

Analog I/O Slave Units with MIL Connectors/e-CON Connectors

CRT1-VAD04□□/-VDA02□□

Analog Slave Units with the Industry's Narrowest Width Help Save Space in Equipment and Panels

- The series includes Slave Units with a width of only 15 mm, the narrowest in the industry. Models with e-CON connectors boast a width of only 23 mm, making them the smallest in their class to save even more space.
- I/O interface wiring can be performed easily with either MIL connectors or e-CON connectors.
- Just make a few switch settings to complete Unit setup.
- Enhanced Smart functions in a slim body. Reduce your total cost of operation by collecting maintenance data by using only the Slave Unit.



Ordering Information

Name	Specifications		Model
	Input/Output	Points	
MIL Connector Type	Analog Inputs	4 inputs	CRT1-VAD04ML
	Analog Outputs	2 outputs	CRT1-VDA02ML
e-CON Connector Type	Analog Inputs	4 inputs	CRT1-VAD04S
	Analog Outputs	2 outputs	CRT1-VDA02S
Mounting Bracket	Unit with MIL Connectors		CRT1-ATT01
	Unit with e-CON Connectors		CRT1-ATT02

Slave External I/O Connections in the appendix for applicable connectors.

Performance Specifications

For Basic Performance Specifications of Slave Units, refer to page 32.

Input Section Specifications

● Four-point Analog Input Unit (with MIL Connectors) CRT1-VAD04ML

Item	Specification		
	Voltage input	Current input	
Input signal ranges	0 to 5 V 1 to 5 V 0 to 10 V -10 to 10 V	0 to 20 mA 4 to 20 mA	
Maximum signal input	±15 V	±30 mA	
Input impedance	1 MΩ min.	Approx. 250 Ω	
Resolution	1/6,000 (full scale)		
Overall accuracy	25°C	±0.3% FS	±0.4% FS
	-10 to 55°C	±0.6% FS	±0.8% FS
Conversion cycle	1 ms/ 1 point		
AD conversion data	-10 to 10 V range: F448 to 0BB8 hex full scale (-3,000 to 3,000) Other ranges: 0000 to 1770 hex full scale (0 to 6,000) AD conversion range: ±5% FS of the above data ranges.		
Isolation method	Photocoupler isolation (between input and communications lines) No isolation between input signal wires		
Mounting	DIN Track mount or mount for Mounting Bracket		
Power supply type	Multi-power supply		
Communications power current consumption	75 mA max. for 24-VDC power supply 115 mA max. for 14-VDC power supply		
Weight	70 g max.		

● Four-point Analog Input Unit (with e-CON Connectors) CRT1-VAD04S

Item	Specification		
	Voltage input	Current input	
Input signal ranges	0 to 5 V 1 to 5 V 0 to 10 V -10 to 10 V	0 to 20 mA 4 to 20 mA	
Maximum signal input	±15 V	±30 mA	
Input impedance	1 MΩ min.	Approx. 250 Ω	
Resolution	1/6,000 (full scale)		
Overall accuracy	25°C	±0.3% FS	±0.4% FS
	-10 to 55°C	±0.6% FS	±0.8% FS
Conversion cycle	1 ms/ 1 point		
AD conversion data	-10 to 10 V range: F448 to 0BB8 hex full scale (-3,000 to 3,000) Other ranges: 0000 to 1770 hex full scale (0 to 6,000) AD conversion range: ±5% FS of the above data ranges.		
Isolation method	Photocoupler isolation (between input and communications lines) No isolation between input signal wires		
Mounting	DIN Track mount or mount for Mounting Bracket		
Power supply type	Multi-power supply		
Communications power current consumption	75 mA max. for 24-VDC power supply 115 mA max. for 14-VDC power supply		
Sensor power supply current *	Less than 200 mA (for each CH)		
Weight	85 g max.		

* In order to provide power to the sensor through the I/O connector, a 24-VDC power supply must be connected to the sensor power supply connector.

