

Motion Control Terminal Block

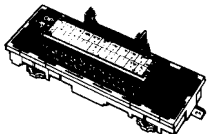
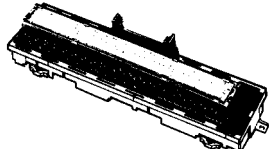
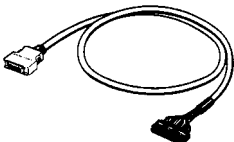
XW2B

Simplify Wiring to CV-series PLC Motion Control Modules

- Terminal block consolidates wiring for 2- and 4-axis motion control modules through a dedicated cable
- Convenient terminal labels included to identify wiring connections at a glance
- Easily mounts to DIN track or via screws
- Space-saving design and easy-to-wire M3 screw terminals



Ordering Information

Appearance	Description	Part number
	Terminal block for CV500-MC221 (for two axes) motion control module	XW2B-20J6-6
	Terminal block for CV500-MC421 (for four axes) motion control module	XW2B-40J6-7
	Connecting cable, 1 m (3.28 ft) length, used between a CV-series PLC motion control module and terminal blocks above.	XW2Z-100J-F1

Specifications

■ TERMINAL BLOCKS

Item	XW2B-□□J6-□
Rated current	1 A at 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)

■ CONNECTING CABLE

Item	XW2Z-100J-F1
Rated current	0.5 A
Rated voltage	24 VDC
Contact resistance	20 mΩ max. with 100 mA max. at 20 mV max. (See note 1) 35 mΩ max. with 1.5 mA max. at 20 mA max. (See note 2)
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 3)
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 on the Terminal Block side.

2. The resistance indicated is the contact resistance of the connector on the Motion Control Module side.

3. The voltage indicated is the dielectric strength of the connectors on the Terminal Block side and Motion Control Module side.

Materials/Finish

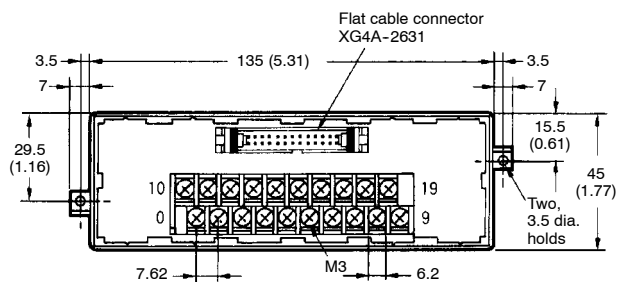
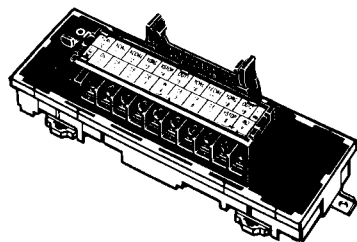
Item	Parts	Materials/Processing
Connector XG4M-2630-T	Housing	Black PBT resin with glass (UL94V-0)
	Strain relief	Black PBT resin with glass (UL94Vv0)
	Contact	Copper-alloy and nickel plated with 0.15-μm-thick gold (contact-carrying part)
Connector (Sumitomo 3M) 10126-6000EL (press-fit 26-pole plug)	Housing	Black polyester resin with glass (UL94V-0)
	Contact	Copper-alloy and nickel plated with 0.3-μm-thick gold (contact-carrying part)
Hood (Sumitomo 3M) 10326-3210-000	Plastic shell (straight type)	Beige ABS resin (UL94V-0)
Cable	Equivalent to UL20276 BC14P-SB AWG28 (7/0.127)	

Dimensions

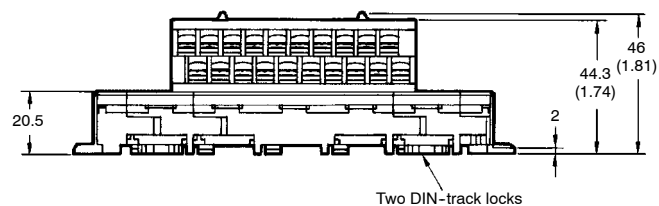
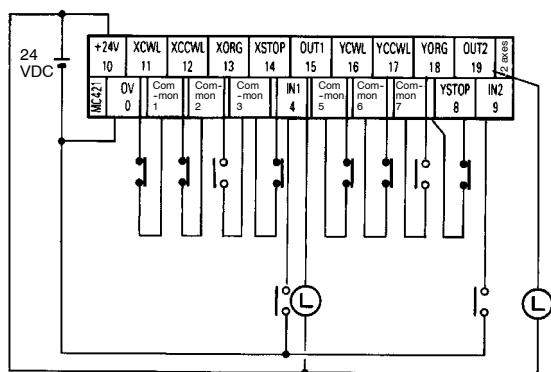
Unit: mm (inch)

