VISION 1210™/1040™

Advanced PLC from the back-big & high resolution color touchscreen from the front, 12.1" /10.4". Snap-in I/Os for an All-in-One; expand up to 1000 I/Os

Features:

HMI

- Up to 1024 user-designed screens
- 1500 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - 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
- Micro SD card - log, backup, clone & more
- Date & Time-based control

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
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc.
- Ports: supplied with 2 isolated RS232/RS485, 1 CANbus, 1 USB programming port; 1 port may be added for serial/Ethernet

V1210
Flat Panel

V1040
Classic Panel

> " I've not yet encountered a job that a Unitronics PLC was unable to cover. "
>
> **Timothy Moulder,**
> Engineer at Black & Decker

Snap-in I/O

Plug a Snap-in module directly into the back of a Vision PLC.
Compatible with all V200, V500, V1040 and V1210 Vision series models.

	V1040	V1210
Article Number	V1040-T20B	V1210-T20BJ
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. Expand up to 1000 I/Os. (See I/O Expansion Modules- page 28)	
Program		
Application Memory	Application Logic: 2MB • Images: 40MB • 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 fixed data	
SD Card (Micro)	Store datalogs, Alarm History, Data Tables, Trend data, export to Excel • Back up Ladder, HMI & OS, clone PLCs	
USB	1 USB programming port (Mini-B)	
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	800 x 600 pixels (SVGA), 10.4"	800 x 600 pixels (SVGA), 12.1"
Touchscreen	Resistive, Analog	
Keys	9 programmable function keys	Virtual Keyboard
General		
Power Supply	12/24VDC	
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC	
Clock	Real-time clock functions (date and time)	
Environment	NEMA4X/IP65 (when panel mounted)	NEMA4X/IP66/IP65 (when panel mounted)
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics	

VISION 700™

Advanced PLC from the back - big & high resolution color 7" touchscreen from the front. Snap-in I/Os for an All-in-One; expand up to 1000 I/Os

Vision700™ has Ethernet port onboard, that supports 8 sockets, enabling to communicate with 8 devices simultaneously.

Features:

HMI

- Up to 1024 user-designed screens
- 1500 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - 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
- Date & Time-based control

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
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939, and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc.
- Ports: supplied with mini-USB programming port, 1 RS232/RS485 and 1 Ethernet port. 1 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus

V700

"
Reliability, ease of use, connectivity and competitive prices are Unitronics' main strengths. "

Mr. Andrea Della Bosca,
EV srl

	V700
Article Number	**V700-T20BJ**
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 (See I/O Expansion Modules- page 28)
Program	
Application Memory	Application Logic: 2MB • Images: 40MB • 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 fixed 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	800 x 480 pixels, 7"
Touchscreen	Resistive, Analog
Keys	Virtual Keyboard
General	
Power Supply	12/24VDC
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Environment	NEMA4X/IP66/IP65 (when panel mounted)
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics

VISION 570™/560™

Advanced PLC from the back-big & high resolution color 5.7" touchscreen from the front. Snap-in I/Os for an All-in-One; expand up to 1000 I/Os

Features:

HMI

- Up to 1024 user-designed screens
- 1000 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - 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
- Date & Time-based control

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
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc.
- Ports: supplied with 2 isolated RS232/RS485 and 1 CANbus; In Vision570: 1 USB programming port; 1 port may be added for serial/Ethernet

V570
Flat Panel

V570
Classic Panel

> **For a first time user, I had a great experience. I look forward to incorporating this brand of product on future jobs.**
>
> Jeremy Charles Keene,
> Controls Manager at General Broach Company

V560

	V570		V560
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. Expand up to 1000 I/Os (See I/O Expansion Modules- page 28)		
Program			
Application Memory	Application Logic: 2MB • Images: 16MB • 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 fixed 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		
Keys	Virtual Keyboard		24 programmable keys. Labeling options – function keys or customized
General			
Power Supply	12/24VDC		
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC		
Clock	Real-time clock functions (date and time)		
Environment	NEMA4X/IP65 (when panel mounted)	NEMA4X/IP66/IP65 (when panel mounted)	NEMA4X/IP65 (when panel mounted)
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics		

