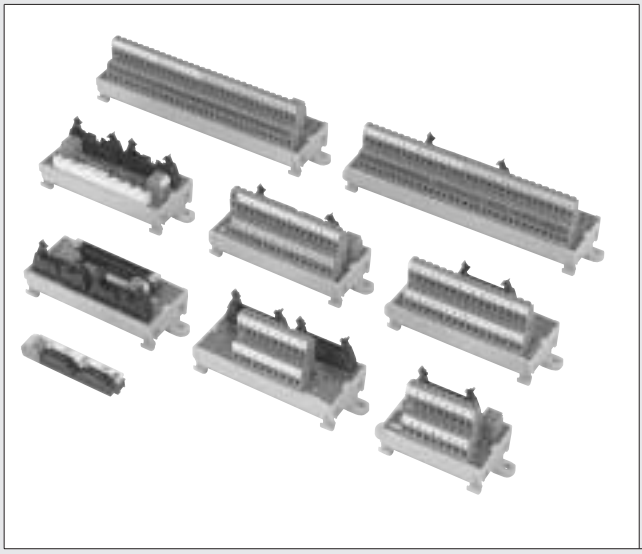


KOGANEI

VALVES GENERAL CATALOG

PC WIRING SYSTEM
INDEX

⚠ **Caution** **Before use, be sure to read the "Safety Precautions" on p. 31.**

Easy, Quick, and Simple Wiring for Valves and Sensors!

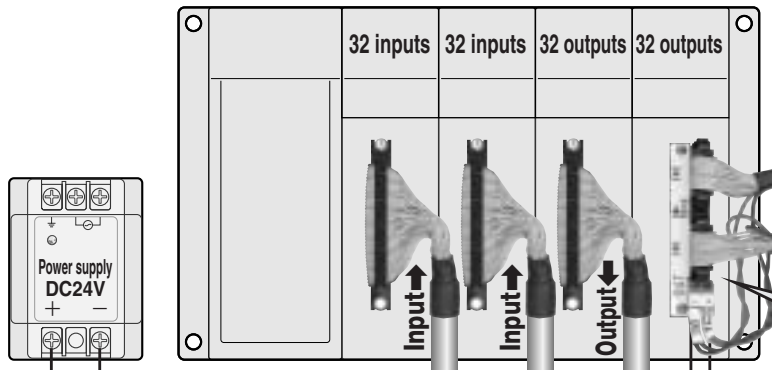
PC WIRING SYSTEM

●Compatible PC manufacturers

- OMRON
- Mitsubishi Electric
- Fuji Electric FA Components & Systems
- Hitachi
- TOSHIBA
- KOYO ELECTRONICS INDUSTRIES
- YASKAWA ELECTRIC
- SHARP
- YOKOGAWA ELECTRIC
- Matsushita Electric Works
- KEYENCE

※For details, see p.1033.

●Programmable controller



➡16 outputs

➡16 outputs

■Branch unit (For output)
32 outputs→16 outputs×2
(direct connecting type) p.996

Fujitsu FCN connector

or

MIL standard connector

32 inputs

32 outputs

■Branch unit (For output)
32 outputs→16 outputs×2
(mountable on DIN rail)
Converts the 40-pin, 32 outputs pin arrangement that varies from one company PC to another, to the commonly used 16 outputs, 20-pin arrangement.
p.999

■Branch unit (For input)
32 inputs→16 inputs×2
(mountable on DIN rail)
Converts the 40-pin, 32 inputs pin arrangement that varies from one company PC to another, to the commonly used 16 inputs, 20-pin arrangement.
p.997

16 inputs

16 inputs

16 outputs

16 outputs

■32-input unit
Achieves space savings. p.1001

Cascade connection

Uses easy to handle crimping type connector

8 inputs

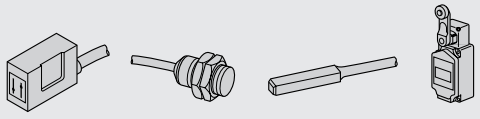
8 inputs

■16-input unit
(mountable on DIN rail) p.1005

■8-input unit
(mountable on DIN rail) p.1005

■8-input unit
(Box-mounting type) p.1006

Photo-electric switches, proximity switches, sensor switches for cylinders, limit switches, and other input devices can be connected.



Branch Unit Offers Commonality

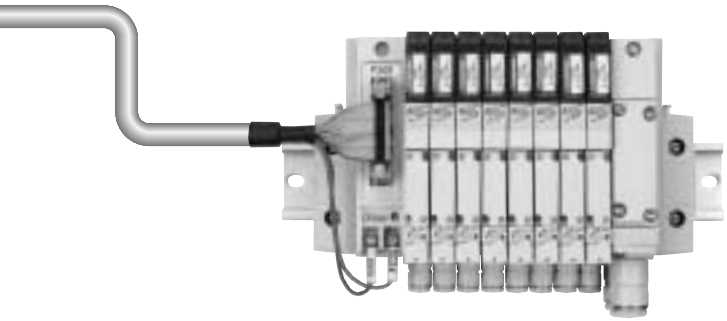
- The branch unit branches off the 32-I/O of the various PC manufacturers into the 16-I/O common pin arrangement.
- Converts to common pin arrangement to ensure connection with the Koganei manifold type solenoid valves, relay terminals, etc. of other companies, without undue concern for pin arrangement.
- Can supply power to PC I/O units.
- Branch units compatible with the I/O connectors of all PC manufacturers are available.

Parallel Type for Simplicity

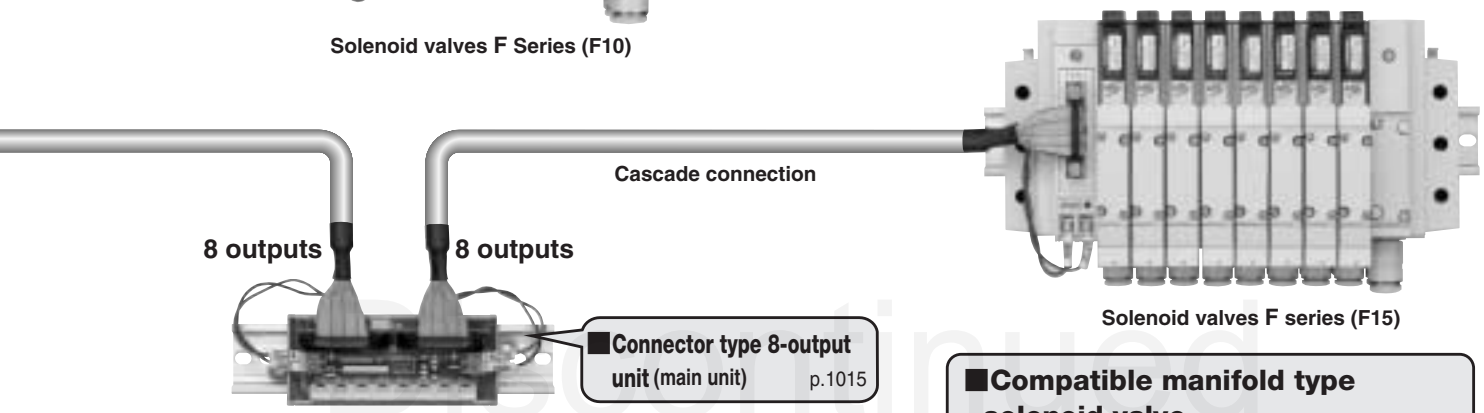
- Unlike with serial transmission, there is no need to worry about transmission delay time.
- Visually and intuitively easy to understand, for simple maintenance during setup, debugging and breakdowns.
- No need for expensive systems; cuts initial costs as well.

Increased Wiring Savings

- Special cable with power line is a remarkable flat cable that incorporates a flat cable and the power line within a single insulation, eliminating the need for separate wiring of power line.
- Cutting the special cable at any point and one operation crimping connection help to achieve wiring savings equivalent to serial transmission systems.
- One operation crimping connector helps to standardize wiring work, to prevent incorrect wiring, and to vastly improve operations efficiency.



Solenoid valves F Series (F10)



Solenoid valves F series (F15)

■Connector type 8-output unit (main unit) p.1015

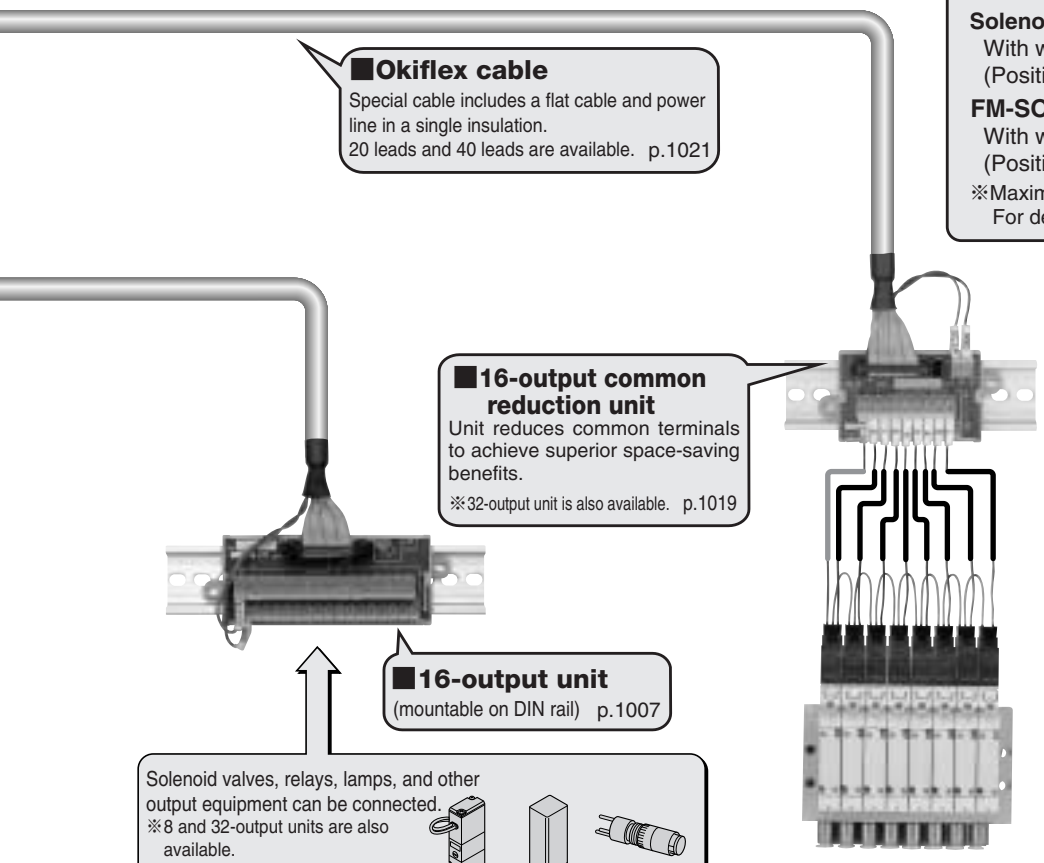
■Compatible manifold type solenoid valve

Solenoid valves F series
With wiring specification -F201
(Positive common specification)

FM-SOLID MANIFOLD X80M, X88M series
With wiring module FMCR-F201, FMC-F201
(Positive common specification)

※Maximum control solenoids: 16
For details, see p.993.

■Okiflex cable
Special cable includes a flat cable and power line in a single insulation.
20 leads and 40 leads are available. p.1021



■16-output common reduction unit
Unit reduces common terminals to achieve superior space-saving benefits.
※32-output unit is also available. p.1019

■16-output unit
(mountable on DIN rail) p.1007

Solenoid valves, relays, lamps, and other output equipment can be connected.
※8 and 32-output units are also available.
(The branch unit is not used when using the 32-output unit.)

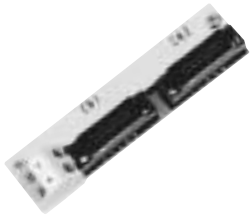
Solenoid valves GF series (GF10)
※Pre-wired common

PC Wiring System Wide Variation Units

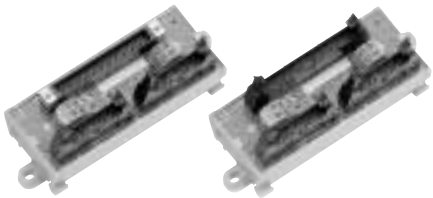
Branch unit

- The branch unit branches off the 32-I/O of the various PC manufacturers into the 16-I/O common pin arrangement.
- Converts to the common pin arrangement to ensure connection with the Koganei manifold type solenoid valves, relay terminals etc. of other companies, without undue concern for pin arrangement.
- Can supply power to PC I/O units.
- Branch units compatible to the I/O connectors of all PC manufacturers are available.
- A direct connecting type with direct plug-in to the I/O connector is also available.

※For details, see p.995～1000.



PC direct connecting type



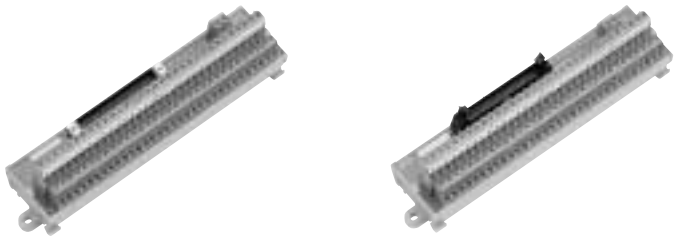
FCN connector type　MIL connector type

DIN rail mounting type

32-input/output unit

- Compatible to the various companies' PC 32- and 64-I/O connectors. Offers more space savings than conventional terminal blocks.
- Color markers are also provided for easy identification of terminal block No. markings.

※For details, see p.1001～1004.



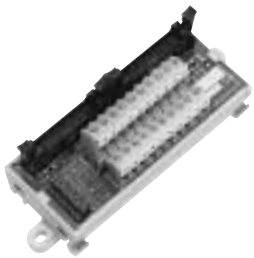
FCN connector type　MIL connector type

DIN rail mounting type

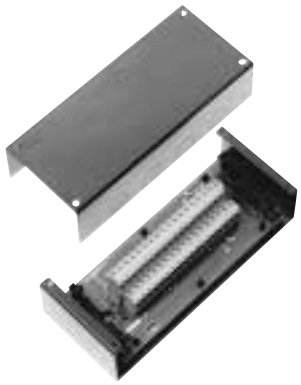
8- and 16-input/output unit

- 8- or 16-I/O unit.
- Used in combination with branch unit.
- The 8-input/output unit is equipped with 2 connectors, and can be added-on by using cascade connections.
  In addition, a jumper switch allows "HI" or "LO" address settings.
- A metal box mounting type is also available to enable installation outside of control panels.

※For details, see p.1005～1008.



DIN rail mounting type

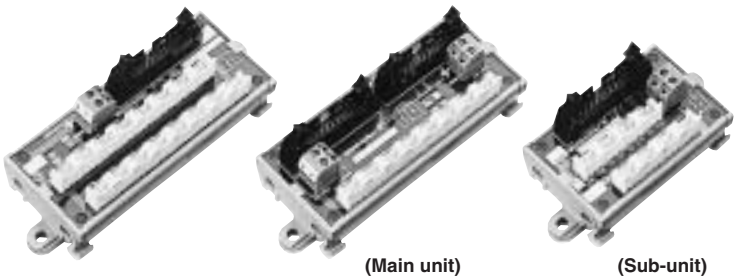


Box-mounting type

Connector type
8- and 16-input/output unit

- A plug connector allows connection to input/output equipment.
- 8- or 16-I/O unit.
- Used in combination with branch unit.
- A connector type 8-input/output unit (main unit) is equipped with 2 connectors, and can also be connected by using a cascade connection to sub-units, or manifold solenoid valves, etc.

※For details, see p.1013～1016.



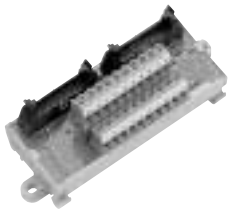
(Main unit)　(Sub-unit)

DIN rail mounting type

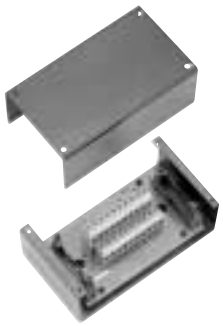
8 LO-only input/output unit
8 HI-only input/output unit

- 8-I/O unit.
- Unit fixed at LO/HI eliminates need for installing the jumper (short-circuit socket).
- Used in combination with branch unit.
- The unit is equipped with 2 connectors, and can be added-on by using cascade connections.
- A metal box mounting type is also available to enable installation outside of control panels.

※For details, see p.994, 1009～1012.



DIN rail mounting type



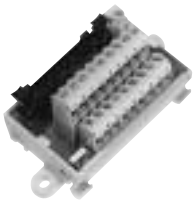
Box-mounting type

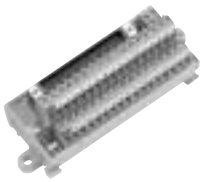
16- and 32-output common reduction unit

- Unit reduces common terminal blocks for excellent space-saving benefits. Includes a 16-output type and a 32-output type compatible with all companies' PCs.
- 32-output unit is compatible with all companies' PC 32- and 64-output connectors.
  Color markers are also provided for easy identification of terminal block No. markings.
- Use the 16-output unit in combination with a branch unit.

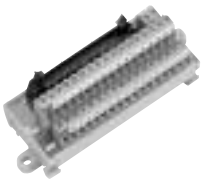
※For details, see p.1017～1019.

(16-output unit)　(32-output unit)





FCN connector type



MIL connector type

DIN rail mounting type

Cable assembly (Made to order)

- Various cable assemblies with crimped connectors onto Okiflex cables are also available.
- Cable lengths offered from 0.5m [1.65ft.] to 20m [65.6ft.], by the 0.5m [1.65ft.] pitch.

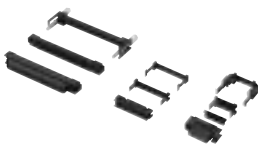
※For details, see p.1028～1032.

Associated products

- Various kinds of crimping connectors
- Okiflex cable
  Remarkable cable incorporates a flat cable with power line within a single insulation for easy crimping onto a connector.
- Crimping tool
  Crimping tools are compatible with all crimping connectors used in PC wiring systems.
- Check unit
  Allows easy function checking of various units, manifold type solenoid valves, and sensors.

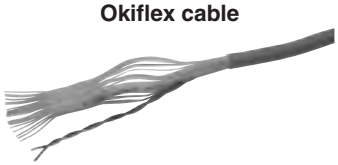
※For details, see p.1021～1026.

