VersaMax Distributed I/O

By choosing GE, customers gain access to a complete line of highly versatile and robust I/O modules that offer seamless integration with the PACSystems control family, for reliable, high performance solutions.

The modular design of VersaMax I/O addresses a wide range of discrete and process applications. Its innovative modular architecture combines power and versatility to help provide performance in a compact control solution.

The VersaMax PROFINET network interface provides integrated I/O to PACSystems controllers in both copper and fiber interface. Ideal for any remote I/O application, the PROFINET interface supports ring topology, which permits a node to go down or break without transmission interruption.

Equipment builders are continuously looking for ways to improve the performance of their equipment while augmenting usability and reducing size

and complexity. These requirements extend to the I/O that they use. GE's I/O solutions provide the high performance control solutions with best-in-class integration of distributed (networked) I/O to meet these demanding applications.

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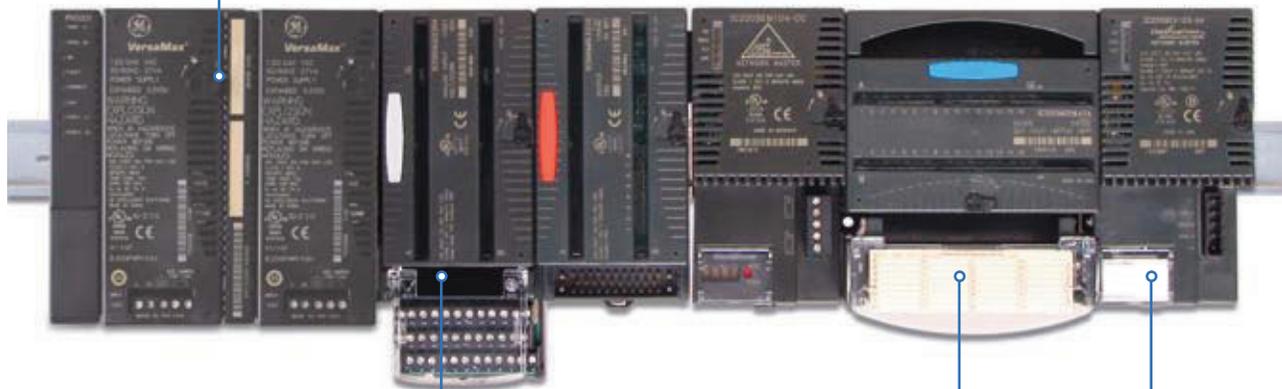
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Publication Reference Chart

GFK-1179	Installation Requirements for Conformance to Standards
GFK-1503	VersaMax PLC User's Manual
GFK-1504	VersaMax Modules, Power Supplies, and Carriers User's Manual
GFK-1533	VersaMax System DeviceNet Communications Modules User's Manual
GFK-1534	VersaMax System PROFIBUS Network Modules User's Manual
GFK-1535	VersaMax System Genius Network Interface Unit User's Manual
GFK-1563	VersaMax I/O and Industrial Networking Application Guide

GFK-1697	VersaMax System AS-i Network Master Module User's Manual
GFK-1847	Remote I/O Manager User's Manual
GFK-1852	VersaMax Serial to Ethernet Adapter User's Manual
GFK-1860	VersaMax System Ethernet Network Interface Unit User's Manual
GFK-1868	Proficy Machine Edition Getting Started Guide
GFK-1876	VersaMax Ethernet Station Manager Manual
IC690CDU002	InfoLink for PLC CD-ROM

Carriers

VersaMax provides several types of snap-together I/O carriers and interposing terminals to provide maximum wiring flexibility, as well as module hot insertion and removal. VersaMax carriers support IEC box-style, spring-style, and barrier-style terminals and are also available as snap-on auxiliary terminal strips and interposing terminals that can be mounted separately and connected to a connector-style carrier by an I/O cable.

	IC200CHS022	IC200CHS025
Product Name	VersaMax Compact I/O Carrier, Local Box Clamp Connection Style	VersaMax Compact I/O Carrier, Local Spring Clamp Connection Style
Lifecycle Status	Active	Active
Field Termination Type	Integrated	Integrated
Wiring Termination Style	Local Box	Local Spring
Orientation on Module on Base	Vertical	Vertical
Dimensions (W x H x D)	66.8 mm (2.63 in) x 163.5 mm (6.45 in) x 70 mm (2.75 in), not including the height of DIN-rail	66.8 mm (2.63 in) x 163.5 mm (6.45 in) x 70 mm (2.75 in), not including the height of DIN-rail
Cables	N/A	N/A

Carriers

VersaMax provides several types of snap-together I/O carriers and interposing terminals to provide maximum wiring flexibility, as well as module hot insertion and removal. VersaMax carriers support IEC box-style, spring-style, and barrier-style terminals and are also available as snap-on auxiliary terminal strips and interposing terminals that can be mounted separately and connected to a connector-style carrier by an I/O cable.

	IC200CHS001	IC200CHS002	IC200CHS005
Product Name	VersaMax I/O Carrier, Local Barrier Style	VersaMax I/O Carrier, Local Box Style	VersaMax I/O Carrier, Local Spring Clamp Connection Style
Lifecycle Status	Active	Active	Active
Field Termination Type	Integrated	Integrated	Integrated
Wiring Termination Style	Barrier	Box	Spring
Orientation on Module on Base	Horizontal	Horizontal	Horizontal
Dimensions (W x H x D)	110.5 mm (4.35 in) x 139.7 mm (5.5 in) x 70 mm (2.75 in), not including the height of DIN-rail	110.5 mm (4.35 in) x 139.7 mm (5.5 in) x 70 mm (2.75 in), not including the height of DIN-rail	110.5 mm (4.35 in) x 139.7 mm (5.5 in) x 70 mm (2.75 in), not including the height of DIN-rail
Cables	N/A	N/A	N/A

Carriers

VersaMax provides several types of snap-together I/O carriers and interposing terminals to provide maximum wiring flexibility, as well as module hot insertion and removal. VersaMax carriers support IEC box-style, spring-style, and barrier-style terminals and are also available as snap-on auxiliary terminal strips and interposing terminals that can be mounted separately and connected to a connector-style carrier by an I/O cable.

	IC200CHS003	IC200CHS011	IC200CHS012	IC200CHS014	IC200CHS015
Product Name	VersaMax I/O Carrier, VersaMax I/O Carrier, Connector Style. Interposing Barrier A connecting cable Style (Requires (IC200CBL1xxx) and IC200CHS003 base interposing base (IC200CHS011, and connecting CHS012, CHS014, CHS015, cable IC200CBL1xxx) IC200CHS1xx or IC200CHS2xx) are required. This carrier can be used with all VersaMax I/O modules EXCEPT the following, due to their high isolation requirements: IC200MDL144 Input 240 VAC 4 Point Isolated Module; IC200MDL244 Input 240 VAC 8 Point Isolated Module; IC200MDD850 Mixed 240 VAC Isolated 4 Point / Output Relay 2.0A Isolated 8 Point Module	VersaMax I/O Carrier, Interposing Box Style (Requires IC200CHS003 base and connecting cable IC200CBL1xxx)	VersaMax I/O Carrier, Interposing Box Thermocouple Compensation (Requires IC200CHS003 base and connecting cable IC200CBL1xxx)	VersaMax I/O Carrier, Interposing Spring Clamp (Requires IC200CHS003 base and connecting cable IC200CBL1xxx)	VersaMax I/O Carrier, Interposing Spring Clamp (Requires IC200CHS003 base and connecting cable IC200CBL1xxx)
Lifecycle Status	Active	Active	Active	Active	Active
Field Termination Type	Integrated	Non-Integrated	Non-Integrated	Integrated	Non-Integrated
Wiring Termination Style	Connector	Barrier	Box	Box-Thermocouple Compensation	Spring
Orientation on Module on Base	Vertical	N/A	N/A	N/A	N/A
Dimensions (W x H x D)	66.8 mm (2.63 in) x 133.4 mm (5.25 in) x 70 mm (2.75 in), not including the height of DIN-rail	110.5 mm (4.35 in) x 105.4 mm (2.63 in) x 70 mm (2.75 in), not including the height of DIN-rail	110.5 mm (4.35 in) x 105.4 mm (2.63 in) x 70 mm (2.75 in), not including the height of DIN-rail	110.5 mm (4.35 in) x 105.4 mm (2.63 in) x 70 mm (2.75 in), not including the height of DIN-rail	110.5 mm (4.35 in) x 105.4 mm (2.63in) x 70 mm (2.75 in), not including the height of DIN-rail
Cables	Requires a IC200CBL1xxx cable	Requires a IC200CBL1xxx cable	Requires a IC200CBL1xxx cable	Requires a IC200CBL1xxx cable	Requires a IC200CBL1xxx cable

I/O Interposing Bases

VersaMax I/O interposing disconnect bases enable the IC200CHS003 to connect to a wide range of termination bases. The Relay bases provide additional protection and higher amperage outputs. The Disconnect bases enables the user to easily disconnect signals, on a per point bases, from the I/O module.

