

## Automation Controller Economy model, PLC + 5,7” color display

### Technical Specifications

#### Model V570-57-T20B

This guide provides specifications for Unitronics' color touchscreen controllers V570-57-T20B.



V200-18-E2B



V570-57-T20B

### Technical Specifications

#### Power Supply

Input voltage	24VDC
Permissible range	20.4 VDC to 28.8VDC with less than 10% ripple
Max. current consumption	270mA@24V

#### Battery

Back-up	7 years typical at 25 °C, battery back-up for RTC and system data, including variable data.
Replaceable	Yes, without opening the controller.

#### Graphic Display Screen

LCD Type	TFT
Illumination backlight	White LED
Display resolution, pixels	320x240 (QVGA)
Viewing area	5.7”
Colors	256
Touchscreen	Resistive, analog
'Touch' indication	Via buzzer
Screen brightness	Via software (Store value to SI 9).
Keypad	Displays virtual keyboard when the application requires data entry.

#### Program

Memory size	Application Logic – 2MB, Images – 6MB, 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
Timers	384	T	32-bit
Counters	32	C	16-bit
Data Tables	120K dynamic data (recipe parameters, datalogs, etc.) 192K fixed data (read-only data, ingredient names, etc.)		
HMI displays	Up to 1024		
Program scan time	9 µsec per 1K of typical application		

#### Removable Memory

SD card	
File system	User must format via Unitronics SD tools utility. See Note 1

**Notes:** 1. The SD memory card slot uses the PC-compatible FAT32 file system. User can store datalogs, Alarm history, Data Tables, backup Ladder, HMI, and OS, up to 2GB.

## Communication

Serial ports	2. See Note 2	
RS232		
Galvanic isolation	Yes	
Voltage limits	±20VDC absolute maximum	
Baud rate range	300 to 115200 bps	
Cable length	Up to 15m (50')	
RS485		
Galvanic isolation	Yes	
Voltage limits	-7 to +12VDC differential maximum	
Baud rate range	300 to 115200 bps	
Nodes	Up to 32	
Cable type	Shielded twisted pair, in compliance with EIA RS485	
Cable length	1200m maximum (4000')	
CANbus port	1	
Nodes	CANopen	Unitronics' CANbus protocols
	127	60
Power requirements	24VDC (±4%), 40mA max. per unit	
Galvanic isolation	Yes, between CANbus and controller	
Cable length/ baud rate	25 m	1 Mbit/s
	100 m	500 Kbit/s
	250 m	250 Kbit/s
	500 m	125 Kbit/s
	500 m	100 Kbit/s
	1000 m*	50 Kbit/s
	1000 m*	20 Kbit/s
	* If you require cable lengths over 500 meters, contact technical support.	
Optional port	User may install a single Ethernet port, or an RS232/RS485 port. Available by separate order.	

**Notes:** 2. The standard for each port is set to either RS232/RS485 according to DIP switch settings. Refer to the Installation Guide.

## I/Os

Number of I/Os and types vary according to module. Supports up to 512 digital, high-speed, and analog I/Os.

Snap-in I/O modules	Plugs into rear port to create self-contained PLC with up to 43 I/Os.
Expansion modules	<b>Local adapter</b> (P.N. EX-A1), via I/O Expansion Port. Integrate up to 8 I/O Expansion Modules comprising up to 128 additional I/Os. <b>Remote adapter</b> (P.N. EX-RC1), via CANbus port. Connect up to 60 adapters; connect up to 8 I/O expansion modules to each adapter.
Exp. port isolation	Galvanic

## Dimensions

Size	197X146.6X68.5mm “ 7.75 ( X “ 5.77 X2.7”). See Note 3
Weight	750 gm (26.4 oz)

