bit	256
Timers	64
HMI displays	60 user-designed displays available
HMI variables	64 HMI variables are available to conditionally display text and data. List variables add up to 1.5K's worth of HMI capacity.

Notes:

9. The controller does **not** offer a communication port. In order to download applications, the controller must be installed with an add-on programming port module. Such a module is included in the JZ-PRG programming kit, which is available by separate purchase.

Jazz Jack

Insertion point	Enables optional add-on modules. See Note 10



Notes:

10. Add-on modules are available by separate order.

Communication	Via add-on port module. See Note 11
GSM-support	SMS messages to/from 6 phone GSM numbers, up to 1K of user-designed messages. Supports Remote Access.
MODBUS	Supports MODBUS protocol, Master-Slave
Baud rate	According to add-on port module

Notes:

11. In order to enable communications, an add-on module containing a COM port must be plugged into the Jazz jack. The module included in the JZ-PRG programming kit may be used to communicate with external devices, if the device provides active RS232 voltage signals for purposes of power supply. For more details, see the JZ-PRG Installation Guide.

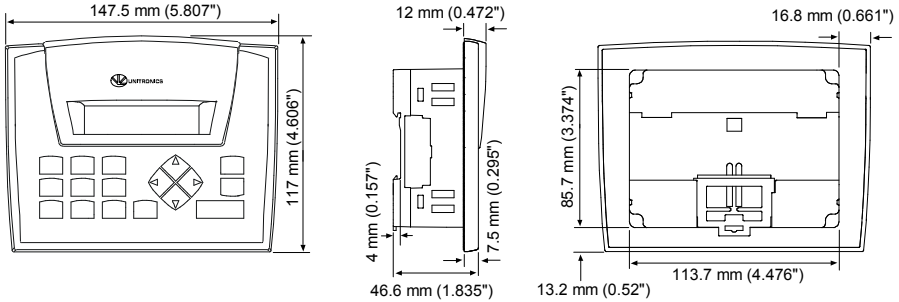
Miscellaneous

Clock (RTC)	Real-time clock functions (date and time).
Battery back-up	10 years typical at 25°C, battery back-up for RTC and system data, including variable data

Environmental

Operating temperature	0° to 50°C (32° to 122°F)
Storage temperature	-20° to 60°C (-4° to 140°F)
Relative humidity (RH)	10% to 95% (non-condensing)
Mounting method	Panel mounted (IP65/NEMA4X)
	DIN-rail mounted (IP20/NEMA1)

Dimensions

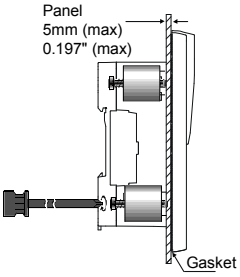


Weight 305g (10.8 oz)

Mounting

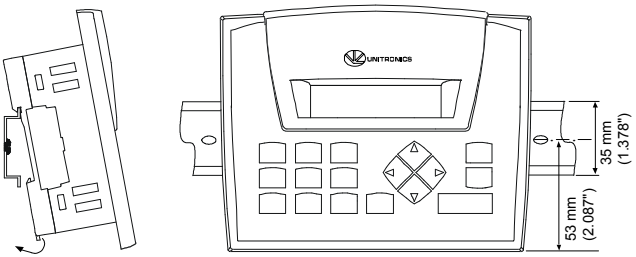
Panel mounting

Insert into cut-out:
117 x 89mm (WxH)
4.606”x 3.504”



DIN-rail mounting

Snap unit onto the DIN rail



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