■ TERMINAL BLOCKS

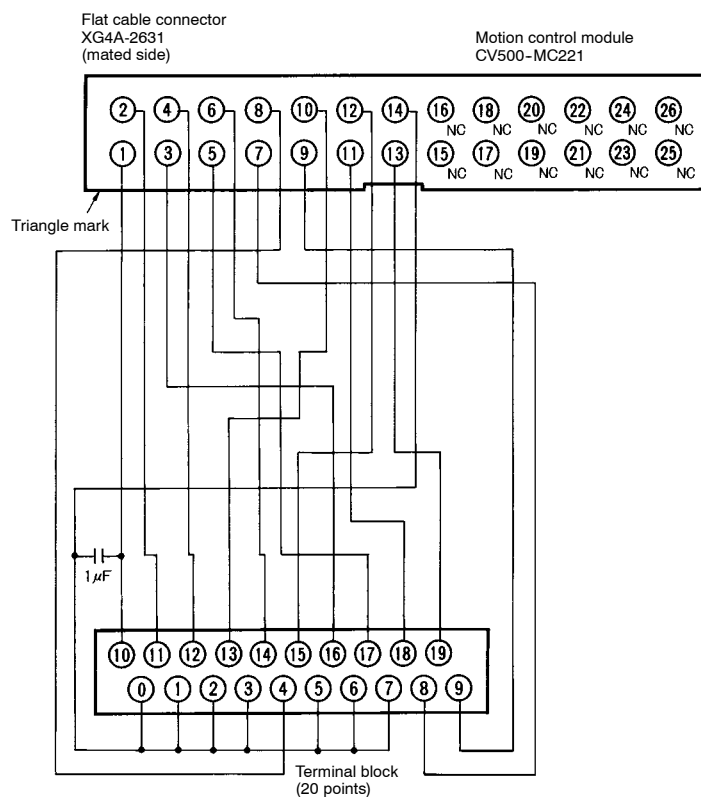
XW2B-20J6-6 for CV500-MC221 Two-Axis Motion Control PLC Module