Output Section Specifications

● Two-point Analog Output Unit (with MIL Connectors) CRT1-VDA02ML

Item	Specification		
	Voltage Output	Current Output	
Output signal ranges	0 to 5 V 1 to 5 V 0 to 10 V -10 to 10 V	0 to 20 mA 4 to 20 mA	
External output allowable load resistance	1 kΩ min.	600 Ω max.	
Resolution	1/6,000 (full scale)		
Overall accuracy	25°C	±0.4% FS	±0.4% FS *
	-10 to 55°C	±0.8% FS	±0.8% FS *
Conversion cycle	2 ms/ 2 points		
DA conversion data	-10 to 10 V range: F448 to 0BB8 hex full scale (-3,000 to 3,000) Other ranges: 0000 to 1770 hex full scale (0 to 6,000) DA conversion range: ±5% FS of the above data ranges.		
Isolation method	Photocoupler isolation (between output and communications lines) No isolation between output signal wires.		
Mounting	DIN Track mount or mount for Mounting Bracket		
Power supply type	Multi-power supply		
Communications power current consumption	105 mA max. for 24-VDC power supply 170 mA max. for 14-VDC power supply		
Weight	75 g max.		

* The specified accuracy does not apply below 0.2 mA when using the 0 to 20 mA range.

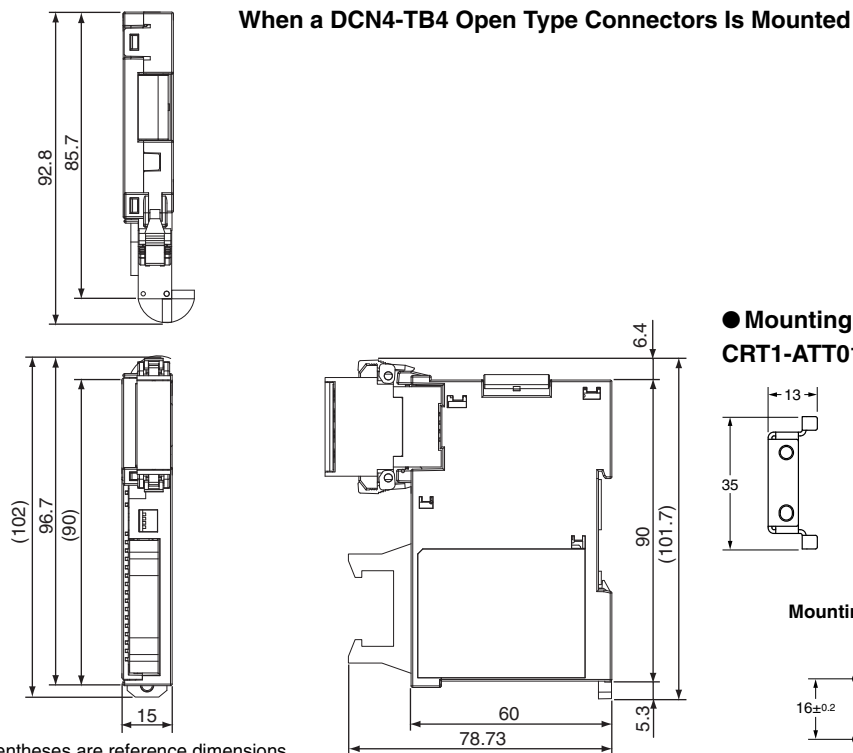
● Two-point Analog Output Unit (with e-CON Connectors) CRT1-VDA02S

Item	Specification		
	Voltage Output	Current Output	
Output signal ranges	0 to 5 V 1 to 5 V 0 to 10 V -10 to 10 V	0 to 20 mA 4 to 20 mA	
External output allowable load resistance	1 kΩ min.	600 Ω max.	
Resolution	1/6,000 (full scale)		
Overall accuracy	25°C	±0.4% FS	±0.4% FS *
	-10 to 55°C	±0.8% FS	±0.8% FS *
Conversion cycle	2 ms/ 2 points		
DA conversion data	-10 to 10 V range: F448 to 0BB8 hex full scale (-3,000 to 3,000) Other ranges: 0000 to 1770 hex full scale (0 to 6,000) DA conversion range: ±5% FS of the above data ranges.		
Isolation method	Photocoupler isolation (between output and communications lines) No isolation between output signal wires.		
Mounting	DIN Track mount or mount for Mounting Bracket		
Power supply type	Multi-power supply		
Communications power current consumption	105 mA max. for 24-VDC power supply 170 mA max. for 14-VDC power supply		
Weight	85 g max.		

