



VersaMax® Nano and Micro 12VDC Control

Data Sheet

GE Fanuc Automation

The new VersaMax® Micro and Nano PLCs are ideal for applications requiring low power 12VDC control.

The VersaMax Nano is a palm-sized PLC that is highly compact, with an all-in-one construction that saves panel space. It can be easily DIN rail or panel mounted. The VersaMax Nano comes with six 12VDC inputs and four Relay outputs or 6 12VDC inputs and four 12VDC outputs. The built-in RS-232 port makes it easy to communicate to a operator interface, modem or pagers.

The VersaMax Micro is available in 14 point CPU, 28 point CPU and a 23 point CPU with analog I/O configurations. VersaMax Micro PLCs can be expanded up to 4 expansion units and a total of 84 I/O. Output options are relay or 12VDC.

The powerful instruction set includes Floating Point Math, PID, Subroutines, Serial Read and Write and much more.



GE Fanuc offers a complete family of Nano and Micro Controllers for 12VDC Control.

Product Features:

• VersaMax Nano PLC:

- Versatile communications options include a built-in RS-232 that supports SNP, Modbus RTU Slave and Serial Read and Write
- A Fast processor that executes in 1.2 micro seconds per Boolean operation
- High speed applications can be easily solved with the two built in High Speed Counters (10kHz)
- More than enough program storage of 2K words stored in the Flash Memory

• VersaMax Micro PLC:

- Removable terminal strips for easy maintenance
 - In addition to the RS-232 port the 23 point and 28 point micro PLCs have a RS-485 port for master/slave and multi-drop applications
 - Time and date stamping is accomplished using the Real Time Clock that is standard on 23 point and 28 point micro PLCs
 - Set point adjustment is easy using the two built-in analog pots
 - Complex applications that require a lot of memory can easily fit into the standard 9K of memory for program and data storage
- Both the VersaMax Micro and Nano are programmed using VersaPro™ programming software that runs on Windows® 95, 98 and Windows NT® 4.0

Application Benefits:

- The wide range of communications options make the VersaMax Nano and Micro PLCs ideal for SCADA, Modem, Pager, Bar Code Readers, and other ASCII serial devices.
- The low power consumption of the VersaMax Nano and Micro PLCs make them affordable and practical in applications that have solar power and battery power.
- The rugged construction, electrical and vibration standards designed into the product make it suitable for difficult applications such as trash trucks, busses, and other transportation systems requiring 12VDC control.
- Programming, troubleshooting and monitoring can be accomplished over modems, multi-drop RS-485 or over Ethernet (Optional VersaMax SE Ethernet interface).
- Applications such as pumps, water levels, speed control, and process control are easily handled the powerful instruction set that includes PID, Floating Point Math and Subroutines.
- The compact size of the VersaMax Nano, which is only 75mm wide x 80mm high and 47mm deep, and the VersaMax Micro reduce the requirement for valuable panel space.
- Panel layout is easy using the VersaMax Micro I/O expansion units. Connection cables come in 0.1, 0.5 and 1 meter and the total length from PLC to last expansion unit is 2 meters.

Specifications & Ordering Information

Dimensions

VersaMax Nano	
Height	80mm, 3.20 inches
Width	75mm, 3.00 inches
Depth	47mm, 1.88 inches
VersaMax Micro 14 Point CPU and 14 Point Expansion Unit	
Height	90mm, 3.60 inches
Width	95mm, 3.80 inches
Depth	76mm, 3.04 inches
VersaMax Micro 23 Point CPU and 28 Point CPU	
Height	90mm, 3.60 inches
Width	150mm, 6.00 inches
Depth	76mm, 3.04 inches