**Notes:** 3. For exact dimensions, refer to the product's Installation Guide.

## Mounting

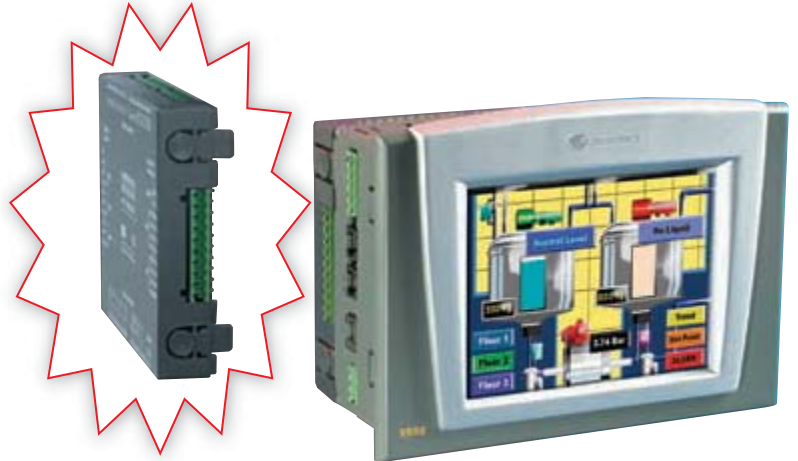
Panel-mounting	Via brackets
----------------	--------------

## Environment

Inside cabinet	IP20 / NEMA1 (case)
Panel mounted	IP65 / NEMA4X (front panel)
Operational temperature	0 to 50°C (32 to 122°F)
Storage temperature	-20 to 60°C (-4 to 140°F)
Relative Humidity (RH)	5% to 95% (non-condensing)

## Snap-in I/O Modules

Plug a Snap-in module directly into the back of a Vision PLC. Compatible with all V200 & V500 (V2XX, V5XX) Vision models.



**New!**

V200-18-E1B	V200-18-E2B	V200-18-E3XB	V200-18-E4XB	V200-18-E5B	V200-18-E6B <sup>1</sup>
16 isolated Digital Inputs (including 2 Shaft-encoder Inputs)	16 Isolated Digital Inputs (including 2 Shaft-encoder Inputs)	18 isolated Digital Inputs (including 2 Shaft-encoder Inputs)	18 isolated Digital Inputs (including 2 Shaft-encoder Inputs)	18 isolated Digital Inputs (including 2 Shaft-encoder Inputs)	18 isolated Digital Inputs (including 2 Shaft-encoder Inputs)
3 Analog Inputs	2 Analog Inputs	4 isolated Thermocouple/PT100/Analog Inputs	4 isolated Thermocouple/PT100/Analog Inputs	3 Analog Inputs	3 Analog Inputs
4 isolated Transistor Outputs (including 2 High-speed Outputs)	4 isolated Transistor Outputs (including 2 High-speed Outputs)	2 isolated Transistor Outputs (including 2 High-speed Outputs)	17 isolated Transistor Outputs (including 2 High-speed Outputs)	17 isolated Transistor Outputs (including 2 High-speed Outputs)	2 Thermocouple/PT100/Analog Inputs
10 isolated Relay Outputs	10 isolated Relay Outputs	15 isolated Relay Outputs	4 isolated Analog Outputs		2 isolated Transistor Outputs (including 2 High-speed Outputs)
	2 Analog Outputs	4 isolated Analog Outputs			15 isolated Relay Outputs
					2 isolated Analog Outputs

<sup>1</sup> V200-18-E6B is not yet UL certified

## Additional COM Module

Use these modules to enhance Vision's communication capabilities<sup>1</sup>

1 Ethernet port	1 RS232/RS485 port	1 isolated RS232/RS485 port	1 CANbus port
V100-17-ET2 <sup>2</sup> (for V130 & V350 Series)	V100-17-RS4 <sup>2</sup> (for V130 & V350 Series)	V100-17-RS4X <sup>2</sup> (for V130 & V350 Series)	V100-17-CAN <sup>2</sup> (for V130 & V350 Series)
V200-19-ET1 (for V200 & V500 series)	V200-19-RS4 (for V200 & V500 series)	V200-19-RS4-X (for V200 & V500 series)	

<sup>1</sup> V200/V500: 1 optional port, V130/V350: 1 optional port for serial or Ethernet & 1 optional port for CANbus

<sup>2</sup> V100-17-ET2, V100-17-RS4, V100-17-RS4X & V200-17-CAN are not yet UL certified

Expand your system with local or remote I/O expansion modules<sup>1</sup>.  
Vision series support both local & remote I/O modules.



