

DeviceNet Communications Unit

# GRT1-DRT

## DeviceNet-compliant Interface Unit with up to 1,024 I/O Points at One Node

- Connect up to 64 SmartSlice I/O Units.
- Consolidate a large capacity of I/O points into one Slave (up to 1,024 I/O points).
- Save space by configuring different I/O types using one Slave Unit.
- Easily get the system started simply by setting the node addresses.
- Replace SmartSlice I/O Units online while maintaining communications. This helps minimize equipment downtime.
- Smart functions for monitoring equipment operating status. This helps improve preventive maintenance and the utilization rate.
- Registering SmartSlice I/O for planned future expansion decreases design work when changes are made. (Supported for unit version 2.0 or higher.)



### Ordering Information

Name	Specifications	Model
DeviceNet Communications Unit	Up to 64 Slice I/O Units can be connected. (1,024 I/O points max.)	GRT1-DRT

### General Specifications

Item	Model	GRT1-DRT
Network power supply voltage		11 to 25 V DC (Supplied from the communications connector)
Unit power supply voltage		20.4 to 26.4 VDC (24 VDC -15%/+10%)
I/O power supply voltage		20.4 to 26.4 VDC * (24 V +10%/-15%)
Noise immunity		Conforms to IEC 61000-4-4, 2 kV (power line)
Vibration resistance		10 to 60 Hz, 0.7-mm double amplitude 60 to 150 Hz: 50 m/s <sup>2</sup>
Shock resistance		150 m/s <sup>2</sup>
Dielectric strength		500 V AC between isolated circuits
Insulation resistance		20 MΩ min. between isolated circuits
Ambient operating temperature		-10°C to 55°C (with no icing or condensation)
Ambient operating humidity		25% to 85%
Ambient operating atmosphere		No corrosive gases
Ambient storage temperature		-25°C to 65°C (with no icing or condensation)
Mounting method		DIN 35 mm-track mounting

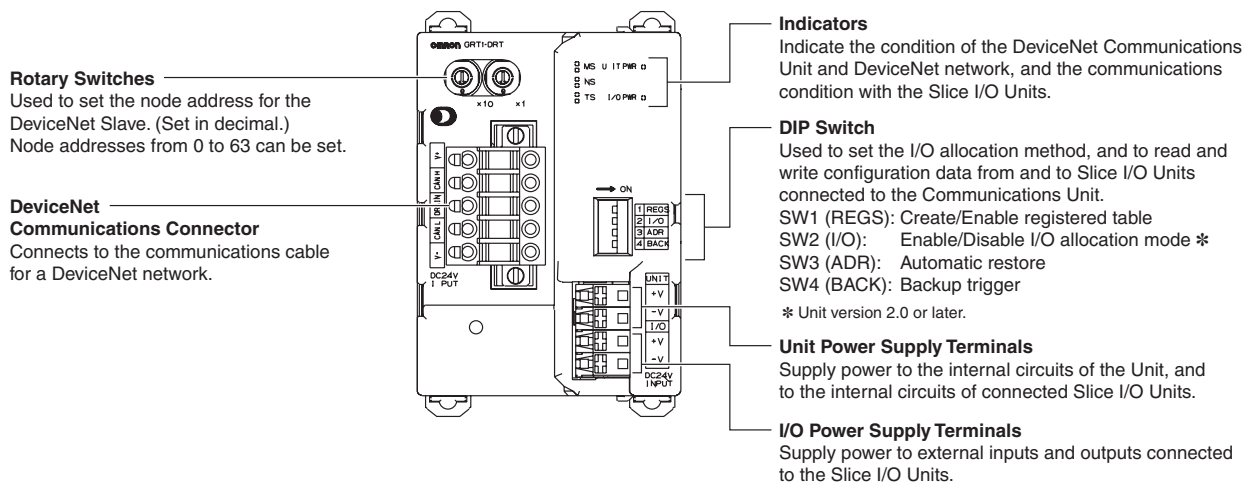
\* For power supply input to the Slice I/O Units.

## DeviceNet Communications Unit Specifications

Item	Model	GRT1-DRT
I/O points		1,024 max. (128 bytes), including inputs and outputs
Connectable Slice I/O Units		64 max.
Communications with Slice I/O Units		64 Units max. in a horizontal connection configuration (for an extension of approx. 2 m max.) Power consumption is limited to 80 W per block, and the extension must be done using Turnback Cables (two 1-m cables max., for a distance of 2 m max.)
Slice I/O Unit data capacity		(1) 0, 2, or 4 bits (2) 0 to 16 words (in word increments)
Status flags		One word is allocated (Communications Unit Status Flags)
Parameter back-up and restore functions		2 KB of data can be backed up and restored per Unit
Message communications function		Supported
Automatic baud rate detection		Supported
Connector		1 DeviceNet open connector with screws Connectable with multi-drop connector
Terminals		2 terminals for I/O power supply, 2 terminals for Unit power supply
Power supply per 1 block		80 W max. (Unit power supply)
I/O power supply consumption current		4 A max.
Weight		137 g

