

VISION PLC SERIES

VISION 130 // 350 // 430

KEY FEATURES

VERSATILE HMI OPTIONS
2.4", 3.5", and 4.3" display sizes.

HIGH-QUALITY DISPLAYS

- Vision 350 & 430: color touchscreens
- Vision 130: monochrome display.

SCALABLE I/O EXPANSION

Expand up to 512 I/Os (V 350 & V 430) and 256 I/Os (V 130).

INTEGRATED SERIAL COMMUNICATION

Built-in RS232 / RS485 for reliable connectivity.

FLEXIBLE COMMUNICATION PORTS

Optional Serial/Ethernet/Profibus + CANbus

REMOTE ACCESS & CONTROL:

- PC & Mobile – Monitor and control systems remotely.
- Web-Based HMI – Built-in Web Server for intuitive remote operation.

ADVANCED DATA HANDLING

microSD slot for data logging, application storage, and more.



VISION

PLC Model					
		V130	V350	V430	
CPU	Real-time application size	488 KB	1 MB	1 MB	
	Non-retained memory	1024 X-bits, 512 X-integers, 256 X-long integers, 64 X-double words			
	Retained memory	4096 coils, 2048 registers, 256 long integers (32-bit), 64 double words (32-bit unsigned), 24 floats, 192 timers (32-bit), 24 counters	8192 coils, 4096 registers, 512 long integers (32-bit), 256 double words (32-bit unsigned), 64 memory floats, 384 timers, 32 counters		
	Battery backup	7 years typical at 25°C / 77°F; battery back-up for all memory sections and RTC			
	Real-time Clock (RTC)	Yes			
HMI Panel Spec	Display size (Inch)	2.4"	3.5"	4.3"	
	Display resolution	128 x 64	320 x 240 (QVGA)	480 x 272	
	Touchscreen	–		Resistive, Analog	
	Color depth	Monochrome display		65,536 (16-bit)	
	Internal memory	Images: 128 KB Fonts: 128 KB	Images: 8 MB Fonts: 512 K	Images: 12 MB Fonts: 512 K	
	Viewing Area Width x Height (mm)	58 x 30.5	72 x 54.5	96.7 x 55.5	
	Cut-Out Width x Height (mm)	92 x 92		122.5 x 91.5	
	Keys	20 programmable	5 programmable		
	Serial ports		1XRS485 / RS232		
	microSD card		1		
Communication & Connectivity (Built-in)	USB port (programming)	–		mini - B	
	UniCloud			Via UCR routers	
	Built-in I/O, model dependent (pg. 44-45)		Yes, According to model (See Built-in I/Os model table)		
	Additional Ethernet port (pg. 41)		1		
	Additional Serial port (pg. 41)		1		
I/O & Communication Expansion Options	Additional CANbus ports (pg. 41)		1		
	Additional Profibus port (pg. 41)		1		
	Local I/O Expansion (pg. 46-47)		Use Local Expansion Adapters (EX-3) to add up to 8 modules		
	Remote I/O Expansion (pg. 46-47)		* EXRC1 (CANbus) adapters allow for additional I/O expansion. * UPB remote I/O adapters support both Ethernet and CANbus communication.		
	Operating Voltage		24 VDC / 12 VDC for B1 models		
Power Supply	Panel IP rating		IP66 / NEMA4X when panel-mounted		
	Operating Temperature	0°C to 50°C / 32°F to 122°F	0°C to 50°C / 32°F to 122°F For V350 - JS - TA24; (-30°C to 60°C / (-22°F to 140°F)	0°C to 50°C / 32°F to 122°F	
	Approvals		UL, CE, EAC, UL Hazardous Locations, Class I Division2 (model dependent)		

