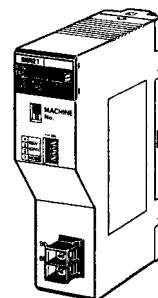# CS1 Series, C200HX/HG/HE, C200HS
CompoBus/S

CompoBus/S Master Unit: **C200HW-SRM21-V1**
CompoBus/S Slaves: **SRT1/SRT2 Series**
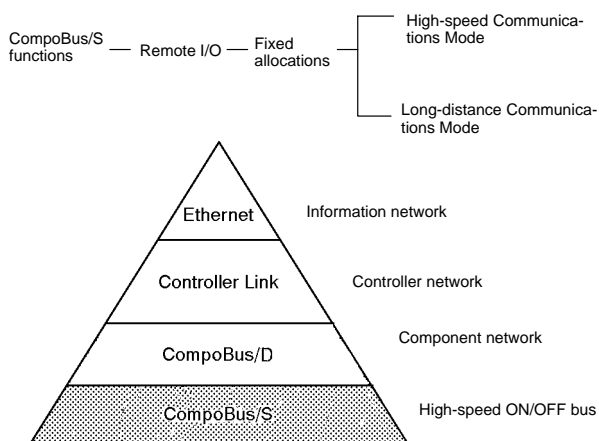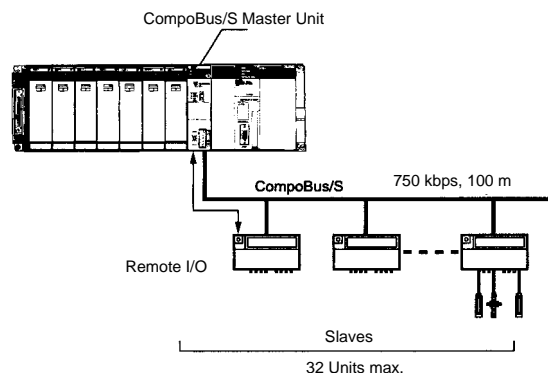
A High-speed ON/OFF Bus Ideal for Distributed Machine Control and Reduced Wiring.
Supports Long-Distance Communications.

■ The DeviceNet (CompoBus/S) is a high-speed ON/OFF bus at the machine control level. Remote I/O capabilities enable automatic I/O exchange between Slaves and the CPU Unit without special programming in the CPU Unit. A communications cycle of 1 ms maximum for 256 points provides high-speed remote I/O in High-speed Communications Mode. Master Units with the model number suffix -V1 also support long-distance communications of up to 500 m using Long-distance Communications Mode.

C200HW-SRM21-V1

CompoBus/S functions — Remote I/O — Fixed allocations — High-speed Communications Mode / Long-distance Communications Mode

Ethernet — Information network
Controller Link — Controller network
CompoBus/D — Component network
CompoBus/S — High-speed ON/OFF bus

■ System Configuration Example

CompoBus/S Master Unit

CompoBus/S 750 kbps, 100 m

Remote I/O

Slaves
32 Units max.

■ Features

Many Master Units and Slaves for Long-distance Communications

Support for long-distance communications is provided by C200HW-SRM21-V1, CQM1-SRM21-V1, and SRM1-C0☐-V2 Master Units, as well as the SRT2 Series of Slaves. Combining these Master Units and Slaves will enable remote I/O communications to be performed in Long-distance Communications Mode as well as in High-speed Communications Mode. Remote I/O communications are possible in High-speed Communications Mode when these Masters and Slaves are used in combination with previous Master and Slave models.

Long-distance Main Line Communications

A Long-distance Communications Mode has been added (in addition to the High-speed Communications Mode) to permit communications over the main line of up to 500 m. (In the High-speed Communications Mode, the main line can be extended to 100 m.) As a result, I/O can be performed with devices over an even greater distance.

High-speed Communications

In High-speed Communications Mode, up to 16 Slaves with 128 I/O points can be connected with a high-speed communications cycle time of only 0.5 ms. This cycle is fast enough for time-critical factory automation applications.

High-Speed I/O of Analog Data

Analog Input and Analog Output Terminals have been added as CompoBus/S Slaves. The Analog I/O Terminals allow high-speed analog I/O.

Reduced Wiring

A Slave can be connected to a Master or another Slave with just one connecting cable. If the special 4-conductor flat cable is used, the Slave's communication power supply is also supplied through the cable, so floor wiring can be reduced dramatically. Also, special connectors simplify branching from a main cable.

Use Both T-branch and Multidrop Methods

Both the T-branch and multidrop methods can be combined freely when wiring. In combination with the floor cables, this wiring feature allows a very flexible system configuration. There are two types of cables (VCTF cable and flat cable); when the flat cable is used, T-branch Connectors can be installed by simply snapping the connector on.

Easy Startup

The CompoBus/S System can be started just by wiring the cables and making some simple settings. Replacement of earlier Remote I/O Systems is also easy.

"Programmable Controller" is abbreviated as "PC" in these *Specification Sheets*.

LED Readouts for Easier Error Detection

Troubleshooting is easy because the Slave's node number is displayed on the Master's indicators if an error occurs with a Slave. When a CS1 or C200HJ Master Unit is used, error information is also stored in the PC's data area.

Wide Variety of Masters

A Master Units is also available integrated with a CPU Unit: The SRM1. The wide variety of Masters provides flexibility in configuring a system to match your application needs.

