OMRON ®

Micro PLC with CompoBus/S I/O

SRM1-C0□-V2

Ultrathin PLC with No Resident I/O
Uses CompoBus/S Terminal Blocks
for Efficient Small Machine Control

■ Maximum 256 I/O per controller

■ Up to 32 slaves per SRM1 system

■ Fast communications of 0.5 ms max. at
  standard distance of 100 m (750 kbps)

■ Extended distance communications to
  500 m (93.75 kbps)

■ Easy to install: use flat cable or Belden
  #9409 twisted-pair cable

■ Instruction set smoothly handles analog
  I/O signals (PID, SCL, NEG, ZCP)

■ PLC includes a peripheral port;
  multi−function RS-232C port available

$C \in$ ⓊⓁ ⓈⓅ

Ordering Information

■ MICRO PLC

Item	Communications ports	Part number
Full feature Micro PLC with CompoBus/S master	One peripheral port	**SRM1-C01-V2**
	One peripheral port; one RS-232C port	**SRM1-C02-V2**

■ ACCESSORIES

Item	Specification	Part number
Communications cable	Flat cable, 100 m length, 4 conductor (0.75 mm^2 each)	**SCA1-4F10**
Branch connector	Sold in packs of 10	**SCN1-TH4**
Extension connector	Sold in packs of 10	**SCN1-TH4E**
Connector terminator	Sold in packs of 10	**SCN1-TH4T**
Terminal block terminator	Sold in packs of 10	**SRS1-T**

Specifications ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━

■ MASTER SPECIFICATIONS

Number of I/O points	256 points (128 inputs/128 outputs) 128 points (64 inputs/64 outputs) Selectable by Data Memory (DM) setting. The default setting is 256 points.
Max. number of Slaves per Master	256 points: 32 128 points: 16
I/O words	Input words: 000 to 007 Output words: 010 to 017
Programming language	Ladder diagram
Types of instruction (See Note)	14 basic and 72 special instructions (123 instructions in total)
Execution time	LD instruction: 0.97 μs MOV instruction: 9.1 μs
Program capacity	4,096 words
Data memory	2,048 + 512 (read-only) words
Timers/Counters	128 timers/counters
Work bits	640 bits
Memory backup	Flash memory (without battery): User programs Super capacitor: Data memory, backed up for 20 days at an ambient temperature of 25°C (77°F)
Peripheral port	1 port
RS-232C port	1 port (SRM1-C02-V1 only) can be configured for Host Link, NT Link, 1:1 Link, or no protocol
Programming tool	Programming Consoles: CQM1-PRO01-E, C200H-PRO27-E SYSMAC–CPT: WS01-CPTB1-E (CD-ROM/FD) SYSMAC Support Software (MS-DOS version): C500-ZL3AT1-E

Note: PID, SCL, NEG, and ZCP instructions are not supported by the SYSMAC-CPT.

