

## Analog Input Modules



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

	IC200ALG230	IC200ALG240	IC200ALG260	IC200ALG261
<b>Product Name</b>	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
<b>Lifecycle Status</b>	Active	Active	Active	Active
<b>Input Range</b>	±10 VDC or 0-10 VDC	±10 VDC, 4-20 mA	4-20 mA, ±10 VDC or 0-10 VDC	±10 VDC
<b>Number of Channels</b>	4	8 Channel to channel isolated	8	8
<b>External Power Supply</b>	None	Range: 19.5-30 VDC including ripple; Current consumption: 100 mA maximum plus load currents	None	None
<b>Resolution</b>	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
<b>Update Rate</b>	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
<b>Accuracy at 25°C</b>	±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
<b>Input Impedance</b>	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
<b>Input Filter Response</b>	5.0 ms	N/A	5.0 ms	N/A
<b>5V Backplane Current Consumption (mA)</b>	125 maximum	15 maximum	130 maximum	200 maximum
<b>3.3V Backplane Current Consumption (mA)</b>	N/A	120 maximum	N/A	N/A
<b>LED Indicators</b>	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.
<b>Dimensions (W x H x D)</b>	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
<b>Product Name</b>	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
<b>Lifecycle Status</b>	Active	Active	Active
<b>Input Range</b>	0 to 20 mA or 4 to 20 mA	±10 VDC	0 to 20 mA or 4 to 20 mA
<b>Number of Channels</b>	8	15	15
<b>External Power Supply</b>	None	None	None
<b>Resolution</b>	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
	7.5 ms	7.5 ms	7.5 ms
<b>Update Rate</b>			
<b>Accuracy at 25°C</b>	±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
<b>Input Impedance</b>	Current mode: 100 kOhms maximum	Voltage mode: 100 kOhms maximum	Voltage mode: 100 kOhms maximum, Current mode: 200 Ohms maximum
<b>Input Filter Response</b>	N/A	N/A	24 Hz ±20%
<b>5V Backplane Current Consumption (mA)</b>	200 maximum	150 maximum	100 maximum
<b>3.3V Backplane Current Consumption (mA)</b>	N/A	N/A	N/A
<b>LED Indicators</b>	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.
<b>Dimensions (W x H x D)</b>	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
<b>Product Name</b>	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
<b>Lifecycle Status</b>	Active	Active	Active
<b>Output Range</b>	4-20 mA	0-10 VDC	±10 VDC
<b>Number of Channels</b>	4	4	4
<b>External Power Supply</b>	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
<b>Resolution</b>	4 uA = 8 counts	2.5 mV = 8 counts	5 mV = 16 counts
<b>Update Rate</b>	0.3 ms maximum	0.3 ms maximum	0.3 ms maximum
<b>Accuracy at 25°C</b>	±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
<b>5V Backplane Current Consumption (mA)</b>	50 maximum	50 maximum	50 maximum
<b>3.3V Backplane Current Consumption (mA)</b>	N/A	N/A	N/A
<b>LED Indicators</b>	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.
<b>Dimensions (W x H x D)</b>	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 $\pm 10$ VDC or 0 to 10 VDC Voltage, 8 Channel	VersaMax Analog Output Module, 13 Bit Current, 8 Channel	VersaMax Analog Output Module, 13 Bit $\pm 10$ 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	$\pm 10$ VDC or 0 to 10 VDC	4 to 20 mA (default) 0 to 20 mA (configured with jumper)	$\pm 10$ VDC or 0 to 10 VDC	4 to 20 mA (default) 0 to 20 mA (configured with jumper)	$\pm 10$ 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; 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 $\mu$ A (~12.7 bits) 0-20 mA: 4 counts = 2.5 $\mu$ A (13 bits)	1.25 mV = 4 counts	4-20 mA: 5 counts = 2.5 $\mu$ A (~12.7 bits) 0-20 mA: 4 counts = 2.5 $\mu$ A (13 bits)	Current mode: 381 nA nominal Voltage mode: 381 $\mu$ V nominal
Update Rate	15.0 ms maximum	15.0 ms maximum	10.0 ms maximum	15 ms maximum	7 ms maximum
Accuracy at 25°C	$\pm 0.3\%$ typical of full scale, $\pm 0.5\%$ maximum of full scale	$\pm 0.3\%$ of full scale (typical), $\pm 0.5\%$ of full scale (max.) $\pm 1\%$ of full scale (max.)	$\pm 0.3\%$ typical of full scale, $\pm 0.5\%$ maximum of full scale	$\pm 0.3\%$ of full scale (typical), $\pm 0.5\%$ of full scale (max.) $\pm 1\%$ of full scale (max.)	$\pm 0.1\%$ 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 (IC200CHSxx).

	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 $\pm$ 10V Input 4 Channel/Output $\pm$ 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 $\mu$ A = 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	$\pm$ 0.3% typical of full scale, $\pm$ 0.5% maximum of full scale	$\pm$ 0.3% typical of full scale, $\pm$ 0.5% maximum of full scale	$\pm$ 0.3% typical of full scale, $\pm$ 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