Wide Variety of Slaves

Remote Terminals, Connector Terminals, Analog Input Terminals, and Analog Output Terminals are newly available as Slaves supporting long-distance communications. CPM1A/CPM2A I/O Link Units are also available. These allow data to be shared with the host PC, which enables distributed control by the PC. A wide variety of I/O devices such as I/O Terminals, Remote I/O Modules, Sensor Amplifier Terminals, and Sensor Terminals can be used as Slaves. The variety of Slaves provides flexibility in configuring a system to match your application.

■ Comparison with Previous Models
Master Units

Item		Previous models C200HW-SRM21	New models C200HW-SRM21-V1
Communications modes	High-speed Communications Mode (previous mode)	Yes	Yes
	Long-distance Communications Mode	No	Yes
Analog I/O Terminal connections		No	Yes

Communications Mode

A Long-distance Communications Mode has been added to the High-speed Communications Mode.

Item		High-speed Communications Mode (previous mode)	Long-distance Communications Mode
Applicable cables	VCTF cable	Yes	Yes
	Special Flat Cable	Yes	No
Communications distances	Main line length	100 m max.	500 m max.
	Branch line length	3 m max.	6 m max.
	Total branch line length	50 m max.	120 m max.
Communications baud rate		750 kbps	93.75 kbps
Communications cycle time		0.5 ms or 0.8 ms (depending on maximum number of I/O points)	4.0 ms or 6.0 ms (depending on maximum number of I/O points)

Slaves

The SRT2 Series provides Slaves that support the Long-distance Communications Mode as well as the previous High-speed Communications Mode. New models fully support the functions of previous models.

New SRT2 Series products also include Connector Terminals, which are connector-based Remote Terminals, and Analog I/O Terminals.

Item		Previous model	New model
Slave series		SRT1 series	SRT2 series
Communications modes	High-speed Communications Mode (previous mode)	Yes	Yes
	Long-distance Communications Mode	No	Yes

Slave Characteristics

Remote Terminals

Input or Output Terminals for general-purpose use.

4-point, 8-point, and 16-point Transistor Remote Terminals and Connector Terminals.

8-point and 16-point Relay-mounted Remote Terminals.

Remote Terminals (3-tier Terminal Blocks)

Input or Output Terminals for general-purpose use.

16 points: 8 inputs and 8 outputs mixed.

Wiring is simple because common terminals for I/O wiring are located at each point on the 3-tier terminal block.

Connector Terminals

All I/O wiring can be done using connectors, reducing the amount of labor for wiring.

Mounting brackets allow the direction of mounting to be changed.

Remote I/O Modules

Modular type that allows PCB mounting.

16-input model and 16-output model.

User's devices can be customized as CompoBus/S Slaves.

Sensor Terminals

Easily connects to Photoelectric Sensor or Proximity Sensor with XS8 Connectors.

8-input model and 4-input/4-output model.

Remote teaching and external diagnosis are possible by using output signals of the Sensor Terminal.

Sensor Amplifier Terminals

Just snap on to connect and save wiring effort.

The Optical Fiber Unit can be directly connected.

Connect to up to eight channels of sensors by using Expansion Blocks.

Bit Chain Terminals

Use 4-conductor cable to connect up to 8 points of 1-point I/O devices.

Analog Input Terminals

Convert analog inputs to binary data.

The number of analog input points can be switched between 4 points, 3 points, 2 points, and 1 point using a DIP switch.

The following input ranges are supported:
0 to 5 V, 1 to 5 V, 0 to 10 V, –10 to 10 V, 0 to 20 mA, 4 to 20 mA

