

Expansion Units

# XWT-VOD08S(-1)/VMD08S(-1)/VOD16ML(-1)/VMD16ML(-1)

## Easy expansion!

### Expansion Digital Input/Output Units connectable to Analog I/O Slave Unit (Numerical indicator type)



- Easy ladder-free local control can be performed if connected with Analog I/O slaves (Numerical indicator type).
- One touch I/O interface connection with MIL Connector and e-CON Connector.
- Comes with testing function which facilitates system start-up.

### Ordering Information

Name	Specifications			Model
Expansion Units e-CON Connector type	Digital outputs NPN	8 outputs	One Expansion Unit can be mounted to one CRT1-VAD02□□D or CRT1-VDA02□□D Analog I/O Slave Unit.	XWT-VOD08S
	Digital outputs PNP	8 outputs		XWT-VOD08S-1
	Digital inputs and outputs NPN	4 inputs/4 outputs		XWT-VMD08S
	Digital inputs and outputs PNP	4 inputs/4 outputs		XWT-VMD08S-1
Expansion Units MIL Connector type	Digital outputs NPN	16 outputs		XWT-VOD16ML
	Digital outputs PNP	16 outputs		XWT-VOD16ML-1
	Digital inputs and outputs NPN	8 inputs/8 outputs		XWT-VMD16ML
	Digital inputs and outputs PNP	8 inputs/8 outputs		XWT-VMD16ML-1

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

### Expansion Unit Functions

The addition Expansion Units to Analog I/O Units (Numerical indicator type) provides these functions.

#### Local Control (for Analog Input Units)

You can combine the digital output of the Expansion Unit with the Comparator function of Analog Input Slave Unit, and have the ON/OFF control.

#### Extended Allocation of Digital Data to I/O Memory

The bits on the connected Expansion Unit can be allocated together with analog data of the Slave Unit to the I/O memory of the Master Unit.

#### Setting the Input Time Constant (for Input/Output Expansion Units)

You can select a time period to check the on/off status of inputs to the Expansion Unit. The input values are read several times in the set time period. The inputs are regarded valid only when all read values are consistent, i.e., either they are all on or all off.

#### Holding or Clearing the Outputs at Errors (for Input/Output Expansion Units, Output Expansion Units)

You can select holding or clearing the output values when there is a communications error.

### Performance Specifications

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

## Output Section Specifications

### ● e-CON connector type 8-output Expansion Unit

Item	Specification	
Model	XWT-VOD08S	XWT-VOD08S-1
Internal I/O common	NPN	PNP
Number of I/O points	8 outputs	
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15% to +10%)	
I/O consumption current	10 mA max for 24-VDC power supply	
Rated output current	0.3 A per point, 2.0 A per common	
Residual voltage	1.2 VDC max (DC at 0.3 A, between each output terminal and G terminal)	1.2 VDC max (DC at 0.3 A, between each output terminal and V terminal)
Leakage voltage	0.1 mA max	
Current supply for connected output devices	100 mA per point	
ON delay time	0.5 ms max	
OFF delay time	1.5 ms max	
Number of circuits per common	8 points	
Insulation method	Photocoupler insulation	
Output indication	Indicator (yellow)	
Power supply type	Multi-power supply	
Communications power consumption	10 mA max. for 24-VDC power supply 15 mA max. for 14-VDC power supply	
Weight	63 g	

### ● MIL connector type 16-output Expansion Unit

Item	Specification	
Model	XWT-VOD16ML	XWT-VOD16ML-1
Internal I/O common	NPN	PNP
Number of I/O points	16 outputs	
I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15% to +10%)	
I/O consumption current	10 mA max for 24-VDC power supply	
Rated output current	0.3 A per point, 2.0 A per common	
Residual voltage	1.2 VDC max (DC at 0.3 A, between each output terminal and G terminal)	1.2 VDC max (DC at 0.3 A, between each output terminal and V terminal)
Leakage voltage	0.1 mA max	0.1 mA max
ON delay time	0.5 ms max	
OFF delay time	1.5 ms max	
Number of circuits per common	16 points	
Insulation method	Photocoupler insulation	
Output indication	Indicator (yellow)	
Power supply type	Multi-power supply type	
Communications power consumption	10 mA max. for 24-VDC power supply 20 mA max. for 14-VDC power supply	
Weight	64 g	

## Input and Output Section Specifications

### ● e-CON connector type 4-input and 4-output Expansion Unit

Item		Specification and Performance	
Common	Model	XWT-VMD08S	XWT-VMD08S-1
	Internal I/O common	NPN	PNP
	Number of I/O points	4 inputs, 4 outputs	
	ON delay time	1.5 ms max for inputs, 0.5 ms max for outputs	
	OFF delay time	1.5 ms max	
	Number of circuits per common	4 points	
	Insulation method	Inputs: Non-insulated Outputs: Photocoupler insulation	
	Input and output indication	Indicator (yellow)	
	Power supply type	Inputs: Network power supply Outputs: Multi-power supply	
	Communications power consumption	10 mA max. for 24-VDC power supply 15 mA max. for 14-VDC power supply	
	Weight	64 g	
	Input part	ON voltage	10.5 VDC min (between each terminal and V terminal)
OFF voltage		5 VDC max (between each terminal and V terminal)	5 VDC max (between each terminal and G terminal)
OFF current		1.0 mA max	
Input current		6.0 mA max per point for 24-VDC power supply 3.0 mA min per point for 10.5-VDC power supply	
Current supply for connected input devices		50 mA per point	
Output part		I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15% to +10%)
	I/O consumption current	10 mA max for 24-VDC power supply	
	Rated output current	0.3 A per point, 1.0 A per common	
	Residual voltage	1.2 VDC max (DC at 0.3 A, between each output terminal and G terminal)	1.2 VDC max (DC at 0.3 A, between each output terminal and V terminal)
	Leakage voltage	0.1 mA max	
	Current supply for connected output devices	100 mA per point	