## Digital Modules

IO-DI8-T08	IO-DI8-R04	IO-DI8-R08	EX90-DI8-R08 <sup>3</sup>	IO-DI16
24VDC 8 Digital Inputs, pnp/npn, including one High-speed Counter 8 pnp Transistor Outputs	24VDC 8 Digital Inputs, pnp/npn, including one High-speed Counter 4 Relay Outputs	24VDC 8 Digital Inputs, pnp/npn, including one High-speed Counter 8 Relay Outputs	24VDC 8 Digital Inputs, pnp/npn, including one High-speed Counter 8 Relay Outputs	24VDC 16 Digital Inputs, pnp/npn, including one High-speed Counter
IO-T016	IO-R08	IO-R016	IO-DI8ACH	
12/24VDC 16 pnp Transistor Outputs	24VDC (power supply) 8 Relay Outputs	24VDC (power supply) 16 Relay Outputs	110/220 VAC 8 AC Inputs	

## Analog, Temperature and Weight/Strain Measurements

IO-AI4-A02	IO-PT400	IO-PT4K
24VDC (power supply) 4 Analog Inputs, 12 bit, 0-10V, 0-20mA, 4-20mA, 2 Analog Outputs 12 bit+sign, ± 10V, 0-20mA, 4-20mA	4 PT100/NI100/NI120 Inputs Range PT100: -50°C...460°C (-58°F...860°F) Range NI100: -50°C...232°C (-58°F...449°F) Range NI120: -50°C...172°C (-58°F...341°F) 12 bit	4 PT1000/NI1000 Inputs Range PT1000: -50°C...460°C (-58°F...860°F) Range NI1000: -50°C...232°C (-58°F...449°F) 12 bit
IO-A06X	IO-LC1 <sup>4</sup>	IO-LC3 <sup>4</sup>
24VDC (power supply) 6 Isolated Analog Outputs, 0-10V, 0-20mA, 4-50mA, 12 bit	12/24VDC (power supply) 1-3 Loadcell / Strain gauge Inputs Input voltage ranges: ±20mV, ±80mV Excitation: AC/DC 1 Digital pnp Input 2 Setpoint pnp Outputs  Not supported by all OPLCs™	8 Thermocouple/Analog Inputs, T/C J, K, T, B, E, N, R, S, 0.1° Resolution, 0-10V, 0-20mA, 4-20mA, 12/14 bit

## XL Digital/Analog Modules

IO-D16A3-R016 <sup>5</sup>
24VDC 16 Digital Inputs, pnp/npn, including two High-speed Counters 3 Analog Inputs 10 bit, 0-20mA, 4-20mA, 16 Relay Outputs
IO-D16A3-T016 <sup>5</sup>
24VDC 16 Digital Inputs pnp/npn, including one High-speed Counter 3 Analog Inputs 10 bit, 0-20mA, 4-20mA 15 pnp + 1 pnp/npn Transistor Outputs including 1 HSO

## I/O Expansion Module Adapters

EX-A1	EX-RC1 <sup>6</sup>
Local I/O module adapter. Up to 8 modules may be connected to a single PLC <sup>1</sup> . Supports both 12/24 VDC.	Remote I/O module adapter, via CANbus. Multiple adapters may be connected to a single PLC, with up to 8 modules to each adapter <sup>1</sup> . Supports both 12/24 VDC.

- <sup>1</sup> Number of I/Os may vary according to module  
<sup>3</sup> The EX90 is housed in an open casing. Only one EX90 can be connected per PLC, as a single expansion module; Expansion adapter not required  
<sup>4</sup> IO-LCx models are supported by the M91 & Vision series. Not supported by the M90 series.  
<sup>5</sup> XL expansion modules will be available in spring 2009. Not yet UL certified  
<sup>6</sup> EX-RC1 is supported by Vision series. Not supported by M91 series. Not yet UL certified.

\* Additional 12VDC models are listed on Unitronics web site.

Unitronics\_Vision\_570\_datasheet\_en\_0211.pdf

www.klinkmann.com

**Helsinki**  
tel. +358 9 540 4940  
automation@klinkmann.fi

**Yekaterinburg**  
tel. +7 343 376 5393  
yekaterinburg@klinkmann.spb.ru

**Vilnius**  
tel. +370 5 215 1646  
post@klinkmann.lt

**St. Petersburg**  
tel. +7 812 327 3752  
klinkmann@klinkmann.spb.ru

**Samara**  
tel. +7 846 273 95 85  
samara@klinkmann.spb.ru

**Tallinn**  
tel. +372 668 4500  
klinkmann.est@klinkmann.ee

**Moscow**  
tel. +7 495 641 1616  
moscow@klinkmann.spb.ru

**Kiev**  
tel. +38 044 495 33 40  
klinkmann@klinkmann.kiev.ua

**Riga**  
tel. +371 6738 1617  
klinkmann@klinkmann.lv

**Minsk**  
tel. +375 17 200 0876  
minsk@klinkmann.com