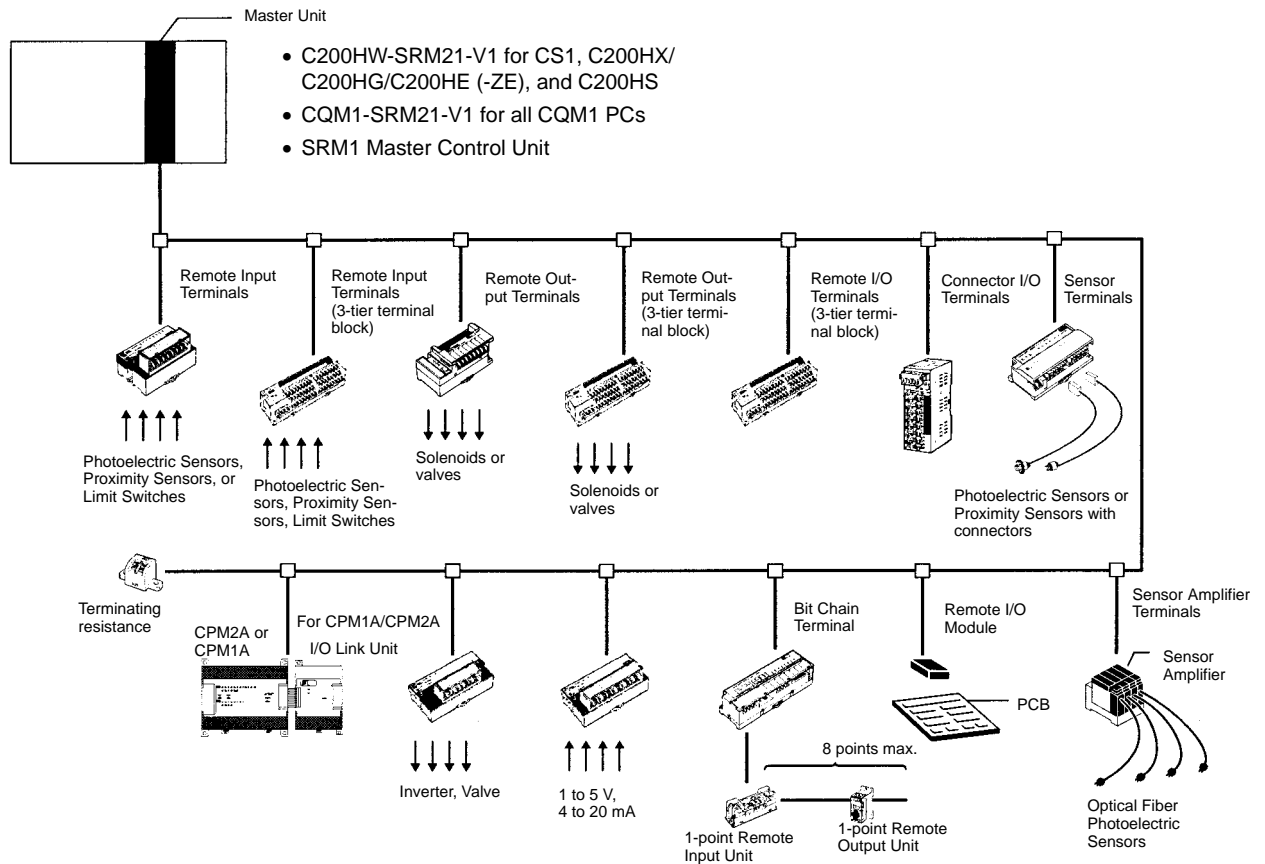**Analog Output Terminals**

Convert binary data to analog outputs.

The number of analog output points can be switched between 2 points and 1 point using a DIP switch.
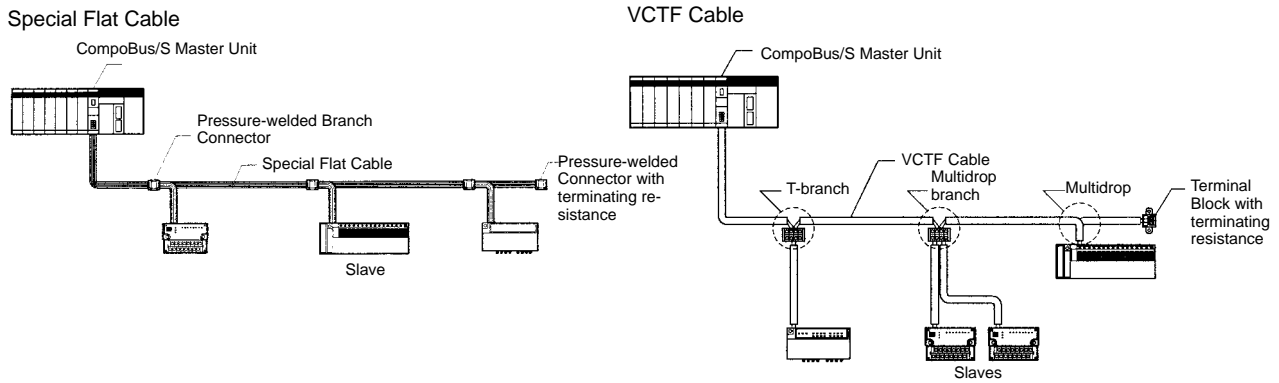
Supports the following output ranges:
1 to 5 V, 0 to 10 V, –10 to 10 V, 0 to 20 mA, 4 to 20 mA

I/O Link Terminals for CPM1A/CPM2A
Create I/O Links (8 inputs, 8 outputs) with CPM1A and CPM2A PCs.

Master Unit

- C200HW-SRM21-V1 for CS1, C200HX/C200HG/C200HE (-ZE), and C200HS
- CQM1-SRM21-V1 for all CQM1 PCs
- SRM1 Master Control Unit

Remote Input Terminals

Remote Input Terminals (3-tier terminal block)

Remote Output Terminals

Remote Output Terminals (3-tier terminal block)

Remote I/O Terminals (3-tier terminal block)

Connector I/O Terminals

Sensor Terminals

Photoelectric Sensors, Proximity Sensors, or Limit Switches

Photoelectric Sensors, Proximity Sensors, Limit Switches

Solenoids or valves

Solenoids or valves

Photoelectric Sensors or Proximity Sensors with connectors

Terminating resistance

CPM2A or CPM1A

For CPM1A/CPM2A I/O Link Unit

Bit Chain Terminal

Remote I/O Module

Sensor Amplifier Terminals

Sensor Amplifier

Inverter, Valve

1 to 5 V, 4 to 20 mA

8 points max.

PCB

1-point Remote Input Unit

1-point Remote Output Unit

Optical Fiber Photoelectric Sensors

CompoBus/S Network Configuration

■ Communications Specifications

Item		Specification
Communications method		Special CompoBus/S protocol
Communications baud rate		High-speed Communications Mode: 750 kbps Long-distance Communications Mode: 93.75 kbps
Modulation method		Baseband method
Coding method		Manchester coding method
Error control checks		Manchester code check, frame length check, and parity check
Cable	Vinyl-clad VCTF JIS C 3306	Two 0.75 mm^2 conductors (2 signal wires)
	Flat cable	Four 0.75 mm^2 conductors (2 signal wires and 2 power supply wires)
Communications distance	VCTF cable	High-speed Communications Mode Main line length: 100 m max. Branch line length: 3 m max. Total branch line length: 50 m max.
		Long-distance Communications Mode Main line length: 500 m max. Branch line length: 6 m max. Total branch line length: 120 m max.
	Flat cable	High-speed Communications Mode Main line length: 30 m max. Branch line length: 3 m max. Total branch line length: 30 m max.
		When flat cable is used to connect fewer than 16 Slaves, the main line can be up to 100 m long and the total branch line length can be up to 50 m. Long-distance Communications Mode is not possible when flat cable is used.
		Long-distance Communications Mode: Not possible

