

# 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.

## Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

## Warranty and Limitations of Liability

### WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT THE BUYER OR USER ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

### LIMITATIONS OF LIABILITY

OMRON SHALL NOT BE RESPONSIBLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.

In no event shall the responsibility of OMRON for any act exceed the individual price of the product on which liability is asserted.

IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WARRANTY, REPAIR, OR OTHER CLAIMS REGARDING THE PRODUCTS UNLESS OMRON'S ANALYSIS CONFIRMS THAT THE PRODUCTS WERE PROPERLY HANDLED, STORED, INSTALLED, AND MAINTAINED AND NOT SUBJECT TO CONTAMINATION, ABUSE, MISUSE, OR INAPPROPRIATE MODIFICATION OR REPAIR.

## Application Considerations

### SUITABILITY FOR USE

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

### PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

## Disclaimers

### CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

### DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

### PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

### ERRORS AND OMISSIONS

The information in this document has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

2011.12

In the interest of product improvement, specifications are subject to change without notice.

**OMRON Corporation**  
Industrial Automation Company

<http://www.ia.omron.com/>

(c)Copyright OMRON Corporation 2011 All Right Reserved.

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9