	IC200CHS003	IC200CHS101	IC200CHS102	IC200CHS111
Product Name	VersaMax I/O Carrier, Connector Style. A connecting cable (IC200CBL1xxx) and interposing base (IC200CHS011, CHS012, CHS014, CHS015, IC200CHS1xx or IC200CHS2xx) are required. This carrier can be used with all VersaMax I/O modules EXCEPT the following, due to their high isolation requirements: IC200MDL144 Input 240 VAC 4 Point Isolated Module; IC200MDL244 Input 240 VAC 8 Point Isolated Module; IC200MDD850 Mixed 240 VAC Isolated 4 Point / Output Relay 2.0A Isolated 8 Point Module	Input or Output Interposing Disconnect Style 16 Points. The base has an individual knife-switch disconnect for each signal and common terminal and its corresponding pin on the VersaMax cable connector. Requires IC200CHS003 and a connecting cable IC200CBL1xxx.	Expansion Input or Output Interposing Disconnect Style 16 Points. The base has an individual knife-switch disconnect for each signal and common terminal and its corresponding pin on the VersaMax cable connector. Requires a IC200CHS101 main base, can not be directly connected to IC200CHS003.	I/O Interposing Relay Base (replaceable relays), fused (8 amps, replaceable), 16 points. The relays on these interposing terminals are intended to be controlled with standard 24 VDC 0.5A VersaMax output modules (IC200MDL740 and IC200MDL750 using IC200CHS003 base and connected by IC200CBL1xxx).
Lifecycle Status	Active	Active	Active	Active
Field Termination Type	Integrated	Non-Integrated	Non-Integrated	Non-Integrated
Wiring Termination Style	Connector	Box	Box	Box
Removable Terminals Connectors	N/A	No	No	No
Input Voltage	N/A	All discrete modules supported except MDL144, 244, 331, 730 and MDD840, 843, 850.	All discrete modules supported except MDL144, 244, 331, 730 and MDD840, 843, 850.	24 VDC from MDL740 and MDL750
Output Voltage	N/A	All discrete modules supported except MDL144, 244, 331, 730 and MDD840, 843, 850.	All discrete modules supported except MDL144, 244, 331, 730 and MDD840, 843, 850.	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Load Current per Point	N/A	N/A	N/A	8.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC (Replaceable Fuse)
Protection	N/A	N/A	N/A	Replaceable Fuse
Points per Common	N/A	N/A	N/A	Isolated Per Point
Dimensions (W x H x D)	66.8 mm (2.63 in) x 133.4 mm (5.25 in) x 70 mm (2.75 in), not including the height of the DIN-rail	115 mm (4.5 in) x 126 mm (4.95 in) x 65 mm (2.6 in), not including the height of the DIN-rail	115 mm (4.5 in) x 126 mm (4.95 in) x 65 mm (2.6 in), not including the height of the DIN-rail	253.7 mm (9.9 in) x 126 mm (4.95 in) x 73 mm (2.8 in), not including the height of the DIN-rail
Cables	Requires a IC200CBL1xxx cable	Requires a IC200CBL1xxx cable	N/A	Requires a IC200CBL1xxx cable

I/O Interposing Bases

VersaMax I/O interposing disconnect bases enable the IC200CHS003 to connect to a wide range of termination bases. The Relay bases provide additional protection and higher amperage outputs. The Disconnect bases enables the user to easily disconnect signals, on a per point bases, from the I/O module.

	IC200CHS112	IC200CHS211	IC200CHS212
Product Name	I/O Interposing Relay Base (replaceable relays), fused (8 amps, replaceable), 16 points. The relays on these interposing terminals are intended to be controlled with standard 24 VDC 0.5A VersaMax output modules (IC200MDL740 and IC200MDL750 using IC200CHS003 base and connected by IC200CBL1xxx). Expansion base.	I/O Interposing Relay Base (replaceable relays), fused (8 amps, replaceable), 16 points. Field terminals are removable. The relays on these interposing terminals are intended to be controlled with standard 24 VDC 0.5A VersaMax output modules (IC200MDL740 and IC200MDL750 using IC200CHS003 base and connected by IC200CBL1xxx).	I/O Interposing Relay Base (replaceable relays), fused (8 amps, replaceable), 16 points. Field terminals are removable. The relays on these interposing terminals are intended to be controlled with standard 24 VDC 0.5A VersaMax output modules (IC200MDL740 and IC200MDL750 using IC200CHS003 base and connected by IC200CBL1xxx). Expansion base.
Lifecycle Status	Active	Active	Active
Field Termination Type	Non-Integrated	Non-Integrated	Non-Integrated
Connection Style	Box	Box	Box
Removable Terminals Connectors	No	Yes	Yes
Input Voltage	24 VDC from MDL740 and MDL750	24 VDC from MDL740 and MDL750	24 VDC from MDL740 and MDL750
Output Voltage	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Load Current per Point	8.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC (Replaceable Fuse)	8.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC (Replaceable Fuse)	8.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC (Replaceable Fuse)
Protection	Replaceable Fuse	Replaceable Fuse	Replaceable Fuse
Points per Common	Isolated Per Point	Isolated Per Point	Isolated Per Point
Dimensions (W x H x D)	253.7 mm (9.9 in) x 126 mm (4.95 in) x 73 mm (2.8 in), not including the height of the DIN-rail	253.7 mm (9.9 in) x 126 mm (4.95 in) x 73 mm (2.8 in), not including the height of the DIN-rail	253.7 mm (9.9 in) x 126 mm (4.95 in) x 73 mm (2.8 in), not including the height of the DIN-rail
Cables	N/A	Requires a IC200CBL1xxx cable	N/A

Power Supplies

VersaMax Power Supply modules snap onto any VersaMax CPU or Network Interface Unit or onto a power supply booster carrier. Each power supply can be used as the main power source for modules in the I/O station, or as a source of supplemental power for larger I/O applications.

	IC200PWR001	IC200PWR002	IC200PWR011	IC200PWR012	IC200PWR101
Product Name	24 VDC Power Supply	24 VDC Power Supply with Expanded 3.3 V	24VDC Isolated Power Supply	24VDC Isolated Power Supply with Expanded 3.3 V	120/240 VAC Power Supply
Lifecycle Status	Active	Active	Active	Active	Active
Input Voltage	24 VDC	24 VDC	24 VDC	24 VDC	120/240 VAC
Output Voltage	5 VDC, 3.3 VDC	5 VDC, 3.3 VDC	5 VDC, 3.3 VDC	5 VDC, 3.3 VDC	5 VDC, 3.3 VDC
Extended Power	No	Yes	No	Yes	No
Input Power	11 W	11 W	11 W	11 W	27 VA
Isolated Power	No	No	Yes	Yes	N/A
Holdup Time	10 ms	10 ms	10 ms	10 ms	20 ms
Inrush Current	20 A @ 24 VDC; 25 A @ 30 VDC	20 A @ 24 VDC; 25 A @ 30 VDC	20 A @ 24 VDC; 25 A @ 30 VDC	20 A @ 24 VDC; 25 A @ 30 VDC	N/A
Protection	Short circuit, overload, reverse polarity	Short circuit, overload, reverse polarity	Short circuit, overload, reverse polarity	Short circuit, overload, reverse polarity	Short circuit, overload
Total Output Current	1.5 A maximum	1.5 A maximum	1.5 A maximum	1.5 A maximum	1.5 A maximum
3.3V Output Current	0.25 A maximum	1.0 A maximum	0.25 A maximum	1.0 A maximum	0.25 A maximum
5V Output Current	1.5 A minus the 3.3 V current used, maximum	1.5 A minus the 3.3 V current used, maximum	1.5 A minus the 3.3 V current used, maximum	1.5 A minus the 3.3 V current used, maximum	1.5 A minus the 3.3 V current used, maximum
Dimensions (W x H x D)	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail

Power Supplies

VersaMax Power Supply modules snap onto any VersaMax CPU or Network Interface Unit or onto a power supply booster carrier. Each power supply can be used as the main power source for modules in the I/O station, or as a source of supplemental power for larger I/O applications.

	IC200PWR102	IC200PWR201	IC200PWR202	IC200PWB001
Product Name	120/240 VAC Power Supply with Expanded 3.3 VDC	12 VDC Power Supply	12 VDC Power Supply with Expanded 3.3 VDC	VersaMax Power Supply Booster Carrier. Supplies power to all modules to the right of booster. Requires power supply.
Lifecycle Status	Active	Active	Active	Active
Input Voltage	120/240 VAC	9.6-15 VDC, 12 VDC nominal	9.6-15 VDC, 12 VDC nominal	N/A
Output Voltage	5 VDC, 3.3 VDC	5 VDC, 3.3 VDC	5 VDC, 3.3 VDC	N/A
Extended Power	Yes	No	Yes	N/A
Input Power	27 VA	11 W	11 W	N/A
Isolated Power	N/A	No	No	N/A
Holdup Time	20 ms	10 ms	10 ms	N/A
Inrush Current	N/A	25 A at 12 VDC; 30 A at 15 VDC	25 A at 12 VDC; 30 A at 15 VDC	N/A
Protection	Short circuit, overload	Short circuit, overload, reverse polarity	Short circuit, overload, reverse polarity	N/A
Total Output Current	1.5 A maximum	1.5 A maximum	1.5 A maximum	N/A
3.3V Output Current	1.0 A maximum	0.25 A maximum	1.0 A maximum	N/A
5V Output Current	1.5 A minus the 3.3 V current used, maximum	1.5 A minus the 3.3 V current used, maximum	1.5 A minus the 3.3 V current used, maximum	N/A
Dimensions (W x H x D)	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail	49 mm (1.93 in) x 133.4 mm (5.25 in) x 39 mm (1.54 in), not including the height of the carrier or the DIN-rail	66.8 mm (2.63 in) x 133.4 mm (5.25 in) x 70 mm (2.75 in), not including the height of DIN-rail

Discrete Mixed I/O Modules

Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Discrete input modules receive signals from input devices such as sensors, push-buttons, and switches that can have two states: on or off, open or closed. Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Modules require a carrier base (IC200CHSxxx).

	IC200MDD840	IC200MDD842	IC200MDD843
Product Name	VersaMax Discrete Mixed Modules, 24 VDC Pos Logic Input 20 points/Output Relay 2.0 A, 12 points	VersaMax Discrete Mixed Modules 24 VDC Pos Logic Input 16/Output 24 VDC 0.5 A with ESCP	VersaMax Discrete Mixed Modules 24 VDC Positive Logic Input 10/Output Relay 6
Lifecycle Status	Active	Active	Active
Input Voltage	24 VDC	24 VDC	24 VDC
Output Voltage	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	24 VDC	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Number of Points	20 in/12 out	16 in/16 out	10 in/6 out
Channel to Channel Isolation	No	No	No
Load Current per Point	2.0 A for 5-265 VAC, 2.0 A for 5-30 VDC	0.5 A for 30 VDC	2.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC
Input and Output Response Time- On/Off(ms)	0.5 and 10	0.5 and 0.5	0.5 and 10
Protection	No internal fuses or snubbers	Short circuit protection, overcurrent protection, free-wheeling diodes	No internal fuses or snubbers
On State Current	2.0-5.5 mA	2.0-5.5 mA	2.0-5.5 mA
Off State Current	0-0.5 mA	0-0.5 mA	0-0.5 mA
External Power Supply	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	18-30 VDC, 24 VDC nominal	0-125 VDC, 5/24/125 VDC nominal, 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Input Impedance	10 kOhms maximum	10 kOhms maximum	10 kOhms maximum
Load Current	2.0 A for 5-265 VAC or 5-30 VDC, 0.2 A for 31-125 VDC	0.5 Amp at 30 VDC maximum (resistive); 2.0 Amps maximum for 100ms inrush	10 mA per point minimum, 8.0 A maximum per module; 2.0 Amps for 5 to 265 VAC maximum (resistive); 2.0 Amps for 5 to 30 VDC maximum (resistive); 0.2 Amp for 31 to 125 VDC maximum (resistive)
5V Backplane Current Consumption (mA)	375 maximum	100 maximum	190 maximum
LED Indicators	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Mixed I/O Modules

Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Discrete input modules receive signals from input devices such as sensors, push-buttons, and switches that can have two states: on or off, open or closed. Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Modules require a carrier base (IC200CHSxxx).

