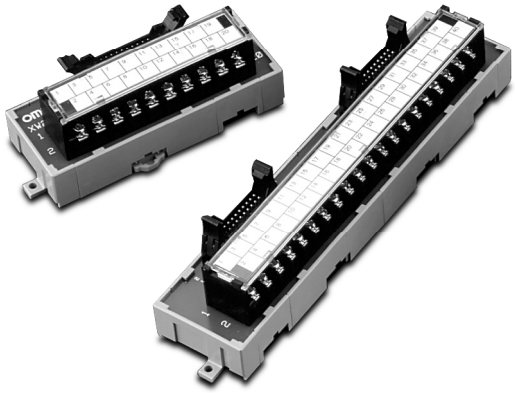
OMRON

Position Control Terminal Block

XW2B

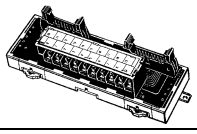
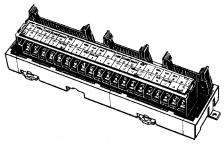
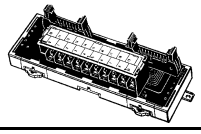
Simplify Wiring between Motor Controls and Omron's Position Control PLC Modules

- Relays control signals between a servo driver and the PLC position control module or CQM1H PLC with pulse I/O capability
- Connectors are wired with a single screwdriver and no soldering is required
- Dedicated cables connect terminal blocks to position control modules
- Requires 24 VDC for control signal use
- Terminal block organizes wiring and saves space; uses M3 screws
- Mounts to DIN track or with screws for panel mounting



Ordering Information

■ POSITION CONTROL TERMINAL BLOCKS

Appearance	Applicable servo driver	Applicable position control module/CQM1H Pulse I/O Board	**Part number**
	U-series: R88D-UP□□□ W-series: R88D-WT□□□	C200H-NC112 C200HW-NC113	**XW2B-20J6-1B**
		C200H-NC211 C200HW-NC213 C200HW-NC413	**XW2B-40J6-2B**
		CQM1H-PLB21	**XW2B-20J6-3B**

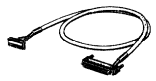
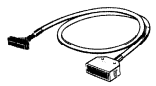
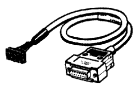
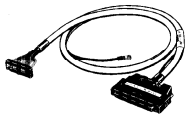
■ CABLES

Cables Between Servo Driver and Terminal Block

Appearance	Position control terminal block	Applicable servo driver	Cable length	**Part number**
	XW2B-20J6-1B, XW2B-40J6-2B (See Note) XW2B-20J6-3B	R88D-UP□□□	1 m (3.28 ft)	**XW2Z-100J-B1**
			2 m (6.56 ft)	**XW2Z-200J-B1**
		R88D-WT□□□□	1 m (3.28 ft)	**XW2Z-100J-B4**
			2 m (6.56 ft.)	**XW2Z-200J-B4**

Note: Two cables will be required on the Servo Driver side if the XW2B-40J6-2B Terminal Block is used for two-axis control.

Cables Between PLC Position Control Module and Terminal Block

Appearance	Position control terminal block	Applicable position control module	Cable length	**Part number**
	XW2B-20J6-1B	C200H-NC112 (for one axis)	0.5 m (1.64 ft)	**XW2Z-050J-A1**
			1 m (3.28 ft)	**XW2Z-100J-A1**
	XW2B-40J6-2B	C200H-NC211 (for two axes)	0.5 m (1.64 ft)	**XW2Z-050J-A2**
			1 m (3.28 ft)	**XW2Z-100J-A2**
	XW2B-20J6-3B (See Note 1)	CQM1H-PLB21 (for one or two axes)	0.5 m (1.64 ft)	**XW2Z-050J-A3**
			1 m (3.28 ft)	**XW2Z-100J-A3**
	XW2B-20J6-1B	C200H-NC113 (for one axis)	0.5 m (1.64 ft)	**XW2Z-050J-A6**
			1 m (3.28 ft)	**XW2Z-100J-A6**
	XW2B-40J6-2B (See Note 2)	C200HW-NC213 (for two axes) C200HW-NC413 (for four axes)	0.5 m (1.64 ft)	**XW2Z-050J-A7**
			1 m (3.28 ft)	**XW2Z-100J-A7**

