



# ELECTRIC CONTROLS

VersaMax Micro

VersaMax Micro PLC

ELECTRIC CONTROLS

## 개요 :

Don't let size fool you. Although they are easy on valuable panel space, the VersaMax Nano and Micro PLCs are big on features. For high-volume applications where cost and fast processor speeds are an issue, the VersaMax Nano is the PLC of choice. For additional functionality, the modular VersaMax Micro offers the features and the flexibility to match application needs in such industries as food processing, chemicals, packaging, water and wastewater, construction equipment and plastics.

For tight spaces, the VersaMax Nano PLC is the perfect solution. Thanks to its all-in-one construction, installation is a breeze. All you have to do is snap it onto a DIN-rail or screw it into a panel. With the VersaMax Nano, you save on initial as well as life cycle costs.

The small-footprint VersaMax Micro PLC offers the flexibility of modular design and a variety of built-in features, including up to 64 I/O points (expandable to 170 I/O points), fast cycle times, a robust instruction set and extensive memory that multiplies your programming options.



Micro PLC



Nano PLC

## VersaMax Nano and Micro Selection Guide

Features	Nano 10	Micro 14	Micro 23	Micro 28	Micro 20	Micro 40	Micro 64
Built-in Discrete I/O	6 in/ 4out	8 in/ 6 out	13 in/10 out	16 in/12 out	12 in/8 out	24 in/16 out	40 in/24 out
Built-in Analog I/O	1 on some models	none	2 in/ 1 out	none	none	none	none
I/O Expansion Units	none	Up to 4 units	Up to 4 units	Up to 4 units	Up to 4 units	Up to 4 units	Up to 4 units
Logic Memory (Words)	2K	9K	9K	9K	24K	24K	24K
Data Storage (Words)	256	256	2K	2K	32K	32K	32K
Scan Time (msec/K)	1.3 msec	1.1 msec	1.1 msec	1.1 msec	1.1 msec	1.1 msec	1.1 msec
Battery Backed RAM	Super Cap only	Super Cap only	Yes and Super Cap	Yes and Super Cap	Yes and Super Cap	Yes and Super Cap	Yes and Super Cap
Real Time Clock	none	none	Yes, Included	Yes, Included	Yes, Included	Yes, Included	Yes, Included
Ports Available	1 RS-232	1 RS-232	1 RS-232 and 1 RS-485	1 RS-232 and 1 RS-485	1 RS-232 and second port optional RS-232, RS-485, USB or Ethernet	1 RS-232 and second port optional RS-232, RS-485, USB or Ethernet	1 RS-232 and second port optional RS-232, RS-485, USB or Ethernet
Ethernet Option	Yes, VersaMax SE	Yes, VersaMax SE	Yes, VersaMax SE	Yes, VersaMax SE	Yes on second port	Yes on second port	Yes on second port
High Speed Counter	Up to 4 at 10Khz (16 bit)	Up to 4 at 10Khz (16 bit)	Up to 4 at 10Khz (16 bit)	Up to 4 at 10Khz (16 bit)	Up to 4 at 100Khz (32 bit)	Up to 4 at 100Khz (32 bit)	Up to 4 at 100Khz (32 bit)
Pulse Train/PWM	Up to 4 at 5Khz (16 bit)	Up to 4 at 5Khz (16 bit)	Up to 4 at 5Khz (16 bit)	Up to 4 at 5Khz (16 bit)	Up to 4 at 65Khz (32 bit)	Up to 4 at 65Khz (32 bit)	Up to 4 at 65Khz (32 bit)
Motion Commands	N/A	N/A	N/A	N/A	Find Home, Go Home, Jog, Ramp, Blended Move (4 Consecutive Moves)	Find Home, Go Home, Jog, Ramp, Blended Move (4 Consecutive Moves)	Find Home, Go Home, Jog, Ramp, Blended Move (4 Consecutive Moves)
Write Register Values to Internal Flash	No	Yes	Yes	Yes	Yes	Yes	Yes
On Line Program Support	No	No	No	No	Yes with Firmware 3.9 & Hardware revision B	Yes with Firmware 3.9	Yes with Firmware 3.9

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### VersaMax Micro

### VersaMax Micro PLC

#### Micro 23 PLCs



The Micro 23 PLC is big on features with 23 discrete I/O and two analog inputs and one analog output built-in (expandable to 135 I/O) points. The Micro 23 executes fast cycle times, robust instruction set, and generous memory to allow more flexible programming. And it's all packaged in a sturdy modular design for easy access and long-term durability.