	IC200MDD844	IC200MDD845	IC200MDD846
Product Name	VersaMax Discrete Mixed Modules 24 VDC Positive Logic Input 16/Output 24 VDC 0.5 A 16 points	VersaMax Discrete Mixed Modules 24 VDC Positive Logic Input 16/Output Relay 2.0A Isolated 8 points	VersaMax Discrete Mixed Modules 120 VAC Input 8 points/Outpoints Relay 2.0A Isolated 8 points
Lifecycle Status	Active	Active	Active
Input Voltage	24 VDC	24 VDC	120 VAC
Output Voltage	24 VDC	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Number of Points	16 in/16 out	16 in/8 out	8 in/8 out
Channel to Channel Isolation	No	Yes, outputs	Yes, outputs
Load Current per Point	0.5 A for 30 VDC	2.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC	2.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC
Input and Output Response Time- On/Off(ms)	0.5 and 0.2 ON / 1.0 OFF	0.5 and 10	1 AC cycle minimum and 2 AC cycle (Hz dependent) maximum and 10.0 OFF
Protection	No internal fuses	No internal fuses or snubbers	No internal fuses or snubbers
On State Current	2.0-5.5 mA	2.0-5.5 mA	5 mA minimum
Off State Current	0-0.5 mA	0-0.5 mA	2.5 mA maximum
External Power Supply	18-30 VDC, 24 VDC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Input Impedance	10 kOhms maximum	10 kOhms maximum	8.6 kOhms (reactive) at 60 Hz, typical; 10.32 kOhms (reactive) at 50 Hz, typical
Load Current	0.5 Amp at 30 VDC maximum (resistive) 2.0 Amps maximum for 100ms inrush	10 mA per point minimum 2.0 A for 5 to 265 VAC maximum (resistive) 2.0 A for 5 to 30 VDC maximum (resistive) 0.2 A for 31 to 125 VDC maximum (resistive)	10 mA per point minimum 2.0 A for 5 to 265 VAC maximum (resistive) 2.0 A for 5 to 30 VDC maximum (resistive) 0.2 A for 31 to 125 VDC maximum (resistive)
5V Backplane Current Consumption (mA)	70 maximum	270 maximum	300 maximum
LED Indicators	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Mixed I/O Modules

Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Discrete input modules receive signals from input devices such as sensors, push-buttons, and switches that can have two states: on or off, open or closed. Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Modules require a carrier base (IC200CHSxxx).

	IC200MDD847	IC200MDD848	IC200MDD849
Product Name	VersaMax Discrete Mixed Modules 240 VAC Input 8 points/Output Relay 2.0A Isolated 8 points	VersaMax Discrete Mixed Modules 120 VAC Input 8 points/Output 120 VAC 0.5A Isolated 8 points	VersaMax Discrete Mixed Modules 120 VAC Input Isolated 8 points/Output Relay 2.0 A Isolated 8 points
Lifecycle Status	Active	Active	Active
Input Voltage	240 VAC	120 VAC	0-132 VAC (47 to 63 Hz), 120 VAC nominal
Output Voltage	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	120 VAC	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Number of Points	8 in/8 out	8 in/8 out	8 in/8 out
Channel to Channel Isolation	Yes, outputs	Yes	Yes
Load Current per Point	2.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC	10 mA min, 0.5 A max., 5 A for 1 cycle (20 ms) max. inrush	2.0 A
Input and Output Response Time- On/Off(ms)	1 AC cycle minimum and 2 AC cycle (Hz dependent) maximum and 10.0 OFF	1 cycle/2 cycle and <1/2 cycle/<1/2 cycle	1 cycle/2 cycle and 10/10
Protection	No internal fuses or snubbers	Snubber and MOVs (each output)	No internal fuses or snubbers
On State Current	4 mA minimum	5 mA minimum	5 mA minimum
Off State Current	1.5 mA maximum	2.5 mA maximum	2.5 mA maximum
External Power Supply	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	N/A
Input Impedance	38.5 kOhms (reactive) at 60 Hz, typical; 46.3 kOhms (reactive) at 50 Hz, typical	8.6 kOhms (reactive) at 60 Hz, typical; 10.32 kOhms (reactive) at 50 Hz, typical	8.6 kOhms (reactive) at 60 Hz, typical; 10.32 kOhms (reactive) at 50 Hz, typical
Load Current	10 mA per point minimum 2.0 Amps for 5 to 265 VAC maximum (resistive) 2.0 Amps for 5 to 30 VDC maximum (resistive) 0.2 Amp for 31 to 125 VDC maximum (resistive)	10 mA minimum per point, 0.5 A maximum per point, 5.0 A for one cycle (20 ms) maximum inrush	10 mA per point minimum; 2.0 A for 5-265 VAC maximum (resistive); 2.0 A for 5-30 VDC maximum (resistive); 0.2 A for 31-125 VDC maximum (resistive)
5V Backplane Current Consumption (mA)	300 maximum	125 maximum	300 maximum
LED Indicators	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm 1.956 in), not including the height of (the carrier or the mating connectors

Discrete Mixed I/O Modules

Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Discrete input modules receive signals from input devices such as sensors, push-buttons, and switches that can have two states: on or off, open or closed. Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Modules require a carrier base (IC200CHSxxx).

	IC200MDD850	IC200MDD851
Product Name	VersaMax Discrete Mixed Modules 240 VAC Input Isolated 4 points/Output Relay 2.0 A Isolated 8 points	VersaMax Discrete Mixed Modules 5/12 VDC Input 16 points/Output 12/24 VDC 16 points
Lifecycle Status	Active	Active
Input Voltage	0-264 VAC (47-63 Hz), 240 VAC nominal	0 to 15 VDC, +5/12 VDC nominal
Output Voltage	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	+10.2 to +30 VDC, +12/24 VDC nominal
Number of Points	8 out/4 in	16 out/16 in
Channel to Channel Isolation	Yes	No
Load Current per Point	2.0 A	0.5 Amps at 30 VDC maximum (resistive) 2.0 Amps maximum for 100ms inrush
Input and Output Response Time- On/Off(ms)	1 cycle/2 cycle and 10/10	0.25ms maximum/0.2ms ON and 1.0ms OFF maximum
Protection	No internal fuses or snubbers	No internal fuses or snubbers
On State Current	4 mA minimum	1.45 mA minimum
Off State Current	1.5 mA maximum	0 to 0.7 mA maximum
External Power Supply	N/A	+10.2 to +30 VDC, +12/24 VDC nominal
Input Impedance	38.5 kOhms (reactive) at 60 Hz, typical; 46.3 kOhms (reactive) at 50 Hz, typical	2.4kOhms typical @ 12 VDC
Load Current	10 mA per point minimum; 2.0 A for 5-265 VAC maximum (resistive); 2.0 A for 5-30 VDC maximum (resistive); 0.2 A for 31-125 VDC maximum (resistive)	0.5 Amps at 30 VDC maximum (resistive); 2.0 Amps maximum for 100ms inrush
5V Backplane Current Consumption (mA)	260 maximum	115 maximum
LED Indicators	One LED per point shows individual point on/off state logic side); OK LED indicates backplane power is present	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Input Modules

Discrete input modules receive signals from input devices such as sensors, pushbuttons, and switches that can have two states: on or off, open or closed. Modules require a carrier base (IC200CHSxxx).

	IC200MDL140	IC200MDL141	IC200MDL143
Product Name	VersaMax Discrete Input Module 120 VAC, 8 points	VersaMax Discrete Input Module 240 VAC, 8 points	VersaMax Discrete Input Module 120 VAC Isolated, 8 points
Lifecycle Status	Active	Active	Active
Input Voltage	0-132 VAC	0-264 VAC	0-132 VAC
Number of Points	8	8	8
Channel to Channel Isolation	No	No	Yes
Input and Output Response Time- On/Off (ms)	1 cycle/2 cycles	1 cycle/2 cycles	1 cycle/2 cycles
Points per Common	1 group of 8	1 group of 8	8 groups of 1
On State Current	5 mA minimum	7 mA minimum	5 mA minimum
Off State Current	2.5 mA maximum	1.5 mA maximum	2.5 mA maximum
Input Impedance	8.6 kOhms (reactive) at 60 Hz, typical; 10.32 kOhms (reactive) at 50 Hz, typical	38.5 kOhms (reactive) at 60 Hz, typical; 46.3 kOhms (reactive) at 50 Hz, typical	8.6 kOhms (reactive) at 60 Hz, typical; 10.32 kOhms (reactive) at 50 Hz, typical
5V Backplane Current Consumption (mA)	55 maximum	55 maximum	50 maximum
LED Indicators	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Input Modules

Discrete input modules receive signals from input devices such as sensors, pushbuttons, and switches that can have two states: on or off, open or closed. Modules require a carrier base (IC200CHSxxx).

