OMRON

OMNUC W-series

AC Servomotors/Servodrivers

- Series now includes 1,500-r/min Servomotors.
- Servodrivers now available with capacities of up to 15 kW.

The advanced W Series of Servomotores and Servodrivers are loaded with functions. They can also be connected to DeviceNet networks, allowing easier distributed control and information management.

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Servomotor/Servodriver Combinations

Choose the Servomotor/Servodriver for Each Application to Maximize Performance

R88M Servomotors						R88D Servodrivers			Application
Style	Rated speed	Capacity	International standards CE, UL/cUL	Shaft end (without reduction gear)	Enclosure rating	100 V	200 V Single phase	200 V Three phase	
Cylinder style	3,000 r/min. (5,000 r/min.)	30 W	Approved	Straight With key With key and tap Straight with tap	IP55 (excluding shaft opening)	WTA3HL	WTA3H	---	Low-inertia machines Machines with fast tact times (Robots, Assembly machines, Conveyance machines)
		50 W				WTA5HL	WTA5H	---	
		100 W				WT01HL	WT01H	---	
		200 W				WT02HL	WT02H	---	
		400 W				---	WT04H	---	
		750 W				---	WT08H (See note.)	WT08H	
		1 kW		With key and tap Straight	IP67 (excluding shaft opening)	---	---	WT10H	
		1.5 kW				---	---	WT15H	
		2 kW				---	---	WT20H	
		3 kW				---	---	WT30H	
		4 kW				---	---	WT50H	
		5 kW				---	---	WT50H	
	1,500 r/min. (3,000 r/min.)	450 W	Approved	With key and tap Straight	IP67 (excluding shaft opening)	---	---	WT05H	Machines requiring high torque (Simple processing machines, Assembly machines, Transfer machines)
		850 W				---	---	WT10H	
		1.3 kW				---	---	WT15H	
		1.8 kW				---	---	WT20H	
		2.9 kW				---	---	WT30H	
		4.4 kW				---	---	WT50H	
		5.5 kW				---	---	WT60H	
		7.5 kW				---	---	WT75H	
	1,500 r/min. (2,000 r/min.)	11 kW				---	---	WT150H	
		15 kW				---	---	WT150H	
	1,000 r/min. (2,000 r/min.)	300 W	Approved	With key and tap Straight	IP67 (excluding shaft opening)	---	---	WT05H	Machines requiring high torque (Simple processing machines, Assembly machines, Transfer machines)
		600 W				---	---	WT08H	
		900 W				---	---	WT10H	
		1.2 kW				---	---	WT15H	
		2 kW				---	---	WT20H	
		3 kW				---	---	WT30H	
		4 kW				---	---	WT50H	
		5.5 kW				---	---	WT60H	
Flat style	3,000 r/min. (5,000 r/min.)	100 W	Approved	Straight With key With key and tap Straight with tap	IP55 (excluding shaft opening) IP67 (including shaft opening)	WT01HL	WT01H	---	Machines allowing little motor depth Machines requiring waterproof motor (Semiconductor-manufacturing machines, Food-processing machines, AGVs)
		200 W				WT02HL	WT02H	---	
		400 W				---	WT04H	---	
		750 W				---	WT08H (See note.)	WT08H	
		1.5 kW				---	---	WT15H	

Note: When using a 200-V single-phase Servomotor, it is necessary to change part of the power supply wiring. Refer to the relevant connection diagram for details. The power supply specification is 220 to 230 VAC (+10%/–15%).

■ Available Models

AC Servodrivers

R88D-WT□□H□
1 2 3 4 5 6

Part	Item	Code	Specification
1	R88D indicates the product is a Servodriver.		
2	Series	W	W-series
3	Input signal	T	Analog or pulse-train input
4	Max. output capacity	A3	30 W
		A5	50 W
		01	100 W
		02	200 W
		04	400 W
		05	500 W
		08	750 W
		10	1 kW
		15	1.5 kW
		20	2 kW
		30	3 kW
		50	5 kW
		60	6 kW
		75	7.5 kW
		150	15 kW
5	---	H	---
6	Power supply	Blank	200 VAC
		L	100 VAC

AC Servomotors (Without Reduction Gear)

R88M-W□□□□□□□-□□□□
1 2 3 4 5 6 7 8 9

Part	Item	Code	Specification
1	R88M indicates the product is a Servomotor.		
2	Series	W	W-series
3	Style	Blank	Cylinder style
		P	Flat style
4	Motor capacity	030	30 W
		100	100 W
		1K0	1 kW
5	Speed	10	1000 r/min.
		15	1500 r/min.
		30	3000 r/min.
6	Motor power supply specifications	H	200 VAC, incremental encoder
		L	100 VAC, incremental encoder
		T	200 VAC, absolute encoder
		S	100 VAC, absolute encoder
7	Brake	Blank	No brake
		B	24-VDC brake
8	Waterproof/ oil seal specifications	Blank	No additional specifications
		O	With oil seal
		W	Waterproof
9	Shaft end	Blank	Straight
		S1	With key
		S2	With key and tap
		S3	Straight with tap

Note: Waterproof specifications are available for only flat-style motors.

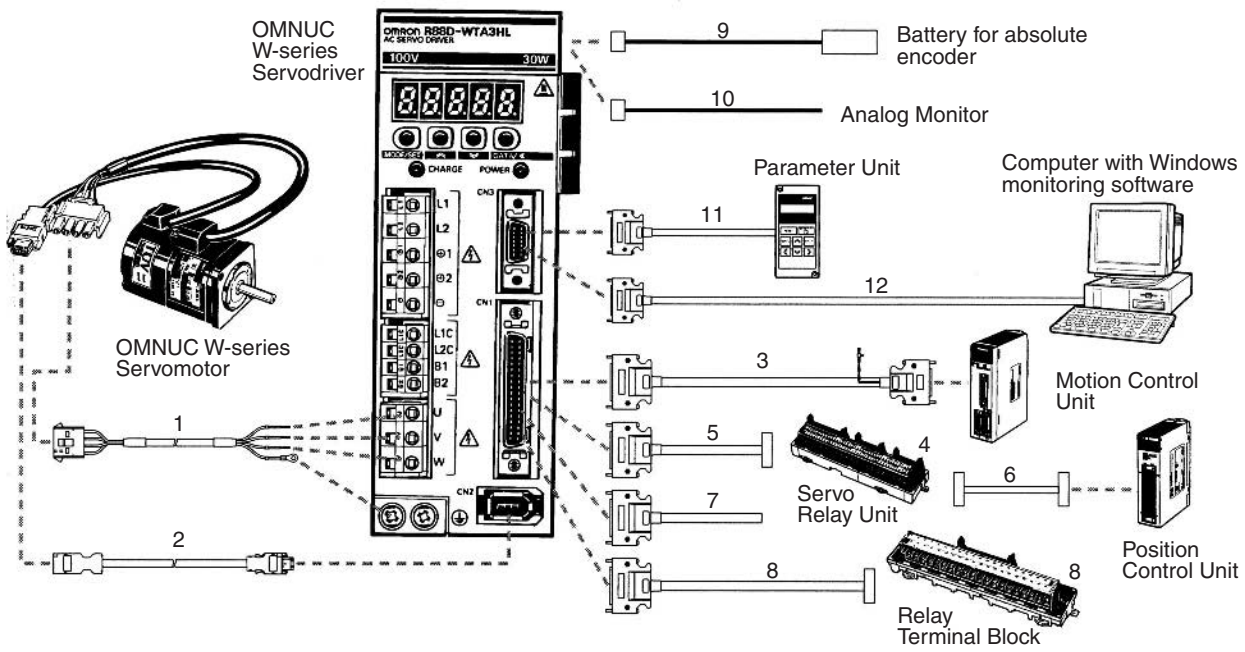
AC Servomotors (With Reduction Gear)

