

PROFIBUS DP Gateway to Compoway-F / K-Format / Host Link / Memobus protocols

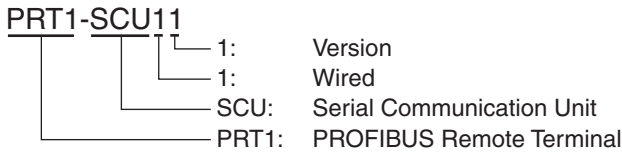
# PRT1-SCU11

**Omron's intelligent PROFIBUS gateway**

- Supports all Compoway-F-equipped products (temperature controllers, digital panel meters, etc.).
- Can be used in Host Link mode for connecting MCW151-E.
- Enhanced for use with E5AK/E5EK temperature controllers and OYMC Varispeed F7 inverters.
- Cost-effectively integrates existing instruments into a PROFIBUS network.
- Requires no complex protocol conversion writing.
- Has function blocks for drag-and-drop configuration.
- Connects up to 15 instruments to a single PROFIBUS point.



**Model Number Structure**



**Specifications**

**Unit Specifications**

<b>Ambient temperatures</b>	Operating temperature: 0 to 55°C Storage temperature: -20 to 75°C
<b>Ambient humidity</b>	10 to 90% (non-condensing)
<b>Conformance to EMC and safety standards</b>	EN61000-6-2: 2001 EN61000-6-4: 2001/CISPR11 EN61131-2: 2003, IDT
<b>Power supply</b>	+24 VDC (+10% / -15%) Current consumption 85 mA (max), 75 mA typical at 24 Vdc
<b>Weight</b>	130 g
<b>Communication Interface</b>	RS-485 based PROFIBUS DP RS-422A / RS-485 RS-232C Peripheral Port supporting connection to CX-Thermo and CX-Drive

**PROFIBUS Cable**

- Only use shielded twisted pair cable, line type A as specified by EN 50170 vol. 2 (e.g. Belden 3079A).
- The maximum cable length per bus segment (32 stations) depends on the selected communication speed

Baud rate (kbit/s)	Length/segment
9.6, 19.2, 45.45, 93.75	1200
187.5	1000
500	400
1500	200
3000, 6000, 12000	100

**PROFIBUS Communication Specifications**

<b>Applicable standard</b>	EN 50170 vol. 2 (PROFIBUS-DP)
<b>Type</b>	PROFIBUS-DP Slave
<b>Bus connector</b>	9-pin sub-D female, RS-485
<b>Bus termination</b>	NOT included
<b>Baud rates in kbit/s (auto-detect)</b>	9.6, 19.2, 45.45, 93.75, 187.5, 500, 1500, 3000, 6000, 12000
<b>PROFIBUS address range</b>	01-99
<b>Communication cable</b>	Type A (EN 50170 vol. 2)
<b>Minimum slave interval</b>	0.5 ms
<b>Input data</b>	200 bytes maximum
<b>Output data</b>	200 bytes maximum
<b>Supported DP functions (as responder)</b>	Data_Exchange Chk_Cfg / Set_Prm Slave_Diag Global_Control (SYNC/FREEZE/CLEAR) RD_Inp / RD_Outp / Get_Cfg
<b>GSD file</b>	OC_0780.GSD

RS-422A / RS-485 Protocol Specifications

Compoway-F devices supported	E5AN / E5CN / E5EN / E5GN E5ZN E5ER / E5AR
K-Format devices supported	E5AK / E5EK
Host Link devices supported	R88A-MCW151-E
Memobus devices supported	OYMC Varispeed F7 Inverter
Max. No of devices	15
Connection type	RS-422A (4-wire) RS-485 (2-wire)
Baud rates in kbit/s	9.6, 19.2, 34.8
Slave address range supported	1 ~ 15 (Address and selected PROFIBUS I/O module must match)

Peripheral Port

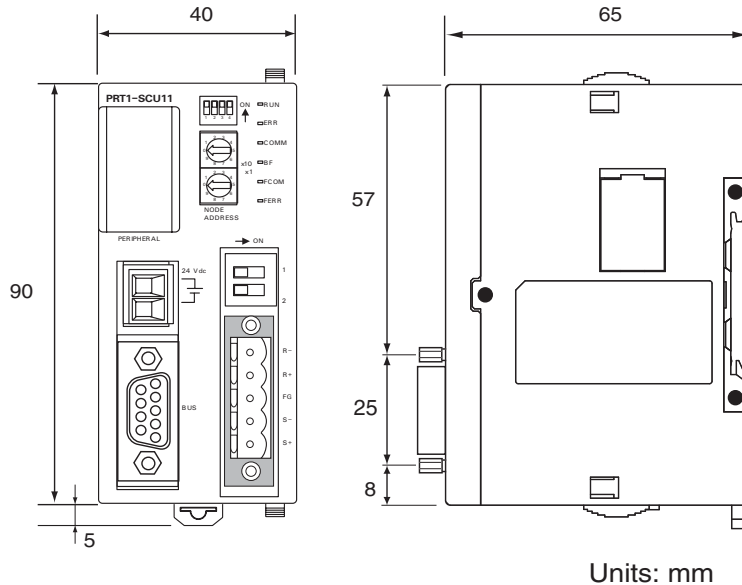
- The Peripheral Port is intended to allow communication between Personal Computer based software (i.e. Thermo-tools) and temperature controllers.
- Use OMRON's CS1W-CN226 cable to setup the connection.

I/O Configuration Options

Type	Device	Description		
Compoway-F	Fixed Comm.	Basic	E5_N / E5ZN / E5_R	1 word I/O per loop
		Extended	E5_N	2 word out / 6 word in
			E5ZN	3 word out / 11 word in
	Free Comm.	E5_N / E5ZN / E5_	READ	5 word out / 21 word in
			WRITE	7 word out / 2 word in
			OPERATE	3 word out / 2 word in
K-Format	Fixed Comm.	Basic	E5AK / E5EK	2 word out / 5 word in
		Extended		4 word out / 5 word in
	Free Comm.	Special Operation		3 word out / 3 word in
Host Link	R88A-MCW151-E	5, 10, 15 word I/O		
Memobus	Fix	OYMC Varispeed F7 Inverter	3 word out / 3 word in	
	Free		3 word out / 3 word in	

- Note:**
- Different protocols can not be intermixed on the same network.
  - Total maximum I/O size: 100 words I/O.
  - Fixed Communication Blocks are pre-defined I/O blocks designed for the listed devices. Free Communication Blocks require programming in the PROFIBUS master to assemble commands.
  - Memobus Fixed I/O modules access pre-defined F7 registers, Free I/O module allows specification of F7 registers.

Dimensions



Cat. No. P05E-EN-02

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

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