

## 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.<br>(1,024 I/O points max.) | <b>GRT1-DRT</b> |

**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 *<br>(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   |

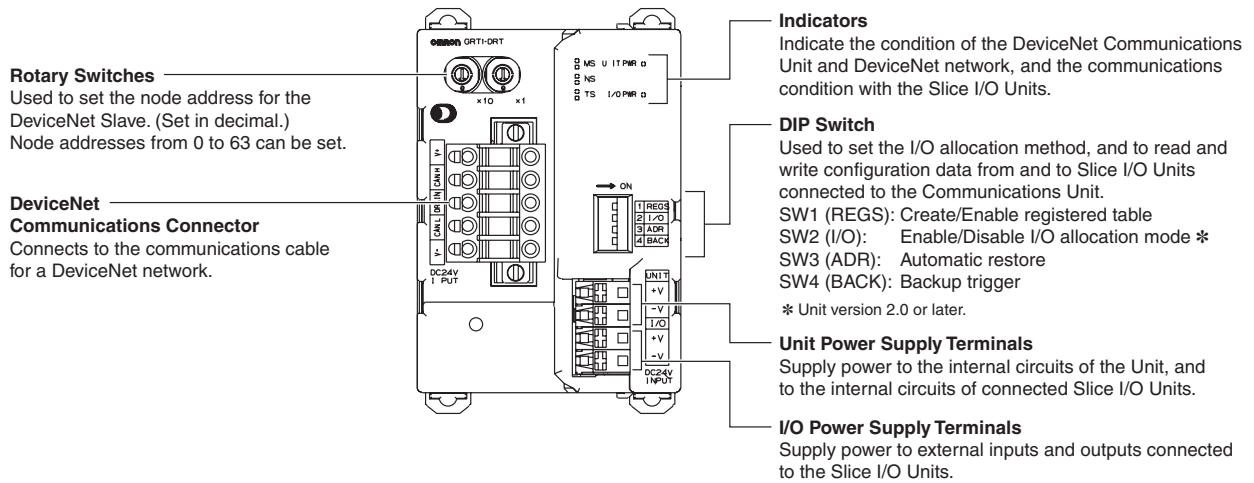
\* For power supply input to the Slice I/O Units.

# 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.)<br>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<br>(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

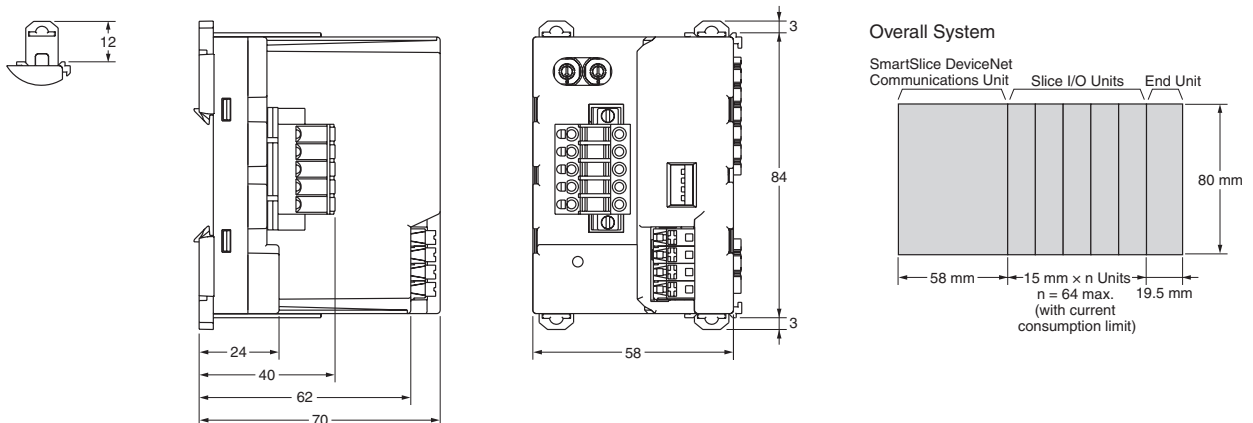
### GRT1-DRT



## 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><br><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<br>(Used to divide a SmartSlice I/O Terminal into blocks)                                | <b>GRT1-TBR</b>                        |
|                               |   |  | For left-side turnback<br>(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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