General Specifications	VersaMax Nano	VersaMax Micro
Logic (Words) and Data Memory	1K Words/256 Registers	18K / Reg. 2K-23/28 pt, 256-14 pt
Execution (Per Boolean Operation)	1.0 micro seconds	1.2 micro seconds
Program Storage and Data Storage (Battery back-up, 4 months at 55C)	Flash Memory Only	Flash Memory. Battery backed RAM for 23 and 28 point CPUs.
Physical I/O	10 I/O	Up to 84 I/O with expansion
Serial Ports	(1) RS-232	(1) RS-232 on 14 Point CPU plus (1) RS-485 on 23 / 28 Point CPUs
Serial Protocols Support	SNP, SNP X, Modbus RTU and Serial Read and Write	
Master/Slave Support	Slave Only	Slave Only on 14 Point CPU and Master/Slave on 23 / 28 Point CPU
Modem Compatible	Yes	
Power Supply Specifications		
Voltage Range	9.6VDC to 15VDC with a 3.0 milliseconds Hold Up	
Input Power Supply Rating	3 Watts	4 Watts - 14 pt, 8 Watts - 23/28 pt.
Inrush Current	8 Amps	9.2 Amps 14 pt, 9.6 Amps 23/28 pt
Inrush Time	200 msec	200 msec
Input Current	250mAmp	300mAmp 14 pt, 480mAmp 23/28 pt
12VDC Input Specifications		
Rated Input Voltage	12VDC (Input Voltage Range 0 to 15VDC)	
Input Current and Resistance	9mA typical and 1.3 Kohms	
Input Threshold Voltage	ON Voltage – 9VDC minimum and OFF Voltage – 2.5VDC maximum	
Response Time	Configurable - 0.5 to 20 milliseconds. 100microseconds HSC Mode.	
12VDC Output Specifications		
Rated Load Voltage	12VDC (+20%, -20%)	
Maximum Load Current	0.7A	
Minimum Switching Current	1mA	
Leakage Current	0.1mA (max)	
Output Response Time	OFF to ON - 0.1ms (max) and ON to OFF – 0.1ms (max)	
PWM/Pulse Train	5Khz (3 channels on Nano and 4 on Micro)	
Relay Output Specifications		
Operating Voltage	5 to 30VDC or 5 to 250VAC	
Leakage Current	15mA at 240VAC Maximum	
Maximum UL Pilot Duty Rating	2 Amps at 12VDC and 240VDC	
Maximum Resistive Load Rating	2 Amps at 12VDC and 240VDC	
Minimum Load	10mAmps	
Maximum Inrush	5 Amps per half cycle	
On and Off Response Time	15 milliseconds each (maximum)	
Contact Life: Mechanical	20 million operations	
Contact Life: Electrical	Current: Resistive 2 Amp	Current: Lamp and Solenoid 0.6 Amp Typical Operations 200,000
Analog Input and Output	Model IC200UAL004	
Input and Output Range	0 to 10VDC, 0 to 20mA and 4 to 20mA	
Input and Output Resolution	12 bit for 0 to 10VDC and 0 to 20mA; 11+ bits for 4 to 20 mA	
Input and Output Accuracy	+/- 1% of full scale over full operating temperature range	
Agency Approvals	CE Mark Approved, UL and CUL (Class 1, Div II, A, B, C D) pending	
Operating/Storage Temperature	Operating 0C to 55C / Storage -10C to +75C	

Ordering Information	
Part Number	Description
IC200NDR010	10 point Nano, (6) 12VDC In, (4) Relay Out, 12VDC P/S
IC200UDR003	14 point Micro, (8) 12VDC In, (6) Relay Out, 12VDC P/S
IC200UAL004	23 point Micro, (13) 12VDC In, (10) Relay Out, (2) Analog In, (1) Analog Out, 12VDC P/S
IC200UDR006	28 point VersaMax Micro, (16) 12VDC In, (12) Relay Out, 12VDC P/S
IC200UEX013	14 point Expansion Unit, (8) 12VDC In, (6) Relay Out, 12VDC P/S
IC200NDD010	10 point Nano, (6) 12VDC In, (4) 12VDC Out, 12VDC P/S
IC200UDD112	14 point Micro, (8) 12VDC In, (6) 12VDC Out, 12VDC P/S
IC200UDD212	28 point VersaMax Micro, (16) 12VDC In, (12) 12VDC Out, 12VDC P/S
IC200UEX015	14 point Expansion Unit, (8) 12VDC In, (6) 12VDC Out, 12VDC P/S
IC200SET001	Ethernet Interface, VersaMax SE. Serial to Ethernet, 10baseT, 12/24VDC P/S



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