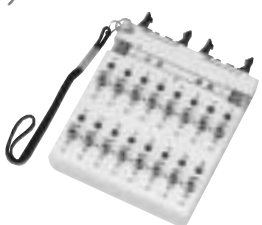
Various connectors



Crimping tool

Okiflex cable



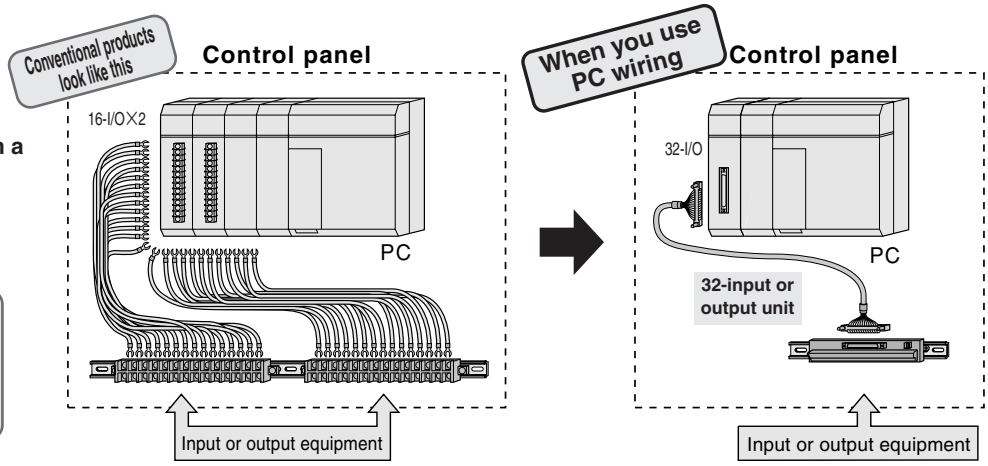


Check unit

Application Example 1

● For connections between a programmable controller and input or output equipment.

Effectiveness
- ●Reduces wiring man-hours.
- ●Prevents wiring mistakes.
- ●Reduces space occupied.



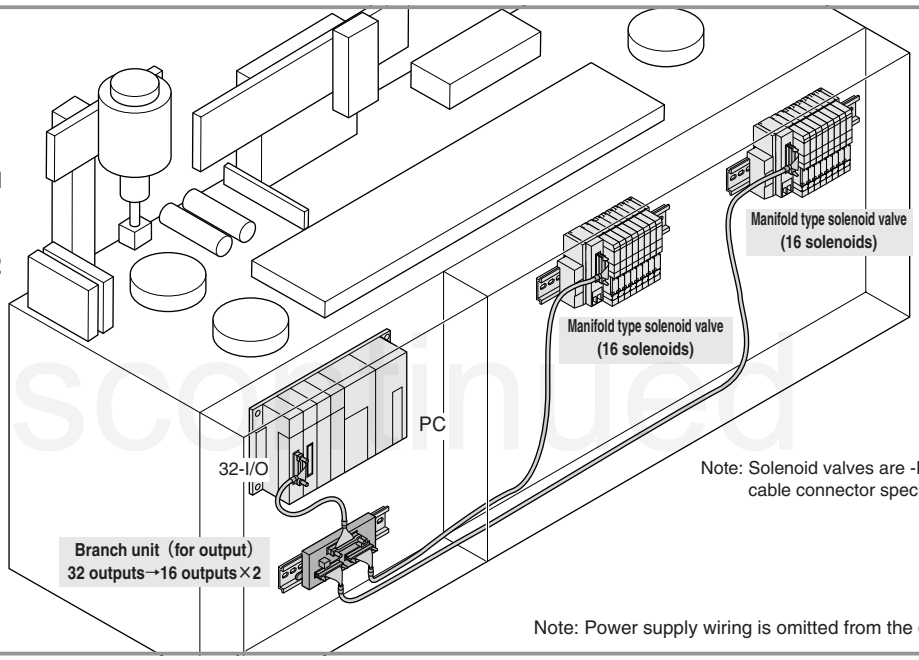
Remark: Power supply wiring is omitted from the diagram.

Application Example 2

●For connections to manifold type solenoid valves, etc.

32 outputs→16 outputs×2

Effectiveness
- ●Reduces wiring man-hours.
- ●Prevents wiring mistakes.
- ●Simple wiring work by using connectors
- ●Also enables commercially available relay terminals, etc. to connect.



Note: Solenoid valves are -F201 flat cable connector specification.

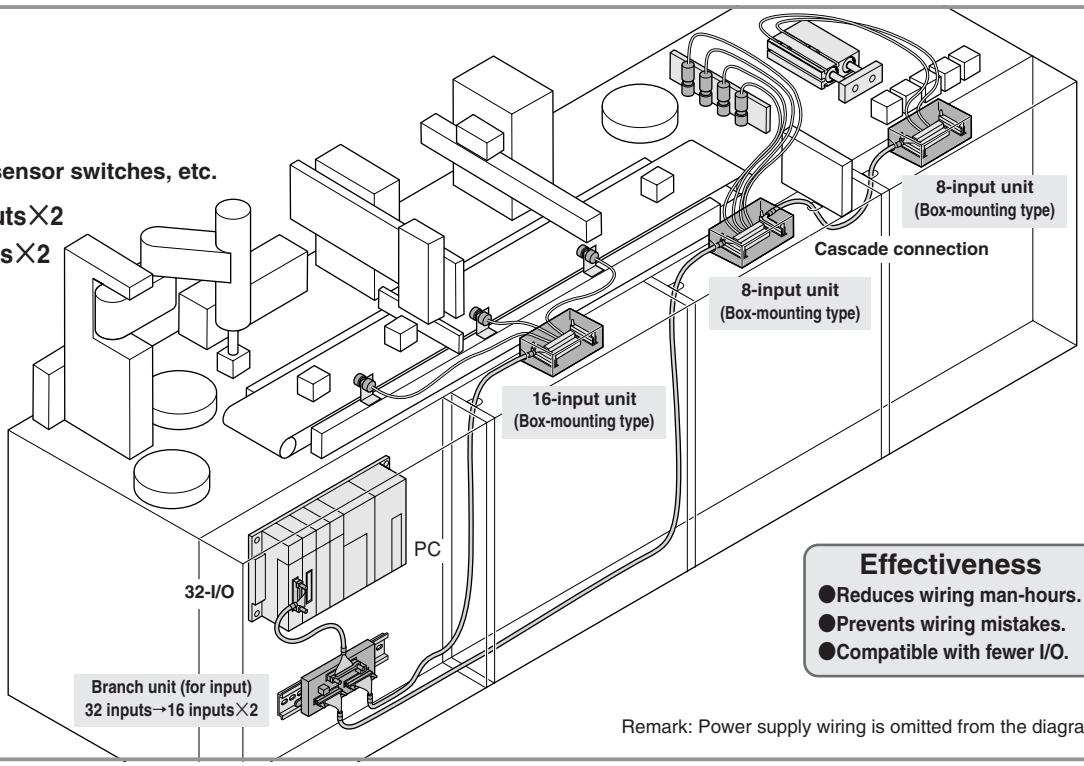
Note: Power supply wiring is omitted from the diagram.

Application Example 3

●For inputs from sensor switches, etc.

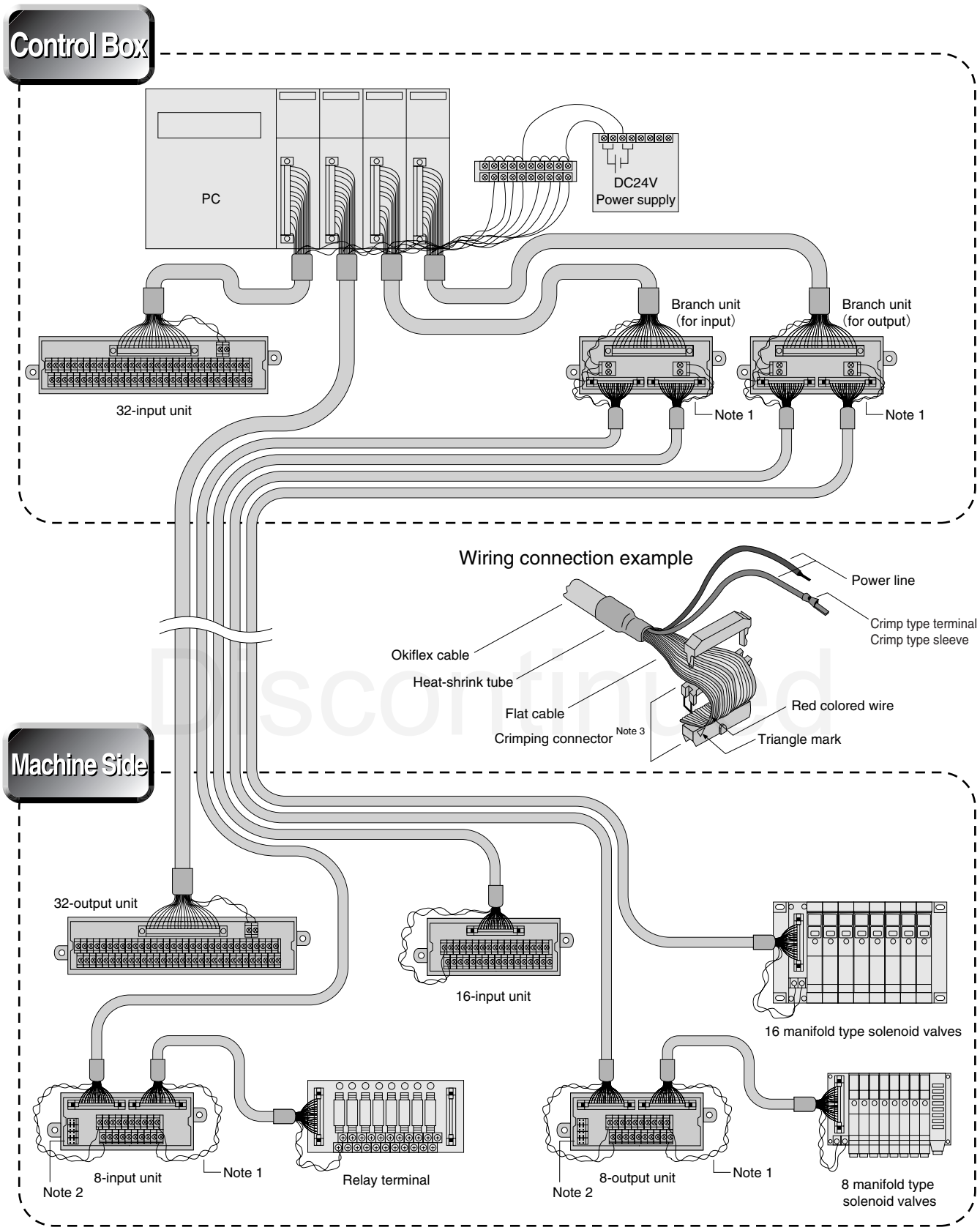
32 inputs→16 inputs×2

16 inputs→8 inputs×2



Effectiveness
- ●Reduces wiring man-hours.
- ●Prevents wiring mistakes.
- ●Compatible with fewer I/O.

Remark: Power supply wiring is omitted from the diagram.



Notes: 1. The rated current for each unit is a maximum of 2.0A (a maximum of 1.0A for the 8-input/output unit). When the transit current in each unit exceeds 2.0A (a maximum of 1.0A for the 8-input/output unit), use the same power supply terminal to connect the 2 power lines, and do not let current flow through the unit.

2. When connecting the 8-input/output unit to manifold solenoid valves and relay terminals, as shown in the diagram above, set the unit jumper to the "HI" side.

3. For the crimping of each type of a connector, see the separately issued User's Manual for PC wiring systems (Document No.HV002).

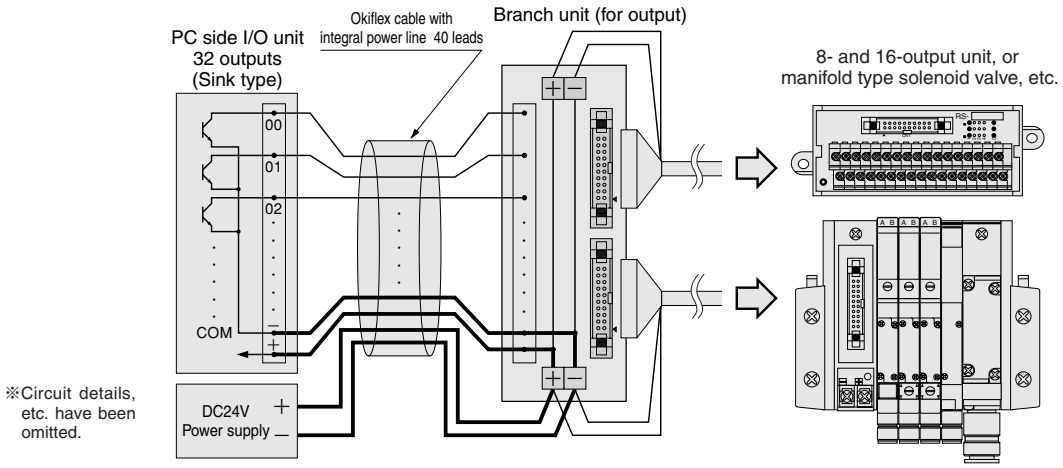
■Benefit No.1

Use of a branch unit allows branching of 32-I/O→16-I/O×2.

Branch units convert the 32-I/O, 40-pin arrangement that varies from one company PC to another, to the commonly used 16-I/O, 20-pin arrangement. Because this pin arrangement follows the Koganei manifold solenoid valve series (wiring specification is the **-F201** type, with positive common specification), and the various common specifications for peripheral equipment of various companies on p.1035, connections can be made without undue concern for connector pin arrangement, etc.

■Benefit No.2

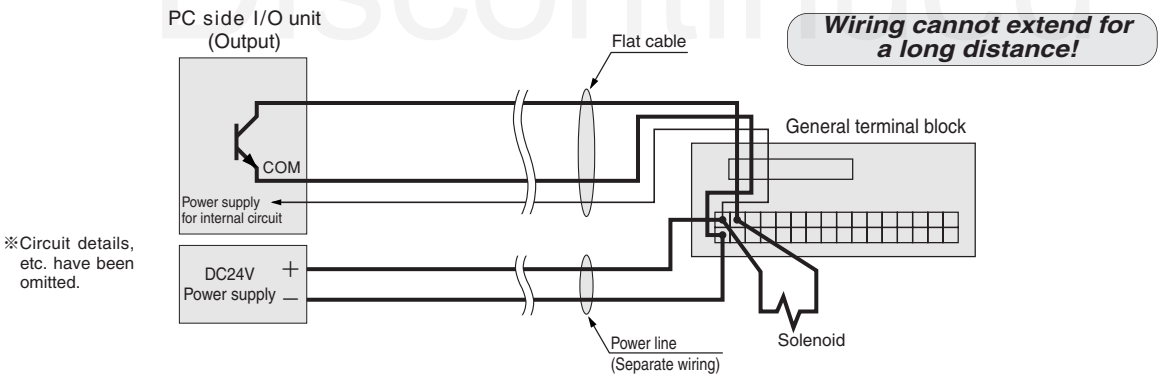
Use of a branch unit enables power supply to the PC side I/O units.



■Benefit No.3

Use of a branch unit reduces voltage drops, and enables long distance wiring.

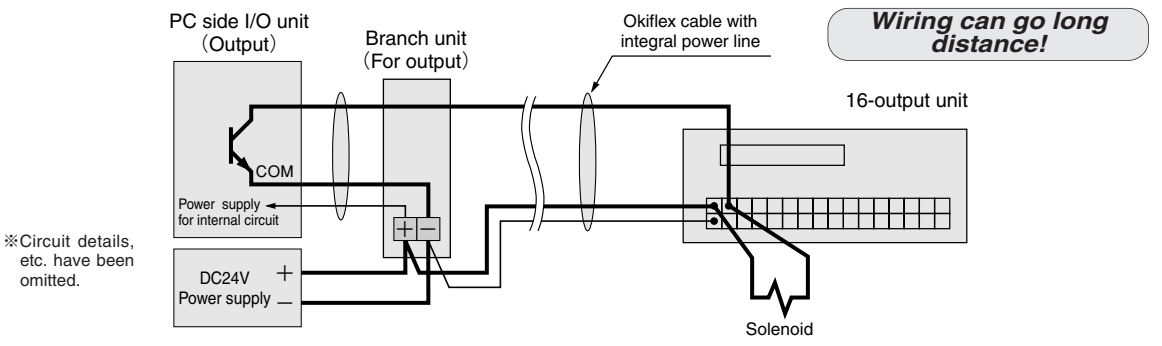
●Example of connection with large voltage drop



●Since the common current line with the largest flow passes an exceedingly long distance to return to the negative polarity of the power supply, the voltage drop increases quite a large amount.

●Example of connection using a branch unit to reduce the voltage drop

Install a branch unit near the I/O unit, and use the branch unit's power supply terminal.



●Since the common current line with the largest flow can be routed an exceedingly short distance to return to the negative polarity of the power supply, the voltage drop remains small, and longer distance wiring is possible. In addition, use of an Okiflex cable eliminates the need for separate wiring for the power line.

Features of Terminal Blocks Used in PC Wiring System

For PC wiring systems, screw-pushed terminal blocks made by the major terminal block manufacturer Weidmuller are used.

1. A large contact surface and high contact pressure guarantee highly reliable and stable contact in ambient environments.

2. The pitch between terminals on the terminal block is just 5.08mm [0.200in.], as compared to the generally used pitch 7.62 ～12mm [0.300～0.472in.], offering large space savings. This design saves a lot of space when using the same number of terminals, or enables more terminals to be used in the same space, and reduces wiring work for common.

3. Since even stranded wire ensures high reliability without the use of crimp type terminals, the crimping process has not been required, reducing wiring man-hour to less than one-third than before. It also accepts bar terminals, crimp type sleeves, and other conventional wiring parts.

4. Because the electric contacts are not exposed, it makes use without covers (which are all too often lost during maintenance, anyway). In addition, the construction is designed to avoid terminal screw dropping losses.

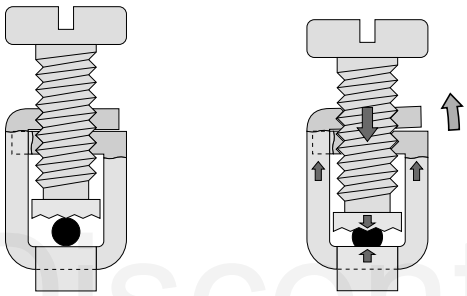
5. When tightening the terminal screw, the effects of a double nut maintain high vibration resistance, and prevent looseness in the screw. In addition, a special heat treatment of the clamp improves mechanical stress.