■ COMMUNICATIONS SPECIFICATIONS

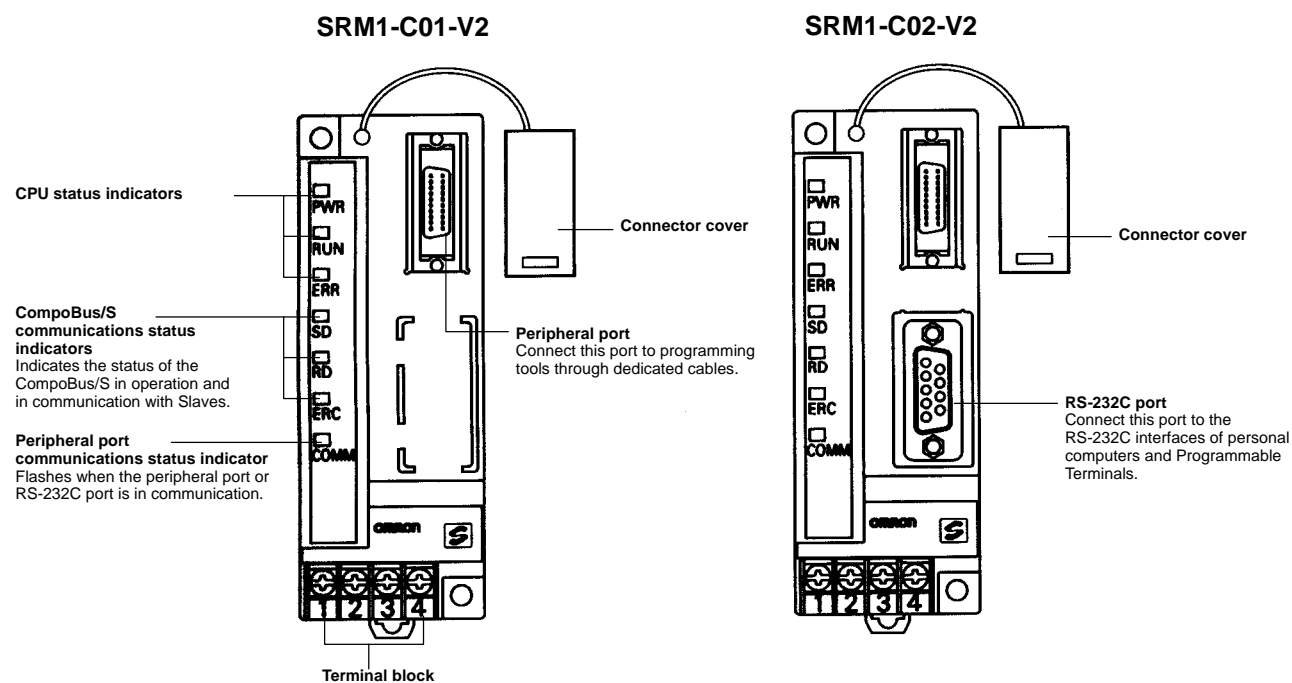|		
Communications method		CompoBus/S protocol
Coding method		Manchester coding method
Connection method		Multi-drop method and T-branch method (See Note 1)
Communications baud rate		750,000 bps/93,750 bps (See Note 2)
Communications cycle time	**High-speed communications mode**	0.5 ms with 8 Slaves for inputs and 8 Slaves for outputs
		0.8 ms with 16 Slaves for inputs and 16 Slaves for outputs
	Long-distance communications mode	4.0 ms with 8 Slaves for inputs and 8 Slaves for outputs
		6.0 ms with 16 Slaves for inputs and 16 Slaves for outputs
Communications cable		2-conductor Belden #9409 or VCTF cable (0.75 x 20) Dedicated flat cable

Communications distance	**High-speed communications mode**	Belden #9409 or VCTF cable:
		    Main line length: 100 m(328.1 ft) max.
		    Branch line length: 3 m (9.84 ft) max.
		    Total branch line length: 50 m (164.0 ft) max.
		
		Flat cable:
		    Main line length: 30 m (98.4 ft) max.
		    Branch line length: 3 m (9.84 ft) max.
		    Total branch line length: 30 m 98.4 ft) max.
		    (When flat cable is used to connect fewer than 16 Slaves, the main line can be up to 100 m (328.1 ft) long and the total branch line length can be up to 50 m (164.0 ft.)

	Long-distance communications mode	Belden #9409 or VCTF cable:
		    Main line length: 500 m (1640.5 ft) max.
		    Branch line length: 6 m (19.69 ft) max.
		    Total branch line length: 120 m (393.7 ft) max.

Max. number of connecting nodes		32
Error control checks		Manchester code check, frame length check, and parity check

Note: 1. A terminator must be connected to the point in the system farthest from the Master.
       2. The communications baud rate is switched using Data Memory (DM) settings. The default setting is 750,000 bps.

