Vision570™/560™ Color OPLC™

Color Vision570™/560™ Series Featuring:

HMI

- Up to 1024 user-designed screens
- 500 images per application
- HMI graphs—color-code Trends
- Built-in alarm screens
- Text String Library—easy localization
- Virtual alpha-numeric keypad
- Troubleshoot via the HMI panel—no PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- SD card—log, backup, clone, & more
- Time-based control in 3 clicks

Communication

- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- Send e-mail function
- SMS messaging
- GPRS/GSM/CDMA enabled
- Remote Access utilities
- MODBUS protocol support CANbus: CANopen, UniCAN, SAE J1939 & more
- DF1 Slave
- Ports: supplied with 2 isolated RS232/RS485 and 1 CANbus; In Vision570: 1 USB programming port; 1 port may be added for serial/Ethernet

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V570-57-T20B-J

V560™

An advanced PLC with an integrated 5.7" color Touchscreen, plus Snap-in & Expansion I/Os (up to 1000)

Article Number	V570-57-T20B	V570-57-T20B-J	V560-T25B*
I/O Options			
Snap-in I/O Modules	Plug these modules directly into the back of the Vision unit to create a self-contained PLC with up to 62 I/Os. Inputs may include Digital, Analog, and Temperature measurement. Outputs may include Transistor, Relay, or Analog. (sold separately)		
I/O Expansion	Local or Remote I/Os may be added via expansion port or via CANbus		
Program			
Application Memory	Application Logic: 2MB • Images: 12MB • Fonts: 1MB		
Scan Time	9μsec per 1K of typical application		
Memory Operands	8192 coils, 4096 registers, 512 long integers (32-bit), 256 double words (32-bit unsigned), 64 floats, 384 timers (32-bit), 32 counters. Additional non-retainable operands: 1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words		
Data Tables	120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K Flash data		
SD Card	Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs		
Enhanced Features	Trends: graph any value and display on HMI • Built-in Alarm management system • String Library: instantly switch HMI language		
Operator Panel			
Type	TFT LCD		
Display Backlight Illumination	White LED		
Colors	65,536 colors, 16 bit resolution • Brightness- Adjustable via touchscreen or software		
Display Resolution & Size	320 x 240 pixels (QVGA), 5.7"		
Touchscreen	Resistive, Analog		
Keyboard			
Number of keys	Virtual keyboard		24 programmable keys. Labeling options – function keys or customized
General			
Power Supply	12/24VDC		
Battery	7 years typical at 25°C, battery back-up for all memory sections and RTC		
Environment	IP65/NEMA4X (when panel mounted)	IP66/IP65/NEMA4X (when panel mounted)	IP65/NEMA4X (when panel mounted)
Clock	Real-time clock functions (date and time)		

* **Not yet UL certified**

Vision™ OPLC™

This guide provides specifications for Unitronics' color touchscreen controllers V570-57-T20B & V570-57-T20B-J and V570-57-T40B. You can find additional documentation on the Unitronics' Setup CD and in the Technical Library at www.unitronics.com.

Technical Specifications

Power Supply

	V570-57-T20B & V570-57-T20B-J	V570-57-T40B
Input voltage	12 or 24VDC	24VDC
Permissible range	10.2-28.8VDC	20.4-28.8VDC
Max. current consumption	540mA@12V 270mA@24V	320mA@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

See Note 1

	V570-57-T20B & V570-57-T20B-J	V570-57-T40B
LCD Type	TFT	TFT
Illumination backlight	White LED	CCFL fluorescent lamp
Display resolution, pixels	320x240 (QVGA)	
Viewing area	5.7"	
Colors	65,536	
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.	

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

spectra

Program

Memory size — Application Logic – 2MB, Images – 12MB, 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	Compatible with fast 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

Serial ports	2. See Note 3

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		
See Note 3	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:
3. The standard for each port is set to either RS232/RS485 according to DIP switch settings. Refer to the Installation Guide.
4. V570-57-T20B & V570-57-T20B-J supports both 12 and 24VDC CANbus power supply, (±4%), 40mA maximum per unit. Note that if 12 VDC is used, the maximum cable length is 150 meters.

I/Os

	Number of I/Os and types vary according to module. Supports up to 1000 digital, high-speed, and analog I/Os.
Snap-in I/O modules	Plugs into rear port to create self-contained PLC with up to 62 I/Os.
Expansion modules	Local adapter (P.N. EX-A1), via I/O Expansion Port. Integrate up to 8 I/O Expansion Modules comprising up to 128 additional I/Os.
	Remote adapter (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 5
Weight	750 gm (26.4 oz)

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

Mounting

Panel-mounting	Via brackets

Environment

Inside cabinet	IP20 / NEMA1 (case)	
Panel mounted	V570-57-T20B & V570-57-T40B	V570-57-T20B-J
	IP65/NEMA4X (front panel)	IP65/66/NEMA4X (front panel)
Operational temperature	0 to 50ºC (32 to 122ºF)	
Storage temperature	-20 to 60ºC (-4 to 140ºF)	
Relative Humidity (RH)	5% to 95% (non-condensing)	

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