	IC200MDL144	IC200MDL240	IC200MDL241
Product Name	VersaMax Discrete Input Module 240 VAC Isolated, 4 points	VersaMax Discrete Input Module, 120 VAC Positive Logic, 16 points	VersaMax Discrete Input Module, 240 VAC Positive Logic, 16 points
Lifecycle Status	Active	Active	Active
Input Voltage	0-264 VAC	0-132 VAC	0-264 VAC
Number of Points	4	16	16
Channel to Channel Isolation	Yes	No	No
Input and Output Response Time- On/Off (ms)	1 cycle/2 cycles	1 cycle/2 cycles	1 cycle/2 cycles
Points per Common	4 groups of 1	2 groups of 8	2 groups of 8
On State Current	7 mA minimum	5 mA minimum	4 mA minimum
Off State Current	3 mA maximum	2.5 mA maximum	1.5 mA maximum
Input Impedance	38.5 kOhms (reactive) at 60 Hz, typical; 46.3 kOhms (reactive) at 50 Hz, typical	8.6 kOhms (reactive) at 60 Hz, typical; 10.32 kOhms (reactive) at 50 Hz, typical	38.5 kOhms (reactive) at 60 Hz, typical; 46.3 kOhms (reactive) at 50 Hz, typical
5V Backplane Current Consumption (mA)	30 maximum	110 maximum	110 maximum
LED Indicators	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Input Modules

Discrete input modules receive signals from input devices such as sensors, pushbuttons, and switches that can have two states: on or off, open or closed. Modules require a carrier base (IC200CHSxxx).

	IC200MDL243	IC200MDL244	IC200MDL631
Product Name	VersaMax Discrete Input Module, 120 VAC Isolated, 16 points	VersaMax Discrete Input Module, 240 VAC Isolated, 8 points	VersaMax Discrete Input Module 125 VDC, Pos/Neg Logic, Isolated, 8 points
Lifecycle Status	Active	Active	Active
Input Voltage	0-132 VAC	0-264 VAC	0-150 VDC, 125 VDC nominal
Number of Points	16	8	8 isolated inputs
Channel to Channel Isolation	Yes	Yes	Yes
Input and Output Response Time- On/Off (ms)	1 cycle/2 cycles	1 cycle/2 cycles	0.5 maximum
Points per Common	16 groups of 1	8 groups of 1	8 groups of 1
On State Current	5 mA minimum	7 mA minimum	1.0 mA minimum
Off State Current	2.5 mA maximum	3 mA maximum	0 to 0.1 mA maximum
Input Impedance	8.6 kOhms (reactive) at 60 Hz, typical; 10.32 kOhms (reactive) at 50 Hz, typical	38.5 kOhms (reactive) at 60 Hz, typical; 46.3 kOhms (reactive) at 50 Hz, typical	74 K Ohm typical at 125 VDC
5V Backplane Current Consumption (mA)	100 maximum	60 maximum	40 maximum
LED Indicators	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Input Modules

Discrete input modules receive signals from input devices such as sensors, pushbuttons, and switches that can have two states: on or off, open or closed. Modules require a carrier base (IC200CHSxxx).

	IC200MDL632	IC200MDL635	IC200MDL636
Product Name	VersaMax Discrete Input Module 125 VDC, Pos/Neg Logic, Isolated, 16 points	VersaMax Discrete Input Module 48 VDC, Pos/Neg Logic (2 Groups of 8), 16 points	VersaMax Discrete Input Module 48 VDC, Pos/Neg Logic (4 Groups of 8), 32 points
Lifecycle Status	Active	Active	Active
Input Voltage	0-150 VDC, 125 VDC nominal	0-60 VDC, 48 VDC nominal	0-60 VDC, 48 VDC nominal
Number of Points	16 isolated inputs	16 inputs (2 groups of 8)	32 (4 groups of 8)
Channel to Channel Isolation	Yes	No	No
Input and Output Response Time- On/Off (ms)	0.5 maximum	0.5 maximum	0.5 maximum
Points per Common	16 groups of 1	2 groups of 8	4 groups of 8
On State Current	1.0 mA minimum	1.0 mA minimum	1.0 mA minimum
Off State Current	0 to 0.1 mA maximum	0 to 0.4 mA maximum	0 to 0.4 mA maximum
Input Impedance	74 K Ohm typical at 125 VDC	28 K Ohm typical	28 K Ohm typical
5V Backplane Current Consumption (mA)	80 maximum	70 maximum	140 maximum
LED Indicators	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Input Modules

Discrete input modules receive signals from input devices such as sensors, pushbuttons, and switches that can have two states: on or off, open or closed. Modules require a carrier base (IC200CHSxxx).

	IC200MDL640	IC200MDL643	IC200MDL644	IC200MDL650
Product Name	VersaMax Discrete Input Module, 24 VDC Pos/Neg Logic, 16 points	VersaMax Discrete Input Module, 5/12 VDC (TTL) Pos/Neg Logic, 16 points	VersaMax Discrete Input Module, 5/12 VDC (TTL) Pos/Neg Logic, 32 points	VersaMax Discrete Input Module, 24 VDC Positive Logic, 32 points
Lifecycle Status	Active	Active	Active	Active
Input Voltage	0-30 VDC	0-15 VDC	0-15 VDC	0-30 VDC
Number of Points	16	16	32	32
Channel to Channel Isolation	No	No	No	No
Input and Output Response Time- On/Off (ms)	0.5	0.25	0.25	0.5
Points per Common	2 groups of 8	2 groups of 8	4 groups of 8	2 groups of 8
On State Current	2.0-5.5 mA	1.45 mA minimum	1.45 mA minimum	2.0-5.5 mA
Off State Current	0-0.5 mA	0-0.7 mA maximum	0-0.7 mA maximum	0-0.5 mA
Input Impedance	10 kOhms maximum	2.4 kOhms at 12 VDC, typical	2.4 kOhms at 12 VDC, typical	10 kOhms maximum
5V Backplane Current Consumption (mA)	25 maximum	70 maximum	140 maximum	50 maximum
LED Indicators	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status. OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Output Modules

Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Modules require a carrier base (IC200CHSxxx).

	IC200MDL329	IC200MDL330	IC200MDL331
Product Name	VersaMax Discrete Output Module, 120 VAC, 0.5A per point Isolated, 8 points	VersaMax Discrete Output Module, 120 VAC 0.5A per point Isolated, 16 points	VersaMax Discrete Output Module, 120 VAC 2.0A per point Isolated, 8 points
Lifecycle Status	Active	Active	Active
Output Voltage	85-132 VAC (47-63 Hz), 120 VAC nominal	85-132 VAC (47-63 Hz), 120 VAC nominal	85-132 VAC (47-63 Hz), 120 VAC nominal
Number of Points	8	16	8
Channel to Channel Isolation	Yes	Yes	Yes
Load Current per Point	0.5 A per point	0.5 A per point	2.0 A per point
Input and Output Response Time- On/Off (ms)	<1/2 cycle/<1/2 cycle	<1/2 cycle/<1/2 cycle	<1/2 cycle/<1/2 cycle
Protection	Snubber and MOVs (each output)	Snubber and MOVs (each output)	Snubber and MOVs (each output)
Points per Common	8 groups of 1	Isolated points	Isolated points
External Power Supply	85-132 VAC (47-63 Hz), 120 VAC nominal	85-132 VAC (47-63 Hz), 120 VAC nominal	85-132 VAC (47-63 Hz), 120 VAC nominal
Load Current	10 mA minimum per point, 0.5 A maximum per point, 5.0 A for one cycle (20 ms) maximum inrush	10 mA minimum per point, 0.5 A maximum per point, 5.0 A for one cycle (20 ms) maximum inrush	10 mA minimum per point, 2.0 A maximum per point, 20 A for one cycle (20 ms) maximum inrush
5V Backplane Current Consumption (mA)	70 maximum	140 maximum	85 maximum
LED Indicators	One LED per point shows individual point ON/OFF status (logic side). OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status (logic side). OK LED indicates backplane power is present	One LED per point shows individual point ON/OFF status (logic side). OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Output Modules

Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Modules require a carrier base (IC200CHSxxx).

	IC200MDL730	IC200MDL740	IC200MDL741
Product Name	VersaMax Discrete Output Module, 24 VDC Positive Logic 2.0A per point w/ESCP, 8 points	VersaMax Discrete Output Module, 24 VDC Positive Logic, 0.5A per point, 16 points	VersaMax Discrete Output Module, 24 VDC Positive Logic, 0.5A per point w/ESCP, 16 points
Lifecycle Status	Active	Active	Active
Output Voltage	17.5-30 VDC, 24 VDC nominal	10.2-30 VDC, 12/24 VDC nominal	18-30 VDC, 24 VDC nominal
Number of Points	8	16	16
Channel to Channel Isolation	No	No	No
Load Current per Point	2.0 A per point	0.5 A per point	0.5 A per point
Input and Output Response Time- On/Off (ms)	0.5	0.2/1.0	0.5/0.5
Protection	Short circuit protection, overcurrent protection (each output)	No internal fuses (each output)	Short circuit protection, overcurrent protection, free-wheeling diodes (each output)
Points per Common	1 group of 8	1 group of 16	1 group of 16
External Power Supply	18-30 VDC, 24 VDC nominal	10.2-30 VDC, 12/24 VDC nominal	18-30 VDC, 24 VDC nominal
Load Current	2.0 A at 30 VDC maximum (resistive) per point, 8.0 A max. per module	0.5 A at 30 VDC maximum (resistive); 2.0 A inrush maximum for 100 ms	0.5 A at 30 VDC maximum (resistive); 2.0 A inrush maximum for 100 ms
5V Backplane Current Consumption (mA)	50 maximum	45 maximum	75 maximum
LED Indicators	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Output Modules

Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Modules require a carrier base (IC200CHSxxx).