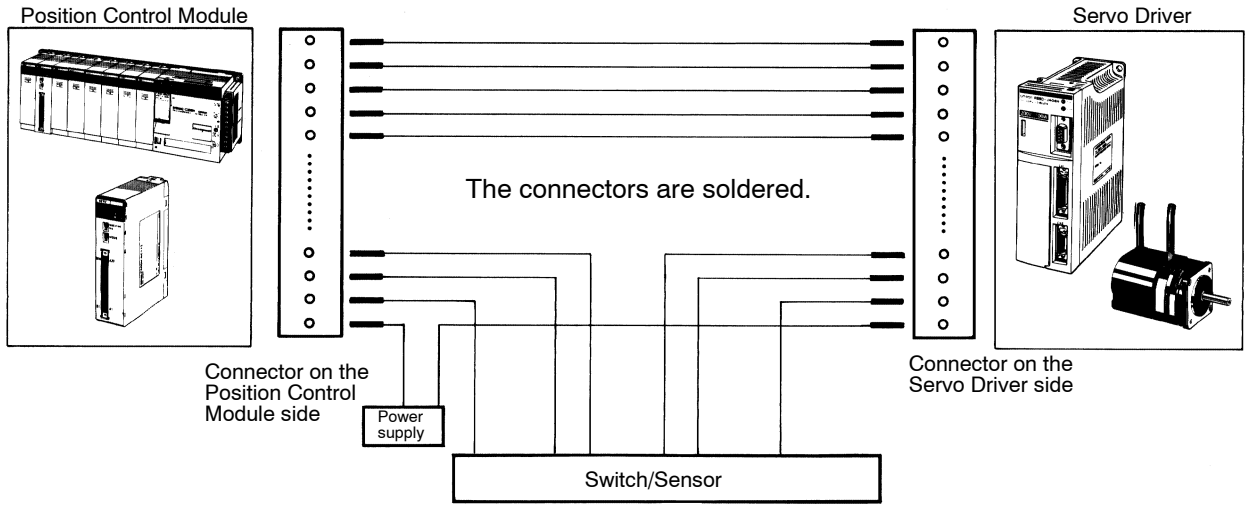
Note: 1. Two cables each will be required on the Servo Terminal Block and Position Control Module side, and on the Servo Driver side if the CQM1H-PLB21 is used for two axes.

2. Two cables each will be required on the Servo Terminal Block and Position Control Module side, and on the Servo Driver side if the C200HW-NC413 (four axes) is used for two axes.

Application Examples

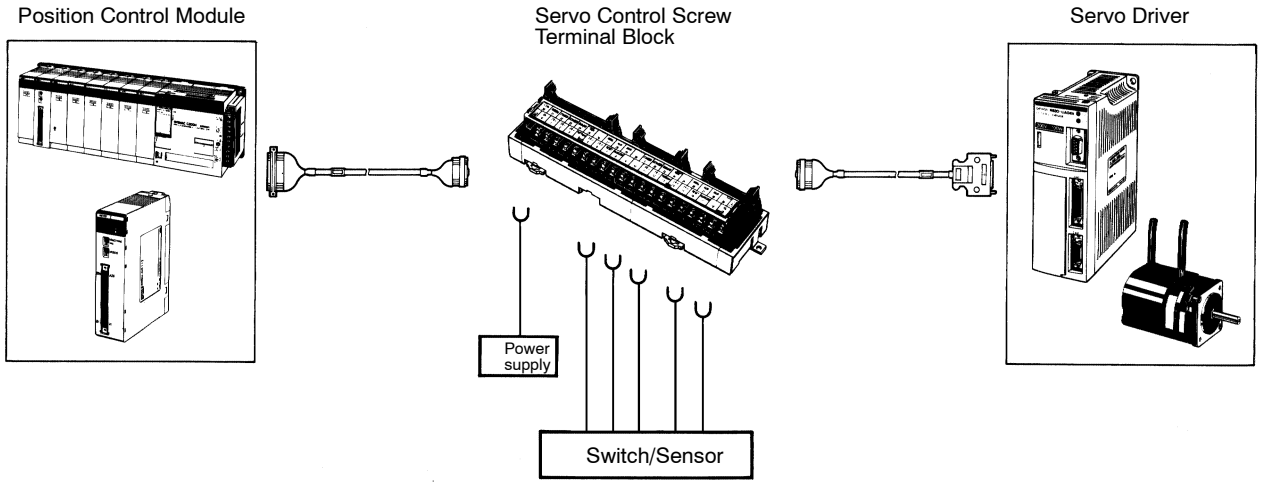
■ REDUCE WIRING TO EXTERNAL SENSORS, SWITCHES AND POWER SUPPLY

Conventional Method Requires Major Wiring Effort.