* The specified accuracy does not apply below 0.2 mA when using the 0 to 20 mA range.

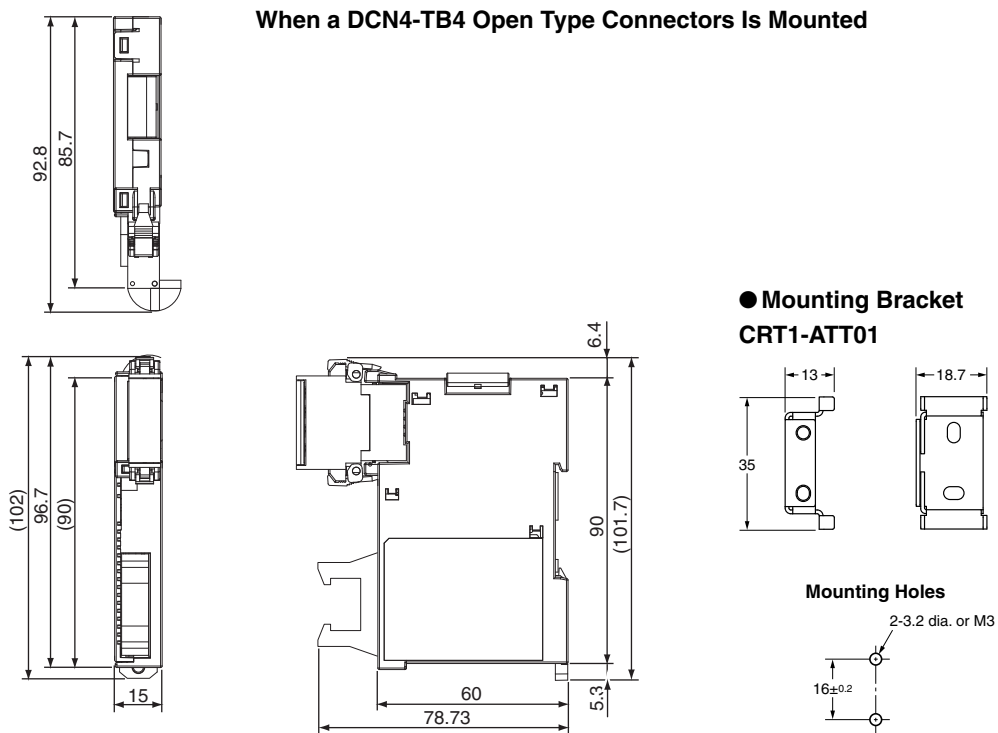
Dimensions

● Four-point Analog Input Unit (with MIL Connectors)
CRT1-VAD04ML



Note: The numbers inside the parentheses are reference dimensions.