	IC200MDL742	IC200MDL743	IC200MDL744
Product Name	VersaMax Discrete Output Module, 24 VDC Positive Logic 0.5A with ESCP, 32 points	VersaMax Discrete Output Module, 5/12/24 VDC Negative Logic, 0.5 A per point (1 group of 16) 16 points	VersaMax Discrete Output Module, 5/12/24 VDC Negative Logic, 0.5 A per point (2 groups of 16) 32 points
Lifecycle Status	Active	Active	Active
Output Voltage	18-30 VDC, 24 VDC nominal	5/12/24 VDC	5/12/24 VDC
Number of Points	32	16 (1 group of 16)	32 (2 groups of 16)
Channel to Channel Isolation	No	No	No
Load Current per Point	0.5 A per point	0.5 A per point	0.5 A per point
Input and Output Response Time- On/Off (ms)	0.5/0.5	0.2/1.0	0.2/1.0
Protection	Short circuit protection, overcurrent protection, free-wheeling diodes (each output)	No internal fuse	No internal fuse
Points per Common	2 groups of 16	1 group of 16	2 groups of 16
External Power Supply	18-30 VDC, 24 VDC nominal	4.75 to 5.25 VDC, 5 VDC nominal for 5 VDC-TTL mode; 10.2 to 30 VDC, 12/24 VDC nominal for 12/24 VDC mode	4.75 to 5.25 VDC, 5 VDC nominal for 5 VDC-TTL mode; 10.2 to 30 VDC, 12/24 VDC nominal for 12/24 VDC mode
Load Current	0.5 A at 30 VDC maximum (resistive); 2.0 A inrush maximum for 100 ms	25 mA maximum for 5 VDC-TTL mode, 0.5 A at 30 VDC maximum, 2.0 A inrush maximum for 100 ms for 12/24 VDC mode	25 mA maximum for 5 VDC-TTL mode, 0.5 A at 30 VDC maximum, 2.0 A inrush maximum for 100 ms for 12/24 VDC mode
5V Backplane Current Consumption (mA)	150 maximum	70 maximum	140 maximum
LED Indicators	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Discrete Output Modules

Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Modules require a carrier base (IC200CHSxxx).

	IC200MDL750	IC200MDL930	IC200MDL940
Product Name	VersaMax Discrete Output Module, 24 VDC Positive Logic, 0.5A per point, 32 points	VersaMax Discrete Output Module, Relay 2.0 A per point Isolated Form A, 8 points	VersaMax Discrete Output Module, Relay 2.0 A per point Isolated Form A, 16 points
Lifecycle Status	Active	Active	Active
Output Voltage	10.2-30 VDC, 12/24 VDC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Number of Points	32	8	16
Channel to Channel Isolation	No	Yes	Yes
Load Current per Point	0.5 A per point	2.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC	2.0 A for 5-265 VAC, 2.0 A for 5-30 VDC, 0.2 A for 31-125 VDC
Input and Output Response Time- On/Off (ms)	0.2/1.0	10.0/10.0	10.0/10.0
Protection	No internal fuses	No internal fuses or snubbers	No internal fuses or snubbers
Points per Common	2 groups of 16	Isolated points	Isolated points
External Power Supply	10.2-30 VDC, 12/24 VDC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal	0-125 VDC, 5/24/125 VDC nominal; 0-265 VAC (47-63 Hz), 120/240 VAC nominal
Load Current	0.5 A at 30 VDC maximum (resistive); 2.0 A inrush maximum for 100 ms	10 mA per point minimum; 2.0 A for 5-265 VAC maximum (resistive); 2.0 A for 5-30 VDC maximum (resistive); 0.2 A for 31-125 VDC maximum (resistive)	10 mA per point minimum; 2.0 A for 5-265 VAC maximum (resistive); 2.0 A for 5-30 VDC maximum (resistive); 0.2 A for 31-125 VDC maximum (resistive)
5V Backplane Current Consumption (mA)	90 maximum	245 maximum	490 maximum
LED Indicators	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	One LED per point shows individual point ON/OFF state (logic side). FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Analog Input Modules

Analog input modules receive signals from current and voltage input devices. Modules require a carrier base (IC200CHSxxx).

	IC200ALG230	IC200ALG240	IC200ALG260	IC200ALG261
Product Name	VersaMax Analog Input Module, 12 Bit Voltage/Current, 4 Channels	VersaMax Analog Input Module, 16 Bit Voltage/Current Isolated, 8 Channel	VersaMax Analog Input Module, 12 Bit Voltage/Current, 8 Channel	VersaMax Analog Input Module, 15 Bit Differential Voltage, 8 Channel
Lifecycle Status	Active	Active	Active	Active
Input Range	±10 VDC or 0-10 VDC	±10 VDC, 4-20 mA	4-20 mA, ±10 VDC or 0-10 VDC	±10 VDC
Number of Channels	4	8 Channel to channel isolated	8	8
External Power Supply	None	Range: 19.5-30 VDC including ripple; Current consumption: 100 mA maximum plus load currents	None	None
Resolution	Bipolar mode: 2.5 mV = 8 counts, Unipolar mode: 2.5 mV = 8 counts	Current mode: 381 nA nominal Voltage mode: 381 µV nominal	Current mode: 4 µA = 8 counts, Bipolar mode: 2.5 mV = 8 counts, Unipolar mode: 2.5 mV = 8 counts	Bipolar mode: 0.3125 mV = 1 counts
Update Rate	0.4 ms	Approximately 20 mS max. @ 50 Hz filter frequency Approximately 16.7 mS max. @ 60 Hz filter frequency	0.4 ms	7.5 ms
Accuracy at 25°C	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.1% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale
Input Impedance	Voltage mode: 126 kOhms maximum, Current mode: 200 Ohms maximum	N/A	Voltage mode: 126 kOhms maximum, Current mode: 200 Ohms maximum	Voltage mode: 100 kOhms maximum
Input Filter Response	5.0 ms	N/A	5.0 ms	N/A
5V Backplane Current Consumption (mA)	125 maximum	15 maximum	130 maximum	200 maximum
3.3V Backplane Current Consumption (mA)	N/A	120 maximum	N/A	N/A
LED Indicators	INT PWR LED indicates internally-generated field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates the presence of both logic power and user power. OK LED indicates module status.	INT PWR LED indicates internally-generated field power is present. OK LED indicates backplane power is present.	INT PWR LED indicates internally-generated field power is present. OK LED indicates backplane power is present.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Analog Input Modules

Analog input modules receive signals from current and voltage input devices. Modules require a carrier base (IC200CHSxxx).

	IC200ALG262	IC200ALG263	IC200ALG264
Product Name	VersaMax Analog Input Module, 15 Bit Differential Current, 8 Channel	VersaMax Analog Input Module, 15 Bit Voltage, 15 Channel	VersaMax Analog Input Module, 15 Bit Current, 15 Channel
Lifecycle Status	Active	Active	Active
Input Range	0 to 20 mA or 4 to 20 mA	±10 VDC	0 to 20 mA or 4 to 20 mA
Number of Channels	8	15	15
External Power Supply	None	None	None
Resolution	4 to 20 mA: 0.5micro Amp= 1 count; 0 to 20 mA: 0.625micro Amp = 1 count	Bipolar mode: 0.3125 mV = 1 count	4 to 20 mA: 0.5micro Amp= 1 count; 0 to 20 mA: 0.625micro Amp = 1 count
Update Rate	7.5 ms	7.5 ms	7.5 ms
Accuracy at 25°C	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale
Input Impedance	Current mode: 100 kOhms maximum	Voltage mode: 100 kOhms maximum	Voltage mode: 100 kOhms maximum, Current mode: 200 Ohms maximum
Input Filter Response	N/A	N/A	24 Hz ±20%
5V Backplane Current Consumption (mA)	200 maximum	150 maximum	100 maximum
3.3V Backplane Current Consumption (mA)	N/A	N/A	N/A
LED Indicators	INT PWR LED indicates internally-generated field power is present. OK LED indicates backplane power is present.	INT PWR LED indicates internally-generated field power is present. OK LED indicates backplane power is present.	INT PWR LED indicates internally-generated field power is present. OK LED indicates backplane power is present.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in) , not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in) , not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in) , not including the height of the carrier or the mating connectors

Analog Output Modules

Analog output modules provide voltage or current signals to analog output devices. Modules require a carrier base (IC200CHSxxx).

	IC200ALG320	IC200ALG321	IC200ALG322
Product Name	VersaMax Analog Output Module, 12 Bit Current, 4 Channel	VersaMax Analog Output Module, 12 Bit 0-10V Voltage, 4 Channel	VersaMax Analog Output Module, 12 Bit ±10V Voltage, 4 Channel
Lifecycle Status	Active	Active	Active
Output Range	4-20 mA	0-10 VDC	±10 VDC
Number of Channels	4	4	4
External Power Supply	Range: 18-30 VDC including ripple; Current consumption: 160 mA maximum including load current	Range: 18-30 VDC including ripple; Current consumption: 125 mA maximum	Range: 18-30 VDC including ripple; Current consumption: 125 mA maximum
Resolution	4 uA = 8 counts	2.5 mV = 8 counts	5 mV = 16 counts
Update Rate	0.3 ms maximum	0.3 ms maximum	0.3 ms maximum
Accuracy at 25°C	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale
5V Backplane Current Consumption (mA)	50 maximum	50 maximum	50 maximum
3.3V Backplane Current Consumption (mA)	N/A	N/A	N/A
LED Indicators	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Analog Output Modules

Analog output modules provide voltage or current signals to analog output devices. Modules require a carrier base (IC200CHSxxx).

	IC200ALG325	IC200ALG326	IC200ALG327	IC200ALG328	IC200ALG331
Product Name	VersaMax Analog Output Module, 13 Bit ±10 VDC or 0 to 10 VDC Voltage, 8 Channel	VersaMax Analog Output Module, 13 Bit Current, 8 Channel	VersaMax Analog Output Module, 13 Bit ±10 VDC or 0 to 10 VDC Voltage, 12 Channel	VersaMax Analog Output Module, 13 Bit, 0 - 20 mA, 4-20 mA Current, 12 Channel	VersaMax Analog Output Module, 14 Bit Voltage/ Current 1500 VAC Isolation, 4 Channel
Lifecycle Status	Active	Active	Active	Active	Active
Output Range	±10 VDC or 0 to 10 VDC	4 to 20 mA (default) 0 to 20 mA (configured with jumper)	±10 VDC or 0 to 10 VDC	4 to 20 mA (default) 0 to 20 mA (configured with jumper)	±10 VDC, 4-20 mA
Number of Channels	8	8	12	12 single ended, one group	4
External Power Supply	Range: 18-30 VDC including ripple; Current consumption: 102 mA maximum	Range: 18-30 VDC including ripple; 2A inrush maximum, 100 mA maximum (no load), 185 mA maximum (all 8 outputs at full scale)	Range: 18-30 VDC including ripple; Current consumption: 112 mA maximum	Range: 18-30 VDC including ripple; Current consumption: 2A inrush maximum 100 mA maximum (no load) 270 mA maximum (all 12 outputs at full scale)	Range: 19.5-30 VDC including ripple; Current consumption: 100 mA maximum plus load currents
Resolution	1.25 mV = 4 counts	4-20 mA: 5 counts = 2.5 uA (~12.7 bits) 0-20 mA: 4 counts = 2.5 uA (13 bits)	1.25 mV = 4 counts	4-20 mA: 5 counts = 2.5 uA (~12.7 bits) 0-20 mA: 4 counts = 2.5 uA (13 bits)	Current mode: 381 nA nominal Voltage mode: 381 µV nominal
Update Rate	15.0 ms maximum	15.0 ms maximum	10.0 ms maximum	15 ms maximum	7 ms maximum
Accuracy at 25¢XC	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% of full scale (typical), ±0.5% of full scale (max.) ±1% of full scale (max.)	±0.3% typical of full scale, ±0.5% maximum of full scale	+/- 0.3% of full scale (typical), +/- 0.5% of full scale (max.) +/-1% of full scale (max.)	±0.1% maximum of full scale
5V Backplane Current Consumption (mA)	50 maximum	50 maximum	50 maximum	50 maximum	10 maximum
3.3V Backplane Current Consumption (mA)	N/A	N/A	N/A	N/A	115 maximum
LED Indicators	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates the presence of both logic power and user power. OK LED indicates module status.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Analog Mixed Modules

Analog mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Modules require a carrier base (IC200CHSxxx).

