

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 ² |
| Shock resistance | | 150 m/s ² |
| 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 |

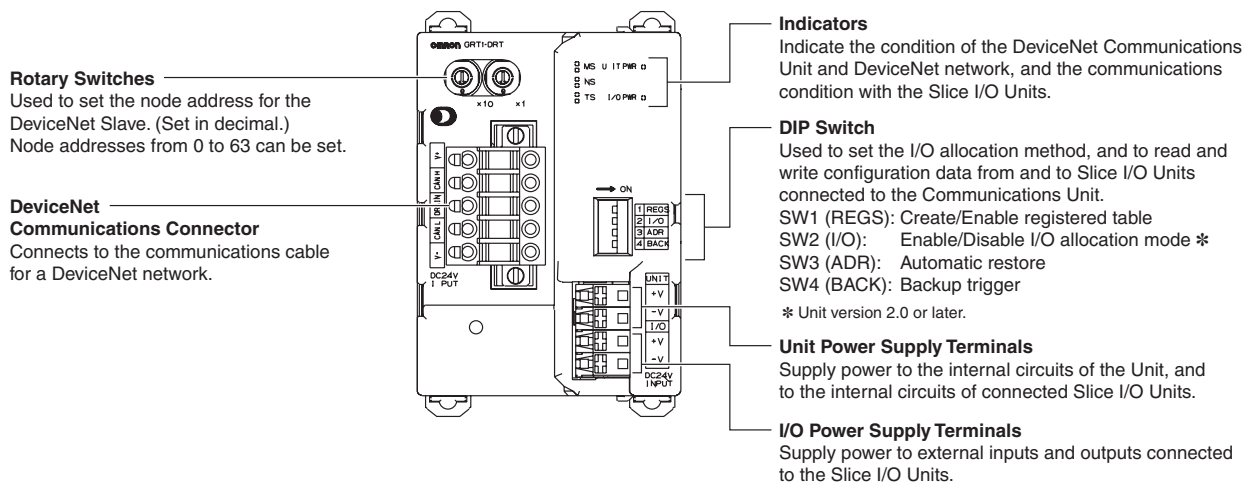
* For power supply input to the Slice I/O Units.

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

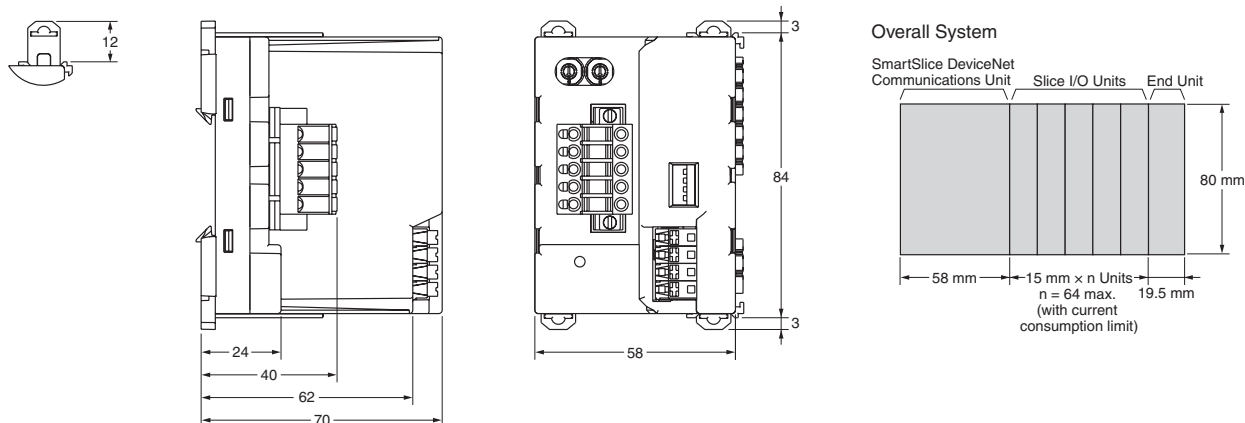
GRT1-DRT



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). | GRT1-DRT |
| SmartSlice I/O Units | Digital I/O Units |  | 4 inputs, NPN | GRT1-ID4 |
| | | | 4 inputs, PNP | GRT1-ID4-1 |
| | | | 4 outputs, NPN | GRT1-OD4 |
| | | | 4 outputs, PNP | GRT1-OD4-1 |
| | | | 8 inputs, NPN | GRT1-ID8 |
| | | | 8 inputs, PNP | GRT1-ID8-1 |
| | | | 8 outputs, NPN | GRT1-OD8 |
| | | | 8 outputs, PNP | GRT1-OD8-1 |
| | | | 2 relay outputs | GRT1-ROS2 |
| | | | 4 AC inputs | GRT1-IA4-1 GRT1-IA4-2 |
| | Analog I/O Units |  | 2 inputs (current or voltage) | GRT1-AD2 |
| | | | 2 outputs (current) | GRT1-DA2C |
| | | | 2 outputs (voltage) | GRT1-DA2V |
| | Temperature Input Unit (resistance thermometer) |  | 2 temperature inputs (Pt100 resistance thermometer) | GRT1-TS2P |
| 2 temperature inputs (Pt1000 resistance thermometer) | | | GRT1-TS2PK | |
| 2 thermocouple inputs | | | GRT1-TS2T | |
| Counter Units |  | 1 counter input, 1 external output, NPN | GRT1-CT1 | |
| | | 1 counter input, 1 external output, PNP | GRT1-CT1-1 | |
| System Units | Turnback Units |  | For right-side turnback (Used to divide a SmartSlice I/O Terminal into blocks) | GRT1-TBR |
| | |  | For left-side turnback (Used to divide a SmartSlice I/O Terminal into blocks) | GRT1-TBL |
| | Turnback Cable | -- | Length: 1 m | GCN2-100 |
| | 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. | GRT1-PD2 |
| | | | | GRT1-PD2G |
| Used to add V and G terminals for the I/O power supply. | | | GRT1-PD8 | |
| | | | GRT1-PD8-1 | |
| End Unit *1 |  | Required at the end of SmartSlice I/O Terminals. | GRT1-END | |
| Option | Terminal blocks | -- | Terminal blocks (5 blocks) | GRT1-BT1-5 |

*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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