



PLC + HMI In One Unit

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PLC + HMI in One Unit

Unitronics designs, manufactures, and markets quality PLCs for the global market.

Easy to use, efficient, and affordable, our products have been automating processes, systems, and stand-alone applications since 1989.

We maintain more than 140 distributors in over 50 countries around the globe, enabling our customers to purchase our products with local marketing support.

Unitronics' field-proven PLCs automate tens of thousands of installations in diverse fields: petrochemical, automotive, food processing, plastic & textile, energy & environment, water & waste water management—anywhere automated processes are required.

Our clients include: Coca-Cola, General Motors, Michelin, Tupperware, Intel, Bayer, Colgate-Palmolive, Bosch-Rexroth, ABB, Land Instruments, Mercedes, Agfa, Tyson Foods, Pirelli, Fiat, Samsonite.

PLC + HMI = OPLC[™] The advantages of Complete Control:

- Reduced programming—a single programming environment for both PLC and HMI applications
- Less wiring, less space required
- Saves I/O points and reduces hardware
- Panel-PLC communication is built-in

Vision1210TM/1040TM Color OPLCTM

Color Vision1210[™]/1040[™] 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
- 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
- Micro 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; 1 USB programming port; 1 port may be added for serial/Ethernet



... An advanced PLC with an integrated color Touchscreen, de elemaciente plus Snap-in and Tank # 11-12 Plant # 5 Expansion I/Os ... Main STAR Liquid Level (m) T# 11 3.5 T# 12 1.2 Tank! 12 STO Tank# 11 1000000 C€/UL 2.15 FA ESC 12 13 14 15 16 F7 V1040™ ·F1

An advanced PLC with an integrated 1210[™]/1040[™] color Touchscreen, plus Snap-in and Expansion I/Os (up to 1000)

Article Number	V1040-T20B	V1210-T20BJ					
I/O Options							
Snap-in I/O Modules		create a self-contained PLC with up to 62 1/Os. Inputs may include s may include Transistor, Relay or Analog (sold separately).					
I/O Expansion	Local or Remote I/Os may be add	ed via expansion port or via CANbus					
Program							
Application Memory	Application Logic: 2MB • Images: 80MB • Fonts: 1MB						
Scan Time	9µsec per 1K of t	ypical application					
Memory Operands	8192 coils, 4096 registers, 512 long integers (32 bit), 256 double v Additional non-retainable operands: 1024 X-bits, 51	words (32 bit unsigned), 64 floats, 384 timers (32 bit), 32 counters 2 X-integers, 256 X-long integers, 64 X-double words					
Data Tables	120K dynamic RAM data (recipe paramet	ers, datalogs, etc.), up to 256K Flash data					
SD Card (Micro)	Store datalogs, Alarm History, Data Tables, Trend dat	a, 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							
Туре	TFT	LCD					
Display Backlight Illumination	white	e LED					
Colors	65,536 colors, 16-bit resolution • Brightn	ess- 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					
Keyboard							
Number of keys	9 programmable function keys	Virtual Keypad					
General							
Power Supply	12/24	4VDC					
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)					
Clock	Real-time clock funct	tions (date and time)					

Vision570TM/560TM Color OPLCTM

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



V570-57-T20B-J



... Our Color PLCs bring your system to life ...



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	,	ick of the Vision unit to create a self-contained Pl Digital, Analog, and Temperature measuremen may include Transistor, Relay, or Analog. (sold so	t.						
I/O Expansion	Local or R	Remote I/Os may be added via expansion port or	via CANbus						
Program									
Application Memory	Ар	Application Logic: 2MB • Images: 12MB • Fonts: 1MB							
Scan Time		9 μ 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 R/	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									
Туре		TFT LCD							
Display Backlight Illumination		White LED							
Colors	65,536 colors, 16 t	pit resolution • Brightness- Adjustable via touch	screen 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	7	12/24VDC							
Battery	7 years typical at 25°C, battery back-up for all memory sections and RTC								
1	IP65/NEMA4X IP66/IP65/NEMA4X IP65/NEMA4X (when panel mounted) (when panel mounted) (when panel mounted)								
Environment	IP65/NEMA4X (when panel mounted)	(when panel mounted)							

Vision350[™]Color OPLC[™]

Color Vision350[™] Series Featuring:

HMI

- 1024 user-designed screens and 250 images per application
- HMI graphs—color-code Trends
- Built-in alarm screens
- Text String Library—easy localization
- 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
- Micro SD card—log, backup, clone, & more
- Time-based control in 3 clicks

Communication

- GPRS/GSM/CDMA enabled
- TCP/IP via Ethernet
- Web server: Use built-in HTML pages, or design complex pages to view and edit PLC data via the Internet
- SMS messaging, Send e-mail function
- **Remote Access utilities**
- MODBUS protocol support
- CANbus: CANopen, UniCAN, SAE J1939 & more
- DF1 Slave
- Ports: supplied with1 RS232/RS485; 2 ports may be added: 1 Serial/Ethernet/Profibus and 1 CANbus



This specification depends upon driver type.