R88M-W□□□□□□□-□G□□□□
1 2 3 4 5 6 7 8 9 10

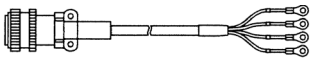
Part	Item	Code	Specification
1	R88M indicates the product is a Servomotor.		
2	Series	W	W-series
3	Style	Blank	Cylinder style
		P	Flat style
4	Motor capacity	030	30 W
		100	100 W
		1K0	1 kW
5	Speed	10	1000 r/min.
		15	1500 r/min.
		30	3000 r/min.
6	Motor power supply specifications	H	200 VAC, incremental encoder
		L	100 VAC, incremental encoder
		T	200 VAC, absolute encoder
		S	100 VAC, absolute encoder
7	Brake	Blank	No brake
		B	24-VDC brake
8	Gear ratio (See note.)	G05 to G45	G05: 1/5, G09: 1/9, G11: 1/11, G15: 1/15, G20: 1/20, G21: 1/21, G25: 1/25, G29: 1/29, G33: 1/33, G45: 1/45
9	Backlash	B	3 minutes max.
		C	About 45 minutes
10	Brake shaft end	Blank	Straight
		J	With key

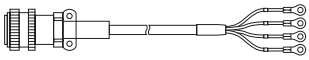
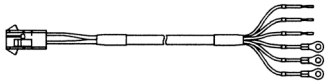
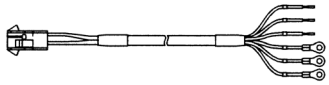
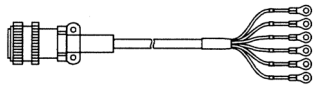
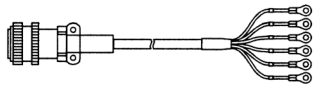
Note: Not all motors can be combined with a reduction gear. See “Servomotor and Reduction Gear Combinations” on page 10 for more details.

Cable Specifications



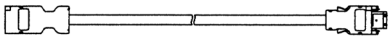
■ Power Cables

Symbol	Description	Connect to:	Model	Remarks
1	Power Cables for Servomotors without Brakes	Cylinder-style Servomotors (3,000 r/min): 30 to 750 W Flat-style Servomotors (3,000 r/min): 100 to 750 W	R88A-CAWA□□□S □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by AMP Japan, Ltd.) Connector cap: 350780-1 Connector socket: 350689-3 
		Flat-style Servomotors (3,000 r/min): 1.5 kW	R88A-CAWB□□□S □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by AMP Japan, Ltd.) Connector cap: 350780-1 Connector socket: 350551-6 (pins 1 to 3) 350551-3 (pin 4) 
		Cylinder-style Servomotors (3,000 r/min): 1 to 2 kW Cylinder-style Servomotors (1,500 r/min): 450 W to 1.3 kW Cylinder-style Servomotors (1,000 r/min): 300 to 900 W	R88A-CAWC□□□S □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector cap: MS3106B18-10S Cable clamp: MS3057-10A 
		Cylinder-style Servomotors (3,000 r/min): 3 to 5 kW Cylinder-style Servomotors (1,500 r/min): 1.8 to 4.4 kW Cylinder-style Servomotors (1,000 r/min): 1.2 to 3 kW	R88A-CAWD□□□S □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector cap: MS3106B22-22S Cable clamp: MS3057-12A 

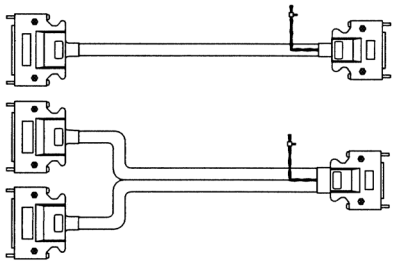
Symbol	Description		Connect to:	Model	Remarks
1	Power Cables for Servomotors without Brakes, and Servomotors with Brakes (See note.)	Power connectors (See note.)	Cylinder-style Servomotors (1,000 r/min): 4 kW	R88A-CAWE□□□S □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector cap: MS3106B32-17S Cable clamp: MS3057-20A 
			Cylinder-style Servomotors (1,500 r/min): 5.5 to 11 kW Cylinder-style Servomotors (1,000 r/min): 5.5 kW	R88A-CAWF□□□S □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector cap: MS3106B32-17S Cable clamp: MS3057-20A 
		Brake connectors (See note.)	Cylinder-style Servomotors (1,500 r/min): 5.5 to 11 kW Cylinder-style Servomotors (1,000 r/min): 4 to 5.5 kW **Note:** Must be used in combination with an R88A-CAWE□□□S or R88A-CAWF□□□S Power Cable.	R88A-CAWE□□□B □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector cap: MS3106A10SL-3S Cable clamp: MS3057-4A 
	Power Cables for Servomotors with Brakes		Cylinder-style Servomotors (3,000 r/min): 30 to 750 W Flat-style Servomotors (3,000 r/min): 100 to 750 W	R88A-CAWA□□□B □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by AMP Japan, Ltd.) Connector cap: 350781-1 Connector socket: 350689-3 
			Flat-style Servomotors (3,000 r/min): 1.5 kW	R88A-CAWB□□□B □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by AMP Japan, Ltd.) Connector cap: 350781-1 Connector socket: 350551-6 (pins 1 to 3) 350551-3 (pin 4) 
			Cylinder-style Servomotors (3,000 r/min): 1 to 2 kW Cylinder-style Servomotors (1,500 r/min): 450 W to 1.3 kW Cylinder-style Servomotors (1,000 r/min): 300 to 900 W	R88A-CAWC□□□B □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector cap: MS3106B20-15S Cable clamp: MS3057-12A 
			Cylinder-style Servomotors (3,000 r/min): 3 to 5 kW Cylinder-style Servomotors (1,500 r/min): 1.8 to 4.4 kW Cylinder-style Servomotors (1,000 r/min): 1.2 to 3 kW	R88A-CAWD□□□B □ represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector cap: MS3106B24-10S Cable clamp: MS3057-16A 

Note: Power connectors and brake connectors are separate for Servomotors with a capacity of 4 kW min. (1,000 r/min) and 5.5 kW min. (1,500 r/min). This means that two cables are necessary when using Servomotors with Brakes: an R88A-CAWE□□□S or R88A-CAWF□□□S Power Connector and an R88A-CAWF□□□B Brake Connector. The R88A-CAWF□□□B Brake Connector is wired (2 conductors) only for braking.

■ Encoder Cables (for CN2)

Symbol	Description	Connect to:	Model	Remarks
2	Encoder Cable	Cylinder-style Servomotors (3,000 r/min): 30 to 750 W Flat-style Servomotors (3,000 r/min): 100 W to 1.5 kW	R88A-CRWA□□□C □represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by MOLEX JAPAN CO., Ltd.) Connector socket: 54280-0600 Connector on driver end (manufactured by MOLEX JAPAN CO., Ltd.) Crimp terminal: 50639-8091 Connector plug: 55101-0600 
		Cylinder-style Servomotors (3,000 r/min): 1 to 5 kW Cylinder-style Servomotors (1,500 r/min): 450 W to 15 kW Cylinder-style Servomotors (1,000 r/min): 300 W to 5.5 kW	R88A-CRWB□□□N □represents one of the following cable lengths: 3 m, 5 m, 10 m, 15 m, 20 m, 30 m, 40 m, 50 m	Connector on motor end (manufactured by Daiichi Denshi Kogyo Co., Ltd.) Connector socket: MS3106B20-29S Cable clamp: MS3057-12A Connector on driver end (manufactured by MOLEX JAPAN CO., Ltd.) Crimp terminal: 50639-8091 Connector plug: 55101-0600 

