JAZZ OPLC™

Technical Specifications

Models JZ20-T10/JZ20-J-T10 & JZ20-T18/JZ20-J-T18

This guide provides specifications for Unitronics' Micro-OPLC™ JZ20-T10/JZ20-J-T10& JZ20-T18/JZ20-J-T18. You can find additional documentation on the Unitronics' Setup CD and in the Technical Library at www.unitronics.com.

Technical Specifications

Input voltage 24VDC

Permissible range 20.4-28.8VDC with less than 10% ripple

Current Consumption See Note 1

> JZ20-T10/JZ20-J-T10 JZ20-T18/JZ20-J-T18

96mA@24VDC 98mA@24VDC Max. current consumption

1.8W Typical power consumption 1.8W

Notes:

To calculate the actual power consumption, subtract the current for each unused relay 1. 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	

7 years typical at 25°C, battery back-up for RTC and system data. Back-up

including variable data.

Digital Inputs

JZ20-T18/JZ20-J-T18 Number of inputs JZ20-T10/JZ20-J-T10

> 6 (one group) – see Note 2 8 (two groups) - see Notes 2 & 3

pnp (source) or npn (sink) Input type

Galvanic isolation None 24VDC

Nominal input voltage

Input voltage

pnp (source) 0-5VDC for Logic '0'

17-28.8VDC for Logic '1'

17-28.8VDC for Logic '0' npn (sink)

0-5VDC for Logic '1'

10-15 16-17

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 10kHz maximum

Minimum pulse width 40us

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01/14 JZ20-T1X/JZ20-J-T1X

Notes:

 Both JZ20-T10/JZ20-J-T10 and JZ20-T18/JZ20-J-T18 comprise I0-I5; these inputs are arranged in a single group. Via wiring, the entire group may be set to either pnp or npn.

- 3. Only JZ20-T18/JZ20-J-T18 comprises I6 & I7. These may be wired as either digital or analog inputs, as shown in the JZ20-T18/JZ20-J-T18 Micro PLC Installation guide. I6 & I7 may be wired as npn, pnp, or 0-10V analog inputs. 1 input may be wired as pnp, while the other is wired as analog. If 1 input is wired as npn, the other may not be wired as analog.
- I0 and I1 can each 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				
Number of outputs JZ20-T10/JZ		10	JZ20-T18/JZ20-J-T18	
	4 pnp (source)		8 pnp (source)	
Output type	P-MOSFET (open drain)			
Isolation	None			
Output current	0.5A maximum			
Maximum frequency	50Hz (resistive load) 0.5Hz (inductive load)			
Short circuit protection	Yes			
Short circuit indication	Yes			
On voltage drop	0.5VDC maximum			
Power supply for outputs				
Operating voltage	20.4 to 28.8VDC			
Nominal voltage	24VDC			
Analog Inputs	JZ20-T18/JZ20-J-T18 only			
Number of inputs	4, according to wiring as described above in Note 3			
	AN0 and AN1	AN2 an	d AN3	
Input range	0-20mA, 4-20mA	0-10VD	С	
Input impedance	154Ω	20ΚΩ		
Maximum input rating	30mA	28.8V		
Galvanic isolation	None			
Conversion method	Succesive approximation			
Resolution	10 or 12-bit (0 to 4095) (Via Software)			
Conversion time	All analog inputs are updated every 8 PLC scans, regardless of how many inputs are actually configured.			

Display

Precision

Status indication

Input cable length

Type STN LCD

Illumination backlight LED, yellow-green, software controlled

± 2%

value will be 4096.

(LCD backlight; enables the display to be viewed in the dark)

Yes - if an analog input deviates above the permissible range, its

Display size 2 lines, 16 characters long Character size 5x8 matrix, 2.95x5.55mm

Up to 30 meters, shielded twisted pair

JZ20-T1X/JZ20-J-T1X 01/14

Keyboard

Number of keys 16 keys, including 10 user-labeled keys Key type Metal dome, sealed membrane switch

Slides Slides may be installed in the operating panel faceplate to

custom-label the keys and logo picture. An extra logo slide is included. A complete set of blank slides is available by separate

order.

ProgramSee Note 5Ladder code memory48K (virtual)

Execution time 1.5 µSec for bit operations (typical)

Memory bits (coils) 256 Memory integers (registers), 256

16 bit

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.

<u>Communication</u> Via a built-in USB port or - Add-On module.See Note 5-8

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

USB

Port type Mini-B Galvanic isolation No

Specification USB 2.0 compliant; full speed

Baud rate range 300 to 115200 bps

Cable USB 2.0 compliant; up to 3m

Notes:

- The JZ20 built-in USB port may be used for programming. Add-on Modules are available
 by separate order for communication and cloning. Note that the USB port and an Add-on
 module cannot be physically connected at the same time.
- Add-on module JZ-PRG, with 6-wires communication cable (supplied in PRG kit – see the JZ-PRG Installation Guide) can be used:
 - for programming
 - to connect a modem
- Add-on module JZ-RS4 (RS232/485), with a standard 4-wire communication cable can be used:
 - for programming
 - to communicate with other devices (including modems/GSM)
 - for RS485 networking.
- Add-on module MJ20-ET1 enables communication over 100 Mbit/s TCP/IP network:
 - Programming/data exchange with Unitronics software;
 - Data exchange via MODBUS TCP as Master or Slave.

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 Clock (RTC)
 Real-time clock functions (date and time).

 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)

Dimensions

Mounting method

Size 147.5X117X46.6mm (5.807" X 4.606" X 1.835"). See Note 9

Panel mounted (IP65/NEMA4X) DIN-rail mounted (IP20/NEMA1)

Weight 300 g (10.6 oz)

Notes:

9. For exact dimensions, refer to the product's Installation Guide.

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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