* Not yet UL certified

VISION 430™

Advanced PLC integrated with a 4.3" wide aspect color touchscreen. Includes an onboard I/O configuration; expand up to 512 I/Os

Features:

HMI

- 1024 user-designed screens and 1000 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - 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
- Micro SD card - log, backup, clone & more
- Date & Time-based control

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
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc.
- Ports: supplied with mini-USB programming port and 1 RS232/RS485 ; 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus

V430

> " The huge advantage of this PLC was that - with everything built-in - the communications and use of tags in the HMI was so simple and intuitive. "

Ashley Parr,
HPS

Vision430™ models - Onboard I/Os

Article	Summary	Inputs [1]				Outputs				Operating voltage
		Digital [2]	HSC/Shaft-encoder [2]	Analog	Temperature Measurement	Transistor [3]	PWM/HSO [3]	Relay	Analog	
V430-J-B1	No onboard I/Os	None	None	None	None	None	None	None	None	12/24VDC
V430-J-RH2	**10** Digital, **2** D/A Inputs [1] **6** Relay Outputs	12	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	None	None	**6**	None	24VDC
V430-J-R34	**20** Digital, 2 D/A Inputs [1] **12** Relay Outputs	22	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	None	None	**12**	None	24VDC
V430-J-TR34	**20** Digital, 2 D/A Inputs [1] **8** Relay, 4 High-speed Transistor Outputs	22	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**4** npn	**4** (3 PTO) 200 kHz max	**8**	None	24VDC
V430-J-RH6	**6** Digital, **2** D/A [1], **4** Analog Inputs **6** Relay Outputs	8	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA and **4** 0-20mA, 4-20mA 10-bit	None	None	None	**6**	None	24VDC
V430-J-RA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **8** Relay, **2** Analog Outputs	12	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	None	None	**8**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V430-J-TRA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **4** Relay, **2** Analog, **4** High-Speed Transistor Outputs	12	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**4** npn	**4** (2 PTO) 200 kHz max	**4**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V430-J-T2	**10** Digital, **2** D/A Inputs [1] **12** Transistor Outputs	12	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**12** pnp	**7** 0.5kHz	None	None	24VDC
V430-J-T38	**20** Digital, **2** D/A Inputs [1], **16** Transistor Outputs	22	**2** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**16** pnp	**7** 0.5kHz	None	None	24VDC
V430-J-TA24	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **10** Transistor, **2** Analog Outputs	12	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**10** pnp	**5** 0.5kHz	None	**2** 0-10V, 4 -20mA 12-bit	24VDC

Product Details

I/O Expansion	
	Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 512 I/Os (See I/O Expansion Modules- page 28)
Program	
Application Memory	Application Logic: 512K • Images: 12MB • Fonts: 1MB
Scan Time	15µ sec 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 fixed data
SD Card (Micro)	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 • String Library: instantly switch HMI language
Operator Panel	
Type	TFT LCD • 65,536 colors, 16-bit resolution • Brightness - Adjustable via touchscreen or software
Display	Resolution: 480x272 pixels • Size: 4.3"
Touchscreen	Resistive, Analog
Keys	5 programmable keys.
General	
Power Supply	24VDC, except for V430-J-B1, which is 12/24VDC
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Environment	NEMA4X/IP66/IP65 (when panel mounted)
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital,high-speed, analog, and in certain models as TC or PT100. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:

- Each high-speed requires 1 or 2 pins according to high-speed mode.
- Each analog input requires 1 pin.
- Each TC requires 2 pins per TC input
- The first PT input requires 3 pins, and two additional pins for each additional PT input.

Example: V430-J-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4 pins, leaving 8 pins free. Implementing 2 PT inputs uses 5 input pins.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.

[3] The total number of digital outputs listed includes high-speed outputs.

VISION 350™

Advanced PLC integrated with a 3.5" color touchscreen. Includes an onboard I/O configuration; expand up to 512 I/Os

Features:

HMI

- 1024 user-designed screens
- 500 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - 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
- Micro SD card - log, backup, clone & more
- Date & Time-based control

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
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc.
- Ports: supplied with mini-USB programming port and 1 RS232/RS485; 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus

V350-J
Flat Panel

V350
Classic Panel

60ºC

-30ºC

NEW! Extended temperature range unit, operational temperature between -30ºC to 60ºC.