Item	Specification
I/O points, Slaves, usable node numbers, and communications cycle time	**C200HW-SRM21-V1 Master Unit (Used in CS1, C200HX/C200HG/C200HE (-ZE), and C200HS PCs.)**
	Max. number of I/O points: 64 inputs/64 outputs

	Usable node numbers: IN0 to IN7 and OUT0 to OUT7
	Communications cycle time:
	        High-speed Communications Mode: 0.5 ms
	        Long-distance Communications Mode: 4.0 ms

	Max. number of I/O points: 128 inputs/128 outputs

	Usable node numbers: IN0 to IN15 and OUT0 to OUT15
	Communications cycle time:
	        High-speed Communications Mode: 0.8 ms
	        Long-distance Communications Mode: 6.0 ms

	CQM1-SRM21-V1 Master Unit (Used in CQM1 PCs.)
	Max. number of I/O points: 64 inputs/64 outputs

	Usable node numbers: IN0 to IN7 and OUT0 to OUT7 (8-point mode)
	Communications cycle time:
	        High-speed Communications Mode: 0.5 ms
	        Long-distance Communications Mode: 4.0 ms

	Usable node numbers: IN0 to IN15 and OUT0 to OUT15 (4-point mode)
	Communications cycle time:
	        High-speed Communications Mode: 0.8 ms
	        Long-distance Communications Mode: 6.0 ms

	Max. number of I/O points: 32 inputs/32 outputs

	Usable node numbers: IN0 to IN3 and OUT0 to OUT3 (8-point mode)
	                IN0 to IN7 and OUT0 to OUT7 (4-point mode)
	Communications cycle time:
	        High-speed Communications Mode: 0.5 ms
	        Long-distance Communications Mode: 4.0 ms

	Max. number of I/O points: 16 inputs/16 outputs

	Usable node numbers: IN0 to IN1 and OUT0 to OUT1 (8-point mode)
	                IN0 to IN3 and OUT0 to OUT3 (4-point mode)
	Communications cycle time:
	        High-speed Communications Mode: 0.5 ms
	        Long-distance Communications Mode: 4.0 ms

■ Master Units
Model

Applicable PC	Master Unit model number	Type of communications	Model
CS1 Series, C200HX/HG/HE, C200HS, C200H	C200H Special I/O Unit	Remote I/O communications (fixed allocation)	C200HW-SRM21-V1
		Communications mode: High-speed Communications (previous) Mode or Long-distance Communications Mode	

Specifications

Item		C200HW-SRM21-V1	
Applicable PC		**C200HX-CPU3□/4□(-Z), C200HG-CPU3□/4□(-Z), All C200HE Units, C200HS**	**CS1 series, C200HX-CPU5□/6□/8□(-Z), C200HG-CPU5□/6□(-Z)**
Unit classification		C200H Special I/O Unit	
Mounting position		CPU Rack, C200H Expansion I/O Rack, or CS1 Expansion Rack (Cannot be mounted to a SYSMAC BUS Slave Rack.)	
Maximum number of Units		10 Units (when allocated words for one Special I/O Unit: 10 words)	16 Units (when allocated words for one Special I/O Unit: 10 words)
		5 Units (when allocated words for two Special I/O Units: 20 words)	8 Units (when allocated words for two Special I/O Units: 20 words)
Data exchange with CPU Unit	**Special I/O Unit Area words allocated to Special I/O Units**	10 words/Unit (allocated words for 1 Unit), or 20 words/Unit (allocated words for 1 Units) (Set using the DIP switch.)	
		10 words/Unit: Slave I/O allocations are 10 input words, 10 output words, 2 status words (Master Unit to CPU Unit)	
		20 words/Unit: Slave I/O allocations are 8 input words, 8 output words, 4 status words (Master Unit to CPU Unit)	
	DM Area words allocated to Special I/O Units	Not used	
Supported communications		Remote I/O communications	
Communications mode		High-speed Communications (previous) Mode or Long-distance Communications Mode (set using the DIP switch on the front of the Unit).	
Analog terminal connection		Possible (see note)	
Maximum No. of I/O points/Master Unit		256 points (128 inputs, 128 outputs), or 128 points (64 inputs, 64 outputs). Set using the DIP switch (see note 2)	
Number of points allocated per node address		8 points	
Connectable node addresses/Master Unit		IN0 to IN7, OUT0 to OUT7 or IN0 to IN15, OUT0 to OUT15	
Power supply to Master Unit		Not necessary (power supplied from power supply unit)	
Status		The Special I/O Unit Area contains the active node flags and communications error flags for each Slave.	
Settings		Rotary switch: Unit number (0 to F)	
		Front panel DIP switch: Valid node address	
Indicators		9 LED indicators: Unit and Slave status indicators (RUN, SD, RD, ERC, ERR, Slave type, invalid Slave number)	
Front-panel connections		Communications Terminals (BD H, BD L)	
Communications power supply voltage		Not supplied to Master Unit (see note 3)	
Effect on CPU Unit cycle time		16 Slaves max.: 0.4 ms	
		32 Slaves max.: 0.9 ms	
Current consumption		5 VDC 150 mA max. (supplied from power supply unit)	
Dimensions		35 × 130 × 100 (W × H × D)	
Weight		200 g max.	
Standard accessories		None	
Cat. No.		W266	

Note: 1. When connecting an Analog Terminal as a Slave, you cannot use a previous model of Master Unit (i.e., a Master Unit without the -V1 suffix). Any attempt to use a previous Master Unit may result in a data error.