Color it beautiful! Power PLC, Color Touchscreen & onboard, expandable I/Os (up to 512)

	Article Number										
	Classic Panel	V350- <mark>35</mark> -B1	V350- <mark>35</mark> -TR20	V350- <mark>35</mark> -R34	V350- <mark>35</mark> -TR34	V350- <mark>35</mark> -TR6	V350- <mark>35</mark> -RA22	V350- <mark>35</mark> -TRA22	V350- <mark>35</mark> -T2	V350- <mark>35</mark> -T38	V350- <mark>35</mark> -TA24
New	Flat Panel	V350- <mark>J</mark> -B1	V350-J-TR20	V350- J -R34	V350- J -TR34	V350- <mark>J</mark> -TR6	V350-J-RA22	V350- J-T RA22	V350- <mark>J</mark> -T2	V350- <mark>J</mark> -T38	V350- <mark>J</mark> -TA24
		No onboard I/Os	10 Digital 2 D/A Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs	20 Digital 2 D/A Inputs ¹ 12 Relay Outputs	20 Digital 2 D/A Inputs ¹ 8 Relay 4 High-speed Transistor Outputs	6 Digital 2 D/A, 4 Analog Inputs ¹ 6 Relay 2 High-speed Transistor Outputs	8 Digital 2 D/A, 2 PT100/TC/ Digital ¹ Inputs 8 Relay 2 Analog Outputs	8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 4 Relay, 2 Analog 4 High-speed Transistor Outputs	10 Digital 2 D/A Inputs ¹ 12 Transistor Outputs	20 Digital 2 D/A Inputs ¹ 16 Transistor Outputs	8 Digital 2 D/A, 2 PT100/ TC/Digital ¹ Inputs 10 Transistor 2 Analog Outputs
	Inputs										
	Digital		12	22	22	8	12	12	12	22	12
	HSC/Shaft-Encoder/ Max Freq. Measurer ²⁸³		3 200kHz ⁴ 32-bit	3 30kHz 32-bit	3 200kHz ⁴ 32-bit	1 200kHz ⁴ 32-bit	1 30kHz 32-bit	1 200kHz ⁴ 32-bit	3 30kHz 32-bit	2 30kHz 32-bit	1 30kHz 32-bit
	Analog	None	2 10-bit, 0-10V 0-20mA 4-20mA	2 10-bit, 0-10V 0-20mA 4-20mA	2 10-bit, 0-10V 0-20mA 4-20mA	2 10-bit, 0-10V 0-20mA, 4-20mA and 4 10-bit, 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA	2 (2 modes) Normal: 14-bit Fast: 12-bit 0-10V, 0-20mA 4-20mA	2 10-bit 0-10V 0-20mA 4-20mA	2 10-bit 0-10V, 0-20mA 4-20mA	2 (2 modes) Normal:14-bit Fast: 12-bit 0-10V, 0-20mA, 4-20mA
	Temperature Measurement		None	None	None	None	and as 2 PT100/TC	and as 2 PT100/TC	None	None	and as 2 PT100/TC
	Outputs				1			1	1		
	Digital		6 relay	12 relay	8 relay	6 relay	8 relay	4 relay	12 pnp	16 pnp	10 pnp
	High-speed Outputs/PWM		2 npn (2 PTO) 200kHz max	None	4 npn (3 PTO) 200kHz max	2 npn (2 PTO) 200kHz max	None	4 npn (2 PTO) 200kHz max	7 0.5kHz	7 0.5kHz	5 0.5kHz
	Analog		None	None	None	None	2 12-bit 0-10V, 4-20mA	2 12-bit 0-10V, 4-20mA	None	None	2 12-bit 0-10V, 4-20mA
	I/O Expansion				1						
					Local or Rem	ote I/Os may be a	dded via expansion	port or via CANbus			
- P	Program										
- F	Application Memory				Appli	•	 Images: 6MB • F 				
H	Scan Time						(of typical application		/		
	Memory Operands		8192 co					signed), 64 floats, 38 5 X-long integers, 64		, 32 counters	
ŀ	Data Tables						•	.), up to 256K Flash			
- F	SD card (Micro)							Back up Ladder, HM		Cs	
- F	Enhanced Features			•				: instantly switch HM			
- k	Operator Panel				9			1			
- P	Type & Colors			TFT LCD	• 65,536 colors, 10	6-bit resolution •	Brightness- Adjusta	ble via touchscreen o	r software		
- F	Display						oixels (QVGA) • Siz				
- F	Touchscreen					Resisti	ve, Analog				
	Keys				5 programmable k			rrows, or customized			
	General					-, si Luzsinig opin					
	Power Supply				24V	DC, except for V350	-35-B1, which is 12,	/24VDC			
-	Battery				7 years typical c	it 25°C, battery ba	ck-up for all memor	y sections and RTC			
-	Environment				, ,,		(when panel mount				
The state of the s	Clock						tions (date and tin	•			

C€/UL

Vision130TM Graphic OPLCTM

Vision130[™] Series Featuring:

HMI

- 1024 user-designed screens and 400 images per application
- HMI graphs & Trends
- Text String Library—easy localization
- Troubleshoot via the HMI panel—no PC needed

PLC

- 1/0 options include high-speed, temperature and weight measurement
- Auto-tune PID, up to 24 independent loops
- Recipe programs and datalogging via Data Tables
- Micro SD card—log, backup, clone, and more
- Time-based control in 3 clicks

Communication

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



... Complex recipe, TCP/IP environment! better use Vision130[™]...