● Two-point Analog Output Unit (with MIL Connectors)
CRT1-VDA02ML

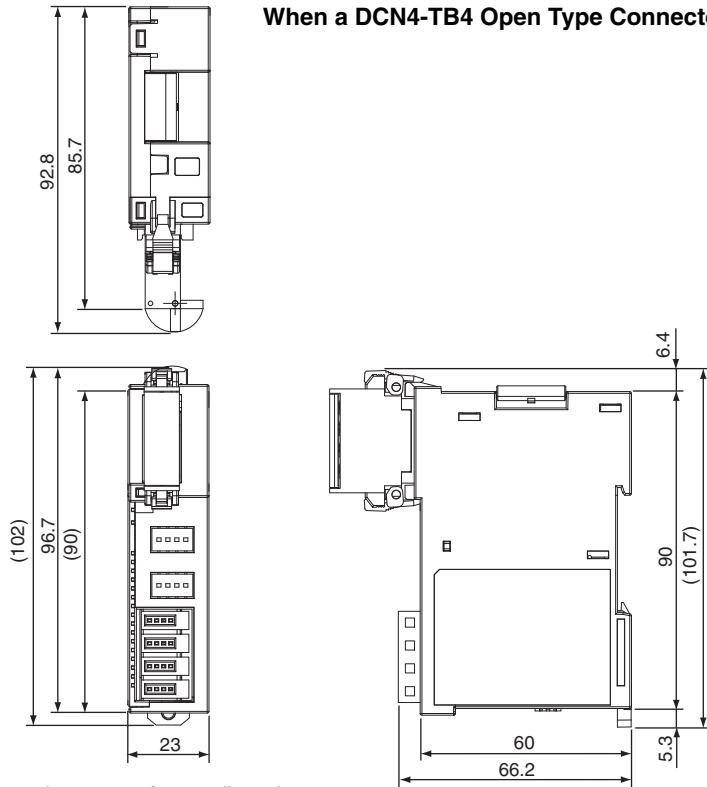


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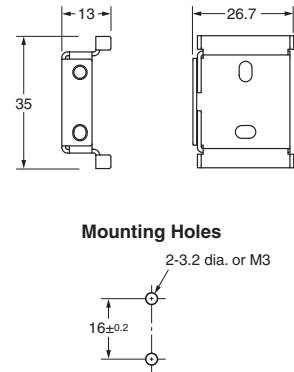
● Four-point Analog Input Unit (with e-CON Connectors)

CRT1-VAD04S

When a DCN4-TB4 Open Type Connectors Is Mounted



● Mounting Bracket
CRT1-ATT02

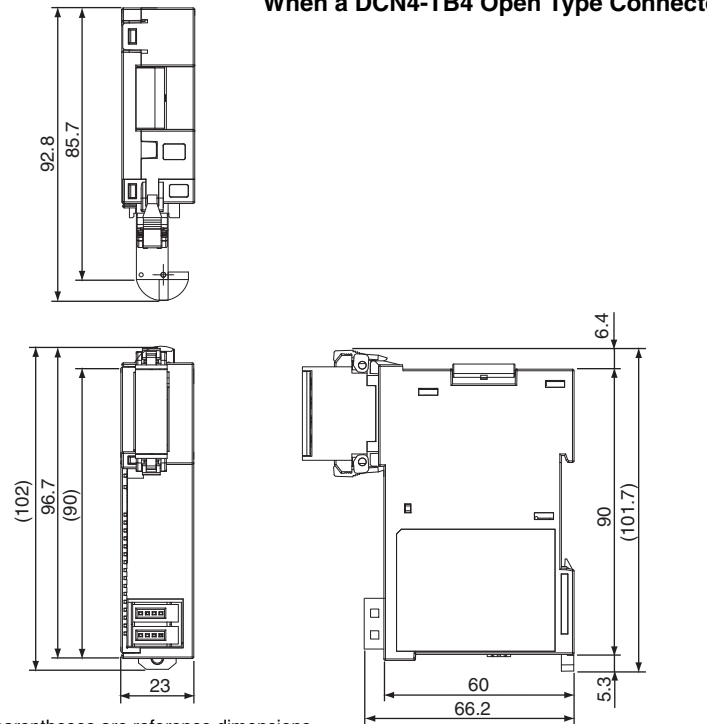


Note: The numbers inside the parentheses are reference dimensions.

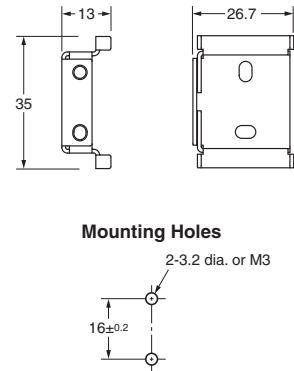
● Two-point Analog Output Unit (with e-CON Connectors)

CRT1-VDA02S

When a DCN4-TB4 Open Type Connectors Is Mounted



● Mounting Bracket
CRT1-ATT02



Note: The numbers inside the parentheses are reference dimensions.

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