6. Meets the UL, CSA, VDE and other standards (terminal block alone).

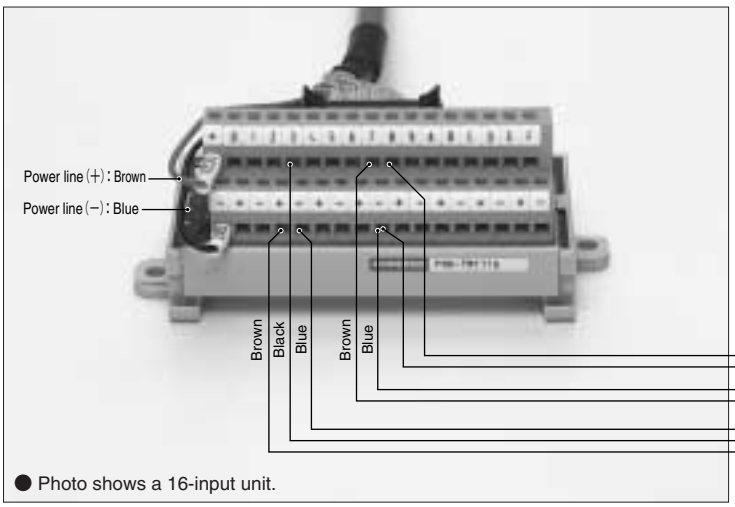
■Double Nut Effect

Tightening the terminal screw generates a reaction force that causes the bent portion near the top of the clamp to restore, thus achieving the double nut effect.

Before tightening **After tightening**



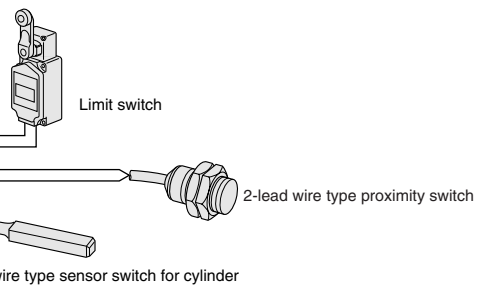
■Easy-to-Use Common Terminal



● Photo shows a 16-input unit.

The input or output unit provides a large number of positive (+) and negative (−) common terminals. Use of an input unit also eases connections to the 3-lead wire type sensor switch, etc.

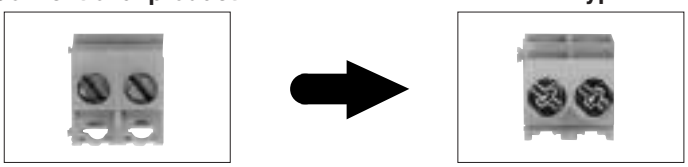
No need to provide a separate common terminal block



■Terminal Block Screw

Use of new Phillips type head screws has further eased work.

Conventional product **New type**



Caution: For the terminal screw tightening torques, see each specifications.

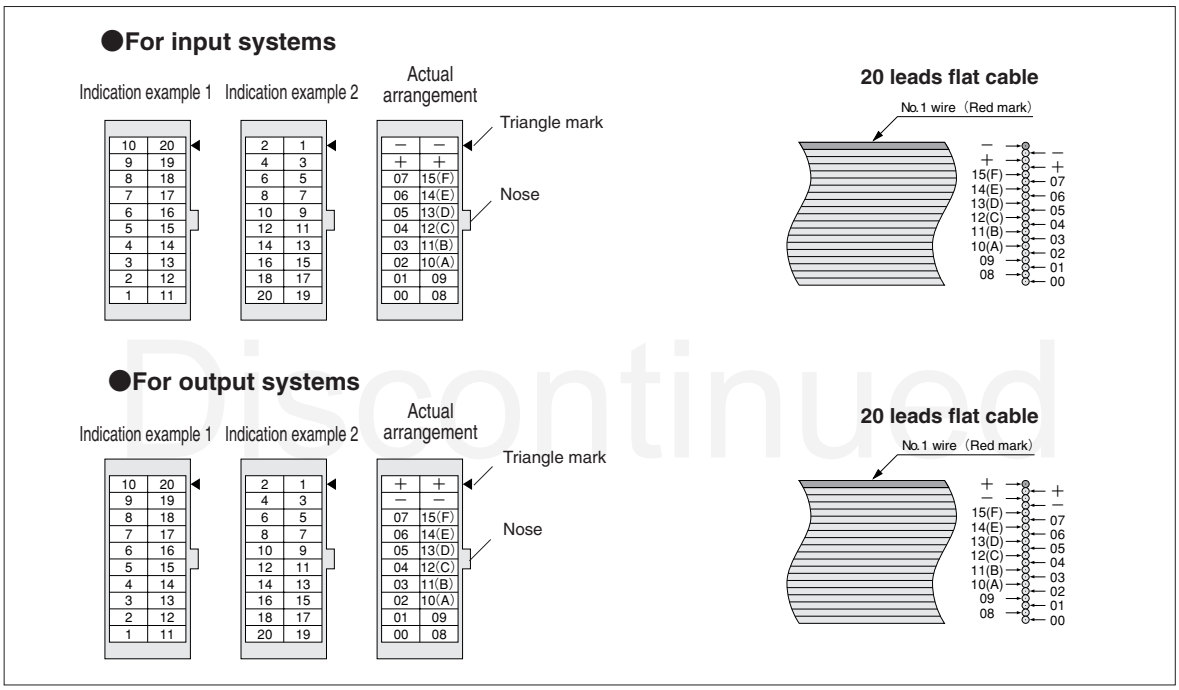
Precautions for Use

1. Always use a voltage of DC24V or less.
2. After wiring is complete, check for incorrect connections before turning on the power.
3. Never disconnect any connectors when the power is on. Also, never apply unnecessary stress on the connectors.
4. Use a dedicated crimping tool when performing cable crimping work. In addition, always check the crimped conditions before operation.
5.The Okiflex cable is a cable for fixed wiring. Never apply any repetitive bending or tensile force to it.

About the Flat Cable Connector Pin Arrangement

Branch units in the PC wiring system convert the 32-I/O, 40-pin arrangement that varies from one company PC to another, to the commonly used 16-I/O, 20-pin arrangement.
This pin arrangement accommodates the PC wiring system's 8- and 16-input/output units (excluding input/output units for the Mitsubishi Electric FX2 and FX2C series), the Koganei manifold type solenoid valve series, and the various common specifications for peripheral equipment of various companies on p.1035. Take particular care about connecting to any other peripheral equipment.

Cautions: 1. The "positive polarity" and "negative polarity" positions differ between the input system and output system. Since an improper connection between the input system and output system equipment can cause a "short circuit", take particular care for this.
2. Although the pin arrangement varies between the Koganei manifold and PC wiring system, the physical arrangement characteristics are the same. For connection to other companies' peripheral equipment, use the triangle mark and nose position as the reference.



Connections to Koganei Manifold Type Solenoid Valves

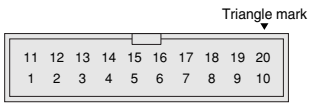
When using a branch unit to connect the Koganei manifold type solenoid valves, see the table below for compatible manifolds:

Compatible manifold	Wiring specification
Solenoid valves F series	Positive common specification Wiring specification **-F201**
FM-SOLID MANIFOLD X80M series	Positive common specification Wiring module **FMCR-F201**
FM-SOLID MANIFOLD X88M series	Positive common specification Wiring module **FMC-F201**

1. Pin arrangement of connector

●Solenoid valves F series
Flat cable connector **-F201**

●FM-SOLID MANIFOLD X80M, X88M series
Flat cable connector **FMCR-F201, FMC-F201**

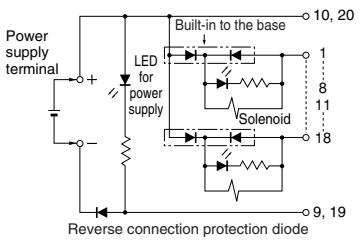


1～8 : Control pins
11～18 : Control pins
9,19 : (−) pins (short-circuited within module)
10, 20 : (+) pins (short-circuited within module)

Notes: 1. The connector pin numbers are assigned for the sake of convenience. Use the ▼ mark as the reference.
2. While the pin location identification method differs from the PC wiring system, the arrangement is equivalent in real usage.

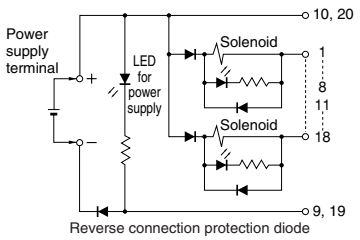
2. Detailed diagram of wiring systems

●Positive common X80M series



Reverse connection protection diode

Solenoid valves F series/X88M series



Reverse connection protection diode

Precautions for Use of the 8- and 16-Input/Output Units

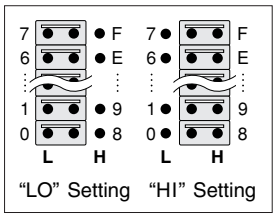
(DIN rail mounting type, Box-mounting type)

1. About the nameplate

Every PC manufacturer has its own way of assigning I/O addresses.
A general use (can be used with any manufacturer) nameplate kit is available. Cut it as required, and then fit it into the terminal nameplate portion.
Fit the nameplate so that the address runs from the left of the ▲ mark on the circuit board to right to increase.

2. About cascade connections (8-input/output unit)

For cascade connections, use the jumper (short-circuit socket) to assign the addresses to either the "LO" side 0 ～7 or the "HI" side 8～F(15).
In setting the "LO" side address, the "LO" side is shorted. It has been set to the "LO" side when shipped from the factory.

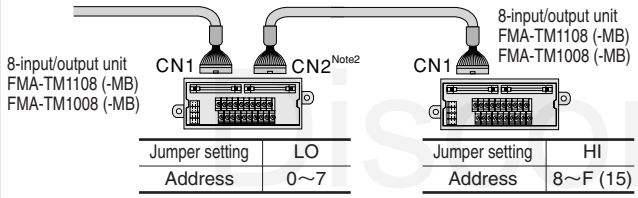


Cautions: When the 8-input/output unit is used for 2 cascade connections, do not set each jumper setting as LO and LO, or HI and HI, for not sharing the same address.
(In the case of input, it becomes OR circuits with 2 sensors, and operating problems will occur.)

●Connection example for cascade connections[Note 1]

① First unit: 8-input/output unit Second unit: 8-input/output unit

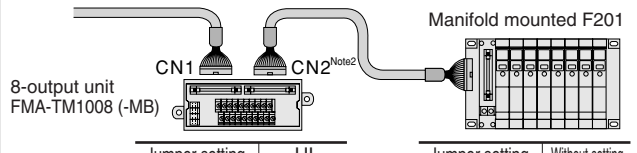
When the first 8-input/output unit is set to the "LO" side address, set the second 8-input/output unit to the "HI" side.



Jumper setting	LO	Jumper setting	HI
Address	0～7	Address	8～F (15)

② First unit: 8-output unit Second unit: Manifold

For the manifold, use the "LO" side address. Therefore, use the "HI" setting for the 8-output unit.
Note: When the manifold address is set on the "HI" side, the address is 8 ～F(15), or when the manifold is connected to the first unit, the manifold should be a special specification. Consult us.



Jumper setting	HI	Jumper setting	Without setting
Address	8～F (15)	Address	0～7

Notes: 1. For cascade connections, see the circuit diagram.
2. CN1 and CN2 have identical pin arrangements. (For details, see the circuit diagram.)

3. About the 8 LO/HI-only input/output unit

Unit for fixed LO/HI that does not require jumper (short-circuit socket) settings.

●LO-only unit
FMA-TJ1108, **FMA-TJ2108**
FMA-TJ1008, **FMA-TJ2008**
Address allocation is fixed to the "LO" side (0～7).

●HI-only unit
FMA-TK1108, **FMA-TK2108**
FMA-TK1008, **FMA-TK2008**
Address allocation is fixed to the "HI" side (8～F(15)).

Precautions for Use of the Connector Type Input/Output Unit

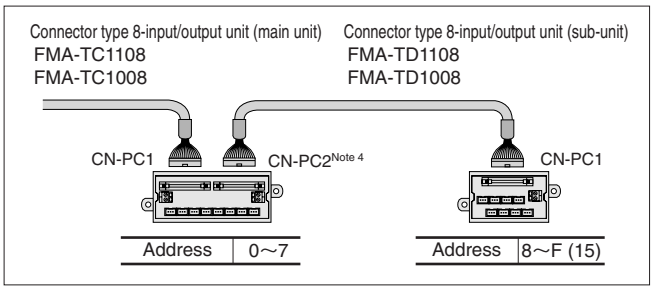
1. About cascade connections

The connector type 8-input/output unit can be used in cascade connections between main units and sub-units, or in cascade connections between main units and other equipment.

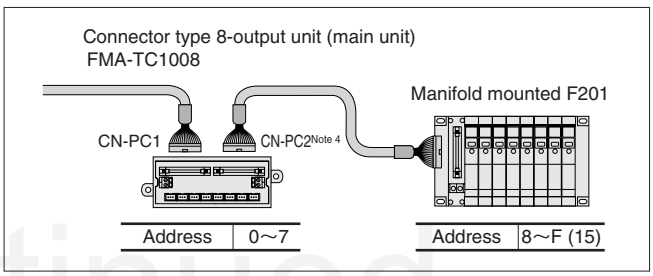
Caution: As the connector type input/output unit does not include a jumper (short-circuit socket), caution should be exercised when selecting a product.

●Connection example for cascade connections[Note 3]

① First unit: Connector type 8-input/output unit (main unit)
Second unit: Connector type 8-input/output unit (sub-unit)



② First unit: Connector type 8-output unit (main unit)
Second unit: Manifold



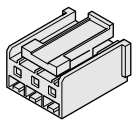
Notes: 3. For cascade connections, see the circuit diagram.
4. The CN-PC1 and CN-PC2 do not have identical pin arrangements.
(For details, see the circuit diagram.)

2. About the 3-pin connector

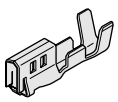
For the housings and terminals for the mounted wafer (3 pins), use the items shown below:

Koganei model: **FMA-BM03A**
(10 housings and 30 terminals make 1 set.)

●Applicable housing
Made by Molex Japan
Model No. 51103-0300



●Applicable terminal
Made by Molex Japan
Model No. 50351-8100



Applicable wire
Lead wire size : AWG No.28...22
Insulation outer diameter : ϕ1.15～ϕ1.8mm [ϕ0.0453～ϕ0.071in.]
Exposed wire length : 2.3～2.8mm [0.091～0.110in.]

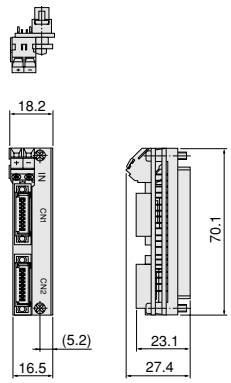
Applicable crimping tool
Made by Molex Japan
Model No. 57295-5000

Extractor
Model No. 57309-6000

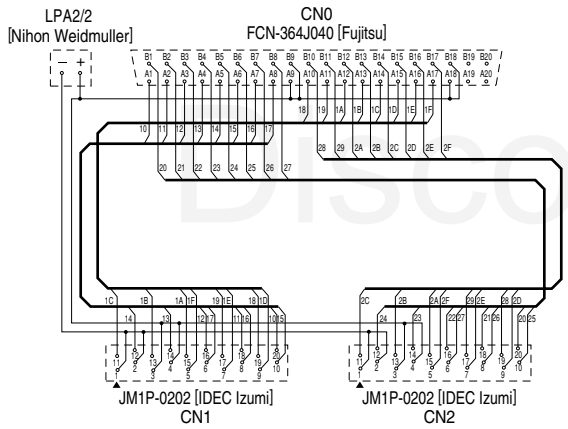
Branch Unit, Programmable Controller Direct Connecting Type
For OMRON, Input/For Mitsubishi Electric, Input

●Branch unit (Input) [For OMRON]
FMA-TF3120-OR

Dimensions (mm)



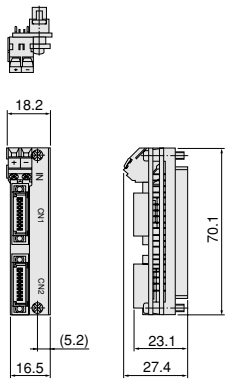
Circuit diagram



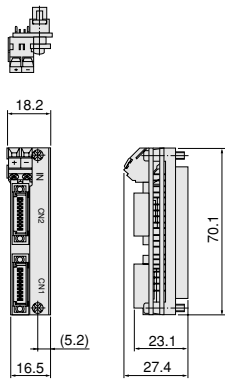
●Branch unit (Input) [For Mitsubishi Electric]
FMA-TF3120-MBA, FMA-TF3120-MBB

Dimensions (mm)

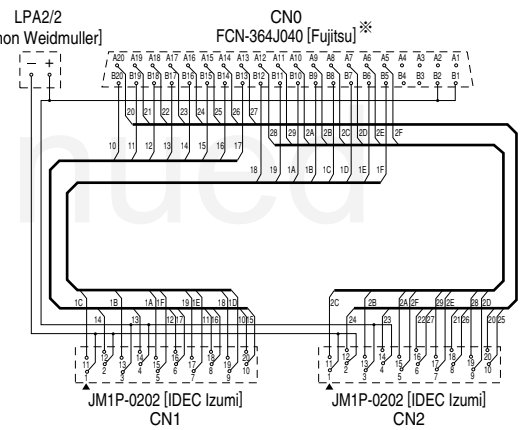
●FMA-TF3120-MBA



●FMA-TF3120-MBB



Circuit diagram



※Differs from Mitsubishi Electric's pin arrangement identification method.

Specifications

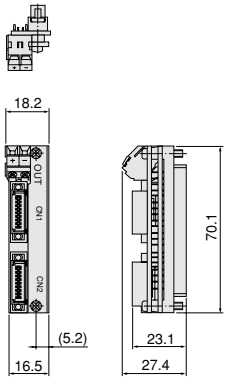
Parts		Branch unit (Input)	Branch unit (Input)
Model		**FMA-TF3120-OR**	**FMA-TF3120-MBA, FMA-TF3120-MBB**
Compatible PC	PC manufacturer	OMRON	Mitsubishi Electric
	Compatible with 32-input model	C200H-ID216	A1SX41
	Compatible with 64-input model (32-input×2)	C500-ID219, C200H-ID217	AX42, A1SX42Note
Rated voltage		DC24V	
Rated current		0.3A/input, 2A/unit	0.3A/input, 2A/unit
Dielectric strength		AC250V r.m.s.	
Tightening torque for the terminal screw		0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]	
AWG		No.26...14	
Connecting wire size (Terminal block)		0.13～2.5mm² [0.00020～0.00388in²]	
Solid wire 〈H05(07) V-U〉		0.5～2.5mm² [0.00078～0.00388in²]	
Stranded wire 〈H05(07) V-K〉		0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Installed terminal block (For power supply)		LPA2/2 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364J040 〈Made by Fujitsu〉	
Installed connector (20 pins, half pitch)		JM1P-0202 〈Made by IDEC Izumi〉	
Mating connector (20 pins, half pitch)		JM1S-0203 〈Made by IDEC Izumi〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		25g [0.88oz.]	

