

### Ordering Information

V700-T20BJ                      PLC with Flat panel, Color touch display 7"

You can find additional information, such as wiring diagrams, in the product's installation guide located in the Technical Library at [www.unitronics.com](http://www.unitronics.com).

### Power Supply

Input voltage	12 or 24VDC
Permissible range	10.2-28.8VDC
Max. current consumption	630mA@12V 320mA@24V

### Graphic Display Screen

LCD Type	See Note 1 TFT, LCD display
Illumination backlight	White LED
Display resolution	800x480 pixels
Viewing area	7"
Colors	65,536 (16-bit)
Touchscreen	Resistive, analog
'Touch' indication	Via buzzer
Screen brightness control	Via software (Store value to SI 9, values range: 0 to 100%)
Virtual Keypad	Displays virtual keyboard when the application requires data entry.

### Notes:

- Note that the LCD screen may have a single pixel that is permanently either black or white.

### Program

Memory size                      Application Logic – 2MB, Images – 60MB, Fonts – 1MB

Operand type	Quantity	Symbol	Value
Memory Bits	8192	MB	Bit (coil)
Memory Integers	4096	MI	16-bit
Long Integers	512	ML	32-bit
Double Word	256	DW	32-bit unsigned
Memory Floats	64	MF	32-bit
Fast Bits	1024	XB	Bits (coil) – fast, not retained
Fast Integers	512	XI	16 bit - fast, not retained
Fast Long Integers	256	XL	32 bit - fast, not retained
Fast Double Word	64	XDW	32 bit unsigned - fast, not retained
Timers	384	T	Res. 10 ms; max 99h, 59 min, 59.99s
Counters	32	C	16-bit

Data Tables                      120K dynamic RAM data (recipe parameters, datalogs, etc.)  
Up to 256K Flash data (read-only data, ingredient names, etc)  
Expandable via micro-SD card. See Removable Memory below

HMI displays                      Up to 1024

Program scan time              9 µsec per 1K of typical application

**Removable Memory**

Micro-SD card                      Compatible with fast micro-SD cards; store datalogs, Alarms, Trends, Data Tables, backup Ladder, HMI, and OS. See Note 2

**Notes:**

2. User must format via Unitronics SD tools utility.

**Communication**

Port 1	1 channel, RS232/RS485 and USB device. See Note 3
Galvanic isolation	Yes
Baud rate range	300 to 115200 bps
RS232	
Voltage limits	±20VDC absolute maximum
Cable length	Up to 15m (50')
RS485	
Voltage limits	-7 to +12VDC differential maximum
Nodes	Up to 32
Cable type	Shielded twisted pair, in compliance with EIA RS485
Cable length	1200m maximum (4000')
USB	See Note 4
Port type	Mini-B
Galvanic isolation	No
Specification	USB 2.0 compliant; full speed
Cable	USB 2.0 compliant; up to 3m
Ethernet	
Port type	RJ45
Transmission speed	10/100Mbps
Network topology	Star, based on external hub/switch
Cable type	Category 5 STP (shielded twisted pair) is recommended; UTP (unshielded twisted pair) may also be used
Drop line length	Up to 100 meters, controller to hub/switch or controller to controller.
Port 2 (optional)	See Note 5
CANbus (optional)	See Note 5
Profibus (optional)	See Note 5

**Notes:**

3. This model is supplied with a serial port: RS232/RS485 (Port 1). The standard is set to either RS232 or RS485 according to DIP switch settings. Refer to the product's Installation Guide.
4. Note that physically connecting a PC to the controller via USB suspends RS232/RS485 communications via Port 1. When the PC is disconnected, RS232/RS485 resumes.
5. The user may order and install one or both of the following modules:
  - A serial RS232/RS485 isolated/non-isolated interface module in port 2.
  - A CANbus module
  - A Profibus module
 Modules documentation is available on the Unitronics website.

**I/Os**

	Additional I/Os may be added. Configurations vary according to module. Supports digital, high-speed, analog, weight and temperature measurement I/Os.
Snap-in I/O modules	Plugs into rear port to create self-contained PLC with up to 62 I/Os.
I/O Expansion	
Local	Via I/O Expansion Port. Integrate up to 8 I/O Expansion Modules comprising up to 128 additional I/Os. Adapter required (P.N. EX-A2X).
Remote	Via CANbus port. Connect up to 60 adapters to a distance of 1000 meters from controller; and up to 8 I/O expansion modules to each adapter (up to a total of 512 I/Os). Adapter required (P.N. EX-RC1).
Galvanic isolation	Yes

**Miscellaneous**

Clock (RTC)	Real-time clock functions (date and time)
Battery back-up	7 years typical at 25°C, battery back-up for RTC and system data, including variable data
Battery replacement	Yes (without opening the controller). Coin-type 3V, lithium battery, CR2450

**Dimensions**

Size	210 x 146.4 x 42.3mm (8.26 x 5.76 x 1.66"). See Note 6
Weight	640g (22.57 oz)

**Notes:**

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

**Environment**

Operational 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 (IP65/66/NEMA4X)
Operating Altitude	2000m (6562 ft)
Shock	IEC 60068-2-27, 15G, 11ms duration
Vibration	IEC 60068-2-6, 5Hz to 8.4Hz, 3.5mm constant amplitude, 8.4Hz to 150Hz, 1G acceleration.

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