■ Control Cables (for CN1)

Symbol	Description	Connect to	Model	Remarks
3	Control Cable	Motion Control Units (for all SYSMAC CS1, C200H, and CV PCs)	R88A-CPW□□□M◊ □represents one of the following cable lengths: 1 m, 2 m, 3 m, 5 m ◊ represents the number of axes: 1: 1 axis 2: 2 axes	
4	Servo Relay Unit	1-axis Position Control Unit	XW2B-20J6-1B	---
		2-axis Position Control Unit	XW2B-40J6-2B	
		1-axis CJ1M	XW2B-20J6-8A	
		2-axis CJ1M	XW2B-40J6-9A	
5	Servodriver Connecting Cable	XW2B-20J6-1B, XW2B-40J6-2B, XW2B-20J6-3B, XW2B-20J6-8A, or XW2B-40J6-9A Servo Relay Unit	XW2Z-□□□J-B4 □ represents either of the following cable lengths: 1 m, 2 m	
		XW2B-40J6-4A Servo Relay Unit	XW2Z-□□□J-B8 □ represents either of the following cable lengths: 1 m, 2 m	
6	Position Control Unit Connecting Cable	CS1W-NC113 or C200HW-NC113 Position Control Unit	XW2Z-□□□J-A6 □ represents either of the following cable lengths: 50 cm, 1 m	
		CS1W-NC213/413 or C200HW-NC213/413 Position Control Unit	XW2Z-□□□J-A7 □ represents either of the following cable lengths: 50 cm, 1 m	
		CJ1W-NC113 Position Control Unit	XW2Z-□□□J-A14 □ represents either of the following cable lengths: 50 cm, 1m	
		CJ1W-NC213/413 Position Control Unit	XW2Z-□□□J-A15 □ represents either of the following cable lengths: 50 cm, 1m	
		CJ1M (CJ1M-CPU22/23)	XW2Z-100J-A27	
7	Control Cable	General-purpose Controller	R88A-CPW□□□S □ represents either of the following cable lengths: 1 m, 2 m	---

Symbol	Description	Connect to	Model	Remarks
8	Relay Terminal Block Cable	General-purpose Controller	R88A-CTW□□□N □ represents either of the following cable lengths: 1 m, 2 m	---
	Relay Terminal Block		XW2B-50G5	
---	Control I/O Connector CN1	---	R88A-CNU11C	

■ CN3 Options

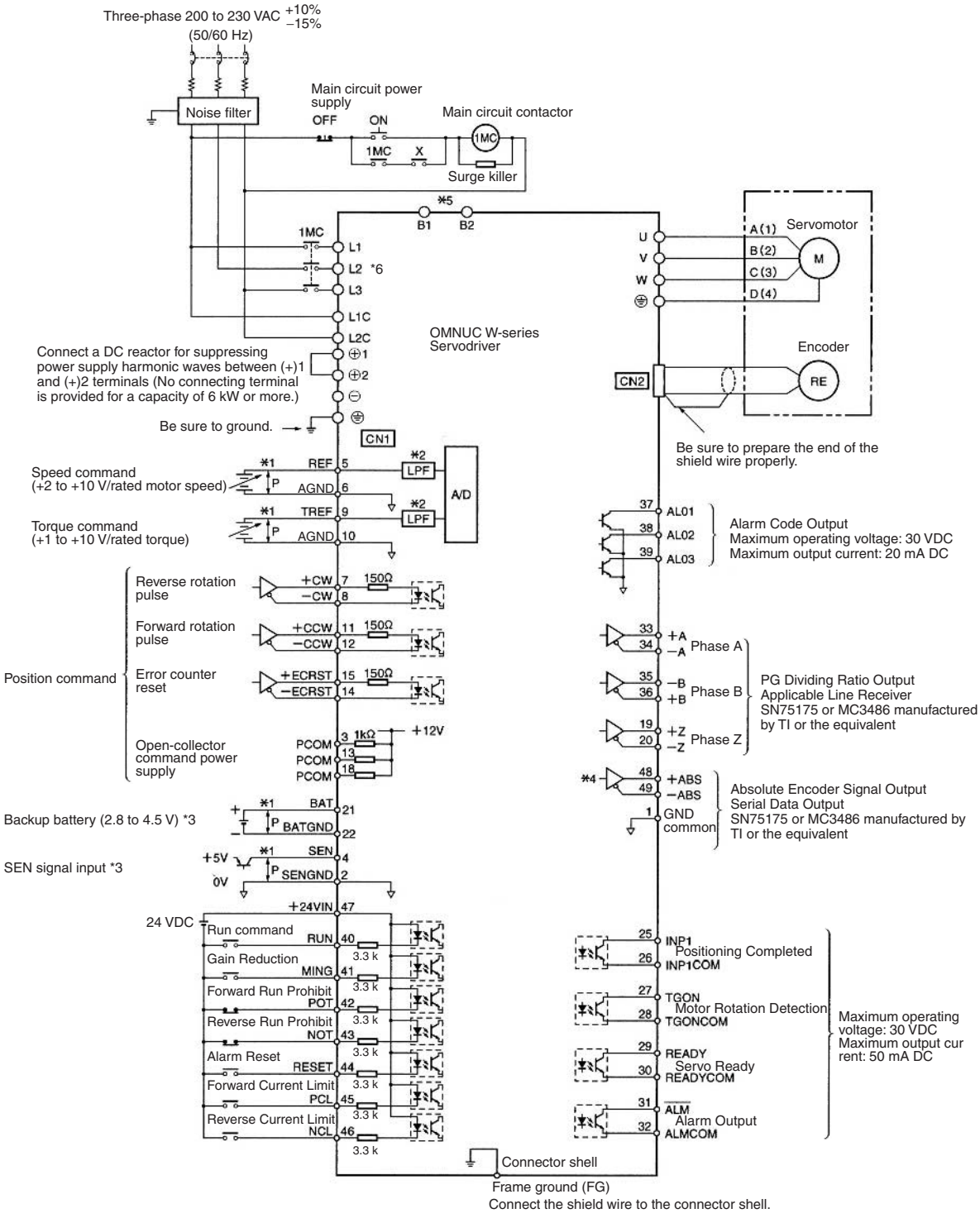
Symbol	Description	Connect to:	Model
11	Parameter Unit with Cable (1 m)	---	R88A-PR02W
	Parameter Unit Connecting Cable (2 m)	R88A-PR02U/ PR02W	R88A-CCW002C
12	Computer Connecting Cable (2 m)	IBM PC/AT or compatibles	R88A-CCW002P2

■ Other Options

Symbol	Description	Connect to:	Model
9	Backup Battery	R88D-WT□H (□: 50 or less)	R88A-BAT01W
		R88D-WT60H/ 75H/150H	R88A-BAT02W
10	Analog Monitor Cable (1 m)	---	R88A-CMW001S
---	Encoder Cable Connector	Servodriver side	R88A-CNW01R
		Servomotor side	R88A-CNW02R

Note: For details, refer to *Ordering Information* on page 67.

■ Three-phase



*1. P represents a twisted-pair cable.

*2. Primary filter

*3. Connect when using an absolute encoder.

*4. Used only with an absolute encoder.

*5. When using an external regenerative resistor, connect it between B1 and B2.
(When the capacity is 6 kW, connect a Regenerative Resistor Unit.)

*6. When using the R88D-WT08H at single-phase 200 V, connect single-phase 200 V to L1 and L3, and short-circuit L1 to L2.