Available with classic or flat panel design Extended temperature options also available for Ethernet and CANBus cards.

Classic panel p/n: V350-S-TA24, Flat panel p/n: V350-JS-TA24, CANBus p/n: V100-S-CAN Ethernet p/n V100-S-ET2

> **"There were significant cost savings using the Unitronics PLC."**
>
> **Justin Butler,**
> Senior Electrical Engineer at Energy Plant Solutions

Vision350™ models - Onboard I/Os

Article		Summary	Inputs [1]				Outputs				Operating voltage
			Digital [2]	HSC/Shaft-encoder [2]	Analog	Temperature Measurement	Transistor [3]	PWM/HSO [3]	Relay	Analog	
V350-J-B1	V350-35-B1	No onboard I/Os	None	None	None	None	None	None	None	None	12/24VDC
V350-J-TR20	V350-35-TR20	**10** Digital, **2** D/A Inputs [1] **6** Relay Outputs **2** High-speed Transistor Outputs	12	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**2** npn	**2** (2 PTO) 200 kHz max	**6**	None	24VDC
V350-J-R34	V350-35-R34	**20** Digital, **2** D/A Inputs [1] **12** Relay Outputs	22	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	None	None	**12**	None	24VDC
V350-J-TR34	V350-35-TR34	**20** Digital, **2** D/A Inputs [1] **8** Relay, **4** High-speed Transistor Outputs	22	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**4** npn	**4** (3 PTO) 200 kHz max	**8**	None	24VDC
V350-J-TR6	V350-35-TR6	**6** Digital, **2** D/A [1], **4** Analog Inputs **6** Relay Outputs **2** High-speed Transistor Outputs	8	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA and **4** 0-20mA, 4-20mA 10-bit	None	**2** npn	**2** (2 PTO) 200 kHz max	**6**	None	24VDC
V350-J-RA22	V350-35-RA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **8** Relay, **2** Analog Outputs	12	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	None	None	**8**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V350-J-TRA22	V350-35-TRA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **4** Relay, **2** Analog, **4** High-Speed Transistor Outputs	12	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**4** npn	**4** (2 PTO) 200 kHz max	**4**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V350-J-T2	V350-35-T2	**10** Digital, **2** D/A Inputs [1] **12** Transistor Outputs	12	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**12** pnp	**7** 0.5kHz	None	None	24VDC
V350-J-T38	V350-35-T38	**20** Digital, **2** D/A Inputs [1], **16** Transistor Outputs	22	**2** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**16** pnp	**7** 0.5kHz	None	None	24VDC
V350-J-TA24 V350-S-TA24	V350-35-TA24 V350-JS-TA24	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **10** Transistor, **2** Analog Outputs	12	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**10** pnp	**5** 0.5kHz	None	**2** 0-10V, 4 -20mA 12-bit	24VDC

Product Details

I/O Expansion	
	Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 512 I/Os (See I/O Expansion Modules- page 28)
Program	
Application Memory	Application Logic: 1MB • Images: 8MB • Fonts: 512K
Scan Time	15µ sec 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 fixed data
SD Card (Micro)	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 • String Library: instantly switch HMI language
Operator Panel	
Type	TFT LCD • 65,536 colors, 16-bit resolution • Brightness - Adjustable via touchscreen or software
Display	Resolution: 320 x 240 pixels (QVGA) • Size: 3.5”
Touchscreen	Resistive, Analog
Keys	5 programmable keys. Labeling options - function keys, arrows, or customized
General	
Power Supply	24VDC, except for V350-35-B1, which is 12/24VDC
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Environment	NEMA4X/IP66/IP65 (when panel mounted)
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital, high-speed, analog, and in certain models as TC or PT100. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:

• Each high-speed requires 1 or 2 pins according to high-speed mode.
• Each analog input requires 1 pin.
• Each TC requires 2 pins per TC input
• The first PT input requires 3 pins, and two additional pins for each additional PT input.