■ GENERAL SPECIFICATIONS

Supply voltage	24 VDC
Allowable supply voltage	20.4 to 26.4 VDC
Power consumption	3.5 W max.
Inrush current	12.0 A max.
Noise immunity	1,500 Vp-p, pulse width: 0.1 to 1 μs, rise time: 1 ns (via noise simulation)
Vibration resistance	10 to 57 Hz, 0.075 mm amplitude, 57 to 150 Hz, acceleration: 9.8 m/s^2 in X, Y, and Z directions for 80 minutes each (Time coefficient; 8 minutes × coefficient factor 10 = total time 80 minutes)
Shock resistance	147 m/s^2 three times each in X, Y, and Z directions
Ambient temperature	Operating: 0°C to 55°C (32°F to 131°F) Storage: −20°C to 75°C (−4°F to 167°F)
Humidity	10% to 90% RH with no condensation
Atmosphere	Must be free from corrosive gas
Terminal screw size	M3
Power interrupt time	DC type: 2 ms min.
Weight	150 g max.

Nomenclature ─────────────────────────────

SRM1-C01-V2

CPU status indicators

CompoBus/S communications status indicators
Indicates the status of the CompoBus/S in operation and in communication with Slaves.

Peripheral port communications status indicator
Flashes when the peripheral port or RS-232C port is in communication.

Connector cover

Peripheral port
Connect this port to programming tools through dedicated cables.

Terminal block

SRM1-C02-V2

Connector cover

RS-232C port
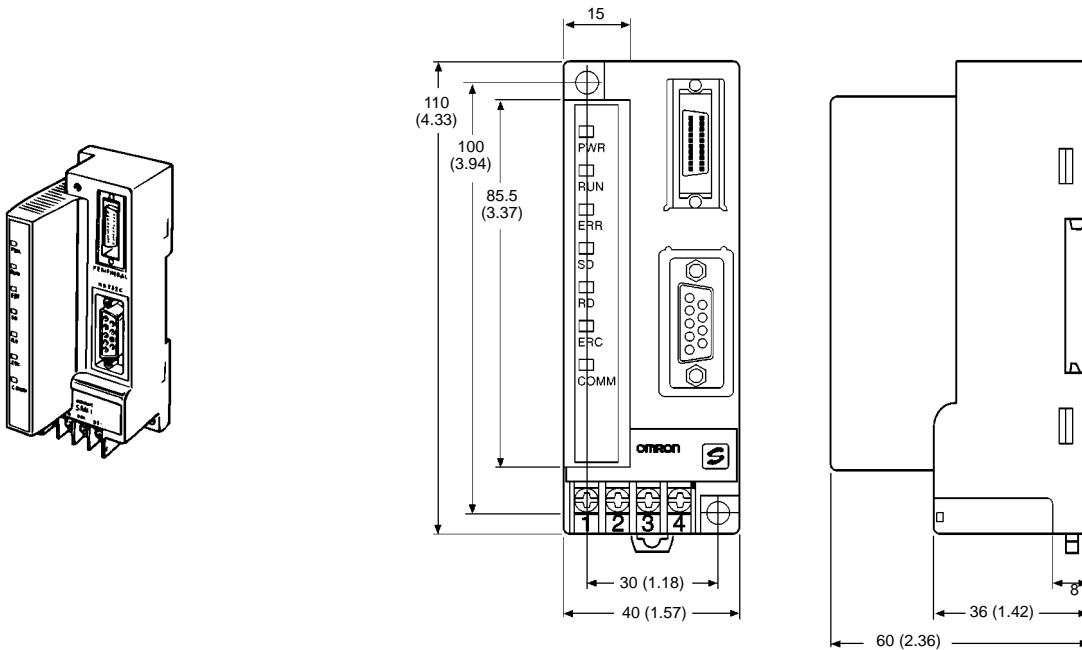Connect this port to the RS-232C interfaces of personal computers and Programmable Terminals.

Dimensions

Unit: mm (inch)

■ SRM1-C0☐V-2

The above dimensions apply to the SRM1-C02-V2. The SRM1-C01-V2 has no RS-232C port.

NOTE: DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

OMRON ®

OMRON ELECTRONICS, INC.
One East Commerce Drive
Schaumburg, IL 60173
1-800-55-OMRON

OMRON CANADA, INC.
885 Milner Avenue
Scarborough, Ontario M1B 5V8
416-286-6465