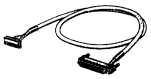
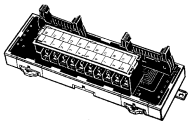
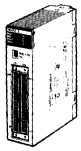
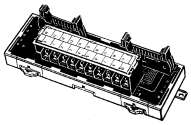
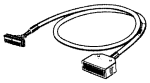
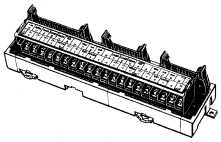
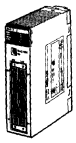
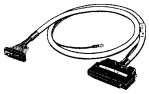
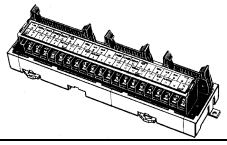
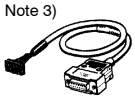
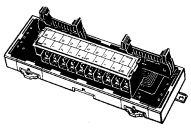
Position Control Terminal Block

All wires are connected to the Position Control Terminal Block with ease.



- Relays control signals between the Servo Driver and the Position Control Module with minimal wiring effort.
- Connectors are wired with a single screwdriver and no soldering is required.
- Dedicated Cable connects Units.

■ TYPICAL CONFIGURATIONS

Position Control Module, and CQM1	Cable on the Position Control Module side	Position Control Terminal Block	Cable on the Servo Driver side	Servo Driver
			(Nee Notes 2, 3 and 4) 	
Position Control Module (for one axis) for C200H	Cable for C200H-NC112	Position Control Terminal Block for C200H-NC112	U-series Cable	U-series Servo Driver
C200H-NC112	XW2Z-□□□J-A1	XW2B-20J6-1B (See Note 1)	XW2Z-□□□J-B1	R88D-UP□□□
			(Nee Notes 2, 3 and 4) 	
Position Control Module (for one axis) for C200H	Cable for C200HW-NC113	Position Control Terminal Block for C200HW-NC113	W-series Cable	W-series Servo Driver
C200HW-NC113	XW2Z-□□□J-A6	XW2B-20J6-1B (See Note 1)	XW2Z-□□□J-B4	R88D-WT□□□
				
Position Control Module (for two axis) for C200H	Cable for C200H-NC211	Position Control Terminal Block for C200H-NC211		
C200H-NC211	XW2Z-□□□J-A2	XW2B-40J6-2B (See Note 1)		
				
Position Control Module (for two axes/four axes) for C200HW	Cable for C200HW-NC213 (two axes) and C200HW-NC413 (four axes)	Position Control Terminal Block for C200HW-NC213 (two axes) and C200HW-NC413 (four axes)		
C200HW-NC213 C200HW-NC413	XW2Z-□□□J-A7	XW2B-40J6-2B (See Note 4)		
	(See Note 3) 	(See Note 3) 		
CQM1 (for one/two axes)	Cable for CQM1H-PLB21	Servo Terminal Unit for CQM1H-PLB21		
CQM1H-PLB21 Pulse I/O Board	XW2Z-□□□J-A3	XW2B-20J6-3B (See Note 1)		

Note: 1. Has the functions of the conventional XW2B-20J6-1, XW2B-40J6-2 and XW2B-20J6-3.
2. Two cables will be required on the Servo driver side if the C200H-NC211 (for two axes) is used.
3. Two cables each are required on the Position Control Terminal Block and Position Control Module side and on the Servo Driver side if the CQM1H-PLB21 is used for two axes.
4. Two cables each will be required on the Position Control Terminal Block and Position Control Module side and on the Servo Driver side if the C200HW-NC413 (four axes) is used.