Terminal Block Labels/Wiring Exmple



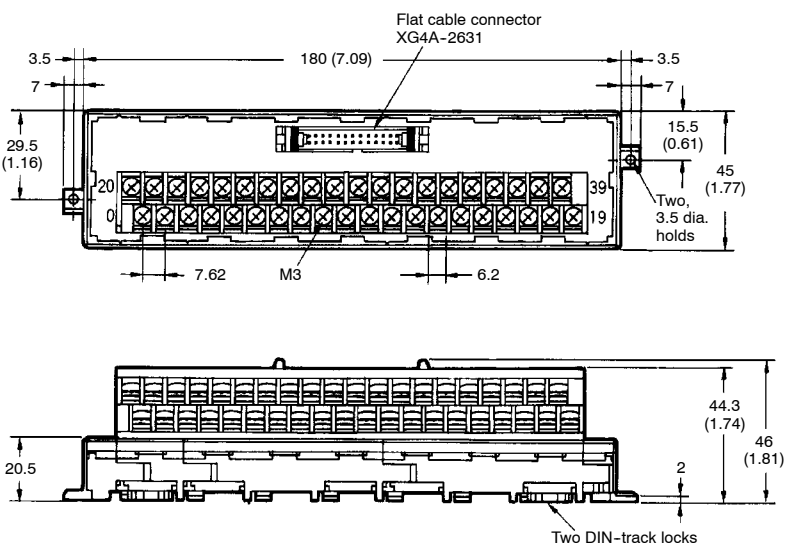
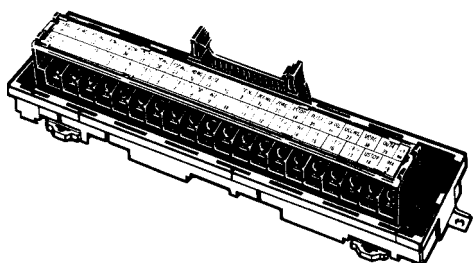
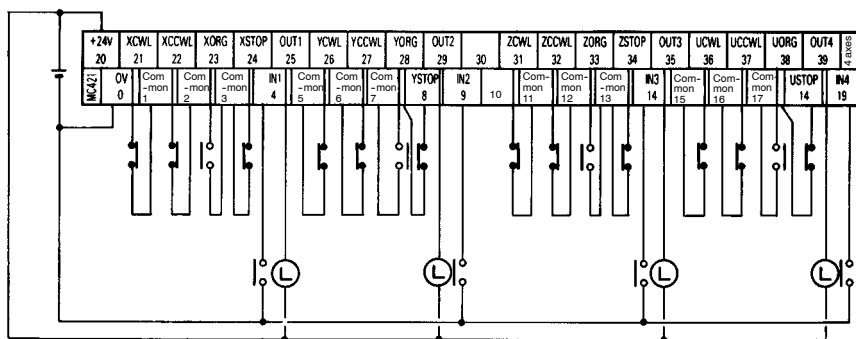
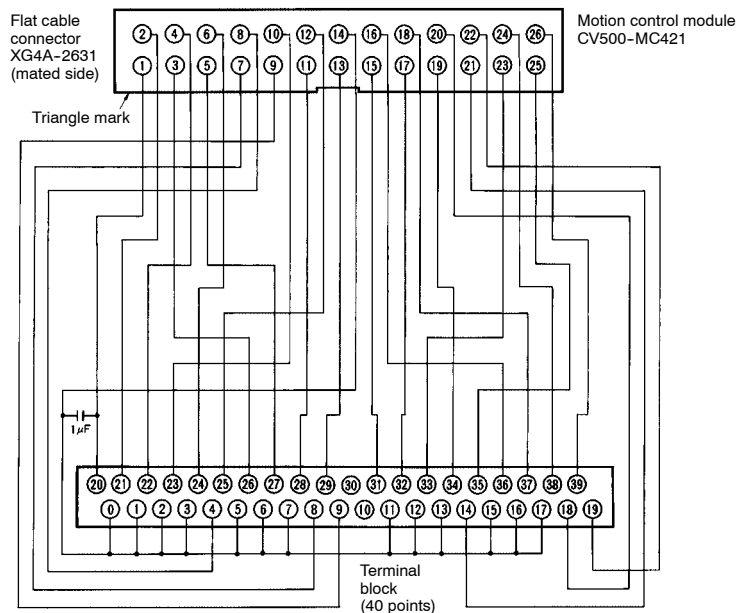
Connections Between Motion Control Module and Terminal Block Using XW2Z Cable



Corresponding Pin Designations

XW2B-20J6B-6 Terminal block side		CV500B-MC221 Two-axis motion control module side		
Terminal number	Label	Symbol	Name	Pin number
0	0V	DC GND	24-V input ground	14
1	Common	DC GND	24-V input ground	14
2	Common	DC GND	24-V input ground	14
3	Common	DC GND	24-V input ground	14
4	IN1	IN1	General-purpose input 1	8
5	Common	DC GND	24-V input ground	14
6	Common	DC GND	24-V input ground	14
7	Common	DC GND	24-V input ground	14
8	YSTOP	YSTOP	Y-axis immediate stop input	7
9	IN2	IN2	General-purpose input 2	9
10	+24V	+24V	24-V input	1
11	XCWL	XCWL	X-axis CW limit input	2
12	XCCWL	XCCWL	X-axis CCW limit input	4
13	XORG	XORG	X-axis origin proximity input	10
14	XSTOP	XSTOP	X-axis immediate stop input	6
15	OUT1	OUT1	General-purpose output 1	12
16	YCWL	YCWL	Y-axis CW limit input	3
17	YCCWL	YCCWL	Y-axis CCW limit input	5
18	YORG	YORG	Y-axis origin proximity input	11
19	OUT2	OUT2	General-purpose output 2	13

Unit: mm (inch)

XW2B-40J6-7 for CV500-MC421 Four-Axis Motion Control PLC Module**Terminal Block Labels/Wiring Example****Connections Between Motion Control Module and Terminal Block Using XW2Z Cable**