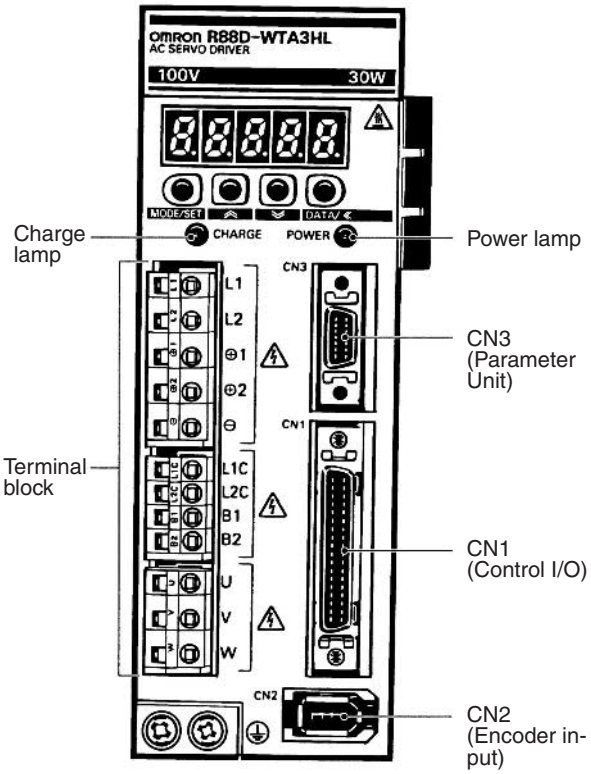
Terminal Blocks and Connectors

■ Terminal Blocks

Symbol	Name	Function	
L1, L2 or L1, L2, L3	Main circuit AC input terminal	AC power input terminals for the main circuit. R88D-WT□□ H (200 VAC): 200/230 VAC (170 to 253 V), 50/60 Hz R88D-WT□□ HL (100 VAC): 100/115 VAC (85 to 127 V), 50/60 = Hz	
U	Servomotor connection terminal	Red	Terminals for outputs to the Servomotor.
V		White	
W		Blue	
L1C, L2C	Control power input terminal	AC power input terminals for the control circuit. R88D-WT□□ H (200 VAC): 200/230 VAC (170 to 253 V), 50/60 Hz R88D-WT□□ HL (100 VAC): 100/115 VAC (85 to 127 V), 50/60 Hz	
⏚	Frame ground	Ground terminal. Ground to a maximum of 100 Ω. (class 3).	
B1, B2 or B1, B2, B3	Main circuit DC output terminal	5 kW or less: Connect an external regenerative resistor if regenerative energy is high. 5.5 kW: There is no internal regenerative resistor. Be sure to connect an external Regenerative Resistor Unit.	
⊕1, ⊕2	DC reactor connection terminal for suppressing power supply harmonic waves	Normally, short ⊕1 and ⊕2. If a countermeasure against power supply harmonic waves is needed, connect a DC reactor between ⊕1 and ⊕2. Note: These terminals do not exist on the R88D-WT60H/75H/150H.	
⊕	Main circuit DC output terminal (positive)	Normally, not connected. This terminal exists on the R88D-WT60H only.	
⊖	Main circuit DC output terminal (negative)	Normally, not connected.	

■ CN2 Encoder Inputs

Pin No.	Symbol	Signal name
1	E5V	Encoder power supply + 5V
2	E0V	Encoder power supply ground
3	BAT+	Battery + (used only with absolute encoder)
4	BAT–	Battery – (used only with absolute encoder)
5	S+	Encoder + serial signal input
6	S–	Encoder – serial signal input



■ CN1 Control Inputs

For Speed and Torque Control

Pin No.	Symbol	Signal name	Function/interface
5	REF	Speed command input	±2 to ±10 V/rated speed Can be changed using the Pn300 user parameter (Speed Command Scale).
6	AGND	Speed command input ground	
9	TRFF	Torque command input	±1 to ±10 V/rated torque Can be changed using the Pn400 user parameter (Torque Command Scale).
10	AGND	Torque command input ground	

For Position Control

Pin No.	Symbol	Signal name	Function/interface
3	PCOM	Open collector command power supply	Used to input CW, CCW, and ECRST signals as open-collector outputs. Connect + inputs to these terminals and connect – inputs to open-collector output terminals.
13			
18			
7	+PULS/CW/A	Feed pulse, reverse pulse, 90° phase difference pulse (phase A)	Line-driver input: 10 mA at 3 V; maximum response frequency: 500 kpps Open-collector input: 25 mA at 5 V; maximum response frequency: 200 kpps
8	–PULS/CW/A		
11	+SIGN/CCW/B	Forward/reverse signal, forward pulse, 90° phase difference pulse (phase B)	Switches between feed pulse and forward/reverse signal, between reverse pulse and forward pulse, or between phases A and B 90° phase difference pulses (×1, 2, 4) according to the Pn200 setting (Position Control Switches 1).
12	–SIGN/CCW/B		
14	–ECRST	Error counter reset	Line-driver input: 10 mA at 3 V Open-collector input: 25 mA at 5 V ON: Disables the command and resets the error counter.
15	+ECRST		

Shared Terminals

Pins 41 to 44 can be reassigned using the Pn50A to Pn50D user parameters.

Pin No.	Symbol	Signal name	Function/interface
40	RUN	Speed command input	ON: Servo ON
41 to 46	MING	Gain deceleration input	ON: Switches speed loop to P control to decrease speed loop gain.
	TVSEL	Control mode switch input	ON: Switches each control mode.
	PLOCK	Position lock command input	ON: Enables position lock when the motor speed drops below the position lock rotation speed set in Pn501.
	IPG	Pulse disable input	ON: Prohibits input command pulses.
	RDIR	Rotation direction command input	Rotation direction command for internal speed settings 1 to 3. (OFF: Forward rotation, ON: Reverse rotation)
	POT	Forward drive prohibit input	Forward rotation overtravel input (OFF when prohibited)
	NOT	Reverse drive prohibit input	Reverse rotation overtravel input (OFF when prohibited)
	RESET	Alarm reset input	ON: Resets Servo alarm status.
	PCL	Forward rotation current limit input	ON: Limits current according to the value specified in Pn404 (Forward External Torque Limit)
	NCL	Reverse rotation current limit input	ON: Limits current according to the value specified in Pn405 (Reverse External Torque Limit)
	SPD1	Speed selection command 1 input	Switches the internal speed settings (Pn301, Pn302, Pn303).
	SPD2	Speed selection command 2 input	
	GSEL	Gain selection input	ON: Switches to the second speed loop gain (Pn104, Pn105, Pn106).
47	+24VIN	+24 VDC control power supply input	+24 V input power supply for pins 40, 41, 42, 43, 44, 45, and 46
4	SEN	Sensor ON input (See note.)	ON: Supplies 5 V power to absolute encoder.
2	SENGND	Sensor ON input ground (See note.)	
21	BAT	Backup battery + input (See note.)	Backup battery connection terminals for absolute encoder in case of power interruption
22	BATGND	Backup battery – input (See note.)	

Note: These input signals are used with absolute encoder only.

■ CN1 Control Outputs

Pins 16 and 17 can be reassigned using the Pn003 user parameter. Pins 25 to 30 can be reassigned using the Pn50E to Pn510 user parameters.