Note : When using with the Mitsubishi Electric A1SX42, use it in combination with one **FMA-TF3120-MBA** and one **FMA-TF3120-MBB**.
Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

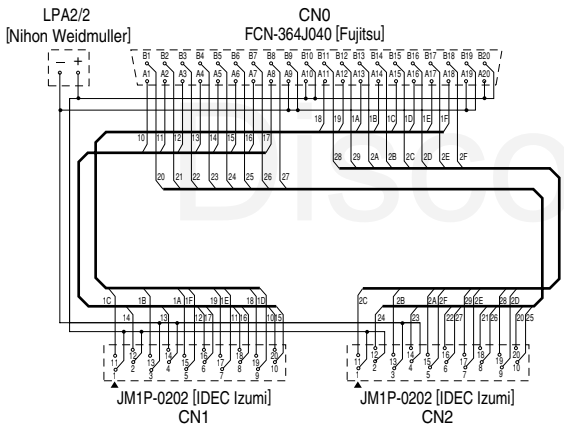
Branch Unit, Programmable Controller Direct Connecting Type
For OMRON, Output/For Mitsubishi Electric, Output

●Branch unit (Output)［For OMRON］
FMA-TF3020-OR

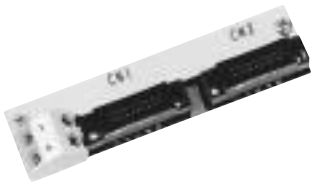
Dimensions (mm)



Circuit diagram

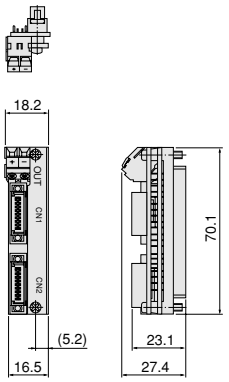


●Branch unit (Output)［For Mitsubishi Electric］
FMA-TF3020-MBA, **FMA-TF3020-MBB**

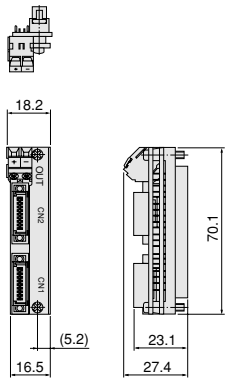


Dimensions (mm)

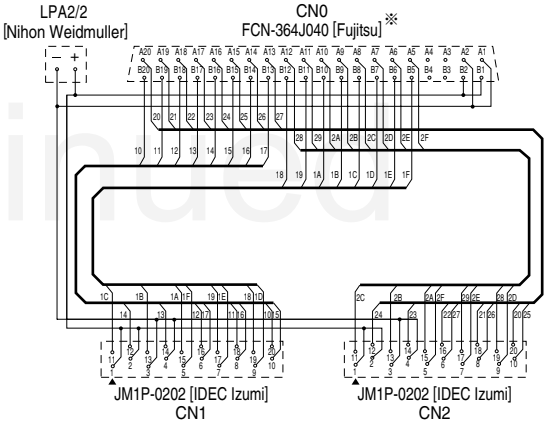
●FMA-TF3020-MBA



●FMA-TF3020-MBB



Circuit diagram



※Differs from Mitsubishi Electric's pin arrangement identification method.

Specifications

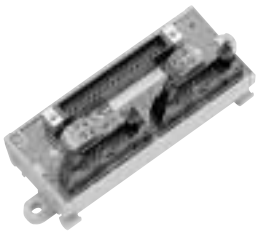
Parts		Branch unit (Output)	Branch unit (Output)
Model		**FMA-TF3020-OR**	**FMA-TF3020-MBA**, **FMA-TF3020-MBB**
Compatible PC	PC manufacturer	OMRON	Mitsubishi Electric
	Compatible with 32-output model	C200H-OD218	A1SY41
	Compatible with 64-output model (32-output×2)	C500-OD213, C200H-OD219	AY42, A1SY42Note
Rated voltage		DC24V	
Rated current		0.3A/output, 2A/unit	0.3A/output, 2A/unit
Dielectric strength		AC250V r.m.s.	
Tightening torque for the terminal screw		0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]	
AWG		No.26...14	
Connecting wire size (Terminal block)		0.13～2.5mm² [0.00020～0.00388in²]	
Solid wire〈H05〈07〉V-U〉		0.5～2.5mm² [0.00078～0.00388in²]	
Stranded wire〈H05〈07〉V-K〉		0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Installed terminal block (For power supply)		LPA2/2〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364J040〈Made by Fujitsu〉	
Installed connector (20 pins, half pitch)		JM1P-0202〈Made by IDEC Izumi〉	
Mating connector (20 pins, half pitch)		JM1S-0203〈Made by IDEC Izumi〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		25g [0.88oz.]	

Note : When using with the Mitsubishi Electric A1SY42, use it in combination with one **FMA-TF3020-MBA** and one **FMA-TF3020-MBB**.
Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

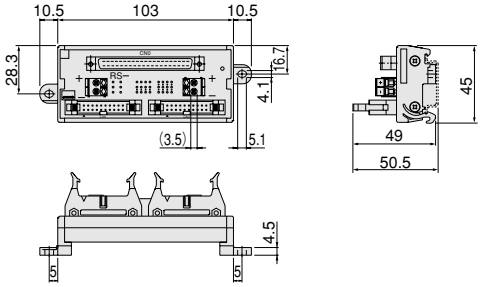
Branch Unit, DIN Rail Mounting Type For OMRON, Input

For the circuit diagrams and specifications of branch units for other manufacturers, consult us.

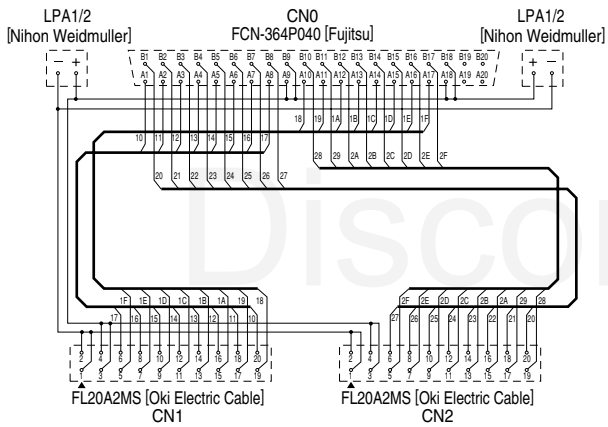
●**Branch unit (Input)**
FMA-TF4120-OR
FCN connector type



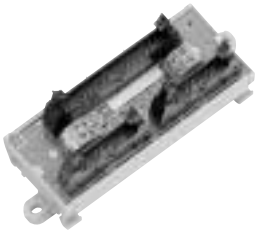
Dimensions (mm)



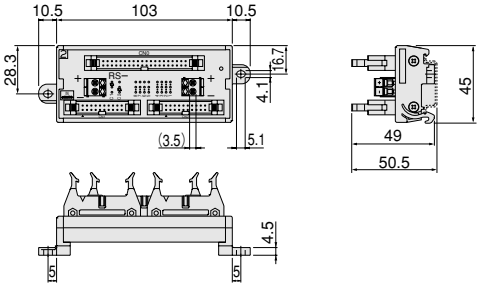
Circuit diagram



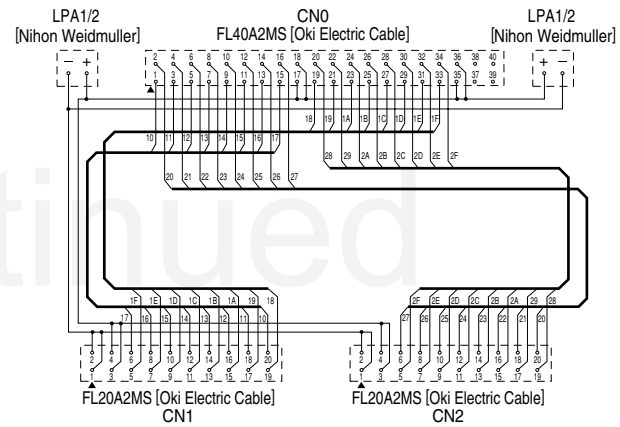
●**Branch unit (Input)**
FMA-TE4120-OR
MIL connector type



Dimensions (mm)



Circuit diagram



Specifications

Parts		Branch unit (Input) FCN connector type	Branch unit (Input) MIL connector type
Model		**FMA-TF4120-OR**	**FMA-TE4120-OR**
Compatible PC	PC manufacturer	OMRON	
	Compatible with 32-input model	C200H-ID216, CQM1-ID213	
	Compatible with 64-input model (32-input×2)	C500-ID219, C200H-ID217	
Rated voltage		DC24V	
Rated current		0.3A/input, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw		0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]	
AWG		No.26...14	
Connecting wire size (Terminal block)		0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire 〈H05〈07〉V-U〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire 〈H05〈07〉V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Installed terminal block (For power supply)		LPA1/2 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040 〈Made by Fujitsu〉	FL40A2MS 〈Made by Oki Electric Cable〉 Note
Installed MIL connector (20 pins)		FL20A2MS 〈Made by Oki Electric Cable〉	
Mating connector (40 pins)		FCN-367J040 〈Made by Fujitsu〉	FL40A2FO 〈Made by Oki Electric Cable〉 or equivalent Note
Mating MIL connector (20 pins)		FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Operating temperature range		−25～80°C [−13～176°F]	
Mass		85g [3.00oz.]	80g [2.82oz.]

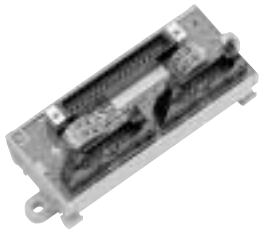
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

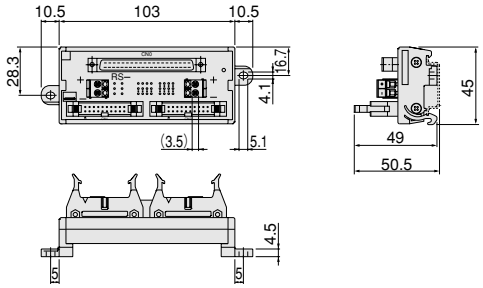
Branch Unit, DIN Rail Mounting Type For Mitsubishi Electric, Input

For the circuit diagrams and specifications of branch units for other manufacturers, consult us.

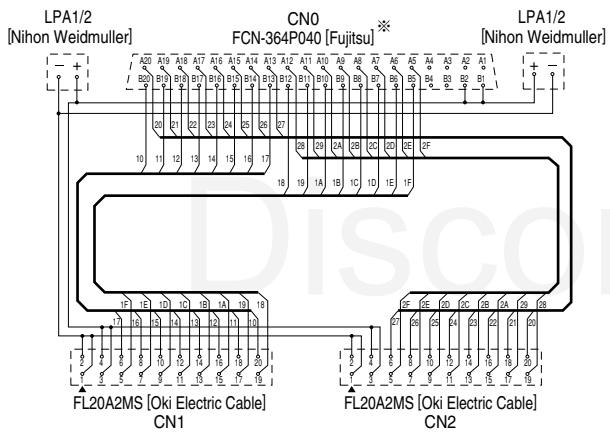
●**Branch unit (Input)**
FMA-TF4120-MB
FCN connector type



Dimensions (mm)

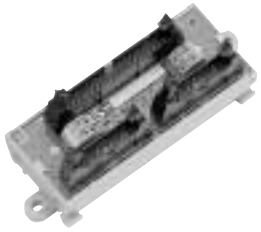


Circuit diagram

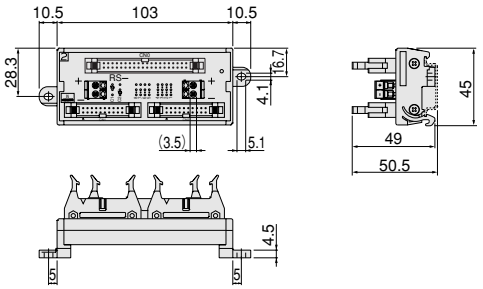


※Differs from Mitsubishi Electric's pin arrangement identification method.

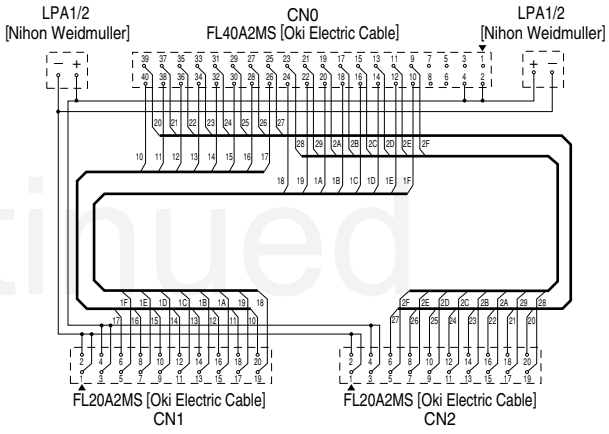
●**Branch unit (Input)**
FMA-TE4120-MB
MIL connector type



Dimensions (mm)



Circuit diagram



Specifications

Parts		Branch unit (Input) FCN connector type	Branch unit (Input) MIL connector type
Model		**FMA-TF4120-MB**	**FMA-TE4120-MB**
Compatible PC	PC manufacturer	Mitsubishi Electric	
	Compatible with 32-input model	A1SX41, AJ35TC1-32D	
	Compatible with 64-input model (32-input×2)	AX42, A1SX42	
Rated voltage		DC24V	
Rated current		0.3A/input, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw		0.4～0.6N·m {0.04～0.06kgf·m} [3.5～5.3in·lbf]	
AWG		No.26...14	
Connecting wire size (Terminal block)		0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire 〈H05(07) V-U〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire 〈H05(07) V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Installed terminal block (For power supply)		LPA1/2 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040 〈Made by Fujitsu〉	FL40A2MS 〈Made by Oki Electric Cable〉 Note
Installed MIL connector (20 pins)		FL20A2MS 〈Made by Oki Electric Cable〉	
Mating connector (40 pins)		FCN-367J040 〈Made by Fujitsu〉	FL40A2FO 〈Made by Oki Electric Cable〉 or equivalent Note
Mating MIL connector (20 pins)		FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Operating temperature range		−25～80°C [−13～176°F]	
Mass		85g [3.00oz.]	80g [2.82oz.]

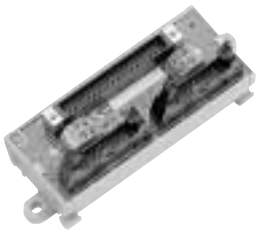
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark: Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

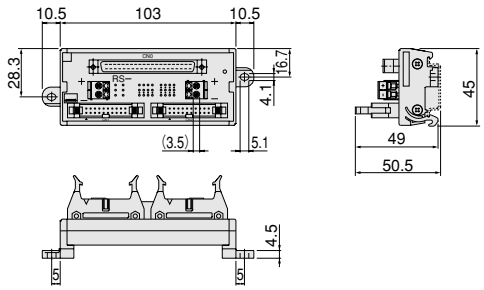
Branch Unit, DIN Rail Mounting Type For OMRON, Output

For the circuit diagrams and specifications of branch units for other manufacturers, consult us.

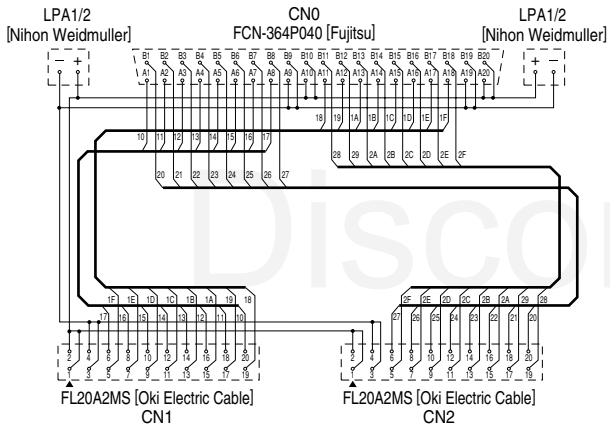
●**Branch unit (Output)**
FMA-TF4020-OR
FCN connector type



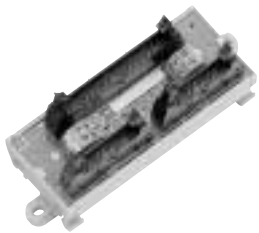
Dimensions (mm)



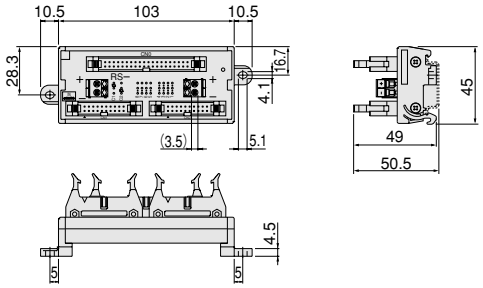
Circuit diagram



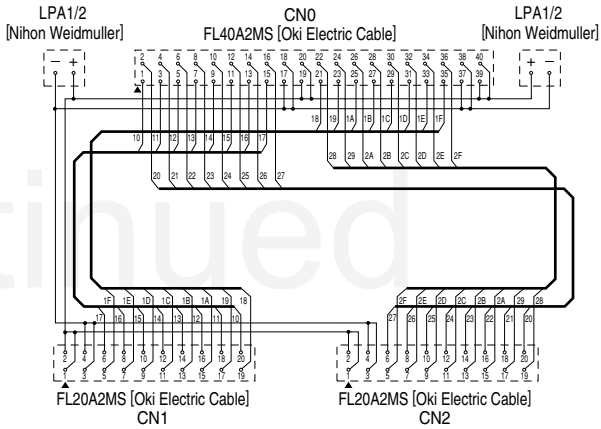
●**Branch unit (Output)**
FMA-TE4020-OR
MIL connector type



Dimensions (mm)



Circuit diagram



Specifications

Parts		Branch unit (Output) FCN connector type	Branch unit (Output) MIL connector type
Model		**FMA-TF4020-OR**	**FMA-TE4020-OR**
Compatible PC	PC manufacturer	OMRON	
	Compatible with 32-output model	C200H-OD218, CQM1-OD213	
	Compatible with 64-output model (32-output×2)	C500-OD213, C200H-OD219	
Rated voltage		DC24V	
Rated current		0.3A/output, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw		0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]	
AWG		No.26...14	
Connecting wire size (Terminal block)		0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire〈H05〈07〉V-U〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire〈H05〈07〉V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Installed terminal block (For power supply)		LPA1/2〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040〈Made by Fujitsu〉	FL40A2MS〈Made by Oki Electric Cable〉 Note
Installed MIL connector (20 pins)		FL20A2MS〈Made by Oki Electric Cable〉	
Mating connector (40 pins)		FCN-367J040〈Made by Fujitsu〉	FL40A2FO〈Made by Oki Electric Cable〉 or equivalent Note
Mating MIL connector (20 pins)		FL20A2FO〈Made by Oki Electric Cable〉 or equivalent	
Operating temperature range		−25～80°C [−13～176°F]	
Mass		85g [3.00oz.]	80g [2.82oz.]