	IC200ALG430	IC200ALG431	IC200ALG432
Product Name	VersaMax Analog Mixed Module, 12 Bit Input Current 4 Channel/Output Current 2 Channel	VersaMax Analog Mixed Module, 12 Bit 0-10V Input 4 Channel/Output 0-10V 2 Channel	VersaMax Analog Mixed Module, 12 Bit ±10V Input 4 Channel/Output ±10V 2 Channel
Lifecycle Status	Active	Active	Active
Input Range	4-20 mA	0-10 VDC	-10 to +10 VDC
Output Range	4-20 mA	0-10 VDC	-10 to +10 VDC
External Power Supply	Range: 18-30 VDC including ripple; Current consumption: 125 mA maximum	Range: 18-30 VDC including ripple; Current consumption: 125 mA maximum	Range: 18-30 VDC including ripple; Current consumption: 125 mA maximum
Resolution	4 uA = 8 counts	2.5 mV = 8 counts	Input: 2.5 mV = 8 counts, Output: 5 mV = 16 counts
Update Rate	0.3 ms maximum	0.3 ms maximum	0.3 ms maximum
Accuracy at 25°C	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale	±0.3% typical of full scale, ±0.5% maximum of full scale
Input Impedance	200 Ohms maximum	120 kOhms minimum	125 kOhms minimum
Input Filter Response	5.0 ms	5.0 ms	5.0 ms
LED Indicators	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.	FLD PWR LED indicates field power is present. OK LED indicates backplane power is present.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

RTD and Thermocouple Modules

Specialty modules are available for RTD and Thermocouple inputs. Modules require a carrier base (IC200CHSxxx).).)

	IC200ALG620	IC200ALG630
Product Name	VersaMax Analog Input Module, 16 Bit RTD, 4 Channel	VersaMax Analog Input Module, 16 Bit Thermocouple, 7 Channel
Lifecycle Status	Active	Active
Input Range	RTD types: 25, 100, and 1000 ohm platinum 10, 50, and 100 ohm copper 100 and 120 ohm nickel 604 ohms nickel/iron	Thermocouple types: J, K, T, S, R, none (used for mV inputs)
Number of Channels	4	7
Resolution	15 bits plus sign	15 bits plus sign
Update Rate	60 Hz: approximately 210 milliseconds per channel 50 Hz: approximately 230 milliseconds per channel	60 Hz: approximately 60 milliseconds per channel 50 Hz: approximately 70 milliseconds per channel
Accuracy at 25°C	on voltage measurement: ±0.15% on resistance measurement on temperature measurement: ±0.15% on RTD (temperature) measurement	on voltage measurement: ±0.2% on temperature measurement:±0.15%
5 V Backplane Current Consumption (mA)	125 maximum	125 maximum
3.3 V Backplane Current Consumption (mA)	125 maximum	125 maximum
LED Indicators	OK LED: green indicates backplane power is present. Amber indicates module fault.	OK LED: green indicates backplane power is present. Amber indicates module fault.
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Specialty Modules

Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Discrete input modules receive signals from input devices such as sensors, pushbuttons, and switches that can have two states: on or off, open or closed. Discrete output modules send control signals to devices such as contactors, indicator lamps, and interposing relays that can also have two states. Discrete mixed modules provide maximum flexibility by combining inputs and outputs in a single, compact module. Modules require a carrier base (IC200CHSxxx).

	IC200MDD841
Product Name	VersaMax Discrete Mixed Modules 24VDC Pos Logic Input 20/Output 12/HSC, PWM or Pulse Train
Lifecycle Status	Active
Input Voltage	24 VDC
Output Voltage	24 VDC
Number of Points	20 in/12 out/4 configurable
Channel to Channel Isolation	No
Inrush Current	2.0 A maximum for 100 ms
Input and Output Response Time- On/Off (ms)	7 and 0.5
Protection	No internal fuses
On State Current	3.0-8.0 mA
Off State Current	0-0.5 mA
External Power Supply	24 VDC nominal, 18-30 VDC
Input Impedance	9.6 kOhms maximum
Load Current	0.5 A maximum
5V Backplane Current Consumption (mA)	30
LED Indicators	One LED per point shows individual point on/off state (logic side); OK LED indicates backplane power is present
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors

Expansion Modules

Expansion Modules can be used to extend a VersaMax PLC or I/O station to include up to seven additional groups of up to eight modules each, providing the architectural flexibility to accommodate larger applications.

	IC200ERM001	IC200ERM002	IC200ETM001
Product Name	Expansion Receiver Module, Isolated	Expansion Receiver Module, Non-Isolated	Bus Transmitter Expansion Module
Lifecycle Status	Active	Active	Active
Expansion Type	Receiver	Receiver	Transmitter
Distance	Up to 2460 feet	Up to 50 feet	N/A
5 V Backplane Current Consumption (mA)	430	70	44
3.3 V Backplane Current Consumption (mA)	20	20	N/A
LED Indicators	PWR LED indicates 5 VDC power status; EXP RX LED indicates status of the expansion bus; SCAN indicates whether CPU/NIU is scanning I/O in expansion racks	PWR LED indicates 5 VDC power status; EXP RX LED indicates expansion bus communications status; SCAN indicates whether CPU/NIU is scanning I/O in expansion racks	PWR LED indicates 5 VDC power status; EXP TX LED indicates expansion bus communication status
Dimensions (W x H x D)	2.63 (66.8 mm) x 5.04 (128 mm) not including the height of power supply	2.63 (66.8 mm) x 5.04 (128 mm) not including the height of power supply	37 mm (1.45 in) x 5.04 (128 mm)

Remote I/O Units

A Remote I/O Unit connects VersaMax I/O modules to a host PLC or computer via a variety of networks. This makes it easy to include VersaMax I/O in the innovative PROFINET interface, as well as Genius, PROFIBUS-DP, DeviceNet, or other Ethernet installations. Together, the Remote I/O Unit and its modules form an I/O station capable of providing up to 256 points of I/O.

	IC200PNS001	IC200PNS002	IC200DBI001	IC200EBI001
Product Name	Remote I/O PROFINET Network Interface Unit (Cooper Media) with built-in switch	Bus Transmitter Expansion Module (Fiber Media) with built-in switch	Remote I/O DeviceNet Network Interface Unit (Slave)	Remote I/O Ethernet Network Interface Unit
Lifecycle Status	Active	Active	Active	Active
Protocol Supported	PROFINET Slave, Version 2.2 Class A IO-Device	PROFINET Slave, Version 2.2 Class A IO-Device	DeviceNet Slave	EGD and Modbus TCP Server
Distance	100 Meters max. drop length 10/100Mbaud	2 – 2,000 (Full-Duplex) 2 – 400 (Half-Duplex)	500Kbps 100m bus length and branches totaling < 39m 250Kbps 250m bus length and branches totaling < 78m 125Kbps 500m bus length and branches totaling < 156m	100 Meters max. drop length 10/100Mbaud
I/O Discrete Points	2880 bytes total 1440 bytes of input data 1440 bytes of output data	2880 bytes total 1440 bytes of input data 1440 bytes of output data	Includes both discrete and analog. Up to 128 bytes of inputs + 2-byte status word Up to 128 bytes of outputs + 2-byte control word.	1024 bytes maximum both discrete and analog. %I: 2048 points %Q: 2048 points
I/O Analog Words	2880 bytes total 1440 bytes of input data 1440 bytes of output data	2880 bytes total 1440 bytes of input data 1440 bytes of output data	Includes both discrete and analog. Up to 128 bytes of inputs + 2-byte status word Up to 128 bytes of outputs + 2-byte control word.	1024 bytes maximum both discrete and analog. %AI: 128 channels %AQ: 128 channels
I/O Data	N/A	N/A	Up to 128 bytes of inputs + 2-byte status word Up to 128 bytes of outputs + 2-byte control word.	256 Bytes of input, output, Analog input and Analog output
I/O Data Update Rate	Configurable: 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms	Configurable: 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms	N/A	N/A
Network Topology	Daisy-chain/line, star, or ring (redundant media) topology.	Daisy-chain/line, star, or ring (redundant media) topology.	Linear bus (trunkline/dropline); power and signal on the same network cable	Network dependent
Transmission Media	10/100BASE-T	Fiber 100BASE-FX	Shielded, dual twisted pair cable, terminated at both ends	Ethernet twisted pair
Connector	(2) RJ45 with built-in switch	(2) SC or SC-Duplex with built-in switch	5-pin open pluggable connector	RJ-45
User Diagnostic Data	32 input status bits and 32 output control bits	32 input status bits and 32 output control bits	2 bytes of status/control	4
Number of Modules	8 per NIU/station, not expandable	8 per NIU/station, not expandable	8 per NIU/station	8 per NIU/station
Redundancy	No	No	N/A	No
5V Backplane Current Consumption (mA)	3 Watts	5 Watts	160	175
3.3V Backplane Current Consumption (mA)	N/A	N/A	10	425
Dimensions (W x H x D)	134mm (5.28 in) x 132mm (5.2 in)	134mm (5.28 in) x 132mm (5.2 in)	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply

Remote I/O Units

A Remote I/O Unit connects VersaMax I/O modules to a host PLC or computer via a variety of networks, which makes it easy to include VersaMax I/O in Genius, PROFIBUS-DP, DeviceNet, or Ethernet installations. Together, the Remote I/O Unit and its modules form an I/O station capable of providing up to 256 points of I/O.