Pin No.	Symbol	Signal name	Function/interface
1	GND	Ground common	Ground for encoder outputs and alarm codes.
19	+Z	Encoder Z-phase + output	Encoder Z-phase output (1 pulse/revolution). Line-driver output: Conforms to RS-422A
20	–Z	Encoder Z-phase – output	
25	INP1, INP2	Positioning completion output 1, 2	ON when the position error is within the positioning completed width specified in Pn500 while in position control mode. Always OFF while in other modes.
26 to 30	VCMP	Speed conformity output	ON when the speed error is within the speed coincidence signal output width specified in Pn503 while in speed control mode. Always OFF while in other modes.
	TGON	Servomotor rotation detection output	ON when the motor speed exceeds the motor rotation detection level specified in Pn502.
	READY	Servo ready output	ON if no errors are detected after the main circuit power supply is turned ON.
	CLIMT	Current limit detection output	If PCL (forward rotation current limit input) or NCL (reverse rotation current limit input) is ON, the CLIMT signal will turn ON when the output torque reaches the external torque limit specified in Pn404/405 or the torque limit specified in Pn402/403, whichever is lower. If PCL (forward rotation current limit input) or NCL (reverse rotation current limit input) is OFF, the CLIMT signal will turn ON when the output torque reaches the torque limit specified in Pn402/403.
	VLIMT	Speed limit detection output	ON when the motor speed is controlled by Pn407 in torque control mode. Always OFF while in other modes.
	BKIR	Brake interlock output	Outputs holding brake timing signals according to the Pn506, Pn507, and Pn508 user parameter settings.
	WARN	Warning output	OFF when an overload warning or a regeneration overload warning is detected.
31	ALM	Alarm output	Turns OFF the output when the Servodriver generates an alarm. Open-collector output: 30 VDC, 50 mA max.
32	ALMCOM	Alarm output ground	
33	+A	Encoder A-phase + output	Outputs encoder pulses divided according to the Pn201 setting (PG ratio). Line-driver output: Conforms to RS-422A
34	–A	Encoder A-phase – output	
35	–B	Encoder B-phase – output	Outputs encoder pulses divided according to the Pn201 setting (PG ratio). Line-driver output: Conforms to RS-422A
36	+B	Encoder B-phase + output	
37	AL01	Alarm code output 1	Outputs an alarm code when the Servodriver generates an alarm. Open-collector output: 30 VDC, 20 mA max.
38	AL02	Alarm code output 2	
39	AL03	Alarm code output 3	
48	+ABS	Absolute encoder signal + output (See note.)	Outputs absolute encoder data. Line-driver output: Conforms to RS-422A
49	–ABS	Absolute encoder signal – output (See note.)	
Shell	FG	Frame ground	Ground terminal for shield wire of cable and FG line

Note: These input signals are used with absolute encoder only.

Ordering Information

■ AC Servomotors

Cylinder-style Motors (3,000 r/min) with Incremental Encoders

Specifications				Model
Straight shafts without key	Without brake	200 VAC	30 W	R88M-W03030H
			50 W	R88M-W05030H
			100 W	R88M-W10030H
			200 W	R88M-W20030H
			400 W	R88M-W40030H
			750 W	R88M-W75030H
		100 VAC	30 W	R88M-W03030L
			50 W	R88M-W05030L
			100 W	R88M-W10030L
			200 W	R88M-W20030L
	With brake	200 VAC	30 W	R88M-W03030H-B
			50 W	R88M-W05030H-B
			100 W	R88M-W10030H-B
			200 W	R88M-W20030H-B
			400 W	R88M-W40030H-B
			750 W	R88M-W75030H-B
		100 VAC	30 W	R88M-W03030L-B
			50 W	R88M-W05030L-B
			100 W	R88M-W10030L-B
			200 W	R88M-W20030L-B

Specifications				Model
Straight shafts with key	Without brake	200 VAC	30 W	R88M-W03030H-S1
			50 W	R88M-W05030H-S1
			100 W	R88M-W10030H-S1
			200 W	R88M-W20030H-S1
			400 W	R88M-W40030H-S1
			750 W	R88M-W75030H-S1
			1 kW	R88M-W1K030H-S2
			1.5 kW	R88M-W1K530H-S2
			2 kW	R88M-W2K030H-S2
			3 kW	R88M-W3K030H-S2
			4 kW	R88M-W4K030H-S2
			5 kW	R88M-W5K030H-S2
		100 VAC	30 W	R88M-W03030L-S1
			50 W	R88M-W05030L-S1
			100 W	R88M-W10030L-S1
			200 W	R88M-W20030L-S1
	With brake	200 VAC	30 W	R88M-W03030H-BS1
			50 W	R88M-W05030H-BS1
			100 W	R88M-W10030H-BS1
			200 W	R88M-W20030H-BS1
			400 W	R88M-W40030H-BS1
			750 W	R88M-W75030H-BS1
			1 kW	R88M-W1K030H-BS2
			1.5 kW	R88M-W1K530H-BS2
			2 kW	R88M-W2K030H-BS2
			3 kW	R88M-W3K030H-BS2
			4 kW	R88M-W4K030H-BS2
			5 kW	R88M-W5K030H-BS2
		100 VAC	30 W	R88M-W03030L-BS1
			50 W	R88M-W05030L-BS1
			100 W	R88M-W10030L-BS1
			200 W	R88M-W20030L-BS1

Note: “S1” at the end of a model name represents models with key and without tap. “S2” at the end of a model name represents models with key and tap. Motors with a capacity of 1 kW or more do not have the S1 or S3 type.

Cylinder-style Motors (3,000 r/min) with Absolute Encoders

Specifications				Model
Straight shafts without key	Without brake	200 VAC	30 W	R88M-W03030T
			50 W	R88M-W05030T
			100 W	R88M-W10030T
			200 W	R88M-W20030T
			400 W	R88M-W40030T
			750 W	R88M-W75030T
		100 VAC	30 W	R88M-W03030S
			50 W	R88M-W05030S
			100 W	R88M-W10030S
			200 W	R88M-W20030S
	With brake	200 VAC	30 W	R88M-W03030T-B
			50 W	R88M-W05030T-B
			100 W	R88M-W10030T-B
			200 W	R88M-W20030T-B
			400 W	R88M-W40030T-B
			750 W	R88M-W75030T-B
		100 VAC	30 W	R88M-W03030S-B
			50 W	R88M-W05030S-B
			100 W	R88M-W10030S-B
			200 W	R88M-W20030S-B

Specifications				Model
Straight shafts with key	Without brake	200 VAC	30 W	R88M-W03030T-S1
			50 W	R88M-W05030T-S1
			100 W	R88M-W10030T-S1
			200 W	R88M-W20030T-S1
			400 W	R88M-W40030T-S1
			750 W	R88M-W75030T-S1
			1 kW	R88M-W1K030T-S2
			1.5 kW	R88M-W1K530T-S2
			2 kW	R88M-W2K030T-S2
			3 kW	R88M-W3K030T-S2
			4 kW	R88M-W4K030T-S2
			5 kW	R88M-W5K030T-S2
		100 VAC	30 W	R88M-W03030S-S1
			50 W	R88M-W05030S-S1
			100 W	R88M-W10030S-S1
			200 W	R88M-W20030S-S1
	With brake	200 VAC	30 W	R88M-W03030T-BS1
			50 W	R88M-W05030T-BS1
			100 W	R88M-W10030T-BS1
			200 W	R88M-W20030T-BS1
			400 W	R88M-W40030T-BS1
			750 W	R88M-W75030T-BS1
			1 kW	R88M-W1K030T-BS2
			1.5 kW	R88M-W1K530T-BS2
			2 kW	R88M-W2K030T-BS2
			3 kW	R88M-W3K030T-BS2
			4 kW	R88M-W4K030T-BS2
			5 kW	R88M-W5K030T-BS2
		100 VAC	30 W	R88M-W03030S-BS1
			50 W	R88M-W05030S-BS1
			100 W	R88M-W10030S-BS1
			200 W	R88M-W20030S-BS1

Note: “S1” at the end of a model name represents models with key and without tap. “S2” at the end of a model name represents models with key and tap. Motors with a capacity of 1 kW or more do not have the S1 or S3 type.