Specifications

■ POSITION CONTROL TERMINAL BLOCKS

Item	XW2B-□□J6-□B
Rated current	1 A at a temperature of 30°C (86°F) max.
Rated voltage	24 VdC
Insulation resistance	5 MΩ min. at 500 VDC
Dielectric strength	500 VAC for 1 minute with a current leakage of 1 mA max.
Enclosure rating	IP00
Electrical protection	Class 0
Ambient temperature	Operating: -0°C to 55°C (32°F to 131°F)

■ CONNECTORS

Item	XW2Z-□J-A□/-B□
Rated current	1 A
Rated voltage	24 VDC
Contact resistance	20 mΩ max. with 100 mA max. at 20 mV max. (See Note 1)
Insulation resistance	5 MΩ min. at 500 VDC
Dielectric strength	500 VAC for 1 minute with a current leakage of 1 mA max. (See Note 2)
Enclosure rating	IP00
Electrical protection	Class 0
Ambient temperature	Operating: 0°C to 55°C (32°F to 131°F)

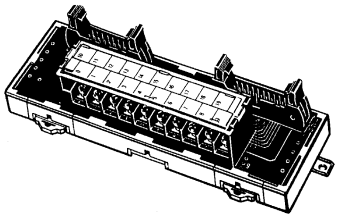
Note: 1. The resistance indicated is the contact resistance of the connector.
2. The voltage indicated is the dielectric strength of the connector.

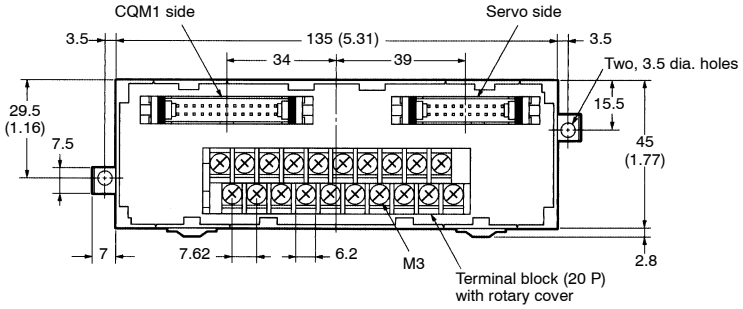
Dimensions

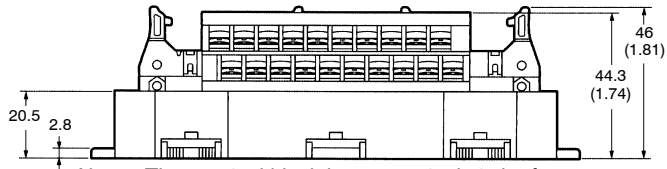
Unit: mm (inch)

■ POSITION CONTROL TERMINAL BLOCKS

XW2B-20J6-1B







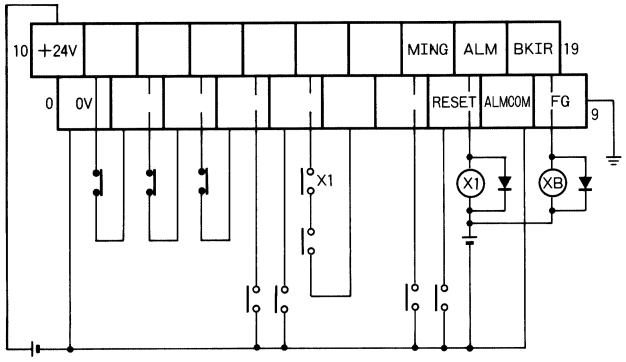
Note: The terminal block has a terminal pitch of 7.62 mm.

Connection to Terminal Block

The terminal signal name varies with the servo driver. Refer to the Operation Manual of the servo driver in use.

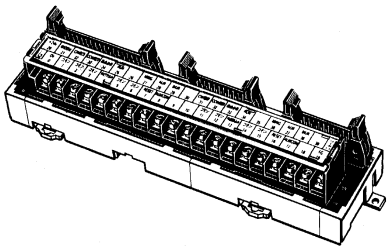
Identify the servo driver in use by writing the name on the terminal nameplates provided. Affix the nameplate to the terminal cover.