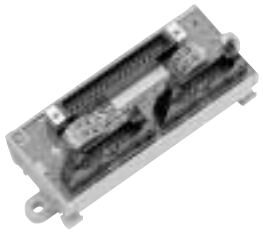
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

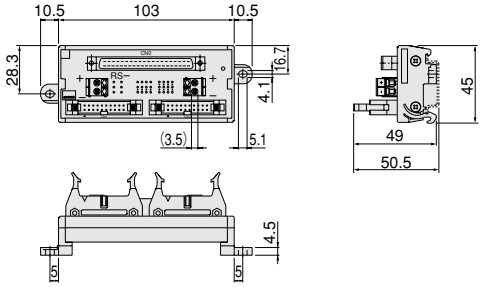
Branch Unit, DIN Rail Mounting Type For Mitsubishi Electric, Output

For the circuit diagrams and specifications of branch units for other manufacturers, consult us.

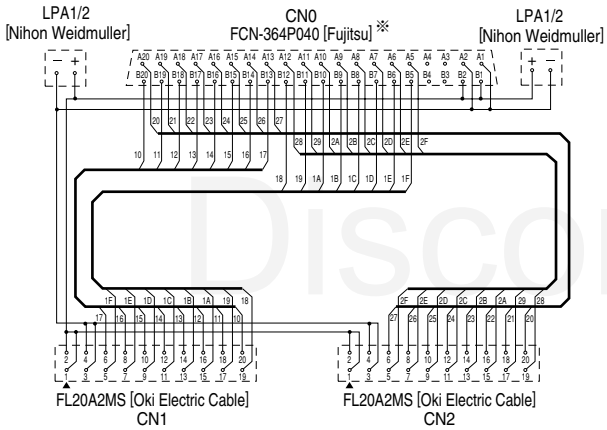
●Branch unit (Output)
FMA-TF4020-MB
FCN connector type



Dimensions (mm)

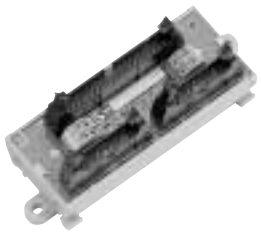


Circuit diagram

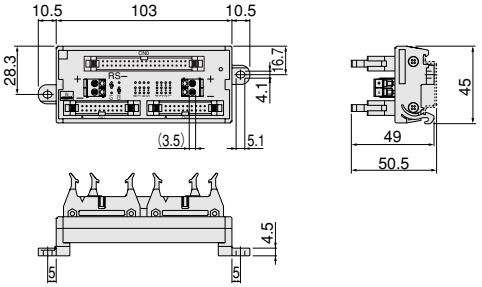


※Differs from Mitsubishi Electric's pin arrangement identification method.

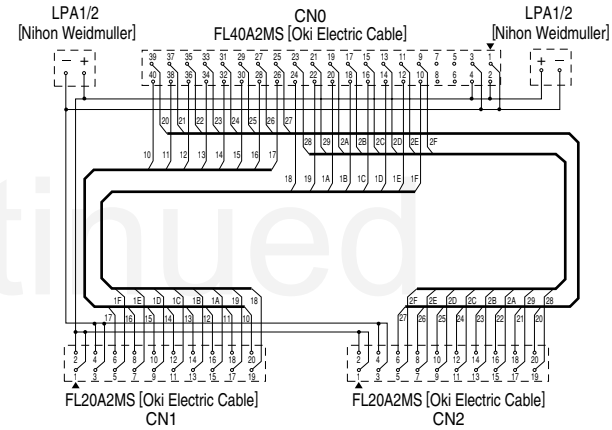
●Branch unit (Output)
FMA-TE4020-MB
MIL connector type



Dimensions (mm)



Circuit diagram



Specifications

Parts		Branch unit (Output) FCN connector type	Branch unit (Output) MIL connector type
Model		FMA-TF4020-MB	FMA-TE4020-MB
Compatible PC	PC manufacturer	Mitsubishi Electric	
	Compatible with 32-output model	A1SY41, AJ35TC1-32T	
	Compatible with 64-output model (32-output×2)	AY42, A1SY42	
Rated voltage		DC24V	
Rated current		0.3A/output, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw		0.4～0.6N·m {0.04～0.06kgf·m} [3.5～5.3in·lbf]	
AWG		No.26...14	
Connecting wire size (Terminal block)		0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire 〈H05〈07〉V-U〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire 〈H05〈07〉V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Installed terminal block (For power supply)		LPA1/2 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040 〈Made by Fujitsu〉	FL40A2MS 〈Made by Oki Electric Cable〉 Note
Installed MIL connector (20 pins)		FL20A2MS 〈Made by Oki Electric Cable〉	
Mating connector (40 pins)		FCN-367J040 〈Made by Fujitsu〉	FL40A2FO 〈Made by Oki Electric Cable〉 or equivalent Note
Mating MIL connector (20 pins)		FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Operating temperature range		−25～80°C [−13～176°F]	
Mass		85g [3.00oz.]	80g [2.82oz.]

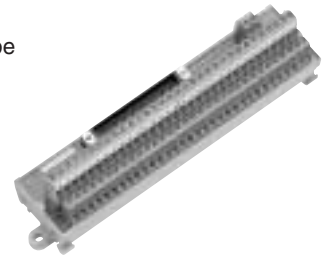
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

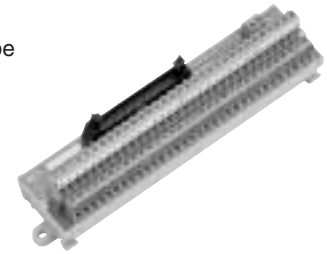
32-input Unit
For OMRON, Input

For the circuit diagrams and specifications of input units for other manufacturers, consult us.

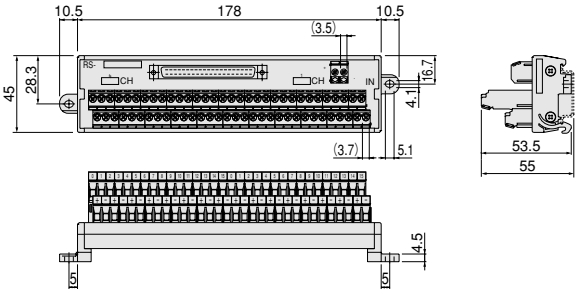
●**32-input unit**
FMA-TM1132-OR
FCN connector type



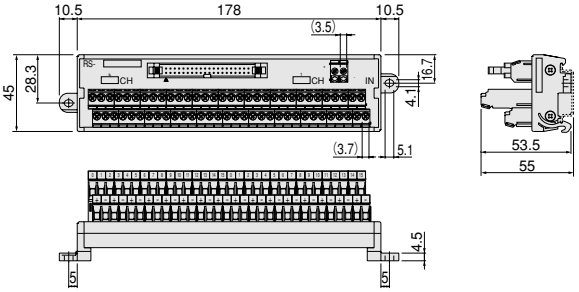
●**32-input unit**
FMA-TL1132-OR
MIL connector type



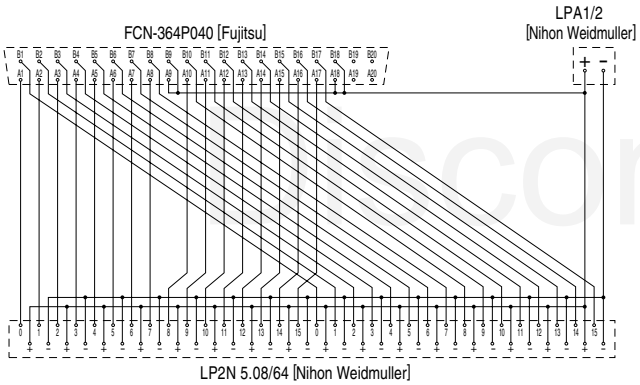
Dimensions (mm)



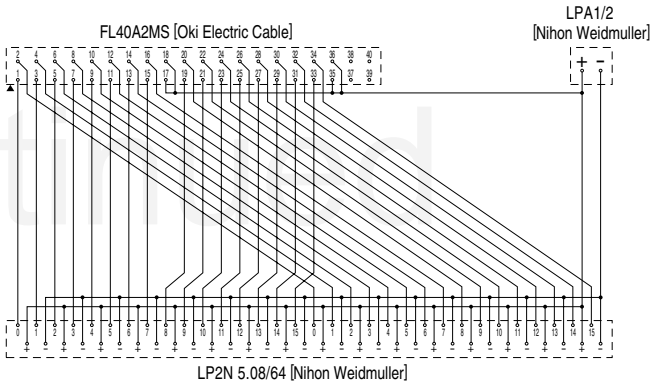
Dimensions (mm)



Circuit diagram



Circuit diagram



Specifications

Parts		32-input unit FCN connector type	32-input unit MIL connector type
Model		FMA-TM1132-OR	FMA-TL1132-OR
Compatible PC	PC manufacturer	OMRON	
	Compatible with 32-input model	C200H-ID216, CQM1-ID213	
	Compatible with 64-input model (32-input×2)	C500-ID219, C200H-ID217	
Rated voltage		DC24V	
Rated current		0.3A/input, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw (terminal block for input/terminal block for power supply)		0.5～0.6N・m {0.05～0.06kgf・m} [4.4～5.3in・lbf]／0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]	
AWG (terminal block for input/terminal block for power supply)		No.26...12／No.26...14	
Connecting wire size (terminal block for input/terminal block for power supply)		0.13～4mm² [0.00020～0.00620in.²]／0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire 〈H05 (07) V-U〉 (terminal block for input/terminal block for power supply)		0.5～4mm² [0.00078～0.00620in.²]／0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire 〈H05 (07) V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Terminal block for input		LP2N5.08/64 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040 〈Made by Fujitsu〉	FL40A2MS 〈Made by Oki Electric Cable〉 Note
Mating connector (40 pins)		FCN-367J040 〈Made by Fujitsu〉	FL40A2FO 〈Made by Oki Electric Cable〉 or equivalent Note
Terminal block for power supply		LPA1/2 〈Made by Nihon Weidmuller〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		215g [7.58oz.]	210g [7.41oz.]

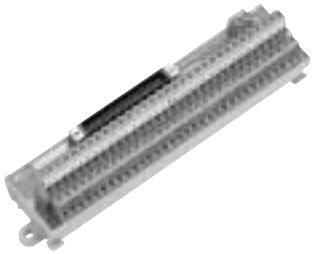
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

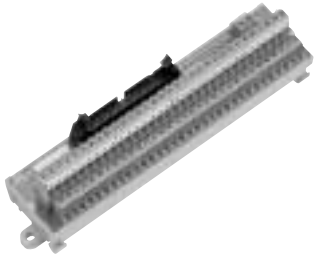
32-input Unit
For Mitsubishi Electric, Input

For the circuit diagrams and specifications of input units for other manufacturers, consult us.

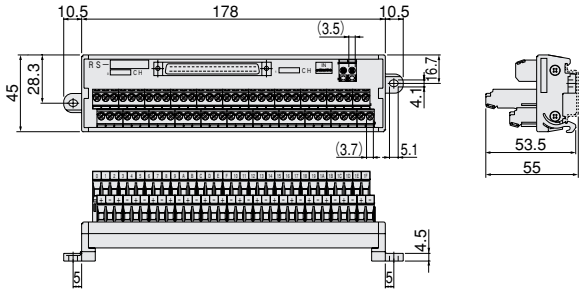
●**32-input unit**
FMA-TM1132-MB
FCN connector type



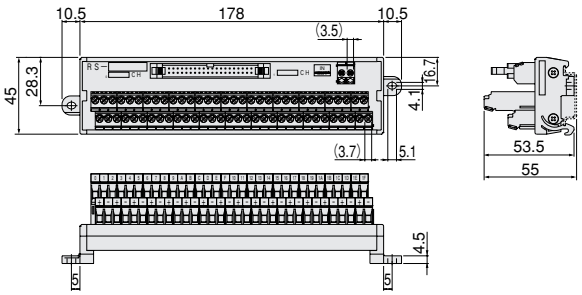
●**32-input unit**
FMA-TL1132-MB
MIL connector type



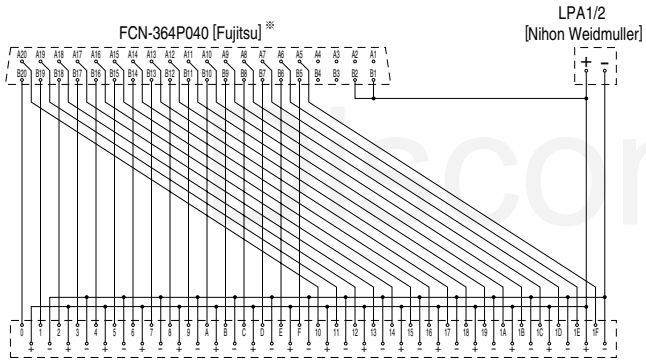
Dimensions (mm)



Dimensions (mm)

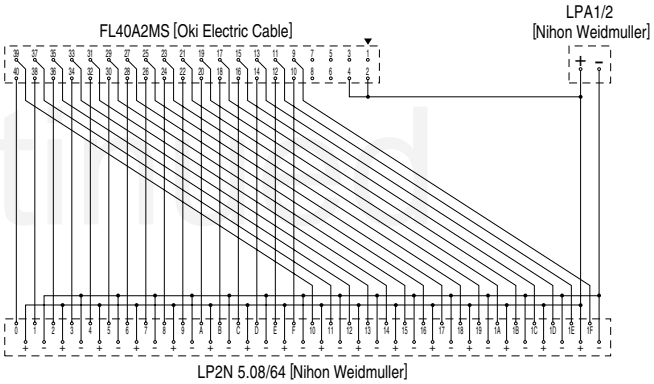


Circuit diagram



※Differs from Mitsubishi Electric's pin arrangement identification method.

Circuit diagram



Specifications

Parts		32-input unit FCN connector type	32-input unit MIL connector type
Model		FMA-TM1132-MB	FMA-TL1132-MB
Compatible PC	PC manufacturer	Mitsubishi Electric	
	Compatible with 32-input model	A1SX41, AJ35TC1-32D	
	Compatible with 64-input model (32-input×2)	AX42, A1SX42	
Rated voltage		DC24V	
Rated current		0.3A/input, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw (terminal block for input/terminal block for power supply)		0.5～0.6N･m {0.05～0.06kgf･m} [4.4～5.3in･lbf]／0.4～0.6N･m {0.04～0.06kgf･m} [3.5～5.3in･lbf]	
AWG (terminal block for input/terminal block for power supply)		No.26...12／No.26...14	
Connecting wire size (terminal block for input/terminal block for power supply)		0.13～4mm² [0.00020～0.00620in²]／0.13～2.5mm² [0.00020～0.00388in²]	
Solid wire 〈H05(07) V-U〉 (terminal block for input/terminal block for power supply)		0.5～4mm² [0.00078～0.00620in²]／0.5～2.5mm² [0.00078～0.00388in²]	
Stranded wire 〈H05(07) V-K〉		0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Terminal block for input		LP2N5.08/64 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040 〈Made by Fujitsu〉	FL40A2MS 〈Made by Oki Electric Cable〉 Note
Mating connector (40 pins)		FCN-367J040 〈Made by Fujitsu〉	FL40A2FO 〈Made by Oki Electric Cable〉 or equivalent Note
Terminal block for power supply		LPA1/2 〈Made by Nihon Weidmuller〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		215g [7.58oz.]	210g [7.41oz.]

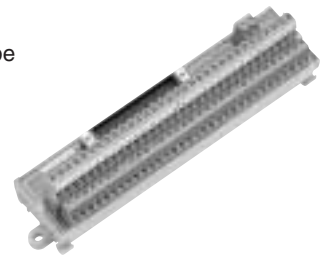
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

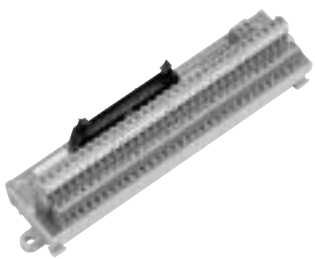
32-output Unit
For OMRON, Output

For the circuit diagrams and specifications of output units for other manufacturers, consult us.

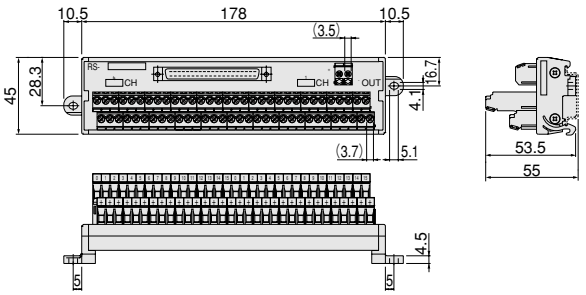
●**32-output unit**
FMA-TM1032-OR
FCN connector type



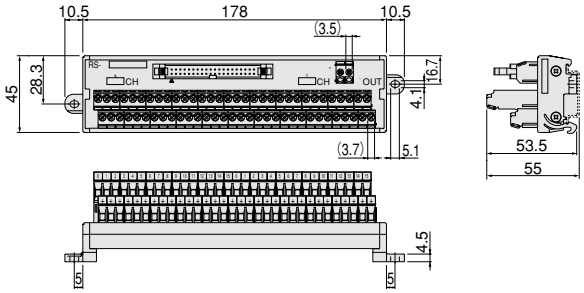
●**32-output unit**
FMA-TL1032-OR
MIL connector type



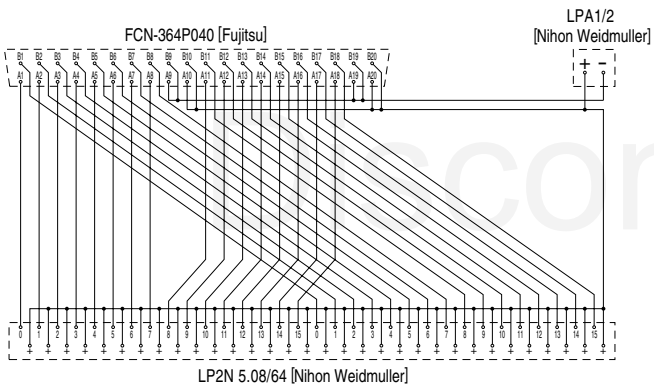
Dimensions (mm)



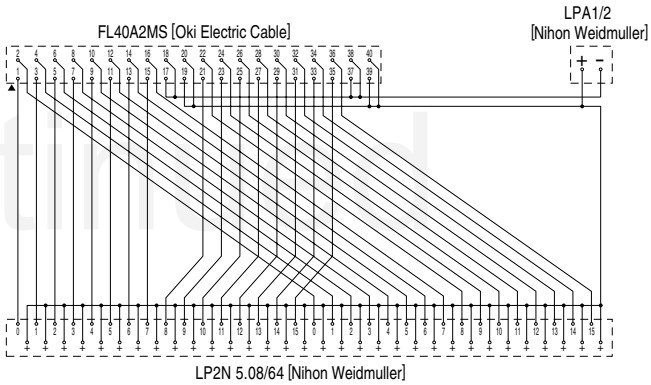
Dimensions (mm)



Circuit diagram



Circuit diagram



Specifications

Parts		32-output unit FCN connector type	32-output unit MIL connector type
Model		FMA-TM1032-OR	FMA-TL1032-OR
Compatible PC	PC manufacturer	OMRON	
	Compatible with 32-output model	C200HOD218, CQM1-OD213	
	Compatible with 64-output model (32-output×2)	C500-OD213, C200H-OD219	
Rated voltage		DC24V	
Rated current		0.3A/output, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw (terminal block for output/terminal block for power supply)		0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]／0.4～0.6N·m {0.04～0.06kgf·m} [3.5～5.3in·lbf]	
AWG (terminal block for output/terminal block for power supply)		No.26...12／No.26...14	
Connecting wire size (terminal block for output / terminal block for power supply)		0.13～4mm² [0.00020～0.00620in.²]／0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire〈H05 (07) V-U〉(terminal block for output / terminal block for power supply)		0.5～4mm² [0.00078～0.00620in.²]／0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire〈H05〈07〉V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Terminal block for output		LP2N5.08/64〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040〈Made by Fujitsu〉	FL40A2MS〈Made by Oki Electric Cable〉Note
Mating connector (40 pins)		FCN-367J040〈Made by Fujitsu〉	FL40A2FO〈Made by Oki Electric Cable〉or equivalent Note
Terminal block for power supply		LPA1/2〈Made by Nihon Weidmuller〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		215g [7.58oz.]	210g [7.41oz.]

