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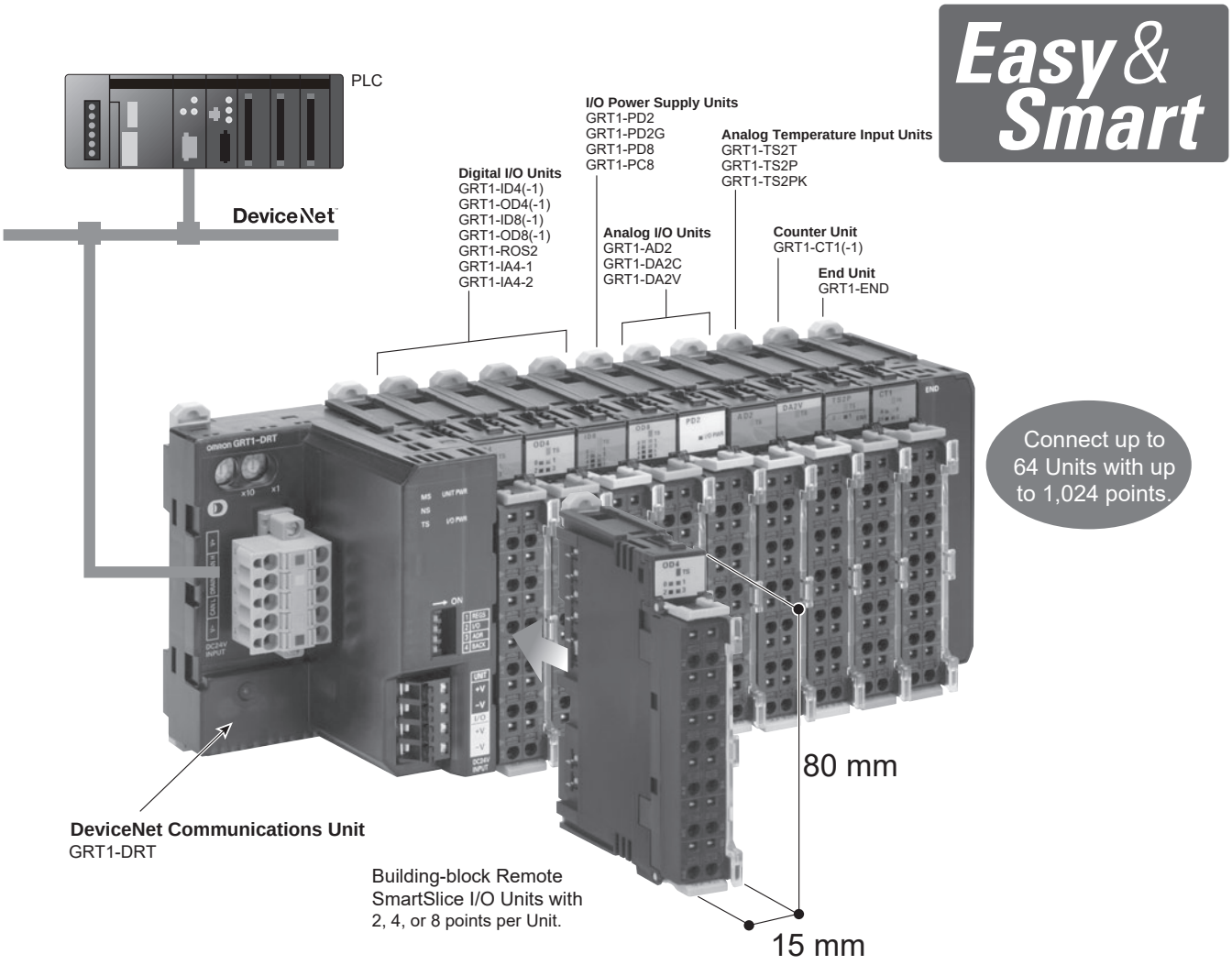
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SmartSlice GRT1 Series

DeviceNet-compliant Building-block I/O Terminals to Save Space, Cut Costs, and Reduce Work.