Example: V350-35-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4 pins, leaving 8 pins free. Implementing 2 PT inputs uses 5 input pins.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.

[3] The total number of digital outputs listed includes high-speed outputs.

VISION 130™

Palm-size, powerful PLC with built-in, black & white LCD 2.4" graphic display, keypad, & onboard I/O configuration, expand up to 256 I/Os

Features:

HMI

- 1024 user-designed screens
- 400 images per application
- HMI graphs - color-code Trends
- Built-in alarm screens
- Text String Library - easy localization
- Memory and communication monitoring via HMI - 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
- Micro SD card - log, backup, clone & more
- Date & Time-based control

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
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN, SAE J1939 and more
- DF1 Slave
- SNMP Agent V1
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc.
- Ports: supplied with 1 RS232/RS485; 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus

V130-J
Flat Panel

V130
Classic Panel

" The perfect solution for our need, the Vision130™ is easy to program, user-friendly and backed up with responsive tech support. "

Michael Lamore,
President of Barrier1

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Vision130™ models - Onboard I/Os

Article		Summary	Inputs [1]				Outputs				Operating voltage
			Digital [2]	HSC/Shaft-encoder [2]	Analog	Temperature Measurement	Transistor [3]	PWM/HSO [3]	Relay	Analog	
V130-J-B1	V130-33-B1	No onboard I/Os	None	None	None	None	None	None	None	None	12/24VDC
V130-J-TR20	V130-33-TR20	**10** Digital, **2** D/A Inputs [1] 6 Relay Outputs **2** High-speed Transistor Outputs	12	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**2** npn	**2** (2 PTO) 200 kHz max	**6**	None	24VDC
V130-J-R34	V130-33-R34	**20** Digital, **2** D/A Inputs [1] 12 Relay Outputs	22	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	None	None	**12**	None	24VDC
V130-J-TR34	V130-33-TR34	**20** Digital, **2** D/A Inputs [1] 8 Relay, **4** High-speed Transistor Outputs	22	**3** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**4** npn	**4** (3 PTO) 200 kHz max	**8**	None	24VDC
V130-J-TR6	V130-33-TR34	**6** Digital, **2** D/A [1], 4 Analog Inputs **6** Relay Outputs **2** High-speed Transistor Outputs	8	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA and **4** 0-20mA, 4-20mA 10-bit	None	**2** npn	**2** (2 PTO) 200 kHz max	**6**	None	24VDC
V130-J-RA22	V130-33-RA22	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **8** Relay, **2** Analog Outputs	12	**1** 30kHz, 32-bit	2 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	None	None	**8**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V130-J-TRA22	V130-33-TRA22	**8** Digital, **2** D/A, 2 PT100/ TC/ Digital [1] Inputs **4** Relay, **2** Analog, **4** High-Speed Transistor Outputs	12	**1** 200kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**4** npn	**4** (2 PTO) 200 kHz max	**4**	**2** 0-10V, 4 -20mA 12-bit	24VDC
V130-J-T2	V130-33-T2	**10** Digital, **2** D/A Inputs [1] **12** Transistor Outputs	12	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**12** pnp	**7** 0.5kHz	None	None	24VDC
V130-J-T38	V130-33-T38	**20** Digital, **2** D/A Inputs [1], 16 Transistor Outputs	22	**2** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	None	**16** pnp	**7** 0.5kHz	None	None	24VDC
V130-J-TA24	V130-33-TA24	**8** Digital, **2** D/A, **2** TC/PT100/ Digital [1] Inputs **10** Transistor, 2 Analog Outputs	12	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 14-bit	**2** Thermocouple, PT100	**10** pnp	**5** 0.5kHz	None	**2** 0-10V, 4 -20mA 12-bit	24VDC

Product Details

I/O Expansion	
	Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 256 I/Os (See I/O Expansion Modules- page 28)
Program	
Application Memory	Application Logic: 512K • Images: 256K • Fonts: 128K
Scan Time	20µ sec per 1K of typical application
Memory Operands	4096 coils, 2048 registers, 256 long integers (32-bit), 64 double words (32-bit unsigned), 24 floats, 192 timers (32-bit), 24 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 fixed data
SD Card (Micro)	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	Graphic STN LCD, white LED backlight
Display	Resolution: 128 x 64 pixels • Size: 2.4"
Keys	20, including 10 user labeled keys (slide kit sold separately)
General	
Power Supply	24VDC, except for V130-33-B1, which is 12/24VDC
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Environment	NEMA4X/IP66/IP65 (when panel mounted)
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital, high-speed, analog, and in certain models as TC or PT100. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:

• Each high-speed requires 1 or 2 pins according to high-speed mode.
• Each analog input requires 1 pin.
• Each TC requires 2 pins per TC input
• The first PT input requires 3 pins, and two additional pins for each additional PT input.

Example: V130-33-RA22 offers 12 digital inputs. Implementing 2 TC inputs requires 4 pins, leaving 8 pins free. Implementing 2 PT inputs uses 5 input pins.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.

[3] The total number of digital outputs listed includes high-speed outputs.

VISION 120™

Full-function PLC with built-in, monochrome graphic LCD display, keypad, & onboard I/O configuration; expand up to 256 I/Os

HMI
- Up to 255 user-designed screens
- Hundreds of images per application
- HMI graphs & Trends
- Memory and communication monitoring via HMI - No PC needed

PLC
- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 12 independent loops
- Recipe programs and datalogging via Data Tables
- Date & Time-based control
- 2 RS232/RS485 built-in ports

Communication
- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN (in C models only)
- FB Protocol Utility: enables serial with 3rd-party device; barcode readers, frequency converters, etc.

V120

I/O Expansion Modules

| Article | Summary | Inputs [1] | | | | Outputs | | | | Operating voltage |
		Digital [2]	HSC/Shaft-encoder [2]	Analog	Temperature Measurement	Transistor [3]	PWM/HSO [3]	Relay	Analog	
V120-22-R1	10 Digital, 1 Analog Inputs 6 Relay Outputs	10	3 10kHz, 32-bit	1 0-10V, 0-20mA, 4-20mA 10-bit	None	None	None	6	None	12/24VDC
V120-22-R2C	10 Digital, 2 Analog Inputs 6 Relay Outputs	10	3 10kHz, 32-bit	2 0-10V, 0-20mA, 4-20mA 10-bit	None	None	None	6	None	12/24VDC
V120-22-R6C	6 Digital, 6 Analog Inputs 6 Relay Outputs	6	1 10kHz, 32-bit	2 0-10V, 0-20mA, 4-20mA and 4 0-20mA, 4-20mA 10-bit	None	None	None	6	None	24VDC
V120-22-R34	20 Digital, 2 D/A[1] Inputs 12 Relay Outputs	22	3 10kHz, 32-bit	2 0-10V, 0-20mA, 4-20mA 10-bit	None	None	None	12	None	24VDC
V120-22-T1	12 Digital Inputs 12 Transistor Outputs	12	2 10kHz, 32-bit	None	None	12 pnp	2 0.5kHz	None	None	12/24VDC
V120-22-T38	22 Digital Inputs 16 Transistor Outputs	22	2 10kHz, 32-bit	None	None	16 pnp		None	None	24VDC
V120-22-T2C	10 Digital, 2 D/A [1] Inputs 12 Transistor Outputs	12	3 10kHz, 32-bit	2 0-10V, 0-20mA, 4-20mA 10-bit	None	12 pnp		None	None	12/24VDC
V120-22-UN2	10 Digital, 2 D/A/ TC/PT100 [1] Inputs 12 Transistor Outputs	12	2 10kHz, 32-bit	2 Thermocouple, PT100, 0-10V, 0-20mA, 4-20mA 14-bit		12 pnp		None	None	12/24VDC
V120-22-UA2	10 Digital, 2 D/A/TC1 Inputs 10 Transistor, 2 Analog Outputs	12	1 10kHz, 32-bit	2 Thermocouple, 0-10V, 0-20mA, 4-20mA 14-bit		10 pnp		None	2 0-10V, 4 -20mA 12-bit	24VDC
V120-22-RA22	8 Digital, 2 D/A, 2 TC/ PT100/Digital [1] Inputs 8 Relay, 2 Analog Outputs	12	1 10kHz, 32-bit	2 0-10V, 0-20mA, 4-20mA 14-bit	2 Thermocouple, PT100	None	None	8	2 0-10V, 4 -20mA 12-bit	24VDC