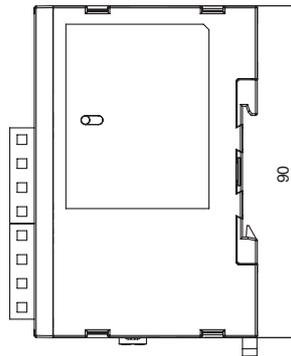
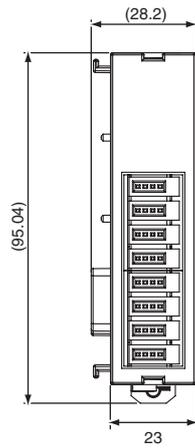
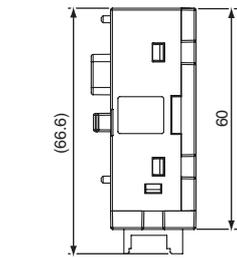
### ● MIL connector type 8-input and 8-output Expansion Unit

Item		Specification	
Common	Model	XWT-VMD16ML	XWT-VMD16ML-1
	Internal I/O common	NPN	PNP
	Number of I/O points	8 inputs, 8 outputs	
	ON delay time	1.5 ms max for inputs, 0.5 ms max for outputs	
	OFF delay time	1.5 ms max	
	Number of circuits per common	8 points	
	Insulation method	Photocoupler insulation	
	Input and output indication	Indicator (yellow)	
	Power supply type	Multi-power supply	
	Communications power consumption	10 mA max. for 24-VDC power supply 20 mA max. for 14-VDC power supply	
	Weight	64 g	
	Input part	I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15% to +10%)
I/O consumption current		2 mA max for 24-VDC power supply	
ON voltage		17 VDC min (between each terminal and V terminal)	17 VDC min (between each terminal and G terminal)
OFF voltage		5 VDC max (between each terminal and V terminal)	5 VDC max (between each terminal and G terminal)
OFF current		1.0 mA max	
Input current		6.0 mA max per point for 24-VDC power supply 3.0 mA min per point for 17-VDC power supply	
Output part	I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15% to +10%)	
	I/O consumption current	10 mA max for 24-VDC power supply	
	Rated output current	0.3 A per point, 1.0 A per common	
	Residual voltage	1.2 VDC max (DC at 0.3 A, between each output terminal and G terminal)	1.2 VDC max (DC at 0.3 A, between each output terminal and V terminal)
	Leakage voltage	0.1 mA max	

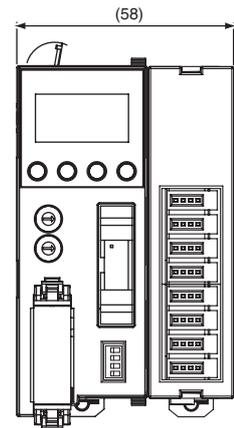
**Dimensions**

● e-CON Connector type

- XWT-VMD08S (NPN)
- XWT-VMD08S-1 (PNP)
- XWT-VOD08S (NPN)
- XWT-VOD08S-1 (PNP)

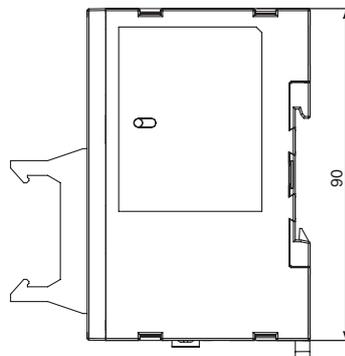
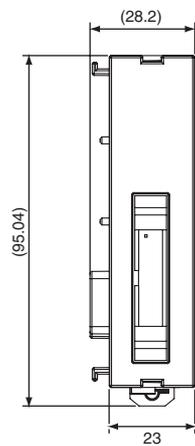
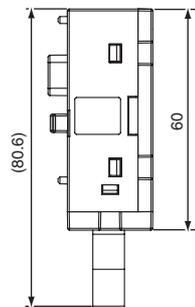


Dimension when it is mounted to a Slave Unit:

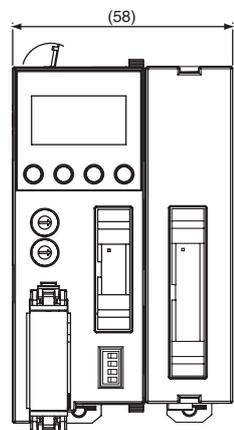


● MIL Connector type

- XWT-VMD16ML (NPN)
- XWT-VMD16ML-1 (PNP)
- XWT-VOD16ML (NPN)
- XWT-VOD16ML-1 (PNP)



Dimension when it is mounted to a Slave Unit:



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