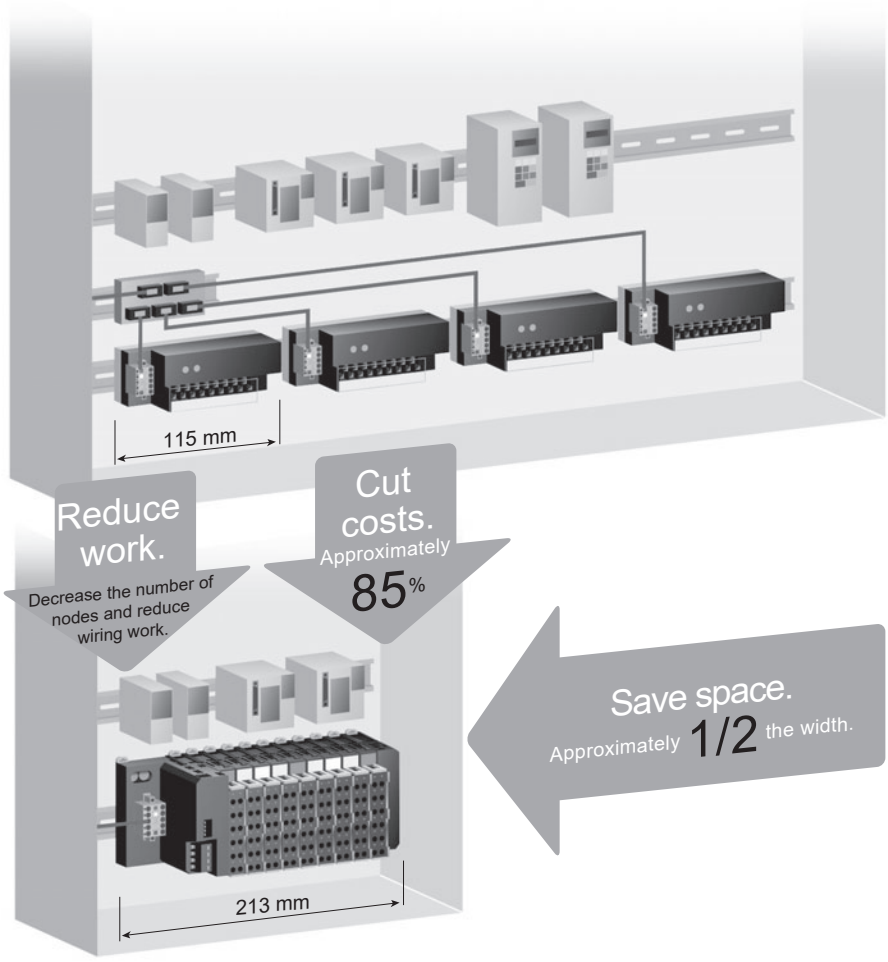
What Is the SmartSlice GRT1 Series?

This SmartSlice GRT1 Series consists of building-block I/O Terminals that enable building flexible systems to match the customer's applications with features such as I/O expansion using small numbers of points.



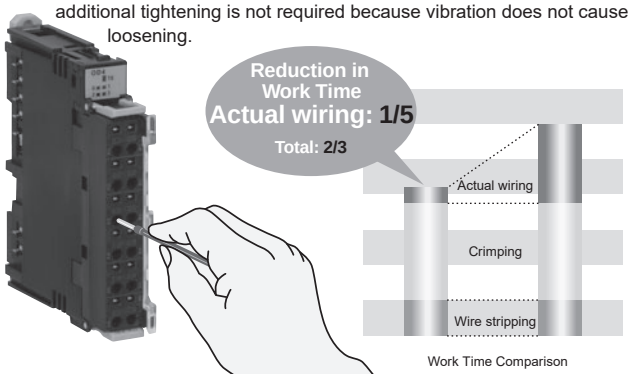
Easily save space and reduce costs.

Required number of points		Number of redundant points	
		Previous slaves	SmartSlice
Inputs	20	12	0
Outputs	10	6	2
Analog inputs	2	2	0
Number of nodes		**4**	**1**



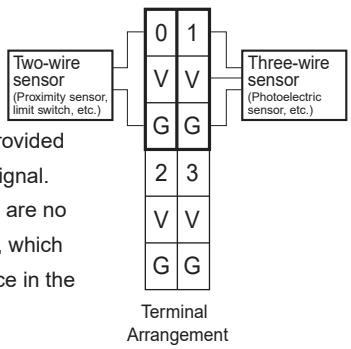
One-touch Wiring

The terminal block with screwless clamp terminals greatly reduces work. Also, additional tightening is not required because vibration does not cause loosening.



Also Save Space in the Control Panel

V and G terminals are provided for each input signal. Relay terminals are no longer required, which helps save space in the control panel.