More power & speed in this palm-size PLC with built-in Graphic LCD display, keypad, & onboard I/Os (expandable up to 256)

	Article Number										
	Classic Panel	V130- <mark>33</mark> -B1	V130- <mark>33</mark> -TR20	V130- <mark>33</mark> -R34	V130- <mark>33</mark> -TR34	V130- <mark>33</mark> -TR6	V130- <mark>33</mark> -RA22	V130- <mark>33</mark> -TRA22	V130- <mark>33</mark> -T2	V130- <mark>33</mark> -T38	V130- <mark>33</mark> -TA24
New	Flat Panel	V130- <mark>J</mark> -B1	V130- J -TR20	V130- <mark>J</mark> -R34	V130-J-TR34	V130-J-TR6	V130-J-RA22	V130- J-T RA22	V130- <mark>J</mark> -T2	V130- <mark>J</mark> -T38	V130- J-T A24
		No onboard I/Os	10 Digital 2 D/A Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs	20 Digital 2 D/A Inputs ¹ 12 Relay Outputs	20 Digital 2 D/A Inputs ¹ 8 Relay 4 High speed Transistor Outputs	6 Digital, 2 D/A 4 Analog Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs	8 Digital 2 D/A, 2 PT100/TC/ Digital ¹ Inputs 8 Relay 2 Analog Outputs	8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 4 Relay, 2 Analog 4 High-speed Transistor Outputs	10 Digital 2 D/A Inputs ¹ 12 Transistor Outputs	20 Digital 2 D/A Inputs ¹ 16 Transistor Outputs	8 Digital 2 D/A, 2 PT100/ TC/Digital ¹ Inputs 10 Transistor 2 Analog Outputs
	Inputs				Γ	ſ		r	r	T	r
	Digital pnp/npn		12	22	22	8	12	12	12	22	12
	HSC/Shaft-Encoder/ Max. Freq. Measurer ^{2&3}		3 200kHz ⁴ 32-bit	3 30kHz 32-bit	3 200kHz ⁴ 32-bit	1 200kHz ⁴ 32-bit	1 30kHz 32-bit	1 200kHz ⁴ 32-bit	3 30kHz 32-bit	2 30kHz 32-bit	1 30kHz 32-bit
	Analog	None	2 10-bit, 0-10V 0-20mA 4-20mA	2 10-bit, 0-10V 0-20mA 4-20mA	2 10-bit, 0-10V 0-20mA 4-20mA	2 10-bit, 0-10V 0-20mA, 4-20mA and 4 10-bit, 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA	2 (2 modes) Normal: 14-bit Fast: 12-bit 0-10V, 0-20mA 4-20mA	2 10-bit 0-10V 0-20mA 4-20mA	2 10-bit 0-10V, 0-20mA 4-20mA	2 (2 modes) Normal:14-bit Fast: 12-bit 0-10V, 0-20mA, 4-20mA
	Temperature Measurement		None	None	None	None	and as 2 PT100/TC	and as 2 PT100/TC	None	None	and as 2 PT100/TC
	Outputs										
	Digital		6 relay	12 relay	8 relay	6 relay	8 relay	4 relay	12 pnp	16 pnp	10 pnp
	High-Speed Outputs/PWM		2 npn (2 PTO) 200kHz max	None	4 npn (3 PTO) 200kHz max	2 npn (2 PTO) 200kHz max	None	2 npn (2 PTO) 200kHz max	7 0.5kHz	7 0.5kHz	5 0.5kHz
	Analog		None	None	None	None	2 12-bit 0-10V, 4-20mA	2 12-bit 0-10V, 4-20mA	None	None	2 12-bit 0-10V, 4-20mA
	I/O Expansion		_								
		_			Local or Re	mote I/Os may be (added via expansion	port or via CANbus			
	Program										
	Application Memory				Appl	-	(• Images: 256K •				
	Scan Time		404		05/1		K of typical application			04	
	Memory Operands		405					igned), 24 floats, 192 6 X-long integers, 64		24 counters	
	Data Tables				120K dynamic RA	N data (recipe par	ameters, datalogs, et	c.), up to 256K Flash (data		
	SD Card (Micro)			Store datalo	gs, Alarm History, D	ata Tables, Trend d	ata, export to Excel •	Back up Ladder, HM	N & OS, clone PLO	Ĵs.	
	Enhanced Features		Tre	nds: graph any valu	ue and display on HI	Al 🔹 Built-in Aları	n management syste	m • String Library: ir	nstantly switch HN	\I language	
	Operator Panel										
	Туре						CD, white LED backli	•			
	Display						8 x 64 pixels • Size: 2				
	Keys				20, inc	luding 10 user lab	eled keys (slide kit so	ld separately)			
	General										
	Power Supply						30-33-B1, which is 1				
	Battery				7 years typic		back-up for all memo	•			
_	Environment						4X (when panel mou	•			
	Clock					Real-time clock	functions (date and t	ime)			

CE/UL

Vision[™] Graphic/Touch OPLC[™]