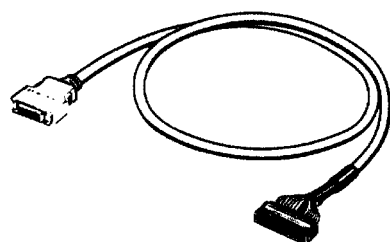
Corresponding Pin Designations

XW2B-40J6-7 Terminal block side		CV500-MC421 Motion control module side		
Terminal number	Label	Symbol	Name	Pin number
0	0V	DC GND	24-V input ground	14
1	Common	DC GND	24-V input ground	14
2	Common	DC GND	24-V input ground	14
3	Common	DC GND	24-V input ground	14
4	IN1	IN1	General-purpose input 1	8
5	Common	DC GND	24-V input ground	14
6	Common	DC GND	24-V input ground	14
7	Common	DC GND	24-V input ground	14
8	YSTOP	YSTOP	Y-axis immediate stop input	7
9	IN2	IN2	General-purpose input 2	9
10	See note	—	—	—
11	Common	DC GND	24-V input ground	14
12	Common	DC GND	24-V input ground	14
13	Common	DC GND	24-V input ground	14
14	IN3	IN3	General-purpose input 3	21
15	Common	DC GND	24-V input ground	14
16	Common	DC GND	24-V input ground	14
17	Common	DC GND	24-V input ground	14
18	USTOP	USTOP	U-axis immediate stop input	20
19	IN4	IN4	General-purpose input 4	22
20	+24V	+24V	24-V input	1
21	XCWL	XCWL	X-axis CW limit input	2
22	XCCWL	XCCWL	X-axis CCW limit input	4
23	XORG	XORG	X-axis origin proximity input	10
24	XSTOP	XSTOP	X-axis immediate stop input	6
25	OUT1	OUT1	General-purpose output 1	12
26	YCWL	YCWL	Y-axis CW limit input	3
27	YCCWL	YCCWL	Y-axis CCW limit input	5
28	YORG	YORG	Y-axis origin proximity input	11
29	OUT2	OUT2	General-purpose output 2	13
30	See note	—	—	—
31	ZCWL	ZCWL	Z-axis CW limit input	15
32	ZCCWL	ZCCWL	Z-axis CCW limit input	17
33	ZORG	ZORG	Z-axis origin proximity input	23
34	ZSTOP	ZSTOP	Z-axis immediate stop input	19
35	OUT3	OUT3	General-purpose output 3	25
36	UCWL	UCWL	U-axis CW limit input	16
37	UCCWL	UCCWL	U-axis CCW limit input	18
38	UORG	UORG	U-axis origin proximity input	24
39	OUT4	OUT4	General-purpose output 4	26

Note: Terminals 10 and 30 are open terminals.

■ CONNECTING CABLE

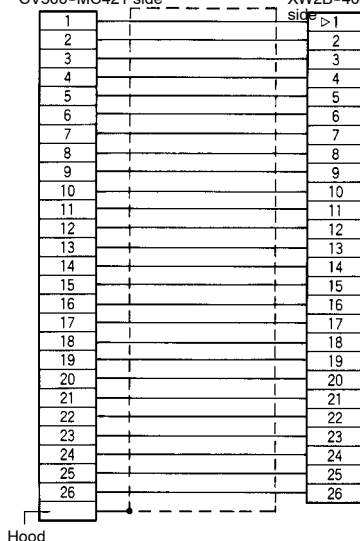
XW2Z-100J-F1 Connects CV500-MC221/CV500-MC421 Motion Control Modules to XW2B Terminal Blocks



Wiring Diagram

Connector on the
CV500-MC221/
CV500-MC421 side

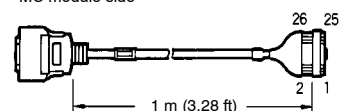
Connector on the
XW2B-20J6-6/
XW2B-40J6-7



Connector

I/O connector on the
MC module side

Terminal block side



10126-6000EL
Connector
10326-3210-000 Hood
(Sumitomo 3M)

XG4M-2630-
T

Precautions

■ WIRING

The open terminal must be left unconnected.

0 V and common terminals are connected internally.

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

Do not connect or disconnect the connector while power is supplied to the Terminal Block, otherwise it may malfunction.

■ TERMINAL WIRE CONNECTIONS

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

■ MOUNTING

More than one XW2B Motion Control Terminal Block can be densely mounted to a DIN track. To do this, 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.

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 (4.8 to 7.8 kgf • cm).

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

OMRON®

OMRON ELECTRONICS, INC.

One East Commerce Drive
Schaumburg, IL 60173

1-800-55-OMRON

OMRON CANADA, INC.

885 Milner Avenue
Scarborough, Ontario M1B 5V8

416-286-6465