Cylinder-style Motors (1,500 r/min) with Incremental or Absolute Encoders

Specifications				Model
Straight shafts with key	Without brake	200 VAC	450 W	R88M-W45015T-S2
			850 W	R88M-W85015T-S2
			1.3 kW	R88M-W1K315T-S2
			1.8 kW	R88M-W1K815T-S2
			2.9 kW	R88M-W2K915T-S2
			4.4 kW	R88M-W4K415T-S2
			5.5 kW	R88M-W5K515T-S2
			7.5 kW	R88M-W7K515T-S2
			11 kW	R88M-W11K015T-S2
			15 kW	R88M-W15K015T-S2
	With brake		450 W	R88M-W45015T-BS2
			850 W	R88M-W85015T-BS2
			1.3 kW	R88M-W1K315T-BS2
			1.8 kW	R88M-W1K815T-BS2
			2.9 kW	R88M-W2K915T-BS2
			4.4 kW	R88M-W4K415T-BS2
			5.5 kW	R88M-W5K515T-BS2
			7.5 kW	R88M-W7K515T-BS2
			11 kW	R88M-W11K015T-BS2
			15 kW	R88M-W15K015T-BS2

Note: "S2" at the end of a model name represents models with key and tap. Motors with a speed of 1,500 r/min do not have the S1 or S3 type.

Cylinder-style Motors (1,000 r/min) with Incremental Encoders

Specifications				Model
Straight shafts with key	Without brake	200 VAC	300 W	R88M-W30010H-S2
			600 W	R88M-W60010H-S2
			900 W	R88M-W90010H-S2
			1.2 kW	R88M-W1K210H-S2
			2 kW	R88M-W2K010H-S2
			3 kW	R88M-W3K010H-S2
			4 kW	R88M-W4K010H-S2
			5.5 kW	R88M-W5K510H-S2
	With brake		300 W	R88M-W30010H-BS2
			600 W	R88M-W60010H-BS2
			900 W	R88M-W90010H-BS2
			1.2 kW	R88M-W1K210H-BS2
			2 kW	R88M-W2K010H-BS2
			3 kW	R88M-W3K010H-BS2
			4 kW	R88M-W4K010H-BS2
			5.5 kW	R88M-W5K510H-BS2

Note: "S2" at the end of a model name represents models with key and tap. Motors with a speed of 1,000 r/min do not have the S1 or S3 type.

Cylinder-style Motors (1,000 r/min) with Absolute Encoders

Specifications				Model
Straight shafts with key	Without brake	200 VAC	300 W	R88M-W30010T-S2
			600 W	R88M-W60010T-S2
			900 W	R88M-W90010T-S2
			1.2 kW	R88M-W1K210T-S2
			2 kW	R88M-W2K010T-S2
			3 kW	R88M-W3K010T-S2
			4 kW	R88M-W4K010T-S2
			5.5 kW	R88M-W5K510T-S2
	With brake		300 W	R88M-W30010T-BS2
			600 W	R88M-W60010T-BS2
			900 W	R88M-W90010T-BS2
			1.2 kW	R88M-W1K210T-BS2
			2 kW	R88M-W2K010T-BS2
			3 kW	R88M-W3K010T-BS2
			4 kW	R88M-W4K010T-BS2
			5.5 kW	R88M-W5K510T-BS2

Note: "S2" at the end of a model name represents models with key and tap. Motors with a speed of 1,000 r/min do not have the S1 or S3 type.

Flat-style Motors with Incremental Encoders

Specifications				Model
Straight shafts without key	Without brake	200 VAC	100 W	R88M-WP10030H
			200 W	R88M-WP20030H
			400 W	R88M-WP40030H
			750 W	R88M-WP75030H
			1.5 kW	R88M-WP1K530H
		100 VAC	100 W	R88M-WP10030L
			200 W	R88M-WP20030L
	With brake	200 VAC	100 W	R88M-WP10030H-B
			200 W	R88M-WP20030H-B
			400 W	R88M-WP40030H-B
			750 W	R88M-WP75030H-B
			1.5 kW	R88M-WP1K530H-B
		100 VAC	100 W	R88M-WP10030L-B
			200 W	R88M-WP20030L-B
Straight shafts with key	Without brake	200 VAC	100 W	R88M-WP10030H-S1
			200 W	R88M-WP20030H-S1
			400 W	R88M-WP40030H-S1
			750 W	R88M-WP75030H-S1
			1.5 kW	R88M-WP1K530H-S1
		100 VAC	100 W	R88M-WP10030L-S1
			200 W	R88M-WP20030L-S1
	With brake	200 VAC	100 W	R88M-WP10030H-BS1
			200 W	R88M-WP20030H-BS1
			400 W	R88M-WP40030H-BS1
			750 W	R88M-WP75030H-BS1
			1.5 kW	R88M-WP1K530H-BS1
		100 VAC	100 W	R88M-WP10030L-BS1
			200 W	R88M-WP20030L-BS1

Flat-style Motors with Absolute Encoders

Specifications				Model
Straight shafts without key	Without brake	200 VAC	100 W	R88M-WP10030T
			200 W	R88M-WP20030T
			400 W	R88M-WP40030T
			750 W	R88M-WP75030T
			1.5 kW	R88M-WP1K530T
		100 VAC	100 W	R88M-WP10030S
			200 W	R88M-WP20030S
	With brake	200 VAC	100 W	R88M-WP10030T-B
			200 W	R88M-WP20030T-B
			400 W	R88M-WP40030T-B
			750 W	R88M-WP75030T-B
			1.5 kW	R88M-WP1K530T-B
		100 VAC	100 W	R88M-WP10030S-B
			200 W	R88M-WP20030S-B
Straight shafts with key	Without brake	200 VAC	100 W	R88M-WP10030T-S1
			200 W	R88M-WP20030T-S1
			400 W	R88M-WP40030T-S1
			750 W	R88M-WP75030T-S1
			1.5 kW	R88M-WP1K530T-S1
		100 VAC	100 W	R88M-WP10030S-S1
			200 W	R88M-WP20030S-S1
	With brake	200 VAC	100 W	R88M-WP10030T-BS1
			200 W	R88M-WP20030T-BS1
			400 W	R88M-WP40030T-BS1
			750 W	R88M-WP75030T-BS1
			1.5 kW	R88M-WP1K530T-BS1
		100 VAC	100 W	R88M-WP10030S-BS1
			200 W	R88M-WP20030S-BS1

Flat-style Motors (Waterproof Type) with Incremental Encoders

Specifications				Model
Straight shafts without key	Without brake	200 VAC	100 W	R88M-WP10030H-W
			200 W	R88M-WP20030H-W
			400 W	R88M-WP40030H-W
			750 W	R88M-WP75030H-W
			1.5 kW	R88M-WP1K530H-W
		100 VAC	100 W	R88M-WP10030L-W
			200 W	R88M-WP20030L-W
	With brake	200 VAC	100 W	R88M-WP10030H-BW
			200 W	R88M-WP20030H-BW
			400 W	R88M-WP40030H-BW
			750 W	R88M-WP75030H-BW
			1.5 kW	R88M-WP1K530H-BW
		100 VAC	100 W	R88M-WP10030L-BW
			200 W	R88M-WP20030L-BW
Straight shafts with key	Without brake	200 VAC	100 W	R88M-WP10030H-WS1
			200 W	R88M-WP20030H-WS1
			400 W	R88M-WP40030H-WS1
			750 W	R88M-WP75030H-WS1
			1.5 kW	R88M-WP1K530H-WS1
		100 VAC	100 W	R88M-WP10030L-WS1
			200 W	R88M-WP20030L-WS1
	With brake	200 VAC	100 W	R88M-WP10030H-BWS1
			200 W	R88M-WP20030H-BWS1
			400 W	R88M-WP40030H-BWS1
			750 W	R88M-WP75030H-BWS1
			1.5 kW	R88M-WP1K530H-BWS1
		100 VAC	100 W	R88M-WP10030L-BWS1
			200 W	R88M-WP20030L-BWS1

Note: Precautions When Selecting Products

1. The standard cable (R88A-CAW□) can be connected, but it is not water resistant. Use a water-resistant cable in locations subject to water.
2. The cable attached to the Motor is water resistant, but the connector is not. Do not allow water to come into contact with the connector to protect the terminals.