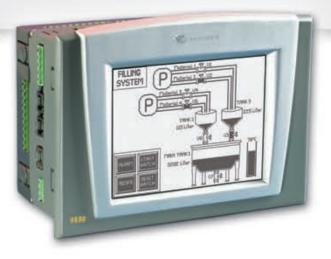
Vision[™] Series Featuring:

HMI

- Up to 255 user-designed screens
- Hundreds of images per application
- HMI graphs & Trends
- Virtual alpha-numeric keypad (in V290 & V530)
- Troubleshoot via the HMI panel—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
- Time-based control in 3 clicks



Communication

- Ethernet via TCP/IP
- SMS messaging
- GPRS/GSM/CDMA enabled
- Remote Access utilities
- MODBUS protocol support
- CANbus: CANopen, UniCAN, CANbus Layer 2
- Ports: supplied with 1 RS232, 1 RS232/RS485 and 1 CANbus; 1 port may be added for serial/Ethernet

... Powerful communication options make the Vision $OPLCs^{TM}$ the natural choice for distributed-control systems ...

Advanced PLCs with an integrated Operator Panel (graphic or touch), plus Snap-in & expansion I/Os (up to 316)

Article Number

I/O Options



I/O Expansion		Local or remote	I/Os may be added via expansio	n port or via CANbus						
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 256K Flash data								
Operator Panel										
Туре	STN LCD	STN LCD Negative blue, STN LCD Black & White FSTN LCD								
Display Resolution & Size	128 x 64 pixels 3.2″	240 x 64 pixels 5.4″	320 x 240 pixels (QVGA), 4.7" active area	320 x 240 pixels (QVGA), 5.7″ active area						
Touch Screen	None	None		Resistive, Analog						
Keyboard										
Number of Keys	24 user labeled keys	33 user labeled keys	27 user labeled keys	Virtual keyboard						
General										
Power Supply			12/24VDC							
Battery Back-up	7 years typical at 25°C, back-up for all memory sections and real-time clock (RTC)									
Environment		IP65/NEMA4	X (for panel, when mounted)							

CE/UL

Vision120TM Graphic OPLCTM

Vision120[™] Series Featuring:

HMI

- Up to 255 user-designed screens
- Hundreds of images per application
- HMI graphs & Trends
- Troubleshoot via the HMI panel no PC needed

PLC

- I/O options include high-speed, temperature and weight measurement
- Auto-tune PID, up to 12 independent loops
- Recipe programs and datalogging via Data Tables
- Time-based control in 3 clicks



Communication

- GPRS/GSM/CDMA enabled
- SMS messaging
- Remote Access utilities
- MODBUS protocol support
- CANbus: CANopen, UniCAN, CANbus Layer 2
- 2 RS232/RS485 built-in ports

¹ In these models certain inputs are adaptable, and can function as either digital, analog, and in certain models also as thermocouple or PT100. Using adaptable inputs reduces the amount of free digital inputs. For example, V120-22-UA2 offers 12 digital inputs. Implementing 2 TC inputs requires 4 digital inputs, leaving 8 free.

- ² Certain inputs can function as high-speed counters, shaft-encoder inputs, or normal digital inputs.
- ³ This specification depends on cable length.
- ⁴ Certain outputs can function as high-speed or PWM outputs.



Small-and-powerful PLC with built-in Graphic LCD display, keypad, & onboard I/O (expandable up to 256)

Article Number	V120-22-R1	V120-22-R2C	V120-22-R6C	V120-22-R34	V120-22-T1	V120-22- T 38	V120-22-T2C	V120-22-UN2	V120-22-UA2	V120-22-RA22	
		10 Digital 2 Analog Inputs 6 Relay Outputs		20 Digital 2 D/A ¹ Inputs 12 Relay Outputs	12 Digital Inputs 12 Transistor Outputs	22 Digital Inputs 16 Transistor Outputs	10 Digital 2 D/A ¹ Inputs 12 Transistor Outputs	10 Digital 2 D/A/PT100/ TC ¹ Inputs 12 Transistor Outputs	10 Digital 2 D/A/TC ¹ Inputs 10 Transistor 2 Analog Outputs	8 Digital 2 D/A, 2 PT100/ TC/Digital ¹ Inputs 8 Relay 2 Analog Outputs	
Inputs											
Digital pnp/npn	10	10	6	22	12	22	12	12	12	12	
HSC/Shaft-Encoder/ Max Freq. Measurer ²	3 10kHz 32-bit	3 10kHz 32-bit	1 10kHz 32-bit	3 30kHz ³ 32-bit	2 10kHz 32-bit	2 30kHz ³ 32-bit	3 10kHz 32-bit	2 10kHz 32-bit	1 30kHz ³ 32-bit	1 30kHz ³ 32-bit	
Analog	1 10-bit 0-10V, 0-20mA 4-20mA		6 10-bit, 2 0-10V 0-20mA, 4-20mA and 4 0-20mA 4-20mA	2 10-bit 0-10V, 0-20mA 4-20mA	None	None	2 10-bit 0-10V 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA	
Temperature Measurement	None	None	None	None	None	None	None	2 PT100/TC	2 TC	and as 2 PT100/TC	
Outputs											
Digital	6 relay	6 relay	6 relay	12 relay	12 pnp	16 pnp	12 pnp	12 pnp	10 pnp	8 relay	
High-Speed Outputs/ PWM ⁴	None	None None None None 2, first 2 outputs can function as HSO, 0.5kHz maximum							None		
Analog	None	None	None	None	None	None	None	None	2 12-bit 0-10V, 4-20mA	2 12-bit 0-10V, 4-20mA	
I/O Expansions											
				Local or Remot	e I/Os may be ad	ded via expansion	port or via CANb	US			
Program											
Application Memory					, ,	adder code capac	,				
Memory Scan Time					<u> </u>	of typical applicat					
Operands		4096 coils	s, 2048 registers, 2		1	•	• 1		it), 24 counters		
Data Tables			120	K dynamic RAM d	ata (recipe param	eters, datalogs, e	tc.), up to 256K FI	asn data			
Operator Panel					0						
Type Display						ic STN LCD 64 pixels • Size:	۹ <i>۸</i> ″				
Display Keypad					VE201011011: 120 X	ut hixels • Size:	. 2.4				
Keys					1	6 keys					
General					, 						
Power Supply	12/24VDC	12/24VDC	24VDC	24VDC	12/24VDC	24VDC	12/24VDC	12/24VDC	24VDC	24VDC	
Battery	12/21100	12/21100	21100								
Environment	7 years typical at 25°C, battery back-up for all memory sections and RTC IP65/NEMA4X (when panel mounted)										
Clock					•		•				
CIULK				K	eai-time clock fun	ctions (date and t	ime)				