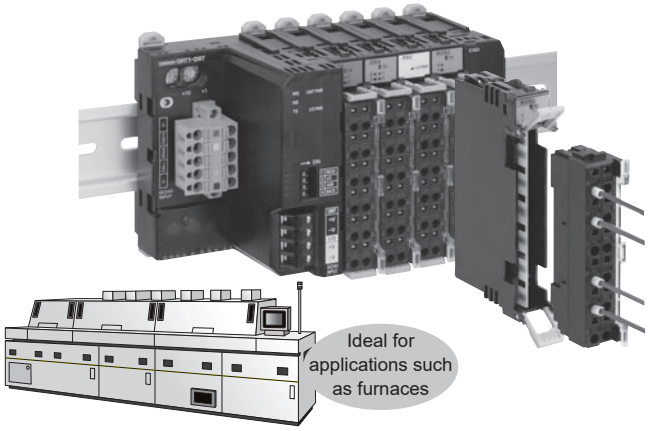
Set Only the Node Addresses

Automatic baud rate detection and automatic I/O allocations enable immediate use with no Support Software.



Online replacement makes maintenance easy

The terminal block, main block, and power supply block of the I/O Unit are detachable.
Replacement can be performed online without changing the I/O wiring and while maintaining communications for the remaining Units.
This is ideal for applications such as furnaces, where heaters must be remain turned ON as much as possible.



Equipped with Smart Functions

The highly acclaimed Smart Functions of the DRT2 Series are used.
This helps monitor the operation status of the equipment and improves capacity utilization.







Smart Timing

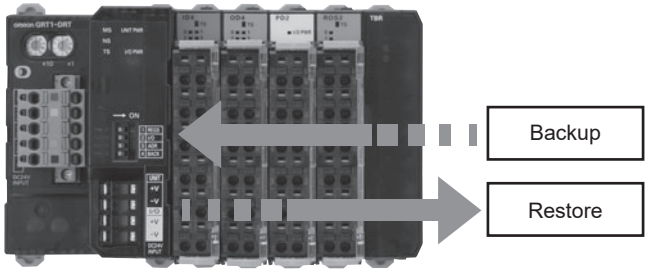
The Slave Unit stores the equipment operating time and amount of change in operation as data to enable monitoring without increasing the load between Controllers.

Smart Counting

The number of ON/OFF operations of the equipment and the total operating time are counted by the Slave Unit to provide notification when maintenance is required.

Recover Unit Parameters without Support Software

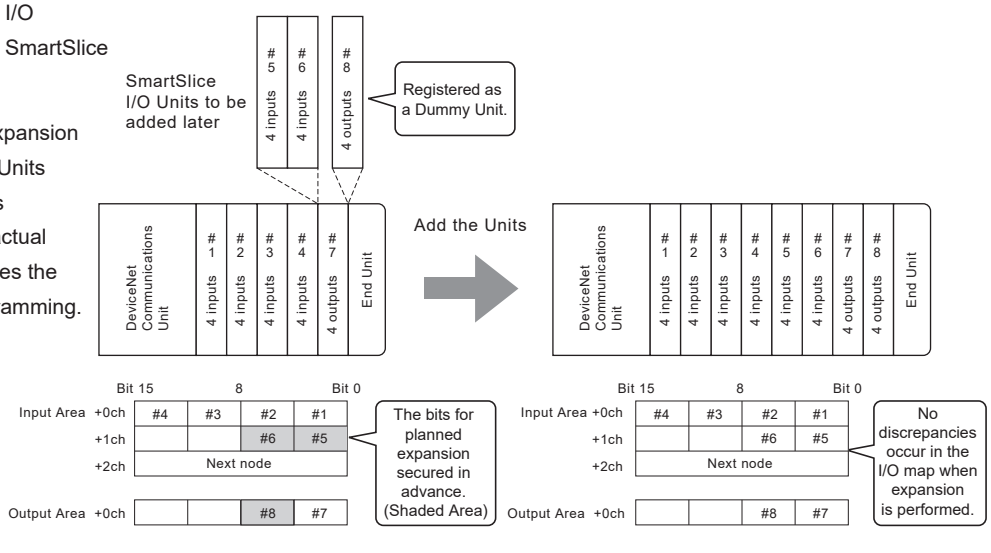
Unit data can be backed up by manipulating a DIP switch.
Automatically restoring data after Unit replacement improves maintenance efficiency.