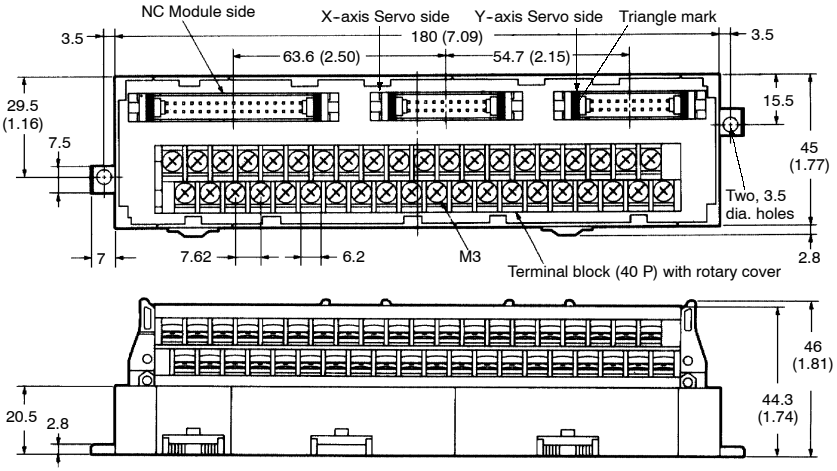
Connection to One Axis Position Control Modules C200H-NC112-U/C200HW-NC113-U



Note: 1. Use mode 2 for origin search.
2. The XB contact is used to turn the electromagnetic brake ON and OFF.
3. The open terminal must be left unconnected.
4. 0 V and Common terminals are connected internally.
5. The suitable crimp terminal is R1.25-3 (round or fork type).

XW2B-40J6-2B





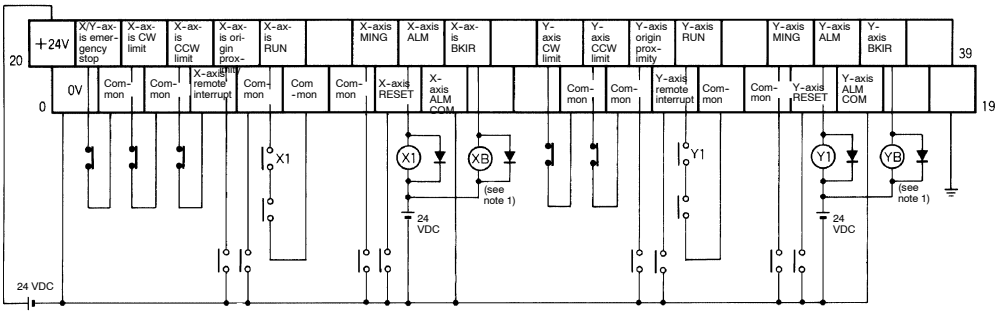
Note: The terminal block has a terminal pitch of 7.62 mm.

Connection to Terminal Block

The terminal signal name varies with the servo driver. Refer to the Operation Manual of the servo driver in use.

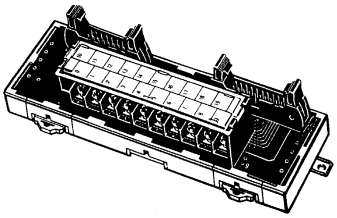
Identify the servo driver in use by writing the name on the terminal nameplates provided. Affix the nameplate to the terminal cover.

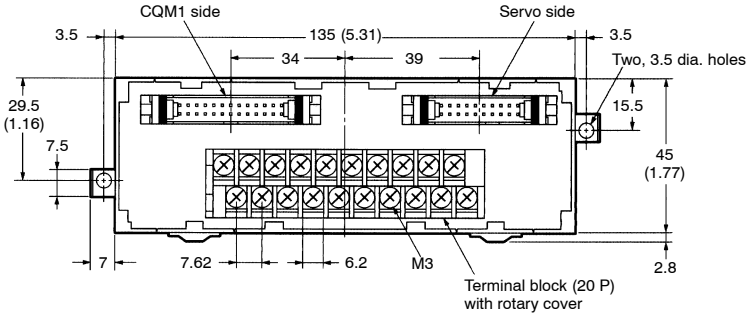
Connection to Multi Axis Position Control Modules
C200H-NC211-U/C200HW-NC213-U/C200HW-NC413-U

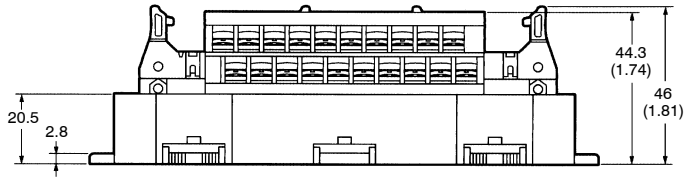


Note: 1. The XB contact is used to turn the electromagnetic brake on and off.
2. Use mode 2 for origin search.
3. When only a single axis is used, short-circuit the unused axis' CW limit and CCW limit to the common terminal.
4. The open terminal must be left unconnected.
5. 0 V and common terminals are connected internally.
6. The suitable crimp terminal is R1.25-3 (round or fork type).