$Jazz^{\mathbb{R}} Micro-OPLC^{TM}$

Jazz[®]series featuring:

Meet the New Jazz[®]2 series Advantages:

- Faster performance 30x faster
- Double the memory
- Built-in mini-USB programming port
- Ethernet via Add-on Port
- Fully compatible with current Jazz[®] models

HMI

- Up to 60 user-designed screens
- Multilingual: supports over 15 languages & 20 graphic symbols
- Scroll between pre-programmed recipes/menus

PLC

- Ladder Logic programming ensures functional flexibility
- Functions include: interrupt, loops, math, store & compare functions
- Time-based control in 3 clicks
- High-speed counters & PWM outputs
- Direct temperature inputs
- Auto-tune PID, up to 4 loops

Communication²

- SMS messaging via GSM
- Remote Access utilities
- PC access via MODBUS or OPC server
- MODBUS networking

These models comprise a total of 10/20 inputs (model-dependent). 6/16 (model-dependent) of these may be wired, in a group, as either digital npn or pnp. 2 inputs have added functionality. Both may be wired in a group as npn, pnp, or analog (voltage) inputs. Note that it is also possible to individually wire 1 input as a pnp input, and the other as an analog input. The two remaining inputs are analog (current).

² In order to download applications and enable communications, install Jazz® with the appropriate Add-on Module.

³ Certain inputs can function as high-speed counters, or as normal digital inputs.

C€/UL

17

Much more than a "smart relay". Full-function PLC and HMI, with up to 40 onboard I/Os, all in one device

	New!	Jazz® 2	series						
	JZ20-R10	JZ20-R16	JZ20-R31	JZ10-11-T10	JZ10-11-T17	JZ10-11-T40	JZ10-11-UN20	JZ10-11-UA24	JZ10-11-PT15
	6 Digital Inputs 4 Relay Outputs	6 Digital, 2 D/A, 2 Analog Inputs ¹ 6 Relay Outputs	16 Digital, 2 D/A, 2 Analog Inputs ¹ 11 Relay Outputs	6 Digital Inputs 4 Transistor Outputs	6 Digital, 2 D/A 2 Analog Inputs ¹ 7 Transistor Outputs	16 Digital 2 D/A, 2 Analog Inputs ¹ 20 Transistor Outputs	9 Digital, 2 D/A 1 Analog 1 PT100/TC Inputs ¹ 5 Relay 2 Transistor Outputs	9 Digital, 2 D/A 2 Analog, 2 PT100/TC Inputs ¹ 5 Relay, 2 Analog 2 Transistor Outputs	3 Digital, 3 D/A 3 PT1000/NI1000 Inputs ¹ 5 Relay 1 Transistor Outputs
Inputs									
Digital pnp/npn	6	8	18	6	8	18	11	11	6
High-Speed Counters ⁴				., 16-bit				1 5kHZ, 16-bit	
Analog	None	2 10 or 12-bit, 0-10V & 2 10-bit, 0-20mA, 4-20mA	2 10 or 12-bit, 0-10V & 2 10-bit, 0-20mA, 4-20mA	None	2 10-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA	2 10-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA	2 10-bit, 0-10V & 1 10-bit 0-20mA, 4-20mA	2 10-bit, 0-10V & 2 10-bit 0-20mA, 4-20mA	3 10-bit 0-10V²
Temperature Measurement	None	None	None	None	None	None	1 PT100/TC	2 PT100/TC	3 PT1000/NI1000
Outputs									
Digital	4 relay	6 relay	11 relay	4 pnp	7 pnp	20 pnp	5 relay, 2 pnp	5 relay, 2 pnp	5 relay 1 pnp/npn
High-Speed Outputs/ PWM	None	None	None	2 PWM	2 PWM	2 PWM	2 PWM	2 PWM	1 HSO
Analog	None	None	None	None	None	None	None	2 12-bit +/- 10V, 4-20mA	None
Program									
Ladder Code Memory (virtual)		48K					24K		
Memory Operands					256 coils, 256 reg	isters, 64 timers			
Operator Panel									
Туре					STN L				
Display Size					2 lines x 16	characters			
Keypad									
Keys				16	keys, 10 of which n	nay be user-labeled			
General									
Power Supply					241				
Battery			10 year				, including variable da	ta	
Environment					P65/NEMA4X (whe				
Clock	-			Re	al-time clock function	ons (date and time)			
Programming Port	0	n Board Mini USE	}			Article	No.: JZ-PRG sold sepa	rately	
Communication						Autola No. 17 DC4			
Serial Ethernet	E Article No.:	Ethernet add on p MJ20-ET1 sold	ort separatelv	K3232/K5485 Add	-on port (isolated)	Article No.: JZ-RS4	sold separately ot supported		