I/O Allocation Software Settings

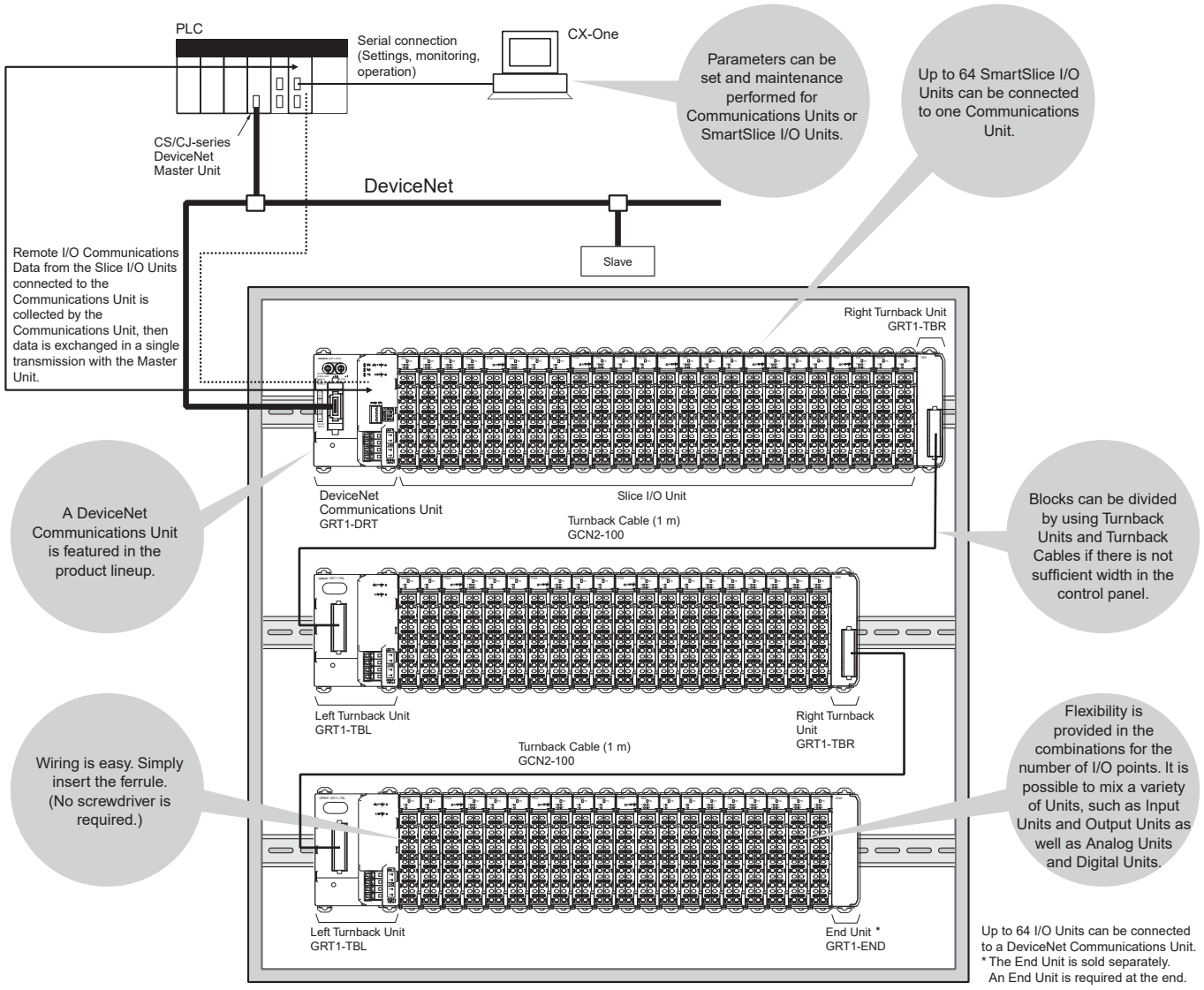
New Function

- This function enables registering the I/O configuration data of a non-mounted SmartSlice I/O Unit as a dummy.
- Securing the required capacity for expansion in the I/O map in advance when I/O Units must be added in the future prevents discrepancies in the I/O map when actual expansion is performed and eliminates the need for significant changes in programming.