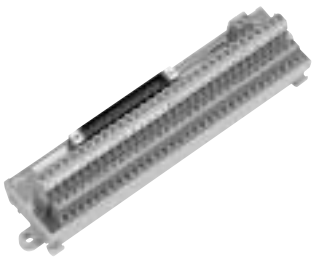
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

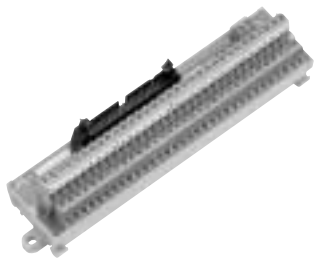
32-output Unit
For Mitsubishi Electric, Output

For the circuit diagrams and specifications of output units for other manufacturers, consult us.

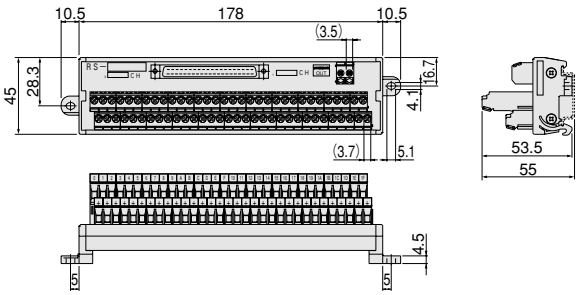
●**32-output unit**
FMA-TM1032-MB
FCN connector type



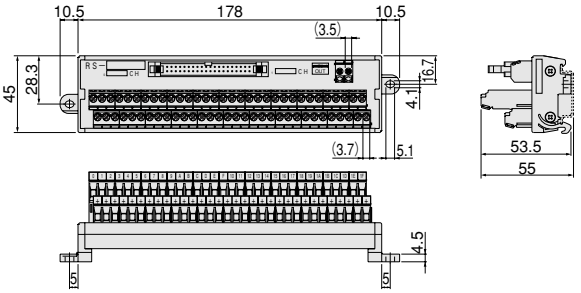
●**32-output unit**
FMA-TL1032-MB
MIL connector type



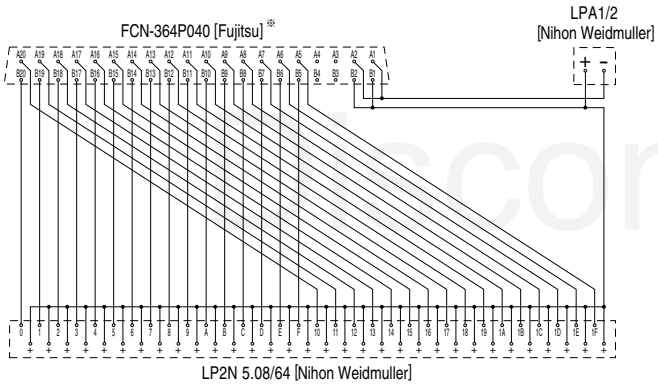
Dimensions (mm)



Dimensions (mm)

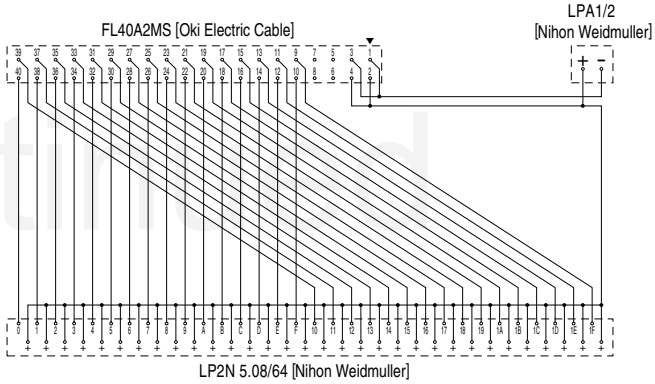


Circuit diagram



※Differs from Mitsubishi Electric's pin arrangement identification method.

Circuit diagram



Specifications

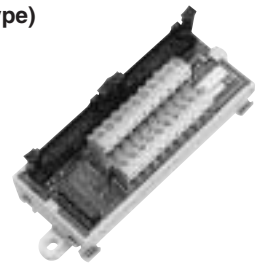
Parts		32-output unit FCN connector type	32-output unit MIL connector type
Model		FMA-TM1032-MB	FMA-TL1032-MB
Compatible PC	PC manufacturer	Mitsubishi Electric	
	Compatible with 32-output model	A1SY41, AJ35TC1-32T	
	Compatible with 64-output model (32-output×2)	AY42, A1SY42	
Rated voltage		DC24V	
Rated current		0.3A/output, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw (terminal block for output / terminal block for power supply)		0.5～0.6N・m {0.05～0.06kgf・m} [4.4～5.3in・lbf]／0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]	
AWG (terminal block for output / terminal block for power supply)		No.26...12／No.26...14	
Connecting wire size (terminal block for output / terminal block for power supply)		0.13～4mm² [0.00020～0.00620in.²]／0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire〈H05 (07) V-U〉(terminal block for output / terminal block for power supply)		0.5～4mm² [0.00078～0.00620in.²]／0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire〈H05〈07〉V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Terminal block for output		LP2N5.08/64〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040〈Made by Fujitsu〉	FL40A2MS〈Made by Oki Electric Cable〉Note
Mating connector (40 pins)		FCN-367J040〈Made by Fujitsu〉	FL40A2FO〈Made by Oki Electric Cable〉or equivalent Note
Terminal block for power supply		LPA1/2〈Made by Nihon Weidmuller〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		215g [7.58oz.]	210g [7.41oz.]

Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS.The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

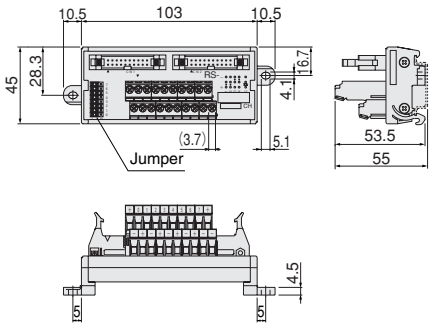
Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

8- and 16-input Unit
DIN Rail Mounting Type

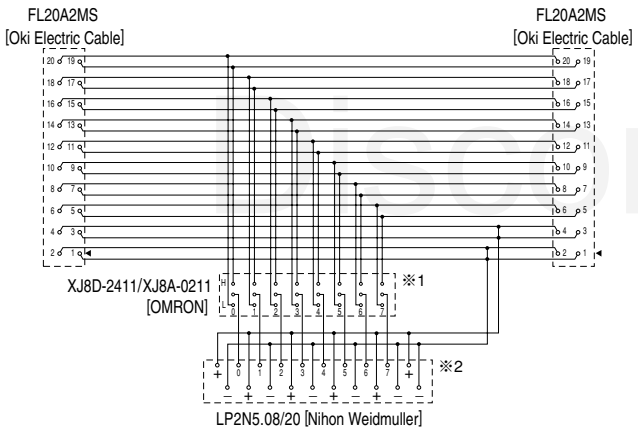
●8-input unit
(DIN rail mounting type)
FMA-TM1108



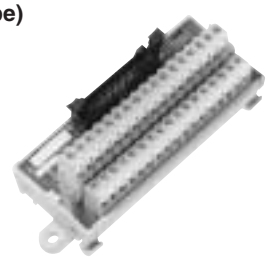
Dimensions (mm)



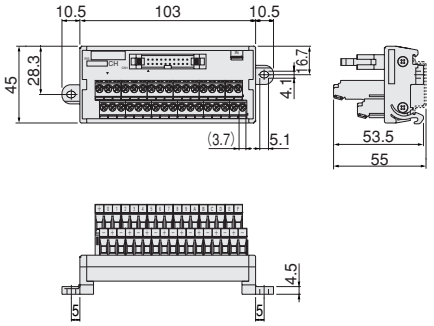
Circuit diagram



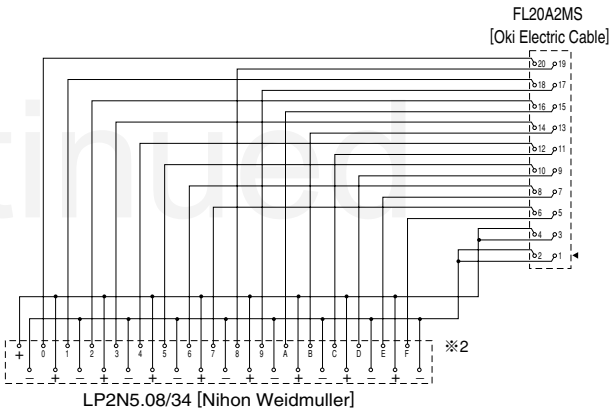
●16-input unit
(DIN rail mounting type)
FMA-TM1116



Dimensions (mm)



Circuit diagram



※1: By switching the jumper(short-circuit socket), freely select either H or L.
※2: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0···16, A···F.

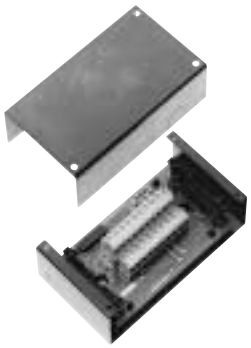
Specifications

Parts	8-input unit (DIN rail mounting type)	16-input unit (DIN rail mounting type)
Model	FMA-TM1108	FMA-TM1116
Rated voltage	DC24V	
Rated current	0.3A/input, 1A/unit	0.3A/input, 2A/unit
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in²]	
Solid wire 〈H05〈07〉V-U〉	0.5～4mm² [0.00078～0.00620in²]	
Stranded wire 〈H05〈07〉V-K〉	0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for input	LP2N5.08/20 〈Made by Nihon Weidmuller〉	LP2N5.08/34 〈Made by Nihon Weidmuller〉
Installed MIL connector (20 pins)	FL20A2MS 〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	105g [3.70oz.]	125g [4.41oz.]

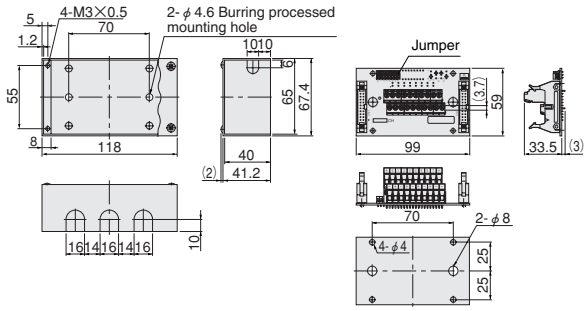
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-ID218CN, C200H-ID215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

8- and 16-input Unit Box-mounting Type

●8-input unit (Box-mounting type) FMA-TM2108

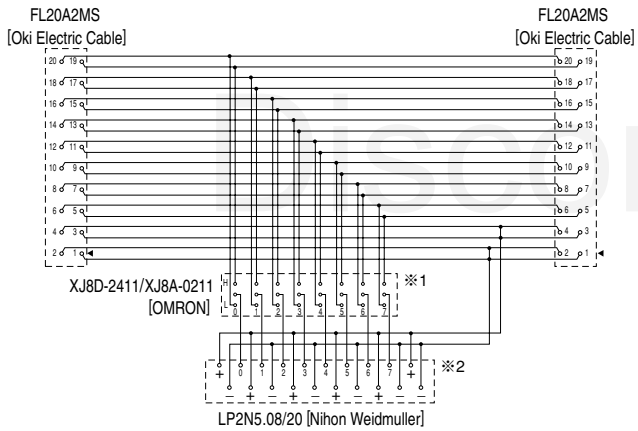


Dimensions (mm)

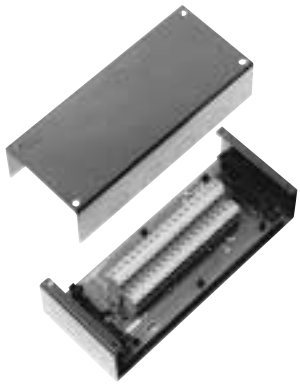


※This drawing is scaled differently from the other drawings.

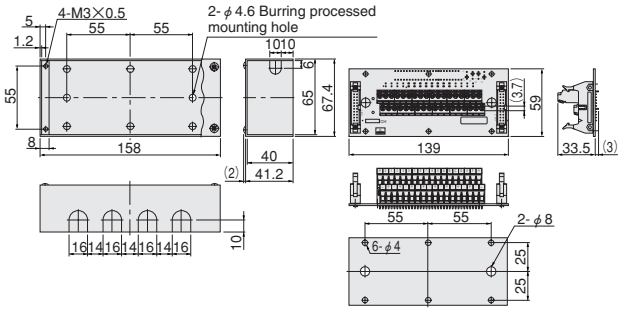
Circuit diagram



●16-input unit (Box-mounting type) FMA-TM2116

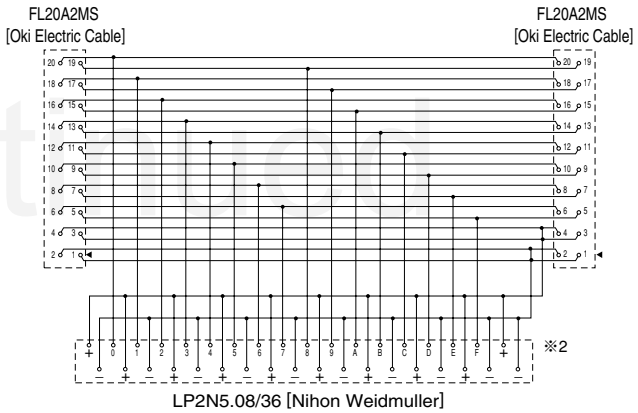


Dimensions (mm)



※This drawing is scaled differently from the other drawings.

Circuit diagram



※1: By switching the jumper(short-circuit socket), freely select either H or L.
※2: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0…16, A…F.

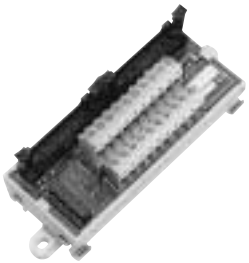
Specifications

Parts	8-input unit (Box-mounting type)	16-input unit (Box-mounting type)
Model	FMA-TM2108	FMA-TM2116
Rated voltage	DC24V	
Rated current	0.3A/input, 1A/unit	0.3A/input, 2A/unit
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in.²]	
Solid wire 〈H05(07) V-U〉	0.5～4mm² [0.00078～0.00620in.²]	
Stranded wire 〈H05(07) V-K〉	0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for input	LP2N5.08/20 〈Made by Nihon Weidmuller〉	LP2N5.08/36 〈Made by Nihon Weidmuller〉
Installed MIL connector (20 pins)	FL20A2MS 〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Materials of box/surface treatment	SPCC/Black zinc plated (MFZnD)	
Plate thickness	1.2mm [0.047in.]	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	365g [12.87oz.]	480g [16.93oz.]

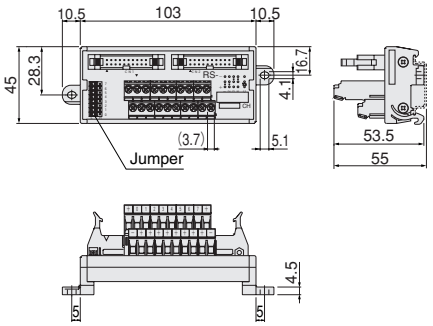
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-ID218CN, C200H-ID215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

8- and 16-output Unit
DIN Rail Mounting Type

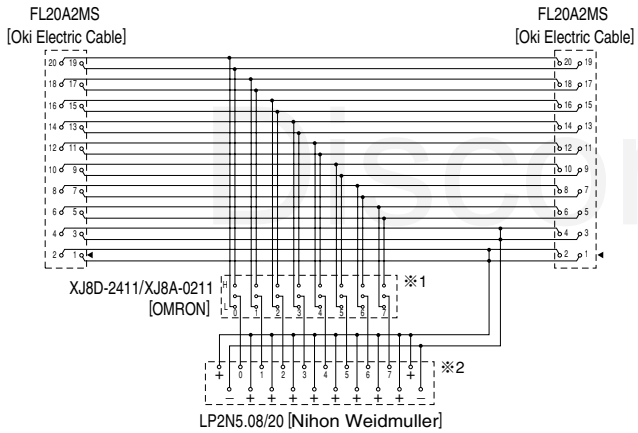
●8-output unit (DIN rail mounting type)
FMA-TM1008



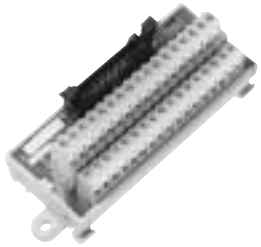
Dimensions (mm)



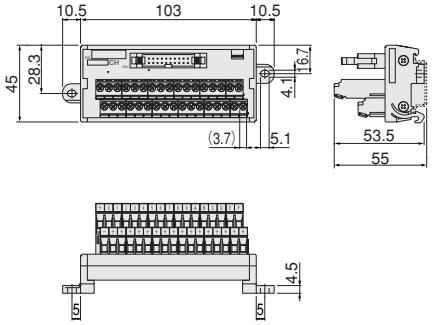
Circuit diagram



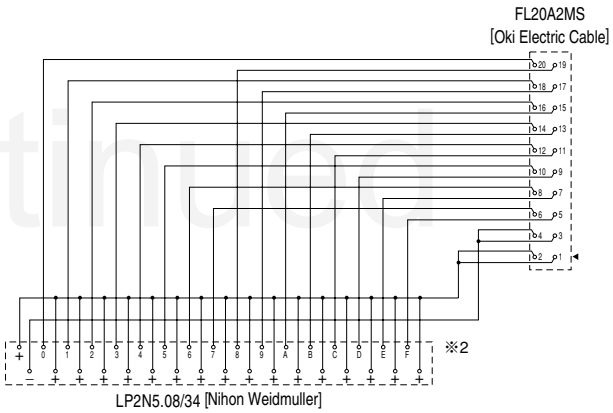
●16-output unit (DIN rail mounting type)
FMA-TM1016



Dimensions (mm)



Circuit diagram



※1: By switching the jumper (short-circuit socket), freely select either H or L.
※2: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0···16, A···F.