Add-on modules and accessories²

	Add-on modoles dia delessones									
COM Port kit	Ethernet ^{Newl} Communication Port	Program Cloner module	Keypad Slide kit							
RS232/RS485 Add-on port (isolated) Article No.: JZ-RS4	Ethernet add on port Supported by Jazz®2 series only Article No.: MJ20-ET1	Copy applications from PLC to PLC Article No.: MJ20-MEM1	Customize the Jazz® keypad to your application Article No.: MJ20-JZ-SL1							

M91 Micro-OPLCTM

M91 Series Featuring:

HMI

- Up to 80 user-designed screens
- Multilingual: supports over 15 languages and 20 graphic symbols
- Scroll between pre-programmed recipes/menus
- Info Mode—troubleshoot via the HMI panel

PLC

- Shaft-encoder inputs and PWM outputs •
- **Direct temperature inputs**
- Auto-tune PID, up to 4 loops
- Time-based control in 3 clicks •
- Database
- Print utilities
- Full source upload



Communication

- SMS messaging via GSM
- Remote access utilities
- PC access via MODBUS or OPC server
- MODBUS networking
- CANbus
- RS232/RS485 built-in port

¹ In these models certain inputs are adaptable, and can function as either digital, analog, and in certain models also as thermocouple or PT100. Using adaptable inputs reduces the amount of free digital inputs. For example, M91-2-UA2 offers 12 digital inputs. Implementing 2 TC inputs requires 4 digital inputs, leaving 8 free.

- ² Certain inputs can function as high-speed counters, shaft-encoder or normal digital inputs.
- ³ This specification depends on cable length.
 ⁴ Certain outputs can function as high-speed or PWM inputs.
- * Additional models (M90 models) are listed on the Unitronics web site.

... Use the perfect PLC for small applications— and skip panel wiring ...



Palm-size PLC + textual HMI and up to 38 onboard I/Os (expandable up to 150)

Article Number	M91-2-R1	M91-2-R2C	M91-2-R6C	M91-2-R34	M91-2-T1	M91-2-T38	M91-2-T2C	M91-2-UN2	M91-2-UA2	M91-2-RA22
	10 Digital 1 Analog Inputs 6 Relay Outputs	10 Digital 2 Analog Inputs 6 Relay Outputs	6 Digital 6 Analog Inputs 6 Relay Outputs	20 Digital 2 D/A ¹ Inputs 12 Relay Outputs	12 Digital Inputs 12 Transistor Outputs	22 Digital Inputs 16 Transistor Outputs	10 Digital 2 D/A ¹ Inputs 12 Transistor Outputs	10 Digital 2 D/A/PT100/TC ¹ Inputs 12 Transistor Outputs	10 Digital 2 D/A/TC ¹ Inputs 10 Transistor 2 Analog Outputs	8 Digital, 2 D/A 2 PT100/TC/ Digital ¹ Inputs 8 Relay 2 Analog Outputs
Inputs										
Digital pnp/npn	10	10	6	22	12	22	12	12	12	12
HSC/Shaft-Encoder/ Max. Freq. Measurer ²	3 10kHz 16-bit	3 10kHz 16-bit	1 10kHz 16-bit	3 30kHz ³ 16-bit	2 10kHz 16-bit	2 30kHz ³ 16-bit	3 10kHz 16-bit	2 10kHz 16-bit	1 30kHz ³ 16-bit	1 30kHz ³ 16-bit
Analog	1 10-bit 0-10V, 0-20mA 4-20mA	2 10-bit 0-10V, 0-20mA 4-20mA	6 10-bit 2 0-10V 0-20mA, 4-20mA and 4 0-20mA 4-20mA	2 10-bit 0-10V, 0-20mA 4-20mA	None	None	2 10-bit 0-10V, 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA	2 14-bit 0-10V, 0-20mA 4-20mA
Temperature Measurement	None	None	None	None	None	None	None	2 PT100/TC	2 TC	and as 2 PT100/TC
Outputs										
Digital	6 relay	6 relay	6 relay	12 relay	12 pnp	16 pnp	12 pnp	12 pnp	10 pnp	8 relay
High-Speed Outputs/ PWM ⁴	None	None	None	None		2 , first 2 outputs	can function as	HSO, 0.5kHz max	kimum	None
Analog	None	None	None	None	None	None	None	None	2 12-bit: 0-10V, 4-20mA	2 12-bit: 0-10V, 4-20mA
I/O Expansion										
Program				I/Os m	ay be added via e	expansion port				
Application Memory				36K	(virtual) Ladder (ode capacity				
Memory Operands					coils, 256 registe					
Database				10	24 integers, (indi	rect access)				
Operator Panel										
Туре					STN LCD					
Display Size					2 lines x 16 cha	racters				
Keypad										
Keys					15 keys					
General			A 115 -							A 11/2 - 2
Power Supply	12/24VDC	12/24VDC	24VDC	24VDC	12/24VDC	24VDC	12/24VDC	12/24VDC	24VDC	24VDC
Battery			7 year	rs typical at 25°C,	, ,	'	tions and RTC			
Environment					IEMA4X (when po					
Clock (RTC)				Real-tin	e clock functions	(date and time)				