XW2B-20J6-3B







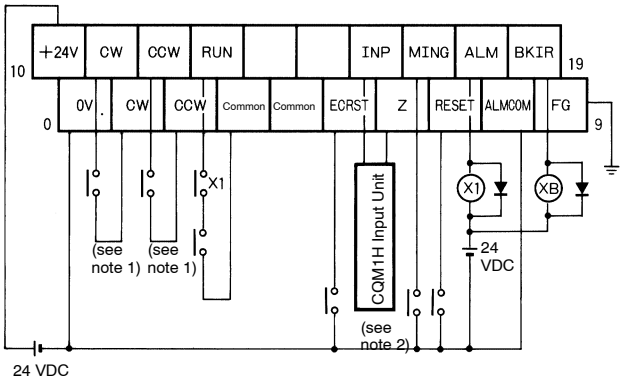
Connection to Terminal Block

The terminal signal name varies with the servo driver. Refer to the Operation Manual of the servo driver in use.

Identify the servo driver in use by writing the name on the terminal nameplates provided. Affix the nameplate to the terminal cover.

Note: The terminal block has a terminal pitch of 7.62 mm.

Connection to Position Control PLC
CQM1H-PLB21 for 1- or 2-Axis Control



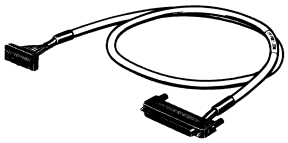
Note: 1. When this signal is input, the output pulses of the CQM1H can be input to the high-speed counters directly.
2. Input this signal output to the CQM1H input modules
3. The XB contact is used to turn the electro-magnetic brake on and off.
4. Phase Z is an open collector output.
5. The open terminal must be left unconnected.
6. 0 V and common terminals are connected internally.
7. The suitable crimp terminal is R1.25-3 (round or fork type).

■ XW2Z CONNECTING CABLES

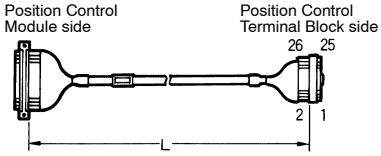
Use the cables to connect the PLC Position Control Module to the XW2B Position Control Terminal Blocks.