2. The words allocated as a Special I/O Unit in the IR/CIO Areas are used in the CPU Unit.

3. Communications power must be supplied to Slaves (network power supply and multi power supply). Communications power voltage will vary depending on the model of Slave.

■ Accessories (Sold Separately)

Name		Specifications	Model
Communications Cables	VCTF Cable	JIS C3306, 0.7 mm^2 × 2-conductor	Sold commercially
	Special Flat Cable	100 m, 0.7 mm^2 × 4-conductor	SA1-4F10
Pressure-welded Branch Connector		Use to branch cables from the main line (can only be used with Special Flat Cables)	SCN1-TH4
Pressure-welded Long Distance Connector		Use to extend Special Flat Cables	SCN1-TH4E
Pressure-welded Connector with terminating resistance		Connector with terminating resistance (can only be used with Special Flat Cables)	SCN1-TH4T
Terminal Block with terminating resistance		Can be used with VCTF Cables and Special Flat Cables	SRS1-T

■ Applicable CPU Units

PC	CPU Unit	Maximum number of Units that can be mounted to CPU Rack and Expansion Racks		Mounting position limitations
	Valid node addresses	IN0 to IN7, OUT0 to OUT7 (allocations for 1 Unit)	IN0 to IN15, OUT0 to OUT15 (allocations for 2 Units)	
CS1 Series	CS1H-CPU☐☐ CS1G-CPU☐☐	16 (Unit Nos. 0 to F)	8 (Unit Nos. 0 to 8, A to F)	None
C200HX/HG/HE	C200HE-CPU11/32/42 (-Z) C200HG-CPU33/43 (-Z) C200HX-CPU34/44 (-Z)	10 (Unit Nos. 0 to 9)	5 (Unit Nos. 0 to 8)	None
	C200HG-CPU53/63 (-Z) C200HX-CPU54/64 (-Z) C200HX-CPU65-Z/85-Z	16 (Unit Nos. 0 to F)	8 (Unit Nos. 0 to 8, A to F)	None
C200HS	C200HS-CPU01(-☐)/21(-☐)/31/03/23/33	10 (Unit Nos. 0 to 9)	5 (Unit Nos. 0 to 8)	None
C200H	C200H-CPU01/02/03/11/21/22/23/31	Cannot be used.	Cannot be used.	---

■ Slave Units
Models

Type	Model		Specifications	Power supply type (see note 1)
	High-speed Communications Mode	High-speed Communications Mode and Long-distance Communications Mode		
Remote I/O Terminal (transistor type)	SRT1-ID04	SRT2-ID04	4-points input (NPN)	Multi-power supply type
	SRT1-ID04-1	SRT2-ID04-1	4-points input (PNP)	
	SRT1-ID08	SRT2-ID08	8-points input (NPN)	
	SRT1-ID08-1	SRT2-ID08-1	8-points input (PNP)	
	SRT1-ID16	SRT2-ID16	16-points input (NPN)	
	SRT1-ID16-1	SRT2-ID16-1	16-points input (PNP)	
	SRT1-ID16T	SRT2-ID16T	16-points input (NPN, 3-step terminal block type)	
	SRT1-ID16T-1	SRT2-ID16T-1	16-points input (PNP, 3-step terminal block type)	
	SRT1-OD04	SRT2-OD04	4-points output (PNP)	
	SRT1-OD04-1	SRT2-OD04-1	4-points output (NPN)	
	SRT1-OD08	SRT2-OD08	8-points output (PNP)	
	SRT1-OD08-1	SRT2-OD08-1	8-points output (NPN)	
	SRT1-OD16	SRT2-OD16	16-points output (PNP)	
	SRT1-OD16-1	SRT2-OD16-1	16-points output (NPN)	
	SRT1-OD16T	SRT2-OD16T	16-points output (NPN, 3-step terminal block type)	
	SRT1-OD16T-1	SRT2-OD16T-1	16-points output (PNP, 3-step terminal block type)	
	SRT1-MD16T	SRT2-MD16T	8-points input, 8-points output (NPN, high-density common terminal type)	
	SRT1-MD16T-1	SRT2-MD16T-1	16-points input, 16-points output (PNP, high-density common terminal type)	
Connector Terminal (transistor input type)	None	SRT2-VID08S	8-points input (NPN, sensor connector type)	
		SRT2-VID08S-1	8-points input (PNP, sensor connector type)	
		SRT2-VID16ML	16-points input (NPN, MIL connector type)	
		SRT2-VID16ML-1	16-points input (PNP, MIL connector type)	
Connector Terminal (transistor output type) (see note 2)	None	SRT2-VOD08S	8-points output (NPN, sensor connector type)	
		SRT2-VOD08S-1	8-points output (PNP, sensor connector type)	
		SRT2-VOD16ML	16-points output (NPN, MIL connector type)	
		SRT2-VOD16ML-1	16-points output (PNP, MIL connector type)	
Sensor Terminal (see note 2)	SRT1-ID08S	SRT2-ID08S (see note 5)	8-points input	Network power supply type
	SRT1-ND08S	SRT2-ND08S (see note 5)	4-points input, 4-points output	
	SRT1-OD08S	SRT2-OD08S (see note 5)	8-points output (NPN, connector output type)	Local power supply type
Remote I/O Terminal (relay-mounted type) (see note 4)	SRT1-ROC08	SRT2-ROC08	8-points output	
	SRT1-ROC16	SRT2-ROC16	16-points output	
Remote I/O Terminal (Power MOS FET-mounted type) (see note 4)	SRT1-ROF08	SRT2-ROF08	8-points output	
	SRT1-ROF16	SRT2-ROF16	16-points output	
Remote I/O Module	SRT1-ID16P	None	16-points input (NPN, PCB-mounted type)	---
	SRT1-OD16P	None	16-points input (PNP, PCB-mounted type)	