I/O Expansion Modules

Expand your system with local or remote I/O expansion modules¹. Vision series support both local & remote I/O modules. M90/M91² support local modules only.

Digital Modules

IO-DI8-TO8	IO-DI8-RO4	IO-DI8-RO8	EX90-DI8-RO8 ³	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, including one High-speed Counter 8 Relay Outputs	24VDC 16 Digital Inputs, pnp/npn, including one High-speed Counter
IO-TO16	IO-RO8	IO-RO16	IO-DI8ACH	
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

I/O Expansion Module Adapters

CE/UL

IO-AI4-AO2	IO-PT400	IO-PT4K		EX-A2X ¹		
24VDC (power supply) 4 Analog Inputs	4 PT100/NI100/NI120 Inputs Range PT100:	4 PT1000/NI1000 Inputs Range PT1000:	Local I/O module adapter. Galvanic isolation. Up to 8 modules may be connected to a single PLC ¹ . Supports both 12/24 VDC			
12 bit, 0-10V, 0-20mA, 4-20mA,	-50ºC÷460ºC (-58ºF÷860ºF)	-50°C ÷460°C (-58°F ÷860°F)		EX-RC1 ⁵		
4-20mA, 2 Analog Outputs, 12 bit + sign, ± 10V, 0-20mA, 4-20mA Range NI100: -50 ⁰ C ÷ 232 ⁰ C (-58 ⁰ F ÷ 449 ⁰ F) Range NI120: -50 ⁰ C ÷ 172 ⁰ C (-58 ⁰ F ÷ 341 ⁰ F) 12 bit		Range NI1000: -50°C÷ 232°C (-58°F÷ 449°F) 12 bit	Remote I/O module adapter, via CANbus. Multiple adapters may be connected to a single PLC, with up to 8 modules to each .adapter ¹ . Supports both 12/24 VDC			
IO-AO6X	IO-LC1 ⁴ IO-LC3 ⁴	IO-ATC8	IO-AI8	¹ Number of I/Os may vary according to module		
24VDC (power supply) 6 Isolated Analog Outputs 0-10V, 0-20mA, 4-20mA	12/24VDC (Power Supply) 1-3 Loadcell / Strain gauge Inputs Input voltage ranges: ± 20mV, ±80mV	8 Thermocouple/ Analog Inputs T/C J, K, T, B, E, N, R, S,	<mark>8 Analog Inputs</mark> 0÷10V / 0÷20mA 14 bit	² Except for M90-19-B1A ³ 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.		
12 bit Excitation: AC/DC 1 Digital pnp Input		0.1 ⁰ Resolution, 0-10V, 0-20mA, 4-20mA,	0-10V, 0-20mA, 4-20mA 12/14 bit	⁴ 10-LCx models are supported by the M91 & Vision series. Not supported by the M90 series.		
	2 pnp Outputs Not supported by all OPLCs™	12/14 bit		⁵ EX-RC1 is supported by Vision series. Not supported by M91 series.		
	Not supported by all OF LCs			* Additional 12VDC models are listed		

XL Digital/ Analog Modules

IO-D16A3-RO16

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-TO16

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

EX-D16A3-RO8

24VDC, built-in Expansion Module Adapter, 16 Digital Inputs, pnp/npn, including two High-speed Counters, 3 Analog Inputs 10 bit, 0-20mA, 4-20mA, 8 Relay Outputs

EX-D16A3-TO16

on Unitronics web site.

24VDC, built-in Expansion Module Adapter, 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