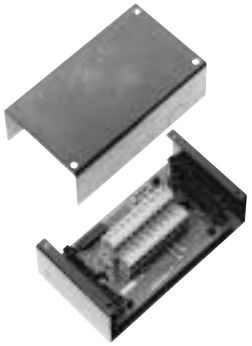
Specifications

Parts	8-output unit (DIN rail mounting type)	16-output unit (DIN rail mounting type)
Model	**FMA-TM1008**	**FMA-TM1016**
Rated voltage	DC24V	
Rated current	0.3A/output, 1A/unit	0.3A/output, 2A/unit
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in.²]	
Solid wire 〈H05〈07〉V-U〉	0.5～4mm² [0.00078～0.00620in.²]	
Stranded wire 〈H05〈07〉V-K〉	0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for output	LP2N5.08/20 〈Made by Nihon Weidmuller〉	LP2N5.08/34 〈Made by Nihon Weidmuller〉
Installed MIL connector (20 pins)	FL20A2MS 〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	105g [3.70oz.]	125g [4.41oz.]

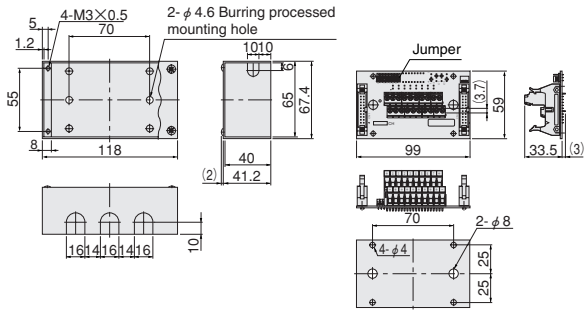
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-OD415CN, C200H-OD215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

8- and 16-output Unit Box-mounting Type

●8-output unit (Box-mounting type) FMA-TM2008

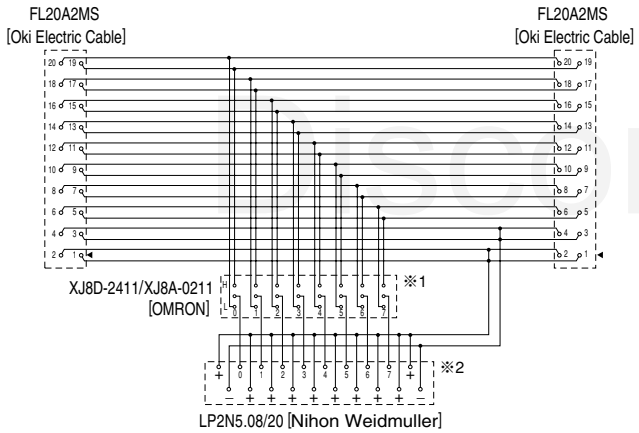


Dimensions (mm)

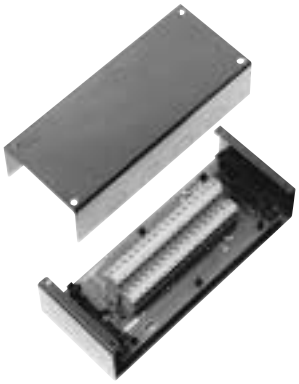


※This drawing is scaled differently from the other drawings.

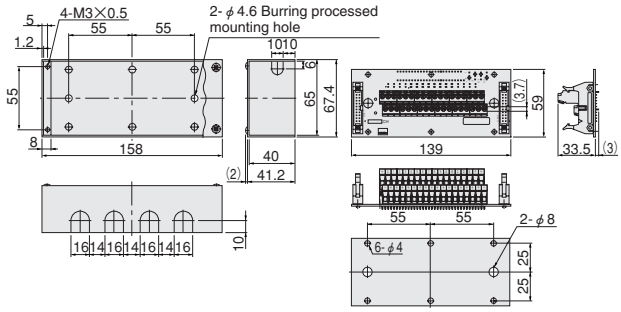
Circuit diagram



●16-output unit (Box-mounting type) FMA-TM2016

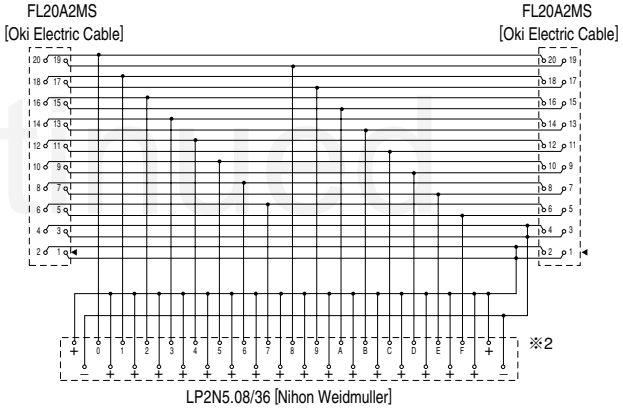


Dimensions (mm)



※This drawing is scaled differently from the other drawings.

Circuit diagram



※1: By switching the jumper(short-circuit socket), freely select either H or L.
※2: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0…16, A…F.

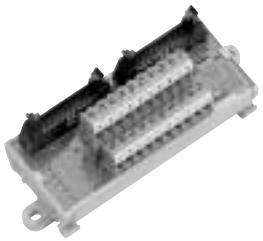
Specifications

Parts	8-output unit (Box-mounting type)	16-output unit (Box-mounting type)
Model	FMA-TM2008	FMA-TM2016
Rated voltage	DC24V	
Rated current	0.3A/output, 1A/unit	0.3A/output, 2A/unit
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in.²]	
Solid wire 〈H05(07) V-U〉	0.5～4mm² [0.00078～0.00620in.²]	
Stranded wire 〈H05(07) V-K〉	0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for output	LP2N5.08/20 〈Made by Nihon Weidmuller〉	LP2N5.08/36 〈Made by Nihon Weidmuller〉
Installed MIL connector (20 pins)	FL20A2MS 〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Materials of box/surface treatment	SPCC/Black zinc plated (MFZnD)	
Plate thickness	1.2mm [0.047in.]	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	365g [12.87oz.]	480g [16.93oz.]

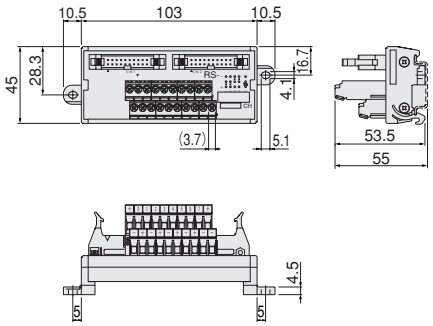
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-OD415CN, C200H-OD215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

8 LO/HI-only Inputs Unit
DIN Rail Mounting Type

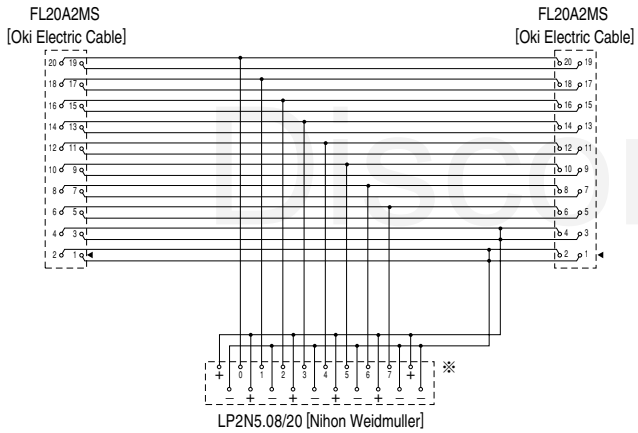
●8 LO-only inputs unit (DIN rail mounting type)
FMA-TJ1108



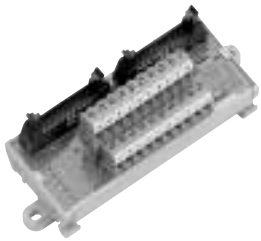
Dimensions (mm)



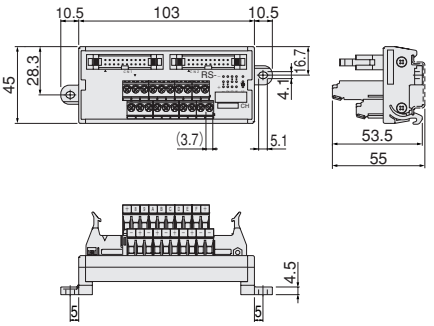
Circuit diagram



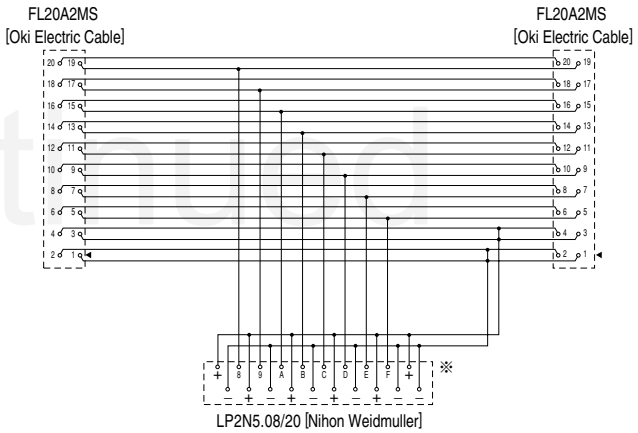
●8 HI-only inputs unit (DIN rail mounting type)
FMA-TK1108



Dimensions (mm)



Circuit diagram



※: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0···16, A···F.

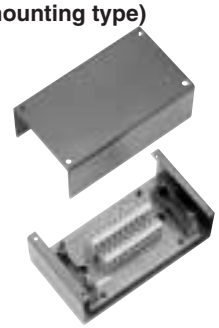
Specifications

Parts	8 LO-only inputs unit (DIN rail mounting type)	8 HI-only inputs unit (DIN rail mounting type)
Model	**FMA-TJ1108**	**FMA-TK1108**
Rated voltage	DC24V	
Rated current	0.3A/input, 1A/unit	
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in²]	
Solid wire〈H05〈07〉V-U〉	0.5～4mm² [0.00078～0.00620in²]	
Stranded wire〈H05〈07〉V-K〉	0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for input	LP2N5.08/20〈Made by Nihon Weidmuller〉	
Installed MIL connector (20 pins)	FL20A2MS〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO〈Made by Oki Electric Cable〉or equivalent	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	105g [3.70oz.]	

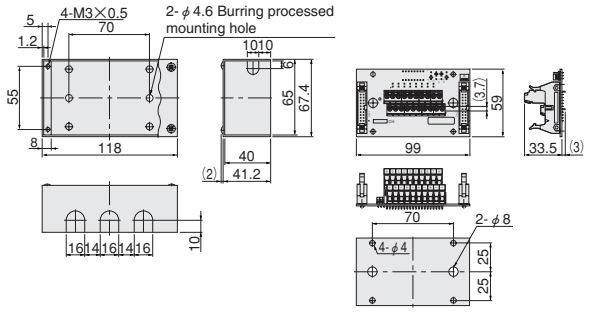
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-ID218CN, C200H-ID215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

8 LO/HI-only Inputs Unit Box-mounting Type

●8 LO-only inputs unit (Box-mounting type) FMA-TJ2108

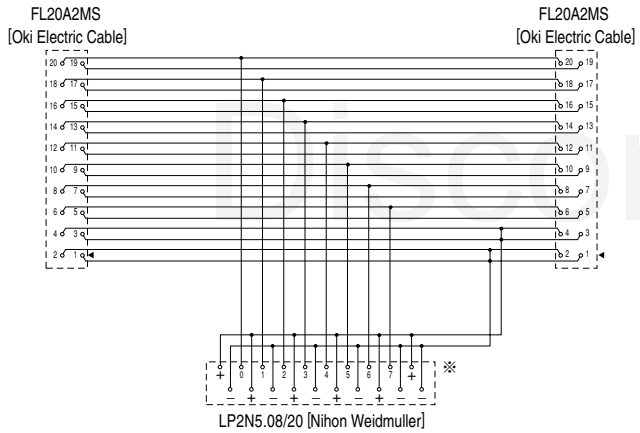


Dimensions (mm)

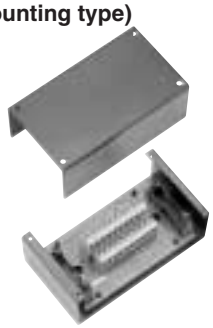


※This drawing is scaled differently from the other drawings.

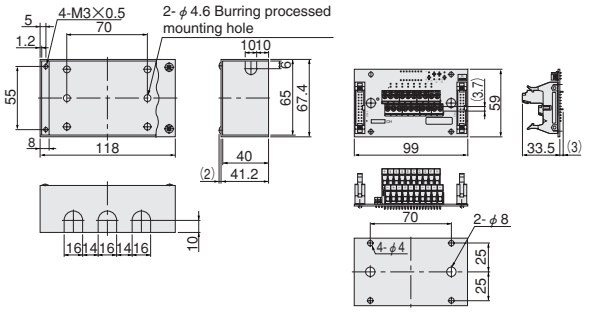
Circuit diagram



●8 HI-only inputs unit (Box-mounting type) FMA-TK2108

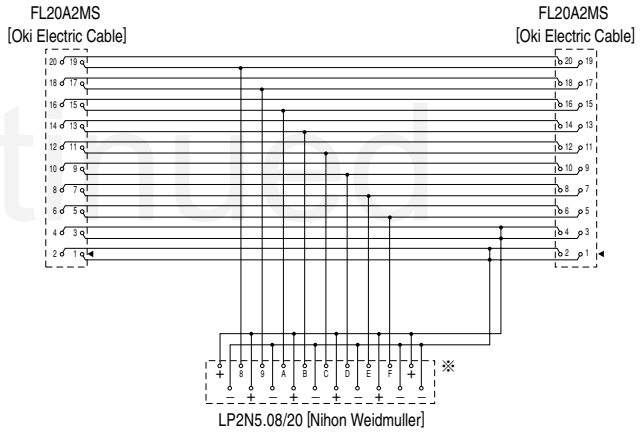


Dimensions (mm)



※This drawing is scaled differently from the other drawings.

Circuit diagram



※: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0···16, A···F.

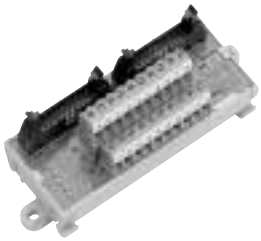
Specifications

Parts	8 LO-only inputs unit (Box-mounting type)	8 HI-only inputs unit (Box-mounting type)
Model	FMA-TJ2108	FMA-TK2108
Rated voltage	DC24V	
Rated current	0.3A/input, 1A/unit	
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N・m {0.05～0.06kgf・m} [4.4～5.3in・lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in²]	
Solid wire 〈H05〈07〉V-U〉	0.5～4mm² [0.00078～0.00620in²]	
Stranded wire 〈H05〈07〉V-K〉	0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for input	LP2N5.08/20 〈Made by Nihon Weidmuller〉	
Installed MIL connector (20 pins)	FL20A2MS 〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Materials of box/surface treatment	SPCC/Black zinc plated (MFZnD)	
Plate thickness	1.2mm [0.047in.]	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	365g [12.87oz.]	

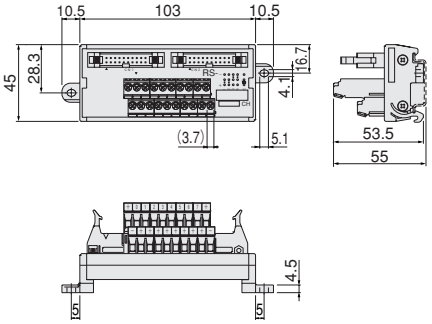
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-ID218CN, C200H-ID215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

8 LO/HI-only Outputs Unit
DIN Rail Mounting Type

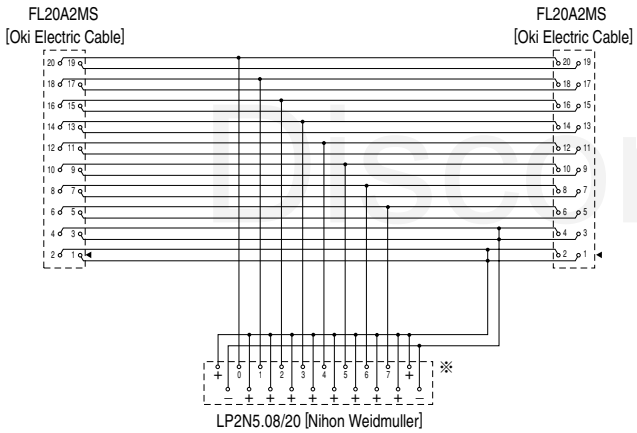
●8 LO-only outputs unit (DIN rail mounting type)
FMA-TJ1008



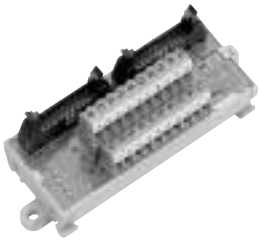
Dimensions (mm)



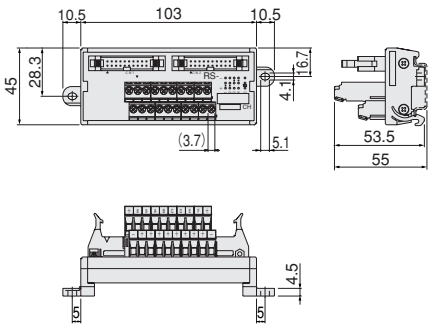
Circuit diagram



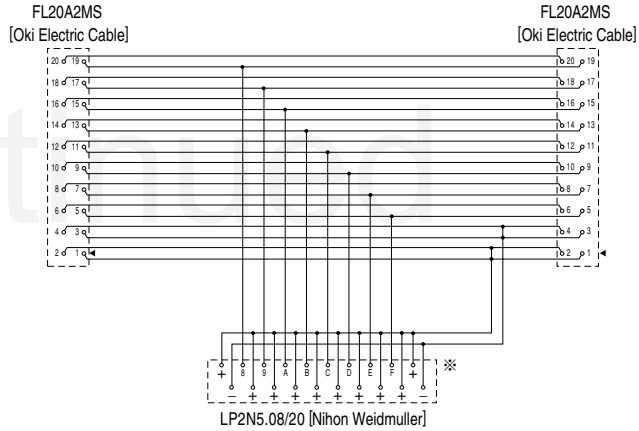
●8 HI-only outputs unit (DIN rail mounting type)
FMA-TK1008



Dimensions (mm)



Circuit diagram



※: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0···16, A···F.