Flat-style Motors (Waterproof Type) with Absolute Encoders

Specifications				Model
Straight shafts without key	Without brake	200 VAC	100 W	R88M-WP10030T-W
			200 W	R88M-WP20030T-W
			400 W	R88M-WP40030T-W
			750 W	R88M-WP75030T-W
			1.5 kW	R88M-WP1K530T-W
		100 VAC	100 W	R88M-WP10030S-W
			200 W	R88M-WP20030S-W
	With brake	200 VAC	100 W	R88M-WP10030T-BW
			200 W	R88M-WP20030T-BW
			400 W	R88M-WP40030T-BW
			750 W	R88M-WP75030T-BW
			1.5 kW	R88M-WP1K530T-BW
		100 VAC	100 W	R88M-WP10030S-BW
			200 W	R88M-WP20030S-BW
Straight shafts with key	Without brake	200 VAC	100 W	R88M-WP10030T-WS1
			200 W	R88M-WP20030T-WS1
			400 W	R88M-WP40030T-WS1
			750 W	R88M-WP75030T-WS1
			1.5 kW	R88M-WP1K530T-WS1
		100 VAC	100 W	R88M-WP10030S-WS1
			200 W	R88M-WP20030S-WS1
	With brake	200 VAC	100 W	R88M-WP10030T-BWS1
			200 W	R88M-WP20030T-BWS1
			400 W	R88M-WP40030T-BWS1
			750 W	R88M-WP75030T-BWS1
			1.5 kW	R88M-WP1K530T-BWS1
		100 VAC	100 W	R88M-WP10030S-BWS1
			200 W	R88M-WP20030S-BWS1

Note: Precautions When Selecting Products

1. The standard cable (R88A-CAW□) can be connected, but it is not water resistant. Use a water-resistant cable in locations subject to water.
2. The cable attached to the Motor is water resistant, but the connector is not. Do not allow water to come into contact with the connector to protect the terminals.

■ AC Servodrivers

Specifications			Model
Common to analog and pulse train inputs Common to incremental and absolute encoders	200 VAC	30 W	R88D-WTA3H
		50 W	R88D-WTA5H
		100 W	R88D-WT01H
		200 W	R88D-WT02H
		400 W	R88D-WT04H
		500 W	R88D-WT05H
		750 W	R88D-WT08H
		1 kW	R88D-WT10H
		1.5 kW	R88D-WT15H
		2 kW	R88D-WT20H
		3 kW	R88D-WT30H
		5 kW	R88D-WT50H
		6 kW	R88D-WT60H (See note.)
		7.5 kW	R88D-WT75H (See note.)
		15 kW	R88D-WT150H (See note.)
	100 VAC	30 W	R88D-WTA3HL
		50 W	R88D-WTA5HL
		100 W	R88D-WT01HL
		200 W	R88D-WT02HL

Note: When ordering the R88D-WT60H/75H/150H, a regenerative resistor must also be ordered.

■ Power Cables

Specification			Model
For motors without brakes	30-W to 750-W cylinder-style motors (3,000 r/min) 100-W to 750-W flat-style motors	3 m	R88A-CAWA003S
		5 m	R88A-CAWA005S
		10 m	R88A-CAWA010S
		15 m	R88A-CAWA015S
		20 m	R88A-CAWA020S
		30 m	R88A-CAWA030S
		40 m	R88A-CAWA040S
		50 m	R88A-CAWA050S
	1.5-kW flat-style motors	3 m	R88A-CAWB003S
		5 m	R88A-CAWB005S
		10 m	R88A-CAWB010S
		15 m	R88A-CAWB015S
		20 m	R88A-CAWB020S
		30 m	R88A-CAWB030S
		40 m	R88A-CAWB040S
		50 m	R88A-CAWB050S
	300-W to 900-W cylinder-style motors (1,000 r/min) 450-W to 1.3-kW cylinder-style motors (1,500 r/min) 1-kW to 2-kW cylinder-style motors (3,000 r/min)	3 m	R88A-CAWC003S
		5 m	R88A-CAWC005S
		10 m	R88A-CAWC010S
		15 m	R88A-CAWC015S
		20 m	R88A-CAWC020S
		30 m	R88A-CAWC030S
		40 m	R88A-CAWC040S
		50 m	R88A-CAWC050S
	1.2-kW to 3-kW cylinder-style motors (1,000 r/min) 1.8-kW to 4.4-kW cylinder-style motors (1,500 r/min) 3-kW to 5-kW cylinder-style motors (3,000 r/min)	3 m	R88A-CAWD003S
		5 m	R88A-CAWD005S
		10 m	R88A-CAWD010S
		15 m	R88A-CAWD015S
		20 m	R88A-CAWD020S
		30 m	R88A-CAWD030S
		40 m	R88A-CAWD040S
		50 m	R88A-CAWD050S

Specification			Model
Motors with brakes	30-W to 750-W cylinder-style motors (3,000 r/min) 100-W to 750-W flat-style motors	3 m	R88A-CAWA003B
		5 m	R88A-CAWA005B
		10 m	R88A-CAWA010B
		15 m	R88A-CAWA015B
		20 m	R88A-CAWA020B
		30 m	R88A-CAWA030B
		40 m	R88A-CAWA040B
		50 m	R88A-CAWA050B
	1.5-kW flat-style motors	3 m	R88A-CAWB003B
		5 m	R88A-CAWB005B
		10 m	R88A-CAWB010B
		15 m	R88A-CAWB015B
		20 m	R88A-CAWB020B
		30 m	R88A-CAWB030B
		40 m	R88A-CAWB040B
		50 m	R88A-CAWB050B
	300-W to 900-W cylinder-style motors (1,000 r/min) 450-W to 1.3-kW cylinder-style motors (1,500 r/min) 1-kW to 2-kW cylinder-style motors (3,000 r/min)	3 m	R88A-CAWC003B
		5 m	R88A-CAWC005B
		10 m	R88A-CAWC010B
		15 m	R88A-CAWC015B
		20 m	R88A-CAWC020B
		30 m	R88A-CAWC030B
		40 m	R88A-CAWC040B
		50 m	R88A-CAWC050B
	1.2-kW to 3-kW cylinder-style motors (1,000 r/min) 1.8-kW to 4.4-kW cylinder-style motors (1,500 r/min) 3-kW to 5-kW cylinder-style motors (3,000 r/min)	3 m	R88A-CAWD003B
		5 m	R88A-CAWD005B
		10 m	R88A-CAWD010B
		15 m	R88A-CAWD015B
		20 m	R88A-CAWD020B
		30 m	R88A-CAWD030B
		40 m	R88A-CAWD040B
		50 m	R88A-CAWD050B

Specification			Model
4-kW cylinder-style motors (1,000 r/min)	Power connector for the motor	3 m	R88A-CAWE003S
		5 m	R88A-CAWE005S
		10 m	R88A-CAWE010S
		15 m	R88A-CAWE015S
		20 m	R88A-CAWE020S
		30 m	R88A-CAWE030S
		40 m	R88A-CAWE040S
		50 m	R88A-CAWE050S
	Brake connector for the motor	3 m	R88A-CAWE003B (See note 1.)
		5 m	R88A-CAWE005B (See note 1.)
		10 m	R88A-CAWE010B (See note 1.)
		15 m	R88A-CAWE015B (See note 1.)
		20 m	R88A-CAWE020B (See note 1.)
		30 m	R88A-CAWE030B (See note 1.)
		40 m	R88A-CAWE040B (See note 1.)
		50 m	R88A-CAWE050B (See note 1.)
5.5-kW cylinder-style motors (1,000 r/min) 5.5-kW/11-kW cylinder-style motors (1,500 r/min)	Power connector for the motor	3 m	R88A-CAWF003S
		5 m	R88A-CAWF005S
		10 m	R88A-CAWF010S
		15 m	R88A-CAWF015S
		20 m	R88A-CAWF020S
		30 m	R88A-CAWF030S
		40 m	R88A-CAWF040S
		50 m	R88A-CAWF050S
	Brake connector for the motor	---	R88A-CAWE□□□B (See notes 1 and 2.)

