

Digital I/O Slave Units with Screw Terminal Blocks (2-tier Terminal Block/Relay Output/SSR Output)

CRT1-□D08(-1)/□D16(-1)/ROS□/ROF□

Visualize the actual worksite status! Simple and Intelligent I/O Slave Units.

In addition to the Digital I/O Slave Unit's basic digital ON/OFF signals, collect useful information from the Slave Unit to improve equipment operating rates and maintainability.

- Communications connector and removable I/O terminal block enable faster startup times and improved maintainability.
- One Expansion Unit can be added to each Digital I/O Slave Unit to increase system configuration flexibility.
- Collect various preventive maintenance data required to improve productivity, such as information on equipment deterioration due to aging and equipment operating time data.
- Simplify startup with the communications power supply monitoring function.



Ordering Information

Name	Specifications			Model
Two-tier Screw Terminal Block	Inputs	8 inputs	NPN	CRT1-ID08
			PNP	CRT1-ID08-1
	Outputs	8 outputs	NPN	CRT1-OD08
			PNP	CRT1-OD08-1
	Inputs	16 inputs	NPN	CRT1-ID16 *
			PNP	CRT1-ID16-1 *
	Outputs	16 outputs	NPN	CRT1-OD16 *
			PNP	CRT1-OD16-1 *
Screw Terminal Block with Relay Outputs	Outputs	8 outputs	Contacts	CRT1-ROS08
		16 outputs		CRT1-ROS16
	Outputs	8 outputs	SSR	CRT1-ROF08
		16 outputs		CRT1-ROF16

* These Units are also available with a DCN-TB4 Terminal Conversion Adapter included in the package. Add "(-B)" to the end of the model number to receive the Adapter as well.

●Expansion Units

One Expansion Unit can be combined with one Digital I/O Slave Unit (CRT1-ID16(-1), CRT1-OD16(-1), CRT1-ROS16, or CRT1-ROF16). The following Expansion Units are available. They can be combined in various ways for flexible I/O capacity expansion.

Model	I/O points	Input capacity	Output capacity
XWT-ID08	8 DC inputs (NPN)	8	0
XWT-ID08-1	8 DC inputs (PNP)	8	0
XWT-OD08	8 transistor outputs (NPN)	0	8
XWT-OD08-1	8 transistor outputs (PNP)	0	8
XWT-ID16	16 DC inputs (NPN)	16	0
XWT-ID16-1	16 DC inputs (PNP)	16	0
XWT-OD16	16 transistor outputs (NPN)	0	16
XWT-OD16-1	16 transistor outputs (PNP)	0	16

Performance Specifications for CRT1-ROS08/ROS16 (with relay outputs) and CRT1-ROF08/ROF16 (with SSR outputs)

For Basic Performance Specifications of Slave Units, refer to page 30.

● Relay Output

Item	Specification
Communications power supply voltage	14 to 26.4 VDC
Noise immunity	Conforms to IEC 61000-4-4, 2 kV (power line).
Vibration resistance	10 to 55 Hz with double-amplitude of 0.7 mm X, Y, and Z directions for 80 min each
Shock resistance	100 m/s ² (3 times in 6 directions on 3 axes)
Dielectric strength	500 VAC (between isolated circuits)
Insulation resistance	20 MΩ min. (between isolated circuits)
Ambient operating temperature	–10 to 55°C
Ambient operating humidity	25% to 85% (with no condensation)
Ambient operating atmosphere	No corrosive gases
Storage temperature	–25 to 65°C
Storage humidity	25% to 85% (with no condensation)
Terminal block screws tightening torque	M3 wiring screws: 0.5 N·m M3 mounting screws: 0.5 N·m

● SSR Output

Item	Specification
Communications power supply voltage	14 to 26.4 VDC
Noise immunity	Conforms to IEC 61000-4-4, 2 kV (power line).
Vibration resistance	10 to 60 Hz with double-amplitude of 0.7 mm, 60 to 150 Hz and 50 m/s ² in X, Y, and Z directions for 80 min each
Shock resistance	150 m/s ² (3 times in 6 directions on 3 axes)
Dielectric strength	500 VAC (between isolated circuits)
Insulation resistance	20 MΩ min. (between isolated circuits)
Ambient operating temperature	–10 to 55°C
Ambient operating humidity	25% to 85% (with no condensation)
Ambient operating atmosphere	No corrosive gases
Storage temperature	–25 to 65°C
Storage humidity	25% to 85% (with no condensation)
Terminal block screws tightening torque	M3 wiring screws: 0.5 N·m M3 mounting screws: 0.5 N·m

Input Section Specifications

● Eight-point Input Units (2-tier Terminal Block)

Item	Specification	
Model	CRT1-ID08	CRT1-ID08-1
I/O capacity	8 inputs	
Internal I/O common	NPN	PNP
ON voltage	15 VDC min. (between each input terminal and the V terminal)	15 VDC min. (between each input terminal and the G terminal)
OFF voltage	5 VDC max. (between each input terminal and the V terminal)	5 VDC max. (between each input terminal and the G terminal)
OFF current	1.0 mA max.	
Input current	At 24 VDC: 6.0 mA max./input At 17 VDC: 3.0 mA min./input	
ON delay	1.5 ms max.	
OFF delay	1.5 ms max.	
Number of circuits per common	8 inputs/common	
Isolation method	Photocoupler	
Input indicator	LED (yellow)	
Installation	DIN Track	
Power supply type	Multi-power supply	
Communications power supply current consumption	30 mA max. for 24-VDC power supply voltage 50 mA max. for 14-VDC power supply voltage	
I/O power supply current consumption	5 mA max. for 24-VDC power supply voltage	
Weight	160 g max.	

● Sixteen-point Input Units (2-tier Terminal Block)

Item	Specification	
Model	CRT1-ID16	CRT1-ID16-1
I/O capacity	16 inputs	
Internal I/O common	NPN	PNP
ON voltage	15 VDC min. (between each input terminal and the V terminal)	15 VDC min. (between each input terminal and the G terminal)
OFF voltage	5 VDC max. (between each input terminal and the V terminal)	5 VDC max. (between each input terminal and the G terminal)
OFF current	1 mA max.	
Input current	At 24 VDC: 6.0 mA max./input At 17 VDC: 3.0 mA max./input	
ON delay	1.5 ms max.	
OFF delay	1.5 ms max.	
Number of circuits per common	16 inputs/common	
Isolation method	Photocoupler	
Input indicator	LED (yellow)	
Installation	DIN Track mounting	
Power supply type	Multi-power supply	
Communications power supply current consumption	55 mA max. for 24-VDC power supply voltage 85 mA max. for 14-VDC power supply voltage	
I/O power supply current consumption	5 mA max. for 24-VDC power supply voltage	
Weight	141 g max.	