Type	Model		Specifications	Power supply type (see note 1)
	High-speed Communications Mode	**High-speed Communications Mode and Long-distance Communications Mode**		
Sensor Amplifier Terminals	SRT1-TID04S	SRT2-TID04S (see note 5)	4-points input (1 word x 4 Connector Units can be mounted)	Network power supply type
	SRT1-TKD04S	SRT2-TKD04S (see note 5)	4-points input (4 words x 1 Connector Unit can be mounted)	
Expansion Sensor Amplifier Terminals	SRT1-XID04S	SRT2-XID04S (see note 5)	4-points input (1 word x 4 Connector Units can be mounted)	---
	SRT1-XKD04S	SRT2-XKD04S (see note 5)	4-points input (4 words x 1 Connector Unit can be mounted)	
Connector Units	E3X-NT16 (New model can also be used)		Optical fiber switch EX3N- connector type, multi-function type, 1 word input	
	E3X-NT26 (New model can also be used)		Optical fiber switch EX3N- connector type, multi-function type, 1 word input	
	E3X-NM16 (New model can also be used)		Optical fiber switch EX3N- connector type, multi-function type, 4 word input	
	E39-JID01 (New model can also be used)		Terminal Block Unit, 1-point input (connects to all types of input devices)	
Bit Chain Terminal (See note 3.)	SRT1-B1T	None	8-points input or 8-points output	Local power supply type
Analog Input Terminal	None	SRT2-AD04	Analog input (select from 4 points, 3 points, 2 points, or 1 point)	Network power supply type
Analog Output Terminal	None	SRT2-DA02	Analog output (select from 2 points or 1 point)	
I/O Link Unit	None	CPM1A-SRT21	8-points input, 8-points output (CPM1A/CPM2A)	---

Note: 1. The following power supply types are available.

- Network power supply type: Slaves powered using a power supply from a CompoBus/S Special Flat Cable.

- Multi-power supply type: Slaves that require both a communications power supply and a I/O power supply (communications power can be supplied using a CompoBus/S Special Flat Cable).

- Local power supply type: Slaves powered using an external power supply only (i.e., cannot be powered using a CompoBus/S Special Flat Cable).

  2. When using the SRT1X-□D04S Sensor Terminal or SRT1-OD08S Remote I/O Terminal with Connector-output Transistors, the following sensor and external device connectors are required.

Name	Description	Model
Cable Connectors (sensor or external device end)	Marking XS8-1, conforming cable core wire size: 0.3 to 0.5 mm^2	XS8A-0441
	Marking XS8-2, conforming cable core wire size: 0.14 to 0.2 mm^2	XS8A-0442

  3. When using the SRT1-B1T Bit Chain Terminal, the following nodes, end nodes, special cables, and connectors are required.

| Type	Name	Description	Model
Nodes and End Nodes	Input Node	1-point transistor input type	B1T-J
	Output Nodes	1-point transistor output type	B1T-JV24
		1-point relay output type (see note 4)	B1T-JR
		1-point Power MOS FET relay output type (see note 4)	B1T-JM
	Input End Node	End node with node functions. 1-point transistor input type	B1T-Z
	Output End Node	End node without node functions	B1T-E
Connectors	Bit Chain Transmission Path Special Cable	100 m 4-conductor 0.75 mm^2 Flat Cable (see note 6)	XB1T-W10
	Pressure-welded Connectors	End node connector (gray)	XB1T-S1
		New node connector (black)	XB1T-S2
Connect the nodes, including the end node last, to the Bit Chain Terminal in a daisy-chain configuration using the Special Flat Cables and pressure-welded connectors given above. Connect a maximum of 7 input nodes and an input end node, or a maximum of 8 output nodes and an output end node, to 1 Bit Chain Terminal. You cannot connect both input and output nodes to the same terminal.			

4. When using the SRT1-RO□□ Remote I/O Terminal (with relays), or B1T-J□ Bit Chain Terminal Output Node, use the following replacement relay.