For C200H-NC112 Use

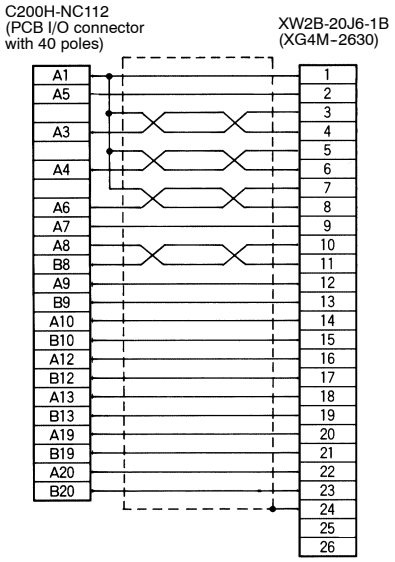
XW2Z-□□□J-A1



Connector

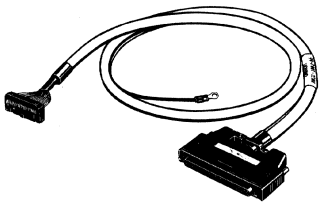


Wiring Diagram
XW2Z-□□□J-A1

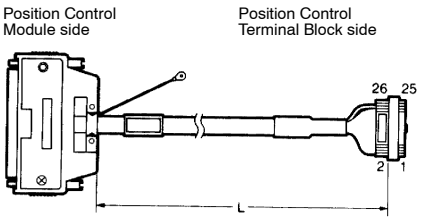


For C200HW-NC113 Use

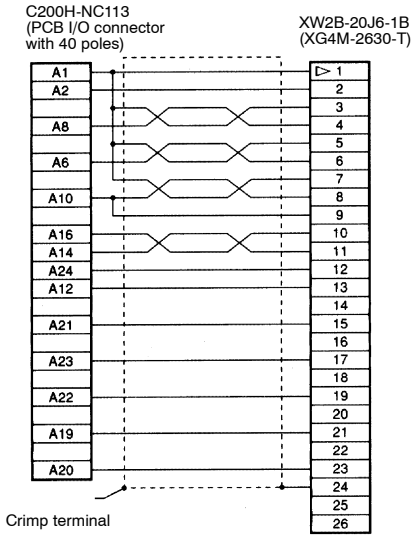
XW2Z-□□□J-A6



Connector

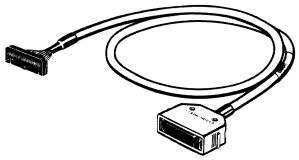


Wiring Diagram
XW2Z-□□□J-A6

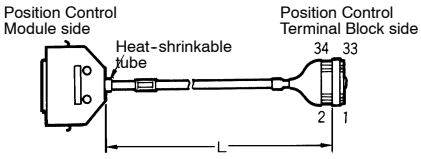


For C200H-NC211 Use

XW2Z-□□□J-A2



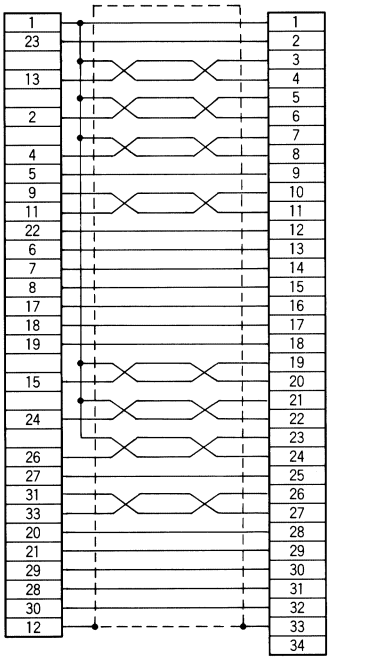
Connector



MR-34LF
(Honda Tsushin Kogyo)

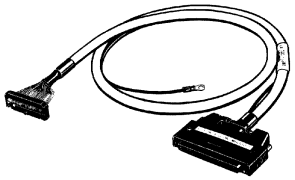
XG4M-3430-T

Wiring Diagram
XW2Z-□□□J-A2

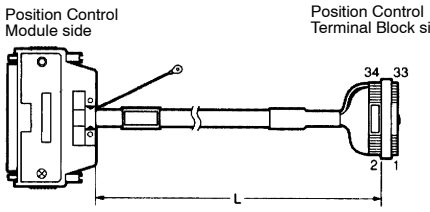


For C200HW-NC213/NC413 Use

XW2Z-□□□J-A7



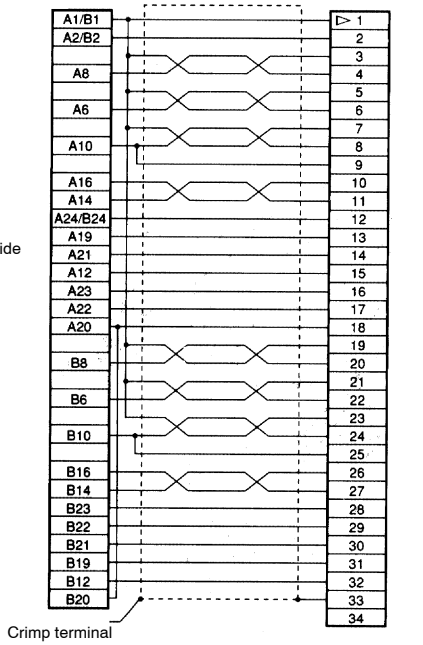
Connector



MR-34LF
(Honda Tsushin Kogyo)