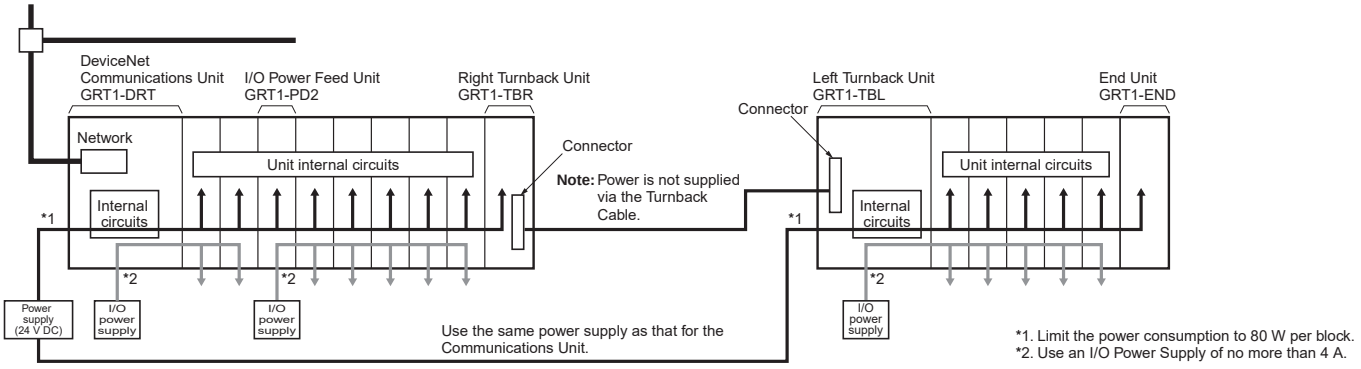


Support for flexible I/O configurations to match the application help downsize the control panel, cut costs, and decrease wiring work.

System Configuration



Internal Circuit Configuration



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

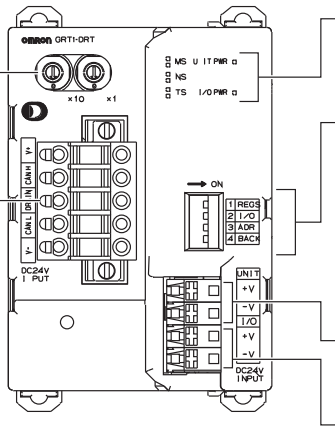
✻ For power supply input to the Slice I/O Units.

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



Rotary Switches
Used to set the node address for the DeviceNet Slave. (Set in decimal.)
Node addresses from 0 to 63 can be set.

DeviceNet Communications Connector
Connects to the communications cable for a DeviceNet network.

Indicators
Indicate the condition of the DeviceNet Communications Unit and DeviceNet network, and the communications condition with the Slice I/O Units.

DIP Switch
Used to set the I/O allocation method, and to read and write configuration data from and to Slice I/O Units connected to the Communications Unit.
SW1 (REGS): Create/Enable registered table
SW2 (I/O): Enable/Disable I/O allocation mode ✻
SW3 (ADR): Automatic restore
SW4 (BACK): Backup trigger
✻ Unit version 2.0 or later.

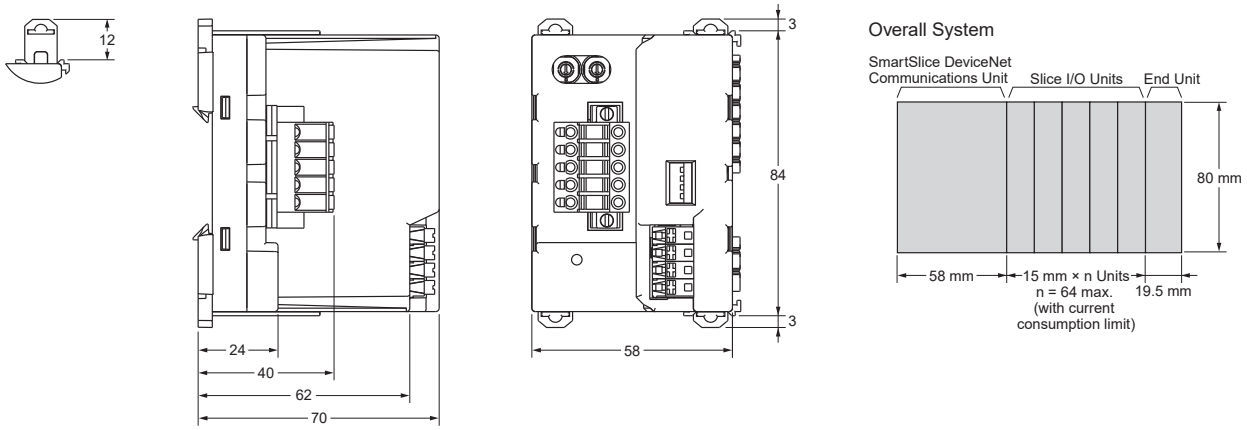
Unit Power Supply Terminals
Supply power to the internal circuits of the Unit, and to the internal circuits of connected Slice I/O Units.

I/O Power Supply Terminals
Supply power to external inputs and outputs connected to the Slice I/O Units.

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
				GRT1-PD8
				GRT1-PD8-1
			Used to add V and G terminals for the I/O power supply.	**GRT1-PC8**
				GRT1-PC8-1
	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.

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