Note: 1. When using a motor with brake, a cable for the power connector is required in addition to the cable for the brake connector.

2. The boxes (□□□) indicate cable length.

■ Encoder Cables

Specification		Model
30-W to 750-W cylinder-style motors (3,000 r/min) 100-W to 1.5-kW flat-style motors	3 m	R88A-CRWA003C
	5 m	R88A-CRWA005C
	10 m	R88A-CRWA010C
	15 m	R88A-CRWA015C
	20 m	R88A-CRWA020C
	30 m	R88A-CRWA030C
	40 m	R88A-CRWA040C
	50 m	R88A-CRWA050C
1-kW to 5-kW cylinder-style motors (3,000 r/min) 450-W to 15-kW cylinder-style motors (1,500 r/min) 300-W to 5.5-kW cylinder-style motors (1,000 r/min)	3 m	R88A-CRWB003N
	5 m	R88A-CRWB005N
	10 m	R88A-CRWB010N
	15 m	R88A-CRWB015N
	20 m	R88A-CRWB020N
	30 m	R88A-CRWB030N
	40 m	R88A-CRWB040N
	50 m	R88A-CRWB050N
Encoder Cable for 70-m connection (cable line material only)	1 m	R88A-CRW001

Note: All these cables are common to incremental and absolute encoders.

■ Control Cables and Relay Units

Specification				Model
For Motion Control Units	Control cables for 1 axis (common to SYSMAC CS1, C200H, and CV-series PCs)		1 m	R88A-CPW001M1
			2 m	R88A-CPW002M1
			3 m	R88A-CPW003M1
			5 m	R88A-CPW005M1
	Control cables for 2 axes (common to SYSMAC CS1, C200H, and CV-series PCs)		1 m	R88A-CPW001M2
			2 m	R88A-CPW002M2
			3 m	R88A-CPW003M2
			5 m	R88A-CPW005M2
For Position Control Units and SYSMAC CQM1	Servo Relay Units	For CS1W-NC113/133, CJ1W-NC113/133, C200HW-NC113, and 3F88M-DRT141		XW2B-20J6-1B
		For CS1W-NC213/413/233/433, CJ1W-NC213/413/233/433, and C200HW-NC213/413		XW2B-40J6-2B
		For CQM1-CPU43, CQM1H-PLB21		XW2B-20J6-3B
		For CJ1M-CPU22/23 (1 axis)		XW2B-20J6-8A
		For CJ1M-CPU22/23 (2 axes)		XW2B-40J6-9A
		For CJ1W-NC213/413/223/423 (with communications support)		XW2B-40J6-4A
		For CS1W-HCPP22-V1		XW2B-80J7-1A
	Servodriver cable	Relay Units other than those listed below	1 m	XW2Z-100J-B4
			2 m	XW2Z-200J-B4

Specification				Model
For Position Control Units and SYSMAC CQM1	Servodriver cable	XW2B-40J6-4A Communications support type	1 m	XW2Z-100J-B8
			2 m	XW2Z-200J-B8
		XW2B-80J7-1A For customizable counters	1 m	XW2Z-100J-B11
			2 m	XW2Z-200J-B11
	Cables on Position Control Unit end	For C200HW-NC113 and CS1W-NC113	0.5 m	XW2Z-050J-A6
			1 m	XW2Z-100J-A6
		For C200HW-NC213/413 and CS1W-NC213/413	0.5 m	XW2Z-050J-A7
			1 m	XW2Z-100J-A7
		For CS1W-NC133	0.5 m	XW2Z-050J-A10
			1 m	XW2Z-100J-A10
		For CS1W-NC233/433	0.5 m	XW2Z-050J-A11
			1 m	XW2Z-100J-A11
		For CJ1W-NC113	0.5 m	XW2Z-050J-A14
			1 m	XW2Z-100J-A14
		For CJ1W-NC213/413	0.5 m	XW2Z-050J-A15
			1 m	XW2Z-100J-A15
		For CJ1W-NC133	0.5 m	XW2Z-050J-A18
			1 m	XW2Z-100J-A18
		For CJ1W-NC233/433	0.5 m	XW2Z-050J-A19
			1 m	XW2Z-100J-A19
		For CQM1-CPU43-V1 and CQM1H-PLB21	0.5 m	XW2Z-050J-A3
			1 m	XW2Z-100J-A3
		For 3F88M-DRT141	0.5 m	XW2Z-050J-A24
			1 m	XW2Z-100J-A24
		For CS1W-HCP22-V1 (For 24-pin connectors) (See note.)	0.5 m	XW2Z-050J-A29
			1 m	XW2Z-100J-A29
		For CS1W-HCP22-V1 (For 40-pin connectors) (See note.)	0.5 m	XW2Z-050J-A32
			1 m	XW2Z-100J-A32
		For CJ1M-CPU22/23		XW2Z-100J-A27
For general-purpose controllers	Control cables with connector at one end		1 m	R88A-CPW001S
			2 m	R88A-CPW002S
	Cables for relay terminal block		1 m	R88A-CTW001N
			2 m	R88A-CTW002N
	Relay terminal block			XW2B-50G5

Note: When using the CS1W-HCP22-V1, cables for both 24-pin connectors and 40-pin connectors are required.

■ Parameter Units

Specification	Model
Handy type for OMNUC W-series (with 1-m cable)	R88A-PR02W
Cable for U-series (2 m) (See note.)	R88A-CCW002C

Note: This cable can be used to connect the R88A-PR02U Parameter Unit for U-series to the W-series Servodriver.

■ Backup Battery Unit for Absolute Encoder

Specification	Model
R88D-WT□H (□: 50 or less)	R88A-BAT01W
R88D-WT60H/75H/150H	R88A-BAT02W

■ External Regenerative Resistors

Specification	Model
220 W, 47 Ω	R88A-RR22047S
880 W, 6.25 Ω	R88A-RR88006

■ DC Reactors

Specification	Model
For R88D-WT30H	R88A-PX5059
For R88D-WT15H/WT20H	R88A-PX5060
For R88D-WT05H/WT08H/WT10H	R88A-PX5061
For R88D-WT02HL	R88A-PX5062
For R88D-WTA3HL/WTA5HL/WT01HL	R88A-PX5063
For R88D-WT50H	R88A-PX5068
For R88D-WT04H	R88A-PX5069
For R88D-WT02H	R88A-PX5070
For R88D-WTA3H/WTA5H/WT01H	R88A-PX5071

■ Front Panel Mounting Brackets

Specification	Model
For R88D-WTA3□ to WT10H	R88A-TK01W
For R88D-WT15H	R88A-TK02W
For R88D-WT20H/WT30H/WT50H	R88A-TK03W

■ Other Peripheral Cables and Connectors

Specification	Model
Analog monitoring cable (1 m)	R88A-CMW001S
Personal computer monitoring cable (2 m)	R88A-CCW002P2
Control I/O connector CN1	R88A-CNU11C
Encoder connector CN2	R88A-CNW01R
Encoder connector (for R88A-CRWA motor side)	R88A-CNW02R