VISION PLC SERIES I/O CONFIGURATIONS

VISION 130 // 350 // 430 MODELS

Article Number ⁵		Summary	Digital ²	HSC / Shaft-Encoder ²	Inputs ¹			Outputs			
					Analog	Temperature Measurement	Transistor ³	PWM/HSO ³	Relay	Analog	Operating Voltage
V130-J-B1 V350-J-B1 V430-J-B1	No onboard I/Os	—	—	—	—	—	—	—	—	—	12 / 24 VDC
V350-J-TR20 V430-J-RH2 V130-J-TR20	10 Digital, 2 D/A Inputs ¹ 6 Relay Outputs 2 High-speed Transistor Outputs ⁶	12	3 200 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 10 - bit	—	2 npn ⁶	2 (2 PTO) 200 kHz max ⁶	6	—	—	24 VDC
V350-J-R34 V430-J-R34 V130-J-R34	20 Digital, 2 D/A Inputs ¹ 12 Relay Outputs	22	3 30 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 10 - bit	—	—	—	12	—	—	24 VDC
V350-J-TR34 V430-J-TR34 V130-J-TR34	20 Digital, 2 D/A Inputs ¹ 8 Relay, 4 High-speed Transistor Outputs	22	3 200 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 10 - bit	—	4 npn	4 (3 PTO) 200 kHz max	8	—	—	24 VDC
V350-J-TR6 V430-J-RH6 V130-J-TR6	6 Digital, 2 D/A ¹ , 4 Analog Inputs 6 Relay Outputs 2 High-speed Transistor Outputs ⁶	8	1 200 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA and 4 0 - 20 mA, 4 - 20 mA 10 - bit	—	2 npn ⁶	2 (2 PTO) 200 kHz max ⁶	6	—	—	24 VDC
V350-J-RA22 V430-J-RA22 V130-J-RA22	8 Digital, 2 D/A, 2 TC/PT100/ Digital Inputs ¹ 4 Relay, 2 Analog Outputs	12	1 30 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 14 - bit	2 Thermocouple, PT 100	—	—	8	2 0 - 10 V, 4 - 20 mA 12 - bit	—	24 VDC
V350-J-TRA22 V430-J-TRA22 V130-J-TRA22	8 Digital, 2 D/A, 2 TC/PT100/ Digital Inputs ¹ 4 Relay, 2 Analog, 4 High-Speed Transistor Outputs	12	1 200 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 14 - bit	2 Thermocouple, PT 100	4 npn	4 (2 PTO) 200 kHz max	4	2 0 - 10 V, 4 - 20 mA 12 - bit	—	24 VDC
V350-J-T2 V430-J-T2 V130-J-T2	10 Digital, 2 D/A Inputs ¹ 12 Transistor Outputs	12	3 30 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 10 - bit	—	12 pnp	7 0.5 kHz	—	—	—	24 VDC
V350-J-T38 V430-J-T38 V130-J-T38	20 Digital, 2 D/A Inputs ¹ 16 Transistor Outputs	22	2 30 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 10 - bit	—	16 pnp	7 0.5 kHz	—	—	—	24 VDC
V350-J-TA24 V350-JS-TA24 ⁴ V430-J-TA24 V130-J-TA24	8 Digital, 2 D/A, 2 TC/PT100/ Digital Inputs ¹ 10 Transistor, 2 Analog Outputs	12	1 30 kHz, 32 - bit	2 0 - 10 V, 0 - 20 mA, 4 - 20 mA 14 - bit	2 Thermocouple, PT 100	10 pnp	5 0.5 kHz	—	2 0 - 10 V, 4 - 20 mA 12 - bit	—	24 VDC

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 PT 100. Adapting requires input pins. This reduces the number of digital inputs. Pin requirements:

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

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.

⁴ Extended temperature unit

⁵ To order a classic V 350 and V 130 with a Bezel panel, switch the 'J' in the model number to 33 = V 130 / 35 = V 350, ex. V350, V 350-33-TR 20