	IC200GBI001	IC200PBI001
Product Name	Genius Network Interface Unit	Remote I/O PROFIBUS-DP Network Interface Unit (Slave)
Lifecycle Status	Active	Active
Protocol Supported	Genius	PROFIBUS DP
Distance	1372 to 2286 meters - 38.4 Kbaud supports a maximum of 16 devices. 1067 to 1372 meters 76.8 Kbaud supports a maximum of 32 devices. 609 to 1067 meters - 153. 6 Kbaud extended supports a maximum of 32 devices. Less than 609 meters 153.6 Kbaud standard or 153.6 Kbaud extended supports a maximum of 32 devices.	9.6Kbits - 1,200 meters 19.2Kbits - 1,200 meters 93.75Kbits - 1,200 meters 187.5Kbits - 600 meters 500Kbits - 400 meters 1.5Mbits - 200 meters 3Mbits; 6Mbits; 12Mbits - 100 meters
I/O Discrete Points	1024 Inputs and 1024 Outputs	375 bytes maximum. Up to 244 bytes of inputs or 244 bytes of outputs
I/O Analog Words	64 Analog In and 64 Analog Out	375 bytes maximum. Up to 244 bytes of inputs or 244 bytes of outputs
I/O Data	128 bytes in and 128 out per bus scan	375 bytes maximum. Up to 244 bytes of inputs or 244 bytes of outputs.
I/O Data Update Rate	N/A	N/A
Network Topology	Bus	Linear bus, terminated at both ends. Stubs are possible.
Transmission Media	Shielded, twisted pair, fiber optic (external option)	Shielded, twisted pair cable
Connector	Removable Connector	9-pin D-sub connector
User Diagnostic Data	Yes	2 bytes of status/control, 5 bytes of standard PROFIBUS diagnostics
Number of Modules	8 per NIU/station	8 per NIU/station
Redundancy	Full media and hardware redundancy supported	N/A
5V Backplane Current Consumption (mA)	250	250
3.3V Backplane Current Consumption (mA)	10	10
Dimensions (W x H x D)	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply	133.4 mm (5.25 in) x 85.9 mm (3.38 in) not including the height of power supply

Network Interface Modules

Network Interface Modules allow a VersaMax PLC to operate as a master or slave on a network. Modules currently available support DeviceNet master or slave communications and PROFIBUS-DP slave communications. An AS-i master communications is also available.

	IC200BEM002	IC200BEM003	IC200CHS006
Product Name	PLC Network Communications PROFIBUS-DP (Slave). Requires IC200CHS006 Communications Carrier.	PLC Network Communications PROFIBUS-DP (Master). Requires IC200CHS006 Communications Carrier.	VersaMax I/O, Local Communications Carrier (Supports IC200BEMxxx Modules)
Lifecycle Status	Active	Active	Active
Number of Stations	32 without repeaters; up to 125 with repeaters	125 PROFIBUS DP Slave devices	N/A
I/O Data	384 Bytes maximum; up to 244 bytes of inputs or 244 bytes of outputs	With a VersaMax CPUx05 CPU: A maximum of 3584 bytes of input data and 3584 bytes of output data With a VersaMax PROFINET Network Slave: A maximum of 1440 bytes of input data and 1440 bytes of output data With either CPU or PNS head end, a maximum of 244 bytes of input data and 244 bytes of output data for each slave.	N/A
Network Data Rate	9.6 Kbaud to 12 Mbaud	9.6 Kbaud to 12 Mbaud	N/A
Network Topology	Linear bus, terminated at both ends. Stubs are possible	Linear bus, terminated at both ends. Stubs are possible.	N/A
Transmission Media	Shielded, twisted pair cable	Shielded, twisted pair cable	N/A
Connector	9-pin D-sub connector	9-pin D-sub connector	N/A
Number of Nodes	N/A	N/A	N/A
User Diagnostic Data	N/A	Slave Status Bit Array Table, Firmware Module Revision, Slave Diagnostic Address	N/A
Power Consumption	460 mA maximum from 5 V output, 5 mA from +3.3 V output	450 mA maximum from 5 V output, 5 mA from +3.3 V output	N/A
Dimensions (W x H x D)	110 mm (4.3 in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	110 mm (4.3in) x 66.8 mm (2.63 in) x 50 mm (1.956 in), not including the height of the carrier or the mating connectors	66.8 mm (2.63 in) x 133.4 mm (5.25 in) x 70 mm (2.75 in), not including the height of DIN-rail

Serial Communications

The serial communications expansion module provides a Modbus Master port for a Genius NIU remote I/O drop. The serial port can be used to interface with a wide range of Modbus slave devices such as controllers, VFDs, bar code readers, marques and much more. The data is transferred to and from the NIU over the Genius LAN and is compatible with any controller that supports Genius Global Data.

IC200CMM020	
Product Name	Modbus Master Module, 1 RS-485 port. Requires IC200CHS006 Communications Carrier.
Lifecycle Status	Active
Module Type	Modbus Master
NIU Type Supported	Genius and PROFINET Slave
Number of Serial Communications Modules	Up to 2 per Genius NIU I/O Station
Number of RTU slaves per Serial Communications Module	1 to 247
Serial Port Type	RS-485. 15-pin subminiature 'D' connector. For RS-232 communications, an RS-485 to RS-232 adapter such as IC690ACC901 can be used. Adapter IC690ACC901 can be installed with its right-angle cable hanging down.RS-485 supports both 2-wire and 4-wire electrical interfaces
Baud Rate Supported	1200, 2400, 4800, 9600, and 19200, and half or full duplex operation
COMMREQ command memory (%AQ) required in the GENERIC_COMM module hardware configuration	Depends on individual COMMREQ content. Minimum: 22 words Maximum: 64 words
RTU Master Commands	65520, Initialize RTU Master Port 8000, Clear RTU Master Diag. Status 8001, Read RTU Master Diag. Status 8002, Send RTU Read/Force/Preset Query 8003, Send RTU Diagnostic Query
Power Consumption	460 mA maximum from 5 V output, 5 mA from +3.3 V output
Dimensions (W x H x D)	110mm (4.3in) x 66.8mm (2.63in) x 50mm (1.956 in), not including the height of the carrier or the mating connectors

Accessories

IC200ACC001	Replacement Battery for VersaMax CPUs	Active
IC200ACC003	EZ Program Store, CPU RS-485 Port Update Device	Active
IC200ACC201	Expansion Terminator QTY 1	Active
IC200ACC202	Expansion Terminator QTY 2	Active
IC690ACC905	Encapsulated Thermistor Kit QTY 2	Active
IC200ACC301	I/O Filler Module	Active
IC200ACC302	I/O Input Simulator	Active
IC200ACC303	I/O Shorting Bar QTY 2	Active
IC200ACC304	Cable Connector Kit, QTY 2, for connector base (IC200CHS003) I/O Base (IC200CHS011, CHS012, CHS014, CHS015 and CHS1xx bases)	Active
IC200ACC313	DIN-rail clips (Qty 2) to secure modules on DIN-rail	Active
IC200TBM001	I/O Auxiliary Terminal Strip, 18 Internally Bussed, Barrier Style	Active
IC200TBM002	I/O Auxiliary Terminal Strip, 18 Internally Bussed, Box Style	Active
IC200TBM005	I/O Auxiliary Terminal Strip, 18 Internally Bussed, Spring Clamp Style	Active

Cables for Connector Type Carrier

IC200CBL105	Cable, I/O Non-Shielded, 2 Connectors. 0.5M used with IC200CHS003 and IC200CHS011, 012, 015.	Active
IC200CBL110	Cable, I/O Non-Shielded, 2 Connectors, 1.0M used with IC200CHS003 and IC200CHS011, 012, 015.	Active
IC200CBL120	Cable, I/O Non-Shielded, 2 Connectors, 2.0M used with IC200CHS003 and IC200CHS011, 012, 015.	Active
IC200CBL230	Cable, I/O Non-Shielded, 1 Connector, 3.0M used with IC200CHS003 and IC200CHS011, 012, 015.	Active

Cables to Connect Rack to Rack Expansion

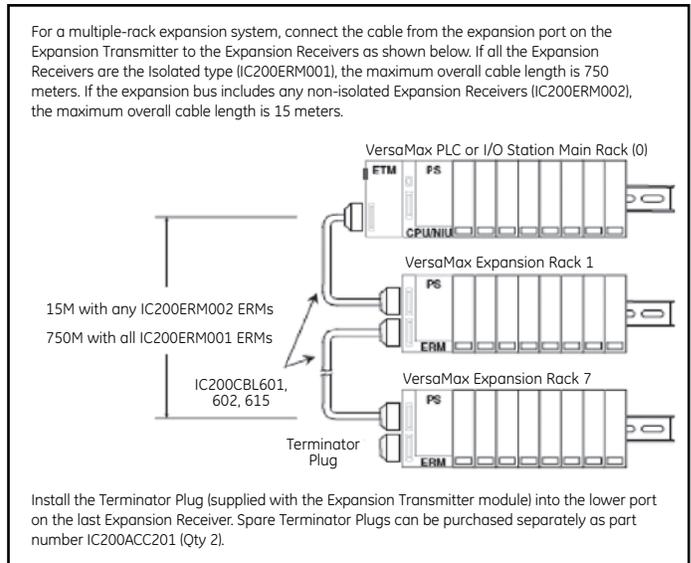|		
IC200CBL600	Rack Expansion Cable, Shielded, Single Ended, 1M to One Expansion Receiver Module (IC200ERM00x)	Active
IC200CBL601	Rack Expansion Cable, Shielded, 2 Connectors, 1M. Supports Multidrop to Multiple Expansion Receiver Modules (IC200ERM00x)	Active
IC200CBL602	Rack Expansion Cable, Shielded, 2 Connectors, 2M. Supports Multidrop to Multiple Expansion Receiver Modules (IC200ERM00x)	Active
IC200ACC304	Cable Connector Kit, QTY 2, for connector base (IC200CHS003) I/O Base (IC200CHS011, CHS012, CHS014, CHS015 and CHS1xx bases)	Active

Starter Kits

IC200PKG001	PLC Starter Kit CPU001	Contains CPU001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1503, GFK-1504, 641VPS300 (Infolink included), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG010	PLC Starter Kit CPUE05	Contains CPUE05, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1503, GFK-1504, Machine Edition (Infolink included), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG101	I/O Starter Kit GENIUS	Contains GBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1535, GFK-1504, 690CDR002 (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG102	I/O Starter Kit PROFIBUS-DP	Contains PBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1534, GFK-1504, 690CDR002 (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG103	I/O Starter Kit DeviceNet	Contains DBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1533, GFK-1504, 690CDR002 (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active
IC200PKG104	I/O Starter Kit Ethernet	Contains EBI001, PWR101, MDD845, CHS002, ACC302, CBL001, GFK-1534, GFK-1504, Machine Edition (Infolink), coffee mug, and plastic carry case. Does not include 24 VDC power supply for inputs.	Active

Configuration Guidelines

When configuring a VersaMax Modular the following guidelines should be considered:

1. All I/O modules require an I/O Carrier (IC200CHS001, 002, 003, 005, 022 or 025).

2. When an I/O Connector Carrier (IC200CHS003) is selected, a cable (IC200CBL6xx) and interposing remote base (IC200CHS011, 012, 014 or 015) are required.