Name	Description	Model
Replacement Relay (per node)	SRT1-ROC08, SRT1-ROC16, B1T-JR	G6D-1A
	SRT1-ROF08, SRT1-ROF16, B1T-JM (Power MOS FET Relay)	G3DZ-2R6PL

5. Available soon

6. Bit chain specifications: Maximum distance between nodes: 50 m, with maximum transmission path distance to end node 100 m.
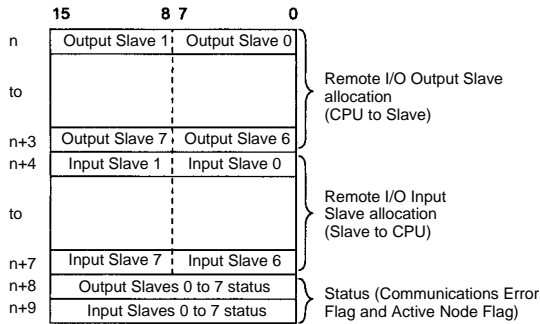
■ Data Exchange Format
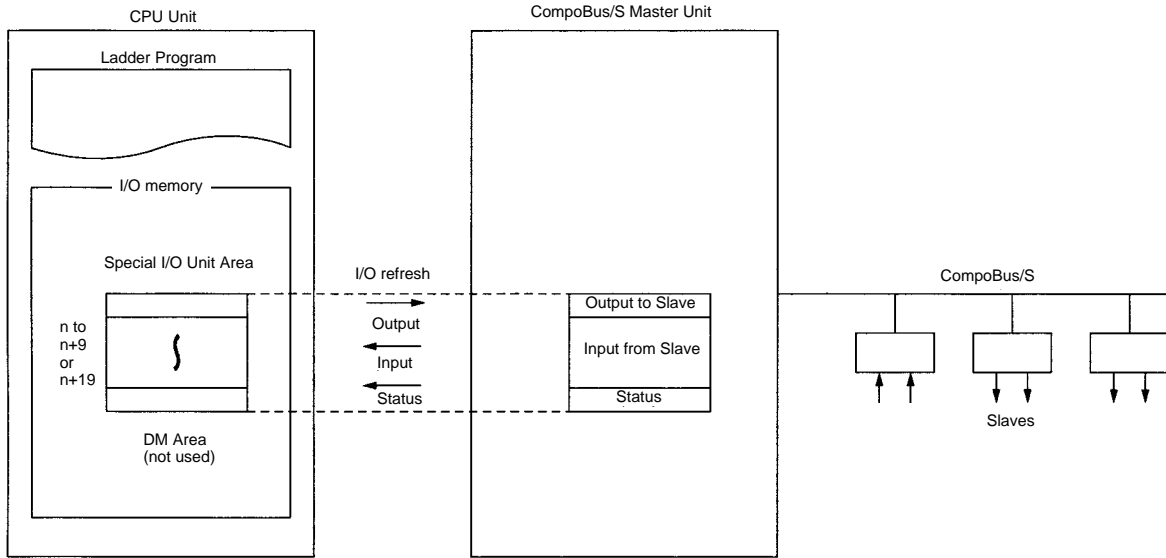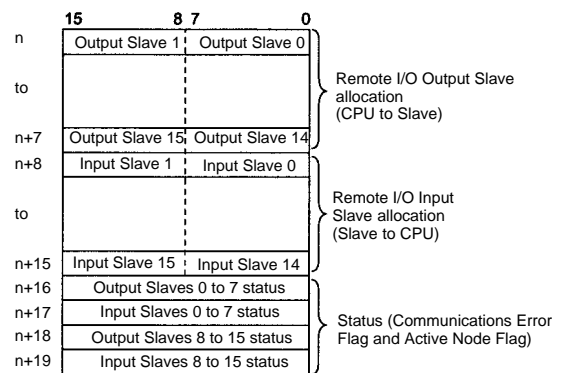

Allocations

10 Words Allocated (Pin 1 on the DIP Switch OFF)

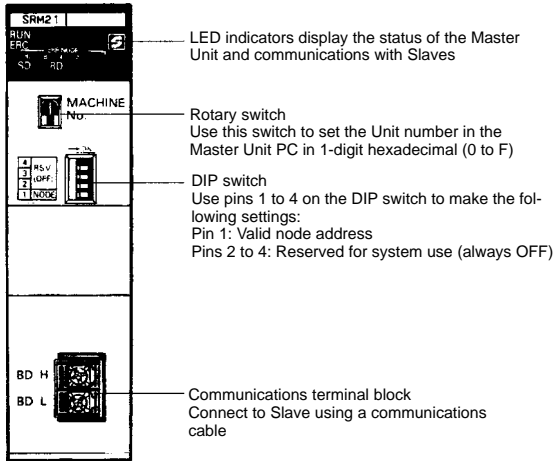You can connect Slaves with node addresses 0 to 7.

20 Words Allocated (Pin 1 on the DIP Switch ON)

You can connect Slaves with node addresses 0 to 15.