Snap-in I/O Modules

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

Article No.	V200-18-E1B	V200-18-E2B	V200-18-E3XB	V200-18-E4XB	V200-18-E5B	V200-18-E6B	V200-18-E46B ¹	V200-18-E62B ¹
Digital Inputs (isolated)	16 npn/pnp (including 2 Shaft-encoder inputs)	16 npn/pnp (including 2 Shaft-encoder inputs)	18 npn/pnp (including 2 Shaft-encoder inputs)	18 npn/pnp (including 2 Shaft-encoder inputs)	18 npn/pnp (including 2 Shaft-encoder inputs)	18 npn/pnp (including 2 Shaft-encoder inputs)	18 npn/pnp (including 2 Shaft-encoder inputs)	30 npn/pnp (including 2 Shaft-encoder inputs)
Analog Inputs	3 10-bit 0-10V, 0-20mA 4-20mA	2 10-bit 0-10V, 0-20mA 4-20mA	4 isolated 12-14-bit (software dependent) 0-10V, 0-20mA 4-20mA	4 isolated 12-14-bit (software dependent) 0-10V, 0-20mA 4-20mA and/or	3 10-bit 0-10V, 0-20mA 4-20mA	3 10-bit 0-10V, 0-20mA 4-20mA & 2 14-bit 0-10V, 0-20mA 4-20mA	9 3 10-bit, 0-10V 0-20mA, 4-20mA 6 14-bit 0-10V, 0-20mA 4-20mA	2 10-bit 0-10V, 0-20mA 4-20mA
Temperature Measurement	None	None	and/or 4 TC/PT100	4 TC/PT100	None	and/or 2 TC/PT100	None	None
Digital Outputs (isolated)	4 npn/pnp (including 2 High-speed outputs)	4 npn/pnp (including 2 High-speed outputs)	2 npn/pnp High-speed	15 pnp 2 npn/pnp (including 2 High-speed)	15 pnp 2 npn/pnp (including 2 High-speed)	2 npn/pnp High-speed	2 (including 2 High-speed)	28 pnp 2 npn/pnp High-speed
Relay Outputs (isolated)	10	10	15	None	None	15	15	None
Analog Outputs	None	2 12-bit 0-10V, 0-20mA 4-20mA	4 12-bit 0-10V, 4-20mA isolated	4 12-bit 0-10V, 4-20mA isolated	None	2 12-bit 0-10V, 4-20mA isolated	2 12-bit 0-10V, 4-20mA isolated	None

¹V200-18-E46B, V200-18-E62B are not yet UL certified

Additional COM Module



Use these modules to enhance Vision's communication capabilities¹

Ethernet	RS232/RS485	lsolated RS232/RS485	CANbus	Profibus ²
V100-17-ET2 (for V130 and V350 series)	V100-17-RS4 (for V130 and V350 series)	V100-17-RS4X (for V130 and V350 series)	V100-17-CAN (for V130 and V350 series)	V100-17-PB1 (for V130 and V350 series)
V200-19-ET1 (for V200, V500, V1040 and V1210 series)	V200-19-RS4 (for V200, V500, V1040 and V1210 series)	V200-19-RS4-X (for V200, V500, V1040 and V1210 series)		

¹ V200/V500/V1040/V1210: 1 optional port for serial or Ethernet

V130/V350: 1 optional port for serial or Ethernet & 1 optional port for CANbus/Profibus

² Not yet UL certified

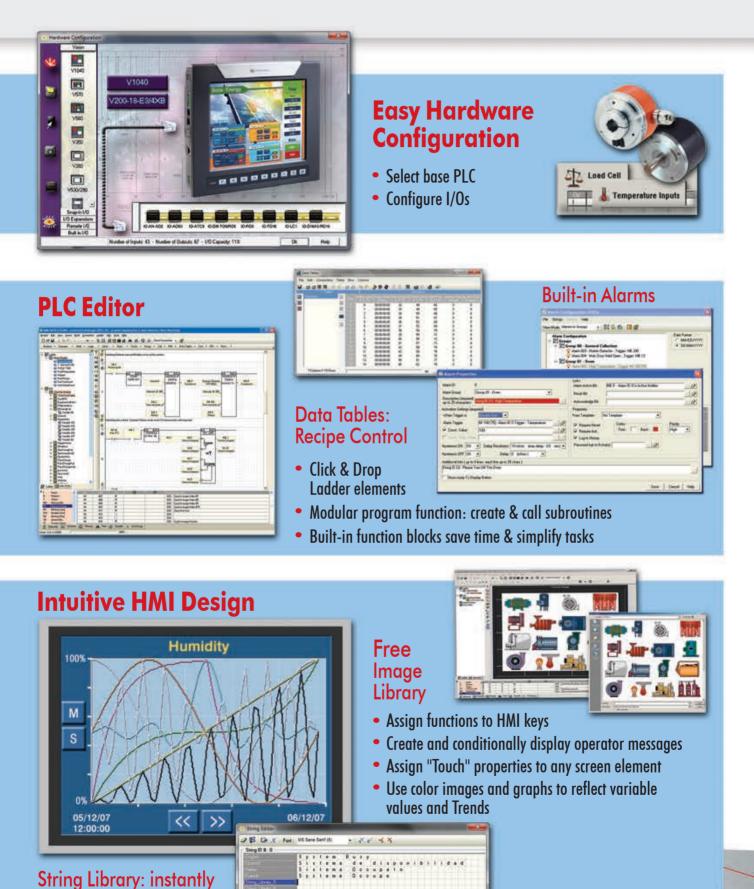
GSM-KIT-14J

GSM-KIT-41J

Kit Including Cinterion TC65 Q. Band Modem

Kit Including Enfora GSM1318 Q. Band Modem

A single, Integrated Programming Environment - Free of charge!



Note that graphic support, String Library, Alarms, and other software features are dependent on PLC model.

switch HMI language

Software Utilities: Added Value -Free of charge!



UniOPC/UniDDE Server: Communicate with SCADA/Windows applications UniDownload Manager: Simultaneously download different programs to many PLCs UniVision Licensing: Protect your Intellectual Property ActiveX & .NET communication driver: Easily implement communication between PLC & PC applications



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