3. When configuring a system, the power consumptions should be tracked to determine what power supply and how many power supplies may be required.

4. DIN-rail clips should be used to secure the VersaMax modules (IC200ACC313).

5. A maximum of 8 carriers, any combination of I/O or communications, can be connected directly to either an NIU or CPU. (Power Supply Booster base is not counted as a carrier). CPUs and NIUs can be expanded beyond the 8 carriers using the Bus Transmitter Expansion (IC200ETM001) and up to 7 Expansion Receiver Modules (IC200ERM00x) for a total of 64 carrier modules.

For a multiple-rack expansion system, connect the cable from the expansion port on the Expansion Transmitter to the Expansion Receivers as shown below. If all the Expansion Receivers are the Isolated type (IC200ERM001), the maximum overall cable length is 750 meters. If the expansion bus includes any non-isolated Expansion Receivers (IC200ERM002), the maximum overall cable length is 15 meters.

Install the Terminator Plug (supplied with the Expansion Transmitter module) into the lower port on the last Expansion Receiver. Spare Terminator Plugs can be purchased separately as part number IC200ACC201 (Qty 2).

Examples of Typical Application

Configuration for Controller (Example application requiring (30) 24 VDC inputs and (10) Relay outputs AC power supply)

Power Supply Current Required (mA)	Qty	Part Number	Description
40@ 5 V and 100@ 3 V	1	IC200CPU001	VersaMax PLC CPU 32K Configurable Memory, 2 Ports RS-232 and RS-485
	1	IC200PWR101	VersaMax 120/240 VAC Power Supply (1.5 amps 5 V and 0.25 amps 3.3 V)
50 @ 5 V	1	IC200MDL650	VersaMax Discrete Input Module, 24 VDC Positive Logic, 32 points
490 @ 5 V	1	IC200MDL940	VersaMax Discrete Output Module, Relay 2.0 A per point Isolated Form A, 16 points
	2	IC200CHS022	VersaMax Compact I/O Carrier, Local Box Clamp Connection Style
	1	IC200ACC313	DIN-rail clips (Qty 2) to secure modules on DIN-rail
	1	IC646MPS101	Logic Developer - PLC Standard - w/Programming Cable
Total:		**580 @ 5 V and 100 @ 3 V (820 mA remaining). 1500 mA available for 5 V and 3.3 V.**	

Options to consider

	1	IC690PWR024	24 VDC, 5 Amp Output Power and 120/230 VAC Input Power Power Supply
100 @ 5 V	1	IC200ACC003	EZ Program Store, CPU RS485 Port Update Device

Configuration for Controller (Application requiring 20K of Registers, (60) 24 VDC inputs, (15) AC Inputs, (12) AC Outputs and (20) Relay outputs also (16) Analog Inputs, (12) Isolated Analog Outputs and 24 VDC power supply. Also requires PROFIBUS Slave connection)

Power Supply Current Required	Qty	Part Number	Description
80 @ 5 V and 650 @ 3 V	1	IC200CPU005	VersaMax PLC CPU 128K Configurable User Memory, 2 Ports RS-232 and RS-485
	3	IC200PWR002	24 VDC Power Supply with Expanded 3.3 V (Logic side supply of 1.5 amps maximum. Up to 1.0 amp can be allocated for 3.3 V usage.)
100 @ 5 V	2	IC200MDL650	VersaMax Discrete Input Module, 24 VDC Positive Logic, 32 points
110 @ 5 V	1	IC200MDL240	VersaMax Discrete Input Module, 120 VAC Positive Logic, 16 points
170 @ 5 V	2	IC200MDL331	VersaMax Discrete Output Module, 120 VAC 2.0 A per point Isolated, 8 points
980 @ 5 V	2	IC200MDL940	VersaMax Discrete Output Module, Relay 2.0 A per point Isolated Form A, 16 points
400 @ 5 V	2	IC200ALG262	VersaMax Analog Input Module, 15 Bit Differential Current, 8 Channel
10 @ 5 V and 115 @ 3 V	2	IC200ALG331	VersaMax Analog Output Module, 14 Bit Voltage/Current 1500 VAC Isolation, 8 Channel
	11	IC200CHS022	VersaMax Compact I/O Carrier, Local Box Clamp Connection Style
460 @ 5 V and 5 @ 3 V	1	IC200BEM002	PLC Network Communications PROFIBUS-DP (Slave)
	1	IC200PWB001	VersaMax Power Supply Booster Carrier. Supplies power to all modules to the right of booster. Requires power supply.
		IC200CHS006	VersaMax I/O, Local Communications Carrier
44 @ 5 V	1	IC200ETM001	Bus Transmitter Expansion Module
70 @ 5 V and 20 @ 3 V	1	IC200ERM002	Expansion Receiver Module, Non-Isolated
	1	IC200CBL600	Cable Expansion Shielded Single Ended 1M
	1	IC200ACC313	DIN-rail clips (Qty 2) to secure modules on DIN-rail
	1	IC646MPS101	Logic Developer - PLC Standard - w/Programming Cable
Total:		**2424 @ 5 V and 790 @ 3 V Required. 4500 mA available for 5 V and 3.3 V. Power Supply to meet power requirements.**	

Options to consider

	Qty	Part Number	Description
	1	IC690PWR024	24 VDC, 5 Amp Output Power and 120/230 VAC Input Power Power Supply
	1	IC754VSI06STD	QuickPanel View Intermediate 6 inch STN Touch DC
100 @ 5 V	1	IC200ACC003	EZ Program Store, CPU RS485 Port Update Device

Configuration for Controller Ethernet connectivity, (60) 24 VDC inputs, (20) Relay outputs, (16) Analog Inputs, (12) Thermocouples on a remote Ethernet drop, (12) Isolated Analog Outputs and 24 VDC power supply. Also requires Color TFT Operator Interface with Touch Screen.

Power Supply Current Required	Qty	Part Number	Description
160 @ 5 V and 650 @ 3 V	1	IC200CPUE05	VersaMax PLC CPU 128K Configurable User Memory, 2 Ports RS-232 and RS-485, 10 MBIT Ethernet Port. Supports SRTP and EGD.
	2	IC200PWR002	24 VDC Power Supply with Expanded 3.3 V (Logic side supply of 1.5 amps maximum. Up to 1.0 amp can be allocated for 3.3 V usage.)
	1	IC200PWB001	VersaMax Power Supply Booster Carrier. Supplies power to all modules to the right of booster. Requires power supply.
100 @ 5 V	2	IC200MDL650	VersaMax Discrete Input Module, 24 VDC Positive Logic, 32 points
980 @ 5 V	2	IC200MDL940	VersaMax Discrete Output Module, Relay 2.0 A per point Isolated Form A, 16 points
400 @ 5 V	2	IC200ALG262	VersaMax Analog Input Module, 15 Bit Differential Current, 8 Channel
10 @ 5 V and 115 @ 3 V	2	IC200ALG331	VersaMax Analog Output Module, 14 Bit Voltage/Current 1500 VAC Isolation, 8 Channel
	8	IC200CHS022	VersaMax Compact I/O Carrier, Local Box Clamp Connection Style
	2	IC200ACC313	DIN-rail clips (Qty 2) to secure modules on DIN-rail
	1	IC646MBT001	Logic Developer PLC Standard Edition and View for QuickPanel with 15 mos. of Proficy GlobalCare which is renewable on an annual basis.
	1	IC754VSI06STD	QuickPanel View Intermediate 6 inch STN Touch DC
Total:			**1650 @ 5 V and 765 @ 3 V. 3000 mA available for 5 V and 3.3 V.**

Ethernet Remote Drop

	Qty	Part Number	Description
175 @ 5 V and 425 @ 3 V	1	IC200ETM001	Bus Transmitter Expansion Module
	1	IC200PWR002	24 VDC Power Supply with Expanded 3.3 V (Logic side supply of 1.5 amps maximum. Up to 1.0 amp can be allocated for 3.3 V usage.)
250 @ 5 V and 250 @ 3 V	2	IC200ALG630	VersaMax Analog Input Module, 16 Bit Thermocouple, 7 Channel
	1	IC690ACC905	Encapsulated Thermistor Kit Qty 2
	2	IC200CHS022	VersaMax Compact I/O Carrier, Local Box Clamp Connection Style
	1	IC200ACC313	DIN-rail clips (Qty 2) to secure modules on DIN-rail
Total:			**2424 @ 5 V and 790 @ 3 V Required. 4500 mA available for 5 V and 3.3 V. Power Supply Booster required with extra Power Supply to meet power requirements.**

Options to consider

	Qty	Part Number	Description
	1	IC690PWR124	24 VDC, 10 Amp Output Power and 120/230 VAC Input Power Power Supply
100 @ 5 V	1	IC200ACC003	EZ Program Store, CPU RS485 Port Update Device