Product Details

I/O Expansion	
	Local or Remote I/Os may be added via expansion port or via CANbus. Expand up to 256 I/Os (See I/O Expansion Modules - page 28)
Program	
Application Memory	448K (virtual) Ladder code capacity
Memory Scan Time	48µ sec per 1K of typical application
Operands	4096 coils, 2048 registers, 256 long integers (32-bit), 64 double words (32-bit unsigned), 24 floats, 192 timers (32-bit), 24 counters
Data Tables	120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 256K fixed data
Operator Panel	
Type	Graphic STN LCD
Display	Resolution: 128 x 64 pixels • Size: 2.4"
Keys	16 keys
General	
Power Supply	V120-22-R1 / R2C / T1 / T2C / UN2 : 12/24VDC • V120-22-R6C / R34 / T38 / UA2 / RA22 : 24VDC
Battery	7 years typical at 77°F, battery back-up for all memory sections and RTC
Clock	Real-time clock functions (date and time)
Environment	NEMA4X/IP65 (when panel mounted)
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital, analog, and in certain models as TC or PT100. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:
- Each high-speed requires 1 or 2 pins according to high-speed mode.
- Each analog input requires 1 pin.
- Each TC requires 2 pins per TC input
- The first PT input requires 3 pins, and two additional pins for each additional PT input.

Example: V120-22-UA2 offers 12 digital inputs. Implementing 2 TC inputs requires 4 pins, leaving 8 pins free. Implementing 2 PT inputs uses 5 input pins.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.

[3] The total number of digital outputs listed includes high-speed outputs

VISION 200™

Advanced PLCs with an integrated operator panel graphic or touch. Snap-in I/Os to create an All-in-One; expand up to 316 I/Os

HMI

- Up to 255 user-designed screens
- Hundreds of images per application
- HMI graphs & Trends
- Virtual alpha-numeric keypad (in V290 & V530)
- Memory and communication monitoring via HMI - No PC needed

PLC

- I/O options include high-speed, temperature & weight measurement
- Auto-tune PID, up to 12 independent loops
- Recipe programs and datalogging via Data Tables
- Date & Time-based control

Communication

- SMS messaging
- GPRS/GSM
- Remote Access utilities
- MODBUS protocol support
- BACnet, KNX, M-bus – via 3rd-party converter
- CANbus: CANopen, UniCAN (in C models only)
- FB Protocol Utility: enables serial or TCP/IP communications with 3rd-party device; barcode readers, frequency converters, etc.
- Ports: supplied with 1 RS232, 1 RS232/RS485 and 1 CANbus; 1 port may be added for serial/Ethernet
- V280-B25B & V290-B25B Not yet UL certified

	V230™	V280™	V290™	V530™
Article Number	V230-13-B20B	V280-18-B20B	V290-19-B20B	V530-53-B20B
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. Expand up to 316 I/Os (See I/O Expansion Modules - page 28)			
Program				
Application Memory	1MB			
Scan Time	30µsec per 1K of typical application			
Operands	4096 coils, 2048 registers, 256 long integers (32 bit), 64 double words (32 bit unsigned), 24 memory floats, 192 timers, 24 counters			
Data Tables	120K dynamic RAM data (recipe parameters, datalogs, etc.), up to 192K fixed data			
Operator Panel				
Type	STN LCD	Black & White FSTN LCD		
Display Resolution & Size	128 x 64 pixels 3.2"	320 x 240 pixels (QVGA), 4.7" active area	320 x 240 pixels (QVGA), 5.7" active area	
Touch Screen	None	Resistive, Analog		
Keys	24 user labeled keys	27 user labeled keys	Virtual keyboard	
General				
Power Supply	12/24VDC			
Battery Back-up	7 years typical at 77°F, back-up for all memory sections and real-time clock (RTC)			
Environment	NEMA4X/IP65 (when panel mounted)			
Standard	CE, UL Many of our products are also UL Class 1 Div 2 and GOST certified - please contact Unitronics			