⁶ Refers only to V 350 and V 130 Models

VISION SERIES

I/O EXPANSION MODULES & ACCESSORIES

		Inputs					Outputs			
Article Number	Digital ¹	HSC ²	Analog	Temperature Measurement	Weight Measurement	Transistor ⁴	PWM/HSC ⁵	Relay	Analog	Operating Voltage
Digital	IO-DI8-T08	8 pnp / npn	1 5 kHz 16-bit	—	—	8 pnp	—	—	—	24 VDC ⁸
	IO-DI8-RO4	8 pnp / npn	1 5 kHz 16-bit	—	—	—	—	4	—	24 VDC ⁸
	IO-DI8-RO8	8 pnp / npn	1 5 kHz 16-bit	—	—	—	—	8	—	24 VDC ⁸
	EX90-DI8-RO8 ³	8 pnp / npn	1 5 kHz 16-bit	—	—	—	—	8	—	24 VDC
	IO-DI16	16 pnp / npn	1 5 kHz 16-bit	—	—	—	—	—	—	24 VDC ⁹
	IO-T016	—	—	—	—	16 pnp	—	—	—	24 VDC
	IO-RO8	—	—	—	—	—	—	8	—	24 VDC ⁹
	IO-RO16	—	—	—	—	—	—	16	—	24 VDC ⁹
	IO-DI8ACH	8 AC	—	—	—	—	—	—	—	110 / 220 V
	IO-AI4-A02	—	4 0-10 V 0-20 mA / 4-20 mA 12-bit	—	—	—	—	—	±10 V 12-bit + sign, 0-20 mA, 4-20 mA 12-bit	24 VDC
Analog, Temperature and Weight / Strain Measurements	IO-PT400	—	—	4 PT 100/NI100/NI120	—	—	—	—	—	Not relevant
	IO-PT4K	—	—	4 PT 1000 / NI1000	—	—	—	—	—	Not relevant
	IO-A06X	—	—	—	—	—	—	—	6 (Isolated) 0-10 V 0-20 mA, 4-20 mA 12-bit	24 VDC
	IO-LC1	1 pnp	—	—	1 Loadcell / Strain gauge	2 pnp	—	—	—	24 VDC
	IO-LC3	1 pnp	—	—	3 Loadcell / Strain gauge	2 pnp	—	—	—	24 VDC
	IO-ATC8	—	8 Thermocouple, 0-10 V 0-20 mA, 4-20 mA 14-bit	—	—	—	—	—	—	Not relevant
Combo	IO-AI8	—	8 0-10 V 0-20 mA / 4-20 mA 14-bit	—	—	—	—	—	—	Not relevant
	IO-D16A3-RO16	16 pnp / npn	2 30 kHz 32-bit	3 0-20 mA, 4-20 mA 10-bit	—	—	—	16	—	24 VDC
	IO-D16A3-T016	16 pnp / npn	1 30 kHz 32-bit	3 0-20 mA, 4-20 mA 10-bit	—	15 pnp, 1 pnp / npn	1 pnp 0.5 kHz npn 50 kHz	None	—	24 VDC
	EX-D16A3-R08 ⁷	16 pnp / npn	2 30 kHz 32-bit	3 0-20 mA, 4-20 mA 10-bit	—	None	None	8	—	24 VDC
	EX-D16A3-T016 ⁷	16 pnp / npn	1 30 kHz 32-bit	3 0-20 mA, 4-20 mA 10-bit	—	15 pnp 1 pnp / npn	1 pnp 0.5 kHz npn 50 kHz	None	—	24 VDC
High-speed Remote I/O Module	EXF-RC15 ^{2,4,9}	9 pnp / npn	3 200 kHz 32-bit	—	—	4 npn	4 (up to 3 PTO)	2	—	24 VDC

I/O EXPANSION MODULE ADAPTERS

Article	Description
EX-A2X ¹	Local I/O module adapter, Galvanic isolation. Up to 8 modules may be connected to a single PLC ³ . Supports both 12 / 24 VDC
EX-RC1 ^{1,4}	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.

¹Number of supported I/Os & I/O modules varies according to module.

²The EXF-RC15 functions as a node in a Vision UniCAN network and connects to the Vision controller via CANbus and programmed in VisiLogic.

The EXF-RC15 cannot be extended as regular I/O unit. High-speed inputs are configurable as either high-speed counter (HSC) or shaft-encoder.

³The EX 90 is housed in an open casing. Only one EX90 can be connected per PLC, as a single expansion module; Expansion adapter not required.

⁴Supported by Samba, Vision and UniStream series.

⁵The total number of digital inputs listed includes high-speed inputs.
Example: the IO-D16A3-T016 offers a total of 16 pnp/npn inputs. You can configure 14 as a HSC and 15 as a Counter reset; this reduces the available number of digital inputs to 14.

⁶The total number of digital outputs listed includes high-speed outputs.
Example: the IO-D16A3-T016 offers a total of 16 transistor outputs. You can configure 1 to High-speed output, reducing the number of available digital outputs to 15.

⁷Functions as local adapter. Can support up to 7 I/O modules.

⁸Also available as 12 VDC – contact us for part number.

⁹One HSC may be configured as a shaft encoder.