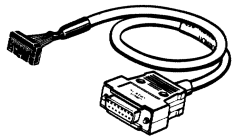
XG4M-3430-T

Wiring Diagram
XW2Z-□□□J-A7



For CQM1 Use

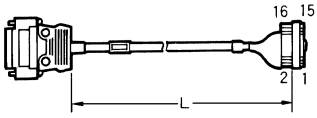
XW2Z-□□□J-A3



Connector

Position Control PLC CPU side

Position Control Terminal Block side



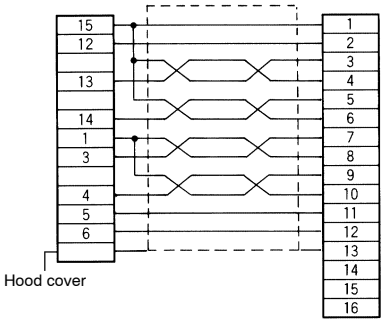
XM2D-1501 Socket
XM2S-1511 Hood

XG4M-1630-T

Wiring Diagram
XW2Z-□□□J-A3

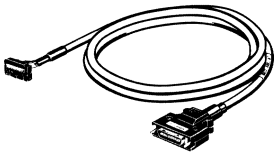
CQM1H-PLB21 (XM2D-1501)

XW2B-20J6-3B (XG4M-1630)



For U-Series Servo Driver and Servo Terminal Block

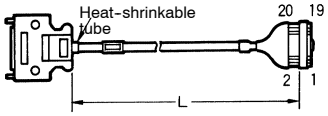
XW2Z-□□□J-B1



Connector

Servo Driver side

Position Control Terminal Block side



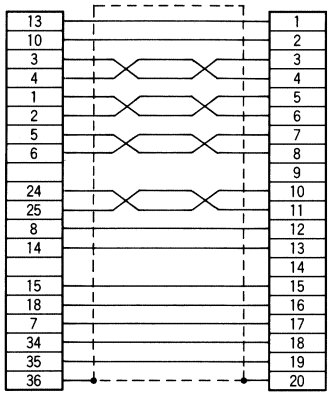
10136-3000VE Plug
10336-52A0-008 Hood
(both Sumitomo 3M)

XG4M-2030-T

Wiring Diagram
XW2Z-□□□J-B1

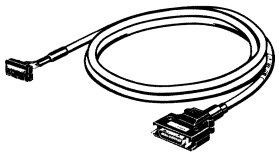
R88D-UP□□□ (Half-pitch connector with 36 poles)

XW2B-□□J6-□B (XG4M-2030)



For W-Series Servo Driver and Servo Terminal Block

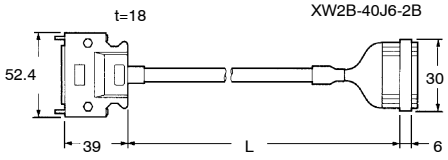
XW2Z-□□□J-B4



Connector

Servo Driver side
R88D-WT□

Position Control
Terminal Block side
XW2B-20J6-1B
XW2B-40J6-2B



Wiring Diagram
XW2Z-□□□J-B4

Position Control Terminal Block

No.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Servo Drive

No.	Symbol
47	+24VIN
26	INP1COM
11	+CCW
12	−CCW
7	+CW
8	−CW
15	+ECRST
14	−ECRST
28	TGONCOM
19	+Z
20	−Z
25	INP1
40	RUN
41	MING
44	RESET
27	TGON
31	ALM
32	ALMCOM
	FG

Cable: AWG28 × 4P + AWG28 × 9C

Precautions

■ WIRING

The open terminal must be left unconnected.

0 V and common terminals are connected internally.

Do not wire the Servo Screw Terminal Block while power is supplied to the unit, or the terminals may be short-circuited with the cable and the Unit may malfunction.

■ TERMINAL WIRE CONNECTIONS

The suitable crimp terminal is R1.25-3 (round or fork type).

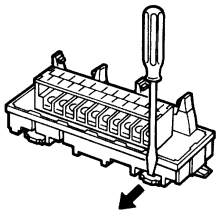
Terminal Screw Tightening Torque

When connecting crimp terminals or wires to the terminal block, be sure to tighten each crimp terminal or wire to 0.5 to 0.8 N • m (4.9 to 7.8 kgf • cm).

■ TRACK MOUNTING

More than one XW2B Position Control Screw Terminal Block can be densely mounted to a DIN track, in which case, move the mounting stays from both sides of the XW2B to the bottom of the XW2B.

Secure both ends of the XW2B with end plates.



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

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