

# SmartSlice CompoNet Communications Unit GRT1-CRT

The CompoNet-compliant unit can interface up to 256 inputs and 256 outputs at one node.

- Connects to up to 64 SmartSlice I/O Units.
- Concentrate I/O at one Slave: Up to 256 inputs and 256 outputs.
- Mix different I/O types at one Slave to help save space.
- Just set the node address for easy startup.
- Replace SmartSlice I/O Units online while continuing communications, minimizing system downtime.
- Smart function provided to monitor operating status, facilitating preventive maintenance and increasing operating rates.
- Register dummy SmartSlice I/O to reduce design work for future expansions.



## Ordering Information

| Name                         | Specifications  | Model    |
|------------------------------|---|----------|
| CompoNet Communications Unit | Connects to up to 64 SmartSlice I/O Units<br>(Inputs: 32 bytes maximum,<br>Outputs: 32 bytes maximum) | GRT1-CRT |

## Specifications

| Item                          | Model | GRT1-DRT  |
|-------------------------------|-------|---|
| Network power supply voltage  |       | 14 to 26.4 V DC   |
| Unit power supply voltage     |       | 20.4 to 26.4 V DC (24 V +10%/–15%)  |
| I/O power supply voltage      |       | 20.4 to 26.4 V DC *<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<br>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 to 55°C (with no icing or condensation)                               |
| Ambient operating humidity    |       | 25% to 85%  |
| Ambient operating environment |       | No corrosive gases  |
| Ambient storage temperature   |       | –25 to 65°C (with no icing or condensation)                               |
| Mounting method               |       | 35-mm DIN track mounting  |

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

## Specifications of the CompoNet Communications Unit

| Item   | Specification  |
|--|--|
| I/O points   | Inputs: 32 bytes maximum (including status and areas which the Unit does not use)<br>Output: 32 bytes maximum (including areas which the Unit does not use)  |
| Maximum number of SmartSlice I/O Units                   | 64 (Do not count the End Unit.)  |
| Status area  | 1 word (This word shows the status of the CompoNet Communications Unit.)   |
| Parameter backup and restore                             | You can back up or restore a maximum of 2 KB of data for one CompoNet Communications Unit.   |
| Baud rate  | The CompoNet Communications Unit uses the baud rate of the CompoNet Master Unit (93.75 kbps, 1.5 Mbps, 3 Mbps, or 4 Mbps).   |
| Communications media                                     | You can use these cables:<br>Round Cable I (JIS C 3306, VCTF 2-core 0.75-mm <sup>2</sup> twisted-pair cable)<br>Round Cable II (JIS C 3306, VCTF 4-core 0.75-mm <sup>2</sup> twisted-pair cable)<br>Flat Cable I (without sheath, DCA4-4F10)<br><b>Note:</b> The Round Cable I, Round Cable II and Flat Cable I are different types of cable. You must use a Repeater to divide a branch line from the main line to use more than one type of cable. |
| Indicators   | MS (green/red): This indicator shows the status of the CompoNet Communications Unit.<br>NS (green/red): This indicator shows the communications status of the CompoNet network.<br>TS (green/red): This indicator shows the status of the SmartSlice I/O Terminal.<br>UNIT PWR (green): This indicator shows the status of the Unit power supply.<br>I/O PWR (green): This indicator shows the status of the I/O power supply.                       |
| Switches   | Rotary switches: There are two rotary switches. You use them to set the node address.<br>DIP switch: There is one DIP switch with four pins. You use them to set the operating mode.   |
| Connectors   | There is one CompoNet communications connector.  |
| Terminals  | Clamp terminals for Unit power supply (24 VDC)<br>Clamp terminals for I/O power supply (24 VDC)  |
| Power consumption  | 2.5 W  |
| Power consumption for each SmartSlice I/O Terminal block | 80 W max.<br>(You must divide the I/O Terminal into blocks to use more than 80 W.)   |
| SmartSlice I/O Terminal blocks                           | Main block and a maximum of two expansion blocks   |
| Current consumption for I/O power supply                 | 4 A max.   |
| Weight   | 137 g  |
| Accessories  | None   |










## Dimensions

(Unit: mm)

### GRT1-CRT



SmartSlice Ordering Information

| Name                        |   | Appearance  | Specifications   | Model                    |
|-----------------------------|---|---|--|--------------------------|
| CompoNet Communication Unit |   |    | Up to 64 Slice I/O Units can be connected<br>(Inputs: 32 bytes maximum, Output: 32 bytes maximum)                              | GRT1-CRT                 |
| Slice 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               |
|                             |   |   | Relay Outputs 2 points   | GRT1-ROS2                |
|                             |   |   | AC Input 4 points  | GRT1-IA4-1<br>GRT1-IA4-2 |
|                             | Analog I/O Units  |    | Analog inputs (current/voltage)  | GRT1-AD2                 |
|                             |   |   | Analog outputs (current)   | GRT1-DA2C                |
|                             |   |   | Analog output (voltage)  | GRT1-DA2V                |
|                             | Temperature Input<br>(Resistance Thermometers)                                      |  | Temperature input (Resistance thermometer:Pt100) 2 points  | GRT1-TS2P                |
|                             |   |   | Temperature input (Resistance thermometer:Pt1000) 2 points   | GRT1-TS2PK               |
| Thermocouple Input 2 points |   |   | GRT1-TS2T  |                          |
| Counter Units               |  | Counter inputs: 1, External outputs: 1 NPN  | GRT1-CT1   |                          |
|                             |   | Counter inputs: 1, External outputs: 1 PNP  | GRT1-CT1-1   |                          |
| System Units                | Turnback Units  |  | Right Turnback Unit (Mounts to the right side of Slice I/O Terminal.)  | GRT1-TBR                 |
|                             |   |  | Left Turnback Unit (Mounts to the left side of Slice I/O Terminal.<br>Can supply power to I/O Units.)                          | GRT1-TBL                 |
|                             | Turnback Cable *1   | ---   | 1 m  | GCN2-100                 |
|                             | I/O Power Feed Unit   |  | Use when the total current consumption of the I/O Power Supply exceeds 4 A, or to make the I/O Power Supply a separate system. | GRT1-PD2                 |
|                             |   |   |  | GRT1-PD2G                |
|                             |   |   |  | GRT1-PD8                 |
| GRT1-PD8-1                  |   |   |  |                          |
| End Unit *2                 |  | Use to add V/G terminals for I/O power supply.                                      | GRT1-PC8   |                          |
|                             |   |   | GRT1-PC8-1   |                          |
| Option                      | Terminal Block  | ---   | Package of 5 Terminal Blocks   | GRT1-BT1-5               |

\*1 Use the Turnback Cable together with the Turnback Units.

\*2 The End Unit is sold separately. It is not provided with the Communications Unit.

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