## Nomenclature and Functions

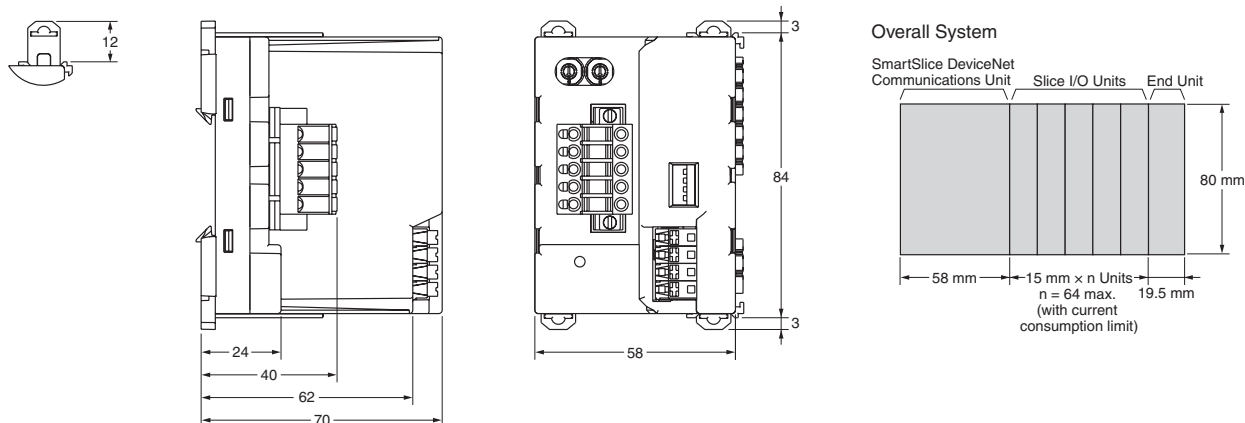
### GRT1-DRT



## Dimensions

(Unit: mm)

### GRT1-DRT



## Ordering Information

Name		Appearance	Specifications	Model
DeviceNet Communications Unit			Up to 64 SmartSlice I/O Units can be connected (1,024 I/O points).	<b>GRT1-DRT</b>
SmartSlice I/O Units	Digital I/O Units		4 inputs, NPN	<b>GRT1-ID4</b>
			4 inputs, PNP	<b>GRT1-ID4-1</b>
			4 outputs, NPN	<b>GRT1-OD4</b>
			4 outputs, PNP	<b>GRT1-OD4-1</b>
			8 inputs, NPN	<b>GRT1-ID8</b>
			8 inputs, PNP	<b>GRT1-ID8-1</b>
			8 outputs, NPN	<b>GRT1-OD8</b>
			8 outputs, PNP	<b>GRT1-OD8-1</b>
			2 relay outputs	<b>GRT1-ROS2</b>
			4 AC inputs	<b>GRT1-IA4-1</b> <b>GRT1-IA4-2</b>
	Analog I/O Units		2 inputs (current or voltage)	<b>GRT1-AD2</b>
			2 outputs (current)	<b>GRT1-DA2C</b>
			2 outputs (voltage)	<b>GRT1-DA2V</b>
	Temperature Input Unit (resistance thermometer)		2 temperature inputs (Pt100 resistance thermometer)	<b>GRT1-TS2P</b>
2 temperature inputs (Pt1000 resistance thermometer)			<b>GRT1-TS2PK</b>	
2 thermocouple inputs			<b>GRT1-TS2T</b>	
Counter Units		1 counter input, 1 external output, NPN	<b>GRT1-CT1</b>	
		1 counter input, 1 external output, PNP	<b>GRT1-CT1-1</b>	
System Units	Turnback Units		For right-side turnback (Used to divide a SmartSlice I/O Terminal into blocks)	<b>GRT1-TBR</b>
			For left-side turnback (Used to divide a SmartSlice I/O Terminal into blocks)	<b>GRT1-TBL</b>
	Turnback Cable	--	Length: 1 m	<b>GCN2-100</b>
	I/O Power Feed Unit		Used if the total current consumption of the I/O Power Supply exceeds 4 A or to use a separate I/O power supply.	<b>GRT1-PD2</b>
				<b>GRT1-PD2G</b>
			Used to add V and G terminals for the I/O power supply.	<b>GRT1-PD8</b>
<b>GRT1-PD8-1</b>				
End Unit *1		Required at the end of SmartSlice I/O Terminals.	<b>GRT1-PC8</b>	
			<b>GRT1-PC8-1</b>	
Option	Terminal blocks	--	Terminal blocks (5 blocks)	<b>GRT1-BT1-5</b>

\*1. The End Unit is sold separately. (End Units are not included with Communications Units.)

\*2. Use the GCN2-100 as a set with the GRT1-TBR and GRT1-TBL.

For details, refer to the following catalogs and user manuals.  
**SmartSlice GRT1-series Catalog (Cat. No. R139)**  
**GRT1-DRT SmartSlice DeviceNet Communications Unit User's Manual (Cat. No. W454)**  
**GRT1-series SmartSlice I/O Unit User's Manual (Cat. No. W455)**

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