Note: Slaves with 16-points input or output are allocated two Input Slave or Output Slave node addresses. Set node addresses 0 to 7 or 8 to 15 using the DIP switch on each Slave.
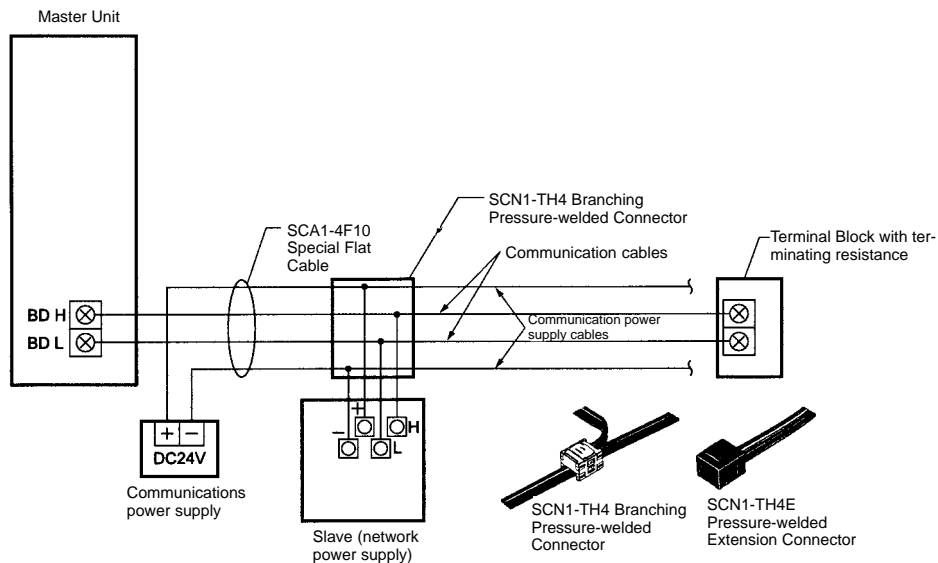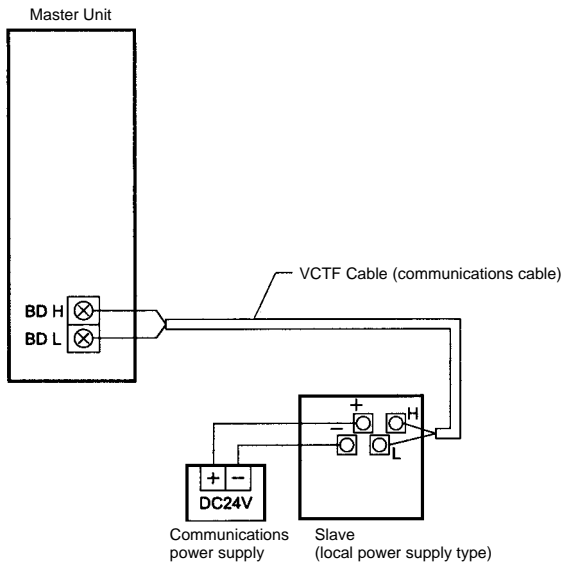
■ Nomenclature
C200HW-SRM21-V1

LED indicators display the status of the Master Unit and communications with Slaves

Rotary switch
Use this switch to set the Unit number in the Master Unit PC in 1-digit hexadecimal (0 to F)

DIP switch
Use pins 1 to 4 on the DIP switch to make the following settings:
Pin 1: Valid node address
Pins 2 to 4: Reserved for system use (always OFF)

Communications terminal block
Connect to Slave using a communications cable

Indicators

Indicator	Name	Color	Status	Meaning
RUN	Operating	Green	Lit	Unit is operating normally
			Not lit	One of the following errors has occurred:
				Power is not being supplied to Unit, I/O settings error, CPU waiting, Unit address setting error
SD	Send	Yellow	Lit	Data transmission
			Not lit	All other times
RD	Receive	Yellow	Lit	Data reception
			Not lit	All other times
ERC	Communications error	Red	Lit	A Slave has become separated from the communications network (communications error)
			Not lit	Slaves are communicating normally
IN/OUT	Error Slave category	Red	Lit	Output Slave error
			Not lit	Input Slave error, or all Slaves operating normally
8, 4, 2, 1	Error Slave address	Red	Flashing	The address of the Slave with the error is displayed in base 2. Lit = 1, not lit = 0.

■ External Connections
Special Flat Cable

Master Unit

BD H
BD L

SCA1-4F10 Special Flat Cable

SCN1-TH4 Branching Pressure-welded Connector

Communication cables

Terminal Block with terminating resistance

Communication power supply cables

DC24V

Communications power supply

Slave (network power supply)

SCN1-TH4 Branching Pressure-welded Connector

SCN1-TH4E Pressure-welded Extension Connector

VCTF Cable

Master Unit

VCTF Cable (communications cable)

BD H

BD L

+
−
DC24V

Communications
power supply
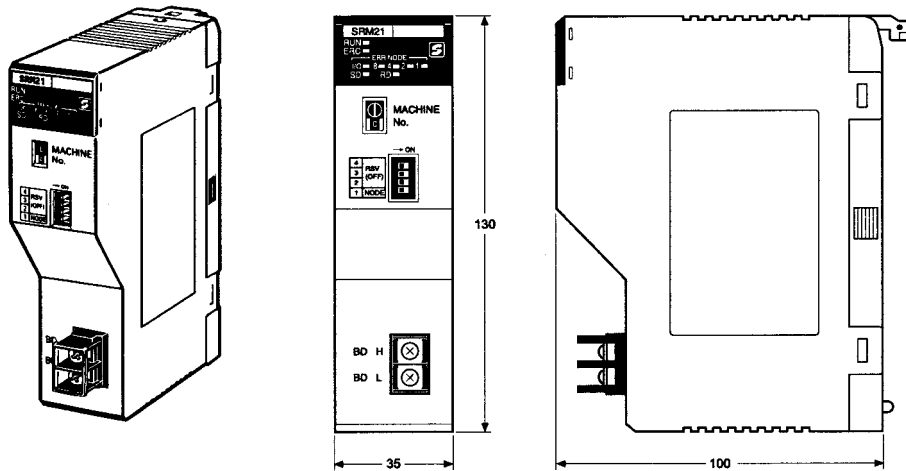
Slave
(local power supply type)

Note: Do not use both Special Flat Cables and VCTF Cables in the same system.

■ Dimensions
C200HW-SRM21-V1
Note: All units are in millimeters unless otherwise indicated.

130

35

100

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.