	IC200UAL004	IC200UAL005	IC200UAL006
Product Name	23 point; (13) 12 VDC In, (10) Relay Out, (2) Analog In and (1) Analog Out, 12 VDC Powered.	23 point; (13) 24 VDC In, (9) Relay Out, (1) 24 VDC Out, (2) Analog In and (1) Analog Out, 24 VDC Powered.	23 point; (13) 24 VDC In, (9) Relay Out, (1) 24 VDC Out, (2) Analog In and (1) Analog Out, 120/240 VAC Powered.
Lifecycle Status	Active	Active	Active
Number of Discrete Inputs/Outputs	13 In / 10 Out (Supports 4 Expansion Units)	13 In / 10 Out (Supports 4 Expansion Units)	13 In / 10 Out (Supports 4 Expansion Units)
Number of Analog Inputs/Outputs	2 analog in / 1 analog out built-in and supports up to 4 analog expansion units (16 analog in/ 8 analog out)	2 analog in / 1 analog out built-in and supports up to 4 analog expansion units (16 analog in/ 8 analog out)	2 analog in / 1 analog out built-in and supports up to 4 analog expansion units (16 analog in/ 8 analog out)
Physical I/O Maximum	135	135	135
User Program Logic Memory (Words)	9 K	9 K	9 K
Registers (Words)	2 K	2 K	2 K
Analog Pots for Data Adjustment	Yes, 2	Yes, 2	Yes, 2
Serial Port Connector Type	RJ-45 (RS-232) port 1 and DB-15 (RS-485 on port 2)	RJ-45 (RS-232) port 1 and DB-15 (RS-485 on port 2)	RJ-45 (RS-232) port 1 and DB-15 (RS-485 on port 2)
Protocols	Port 1, SNP, SNP X (Breakless); Port 2, SNP, SNP X (Breakless), RTU Master and Slave (2 and 4 wire RTU Slave), SNP Master, Serial Read and Write	Port 1, SNP, SNP X (Breakless); Port 2, SNP, SNP X (Breakless), RTU Master and Slave (2 and 4 wire RTU Slave), SNP Master, Serial Read and Write	Port 1, SNP, SNP X (Breakless); Port 2, SNP, SNP X (Breakless), RTU Master and Slave (2 and 4 wire RTU Slave), SNP Master, Serial Read and Write
Power Voltage	12 VDC	24 VDC	120/240 VAC
Input Power Supply Rating	8 Watts	8 Watts	34 VA
24 VDC User Power for Sensors	200 mA	200 mA	200 mA
Input Device Voltage	12 VDC	24 VDC	24 VDC
Maximum Type A and B Counters	4 Type A and 1 Type B @ 10Khz (16 bit)	4 Type A and 1 Type B @ 10Khz (16 bit)	4 Type A and 1 Type B @ 10Khz (16 bit)
Analog Input Ranges	0 to 10 VDC (10.24V max.) 0 to 20 mA (20.5 mA max.); 4 to 20 mA (20.5 mA max.); 12 bit Resolution	0 to 10 VDC (10.24V max.) 0 to 20 mA (20.5 mA max.); 4 to 20 mA (20.5 mA max.); 12 bit Resolution	0 to 10 VDC (10.24V max.) 0 to 20 mA (20.5 mA max.); 4 to 20 mA (20.5 mA max.); 12 bit Resolution
Output Control Voltage	Relay Out	Relay Out	Relay Out
Relay Maximum Resistive Load Rating	2 Amps at 24 VDC and 240 VAC	2 Amps at 24 VDC and 240 VAC	2 Amps at 24 VDC and 240 VAC
Maximum Number of PWM/Pulse Outputs	N/A	1 @ 5Khz (16 bit)	1 @ 5Khz (16 bit)
Analog Output Ranges	0 to 10 VDC (10.24V max.) 0 to 20 mA (20.5 mA max.); 4 to 20 mA (20.5 mA max.); 12 bit Resolution	0 to 10 VDC (10.24V max.) 0 to 20 mA (20.5 mA max.); 4 to 20 mA (20.5 mA max.); 12 bit Resolution	0 to 10 VDC (10.24V max.) 0 to 20 mA (20.5 mA max.); 4 to 20 mA (20.5 mA max.); 12 bit Resolution
Dimensions (W x H x D) mm	150 x 90 x 76	150 x 90 x 76	150 x 90 x 76
Programming Software	VersaPro 1.1 or greater, Proficy Machine Edition Logic Developer	VersaPro 1.1 or greater, Proficy Machine Edition Logic Developer	VersaPro 1.1 or greater, Proficy Machine Edition Logic Developer
Portable Memory Module Support	No	No	No



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## Micro 28 PLC



The Micro 28 PLC is big on features with the built-in 28 I/O (expandable to 140 I/O) points to fast cycle times, two built-in serial ports, robust instruction set, and generous memory to allow more flexible programming. And it's all packaged in a sturdy modular design for easy access and long-term durability. This all-in-one PLC gives you everything you need to control a wide variety of applications.

	IC200UAA007	IC200UAR028	IC200UDD110	IC200UDD120
Product Name	28 point; (16) 120 VAC In, (12) 120 VAC Out, 120/240 VAC Powered.	28 point, (16) 120 VAC In, (12) Relay Out, 120/240 VAC Powered.	28 point; (16) 24 VDC In, (12) 24 VDC Out (6) @ 1.0 A, (6) @ 0.5 A, 24 VDC Powered.	28 point; (16) 24 VDC In, (12) 24 VDC Out (6) @ 1.0 A, (6) @ 0.5 A, 24 VDC Powered.
Lifecycle Status	Active	Active	Active	Active
Number of Discrete Inputs/Outputs	16 In / 12 Out (Supports 4 Expansion Units)	16 In / 12 Out (Supports 4 Expansion Units)	16 In / 12 Out (Supports 4 Expansion Units)	16 In / 12 Out (Supports 4 Expansion Units)
Number of Analog Inputs/Outputs	Supports up to 4 analog expansion units (16 analog in/ 8 analog out)	Supports up to 4 analog expansion units (16 analog in/ 8 analog out)	Supports up to 4 analog expansion units (16 analog in/ 8 analog out)	Supports up to 4 analog expansion units (16 analog in/ 8 analog out)
Physical I/O Maximum	140	140	140	140
User Program Logic Memory (Words)	9 K	9 K	9 K	9 K
Registers (Words)	2 K	2 K	2 K	2 K
Analog Pots for Data Adjustment	Yes, 2	Yes, 2	Yes, 2	Yes, 2
Serial Port Connector Type	RJ-45 (RS-232) port 1 and DB-15 (RS-485 on port 2)	RJ-45 (RS-232) port 1 and DB-15 (RS-485 on port 2)	RJ-45 (RS-232) port 1 and DB-15 (RS-485 on port 2)	RJ-45 (RS-232) port 1 and DB-15 (RS-485 on port 2)
Protocols	Port 1, SNP, SNP X (Breakless); Port 2, SNP, SNP X (Breakless), RTU Master and Slave (2 and 4 wire RTU Slave), SNP Master, Serial Read and Write	Port 1, SNP, SNP X (Breakless); Port 2, SNP, SNP X (Breakless), RTU Master and Slave (2 and 4 wire RTU Slave), SNP Master, Serial Read and Write	Port 1, SNP, SNP X (Breakless); Port 2, SNP, SNP X (Breakless), RTU Master and Slave (2 and 4 wire RTU Slave), SNP Master, Serial Read and Write	Port 1, SNP, SNP X (Breakless); Port 2, SNP, SNP X (Breakless), RTU Master and Slave (2 and 4 wire RTU Slave), SNP Master, Serial Read and Write
Power Voltage	120/240 VAC	120/240 VAC	24 VDC	24 VDC
Input Power Supply Rating	16 VA	16 VA	5 Watts	5 Watts
24 VDC User Power for Sensors	N/A	200 mA	200 mA	200 mA
Input Device Voltage	120 VAC	120 VAC	24 VDC	24 VDC
Maximum Type A and B Counters	N/A	N/A	4 Type A and 1 Type B @ 10Khz (16 bit)	4 Type A and 1 Type B @ 10Khz (16 bit)
Output Control Voltage	120 VAC	Relay Out	24 VDC	24 VDC ESCP, Self Healing, No External Fusing Required
Relay Maximum Resistive Load Rating	N/A	10 @ 2 Amps at 24 VDC and 240 VAC; 2 @ 10 Amps at 24 VDC and 240 VAC	N/A	N/A
Maximum Number of PWM/Pulse Outputs	N/A	N/A	4 @ 5Khz (16 bit)	4 @ 5Khz (16 bit)
Dimensions (W x H x D) mm	150 x 90 x 76	150 x 90 x 76	150 x 90 x 76	150 x 90 x 76
Programming Software	VersaPro 1.1 or greater, Proficy Machine Edition Logic Developer	VersaPro 1.1 or greater, Proficy Machine Edition Logic Developer	VersaPro 1.1 or greater, Proficy Machine Edition Logic Developer	VersaPro 1.1 or greater, Proficy Machine Edition Logic Developer
Portable Memory Module Support	No	No	No	No

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