Specifications

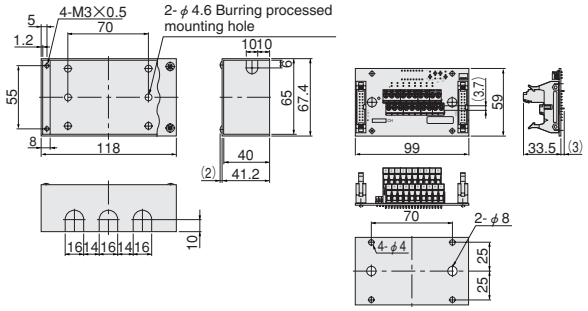
Parts	8 LO-only outputs unit (DIN rail mounting type)	8 HI-only outputs unit (DIN rail mounting type)
Model	**FMA-TJ1008**	**FMA-TK1008**
Rated voltage	DC24V	
Rated current	0.3A/output, 1A/unit	
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in²]	
Solid wire 〈H05〈07〉V-U〉	0.5～4mm² [0.00078～0.00620in²]	
Stranded wire 〈H05〈07〉V-K〉	0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for output	LP2N5.08/20 〈Made by Nihon Weidmuller〉	
Installed MIL connector (20 pins)	FL20A2MS 〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	105g [3.70oz.]	

Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-OD415CN, C200H-OD215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

8 LO/HI-only Outputs Unit Box-mounting Type

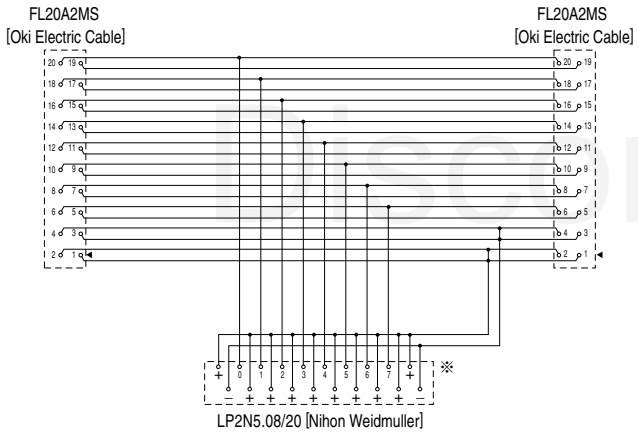
●8 LO-only outputs unit (Box-mounting type) FMA-TJ2008

Dimensions (mm)



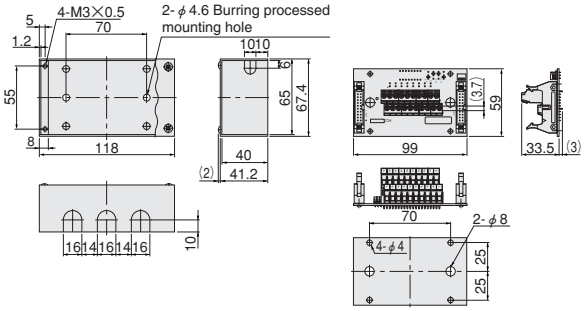
※This drawing is scaled differently from the other drawings.

Circuit diagram



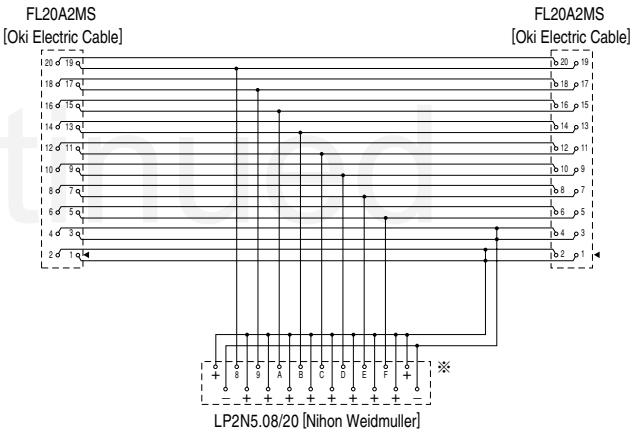
●8 HI-only outputs unit (Box-mounting type) FMA-TK2008

Dimensions (mm)



※This drawing is scaled differently from the other drawings.

Circuit diagram



※: Terminal block (signal wires) No. indication marker: Included in the product and select any from 0…16, A…F.

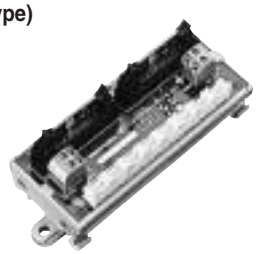
Specifications

Parts	8 LO-only outputs unit (Box-mounting type)	8 HI-only outputs unit (Box-mounting type)
Model	FMA-TJ2008	FMA-TK2008
Rated voltage	DC24V	
Rated current	0.3A/output, 1A/unit	
Dielectric strength	AC500V r.m.s.	
Tightening torque for the terminal screw	0.5～0.6N・m {0.05～0.06kgf・m} [4.4～5.3in・lbf]	
AWG	No.26...12	
Connecting wire size (Terminal block)	0.13～4mm² [0.00020～0.00620in²]	
Solid wire〈H05〈07〉V-U〉	0.5～4mm² [0.00078～0.00620in²]	
Stranded wire〈H05〈07〉V-K〉	0.5～2.5mm² [0.00078～0.00388in²]	
Exposed wire length (Terminal block)	7mm [0.276in.]	
Terminal block for output	LP2N5.08/20〈Made by Nihon Weidmuller〉	
Installed MIL connector (20 pins)	FL20A2MS〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)	FL20A2FO〈Made by Oki Electric Cable〉 or equivalent	
Materials of box/surface treatment	SPCC/Black zinc plated (MFZnD)	
Plate thickness	1.2mm [0.047in.]	
Operating temperature range	−25～80°C [−13～176°F]	
Mass	365g [12.87oz.]	

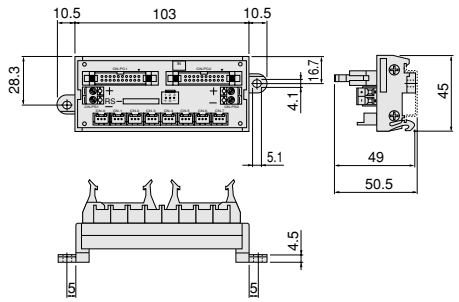
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-OD415CN, C200H-OD215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

Connector Type 8-input Unit
DIN Rail Mounting Type

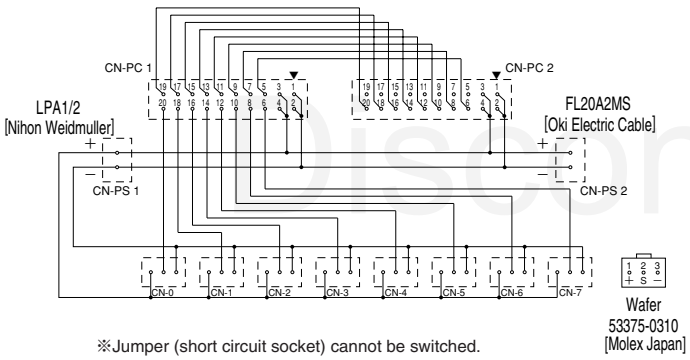
●Connector type 8-input unit〔main unit〕
(DIN rail mounting type)
FMA-TC1108



Dimensions (mm)

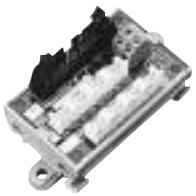


Circuit diagram

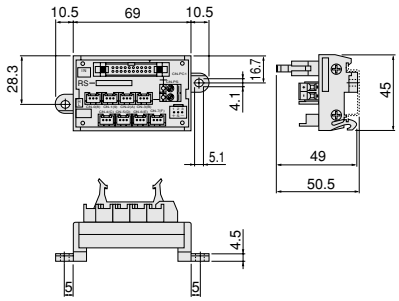


※Jumper (short circuit socket) cannot be switched.

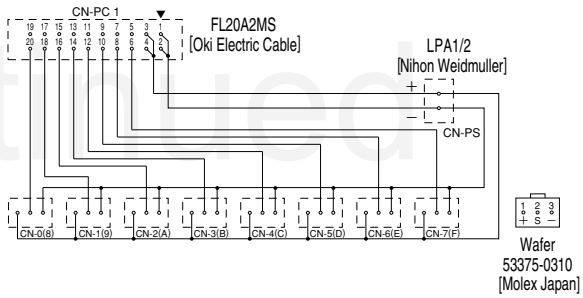
●Connector type 8-input unit〔sub-unit〕
(DIN rail mounting type)
FMA-TD1108



Dimensions (mm)



Circuit diagram



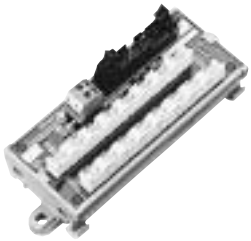
Specifications

Parts		Connector type 8-input unit (main unit)	Connector type 8-input unit (sub-unit)
Model		FMA-TC1108	FMA-TD1108
Rated voltage		DC24V	
Rated current		0.3A/input, 1A/unit	
Dielectric strength		AC500V r.m.s.	
Power supply terminal	Tightening torque for the terminal screw	0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]	
	AWG	No.26...14	
	Connecting wire size (Terminal block)	0.13～2.5mm² [0.00020～0.00388in²]	
	Solid wire〈H05 (07) V-U〉	0.5～2.5mm² [0.00078～0.00388in²]	
	Stranded wire〈H05 (07) V-K〉	0.5～2.5mm² [0.00078～0.00388in²]	
	Exposed wire length (Terminal block)	7mm [0.276in.]	
	Installed terminal block (For power supply)	LPA1/2〈Made by Nihon Weidmuller〉	
Installed MIL connector (20 pins)		FL20A2MS〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)		FL20A2FO〈Made by Oki Electric Cable〉or equivalent	
Installed wafer (3 pins)		53375-0310〈Made by Molex Japan〉	
Mating housing (3 pins)		51103-0300〈Made by Molex Japan〉	
Mating terminal		50351-8100〈Made by Molex Japan〉 ● Applicable wire Lead wire size: AWG No.28...22 Insulation outer diameter: φ1.15～φ1.8mm [φ0.0453～φ0.071in.] Exposed wire length: 2.3～2.8mm [0.091～0.110in.]	
Operating temperature range		−25～80°C [−13～176°F]	
Mass		75g [2.65oz.]	55g [1.94oz.]

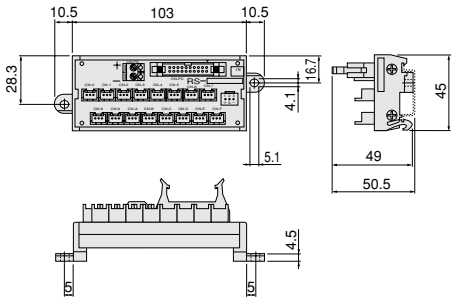
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-ID218CN, C200H-ID215, C500-MD211CN, and C200H-MD215. For details, see p.1032.
3. For details of applicable mating housings and terminals, see p.994.

Connector Type 16-input Unit
DIN Rail Mounting Type

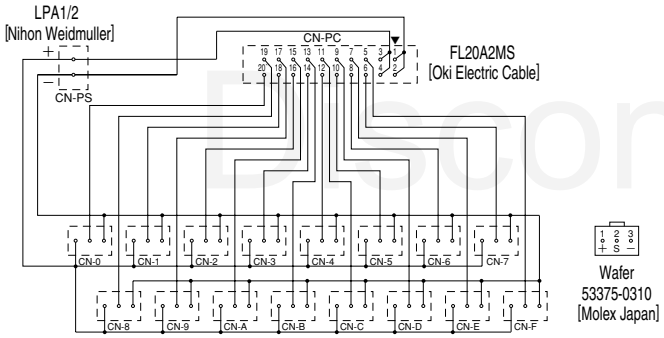
●Connector type 16-input unit (DIN rail mounting type)
FMA-TC1116



Dimensions (mm)



Circuit diagram



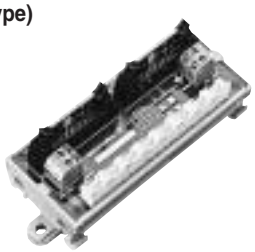
Specifications

Parts		Connector type 16-input unit
Model		FMA-TC1116
Rated voltage		DC24V
Rated current		0.3A/input, 2A/unit
Dielectric strength		AC500V r.m.s.
Power supply terminal	Tightening torque for the terminal screw	0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]
	AWG	No.26...14
	Connecting wire size (Terminal block)	0.13～2.5mm² [0.00020～0.00388in.²]
	Solid wire 〈H05 (07) V-U〉	0.5～2.5mm² [0.00078～0.00388in.²]
	Stranded wire 〈H05 (07) V-K〉	0.5～2.5mm² [0.00078～0.00388in.²]
	Exposed wire length (Terminal block)	7mm [0.276in.]
	Installed terminal block (For power supply)	LPA1/2 〈Made by Nihon Weidmuller〉
Installed MIL connector (20 pins)		FL20A2MS 〈Made by Oki Electric Cable〉
Mating MIL connector (20 pins)		FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent
Installed wafer (3 pins)		53375-0310 〈Made by Molex Japan〉
Mating housing (3 pins)		51103-0300 〈Made by Molex Japan〉
Mating terminal		50351-8100 〈Made by Molex Japan〉 ● Applicable wire Lead wire size: AWG No.28...22 Insulation outer diameter: ϕ 1.15～ϕ 1.8mm [ϕ 0.0453～ϕ 0.071in.] Exposed wire length: 2.3～2.8mm [0.091～0.110in.]
Operating temperature range		−25～80°C [−13～176°F]
Mass		70g [2.47oz.]

Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-ID218CN, C200H-ID215, C500-MD211CN, and C200H-MD215. For details, see p.1032.
3. For details of applicable mating housings and terminals, see p.994.

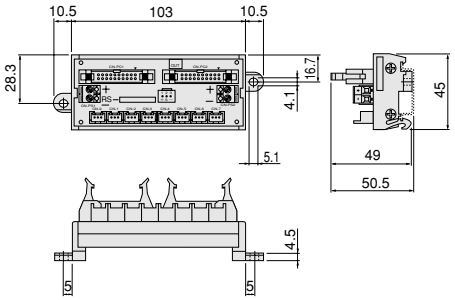
Connector Type 8-output Unit
DIN Rail Mounting Type

●Connector type 8-output unit〔main unit〕
(DIN rail mounting type)
FMA-TC1008

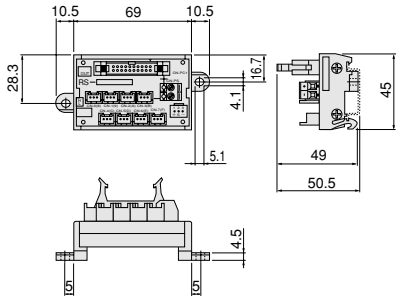


●Connector type 8-output unit〔sub-unit〕
(DIN rail mounting type)
FMA-TD1008

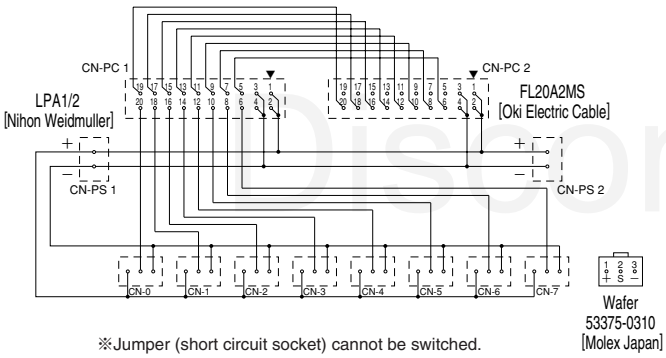
Dimensions (mm)



Dimensions (mm)

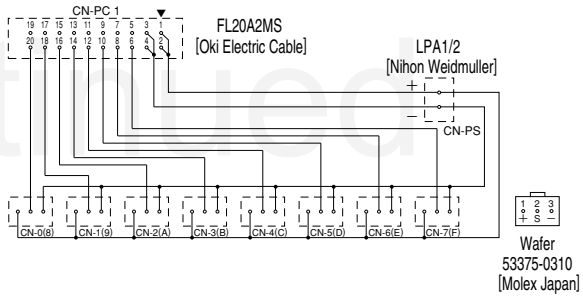


Circuit diagram



※Jumper (short circuit socket) cannot be switched.

Circuit diagram



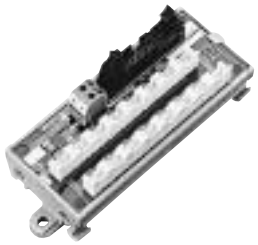
Specifications

Parts		Connector type 8-output unit (main unit)	Connector type 8-output unit (sub-unit)
Model		FMA-TC1008	FMA-TD1008
Rated voltage		DC24V	
Rated current		0.3A/output, 1A/unit	
Dielectric strength		AC500V r.m.s.	
Power supply terminal	Tightening torque for the terminal screw	0.4～0.6N·m {0.04～0.06kgf·m} [3.5～5.3in·lbf]	
	AWG	No.26...14	
	Connecting wire size (Terminal block)	0.13～2.5mm² [0.00020～0.00388in²]	
	Solid wire〈H05 (07) V-U〉	0.5～2.5mm² [0.00078～0.00388in²]	
	Stranded wire〈H05 (07) V-K〉	0.5～2.5mm² [0.00078～0.00388in²]	
	Exposed wire length (Terminal block)	7mm [0.276in.]	
	Installed terminal block (For power supply)	LPA1/2〈Made by Nihon Weidmuller〉	
Installed MIL connector (20 pins)		FL20A2MS〈Made by Oki Electric Cable〉	
Mating MIL connector (20 pins)		FL20A2FO〈Made by Oki Electric Cable〉or equivalent	
Installed wafer (3 pins)		53375-0310〈Made by Molex Japan〉	
Mating housing (3 pins)		51103-0300〈Made by Molex Japan〉	
Mating terminal		50351-8100〈Made by Molex Japan〉 ● Applicable wire Core wire size: AWG No.28...22 Insulation outer diameter: φ1.15～φ1.8mm [φ0.0453～φ0.071in.] Exposed wire length: 2.3～2.8mm [0.091～0.110in.]	
Operating temperature range		−25～80°C [−13～176°F]	
Mass		75g [2.65oz.]	55g [1.94oz.]

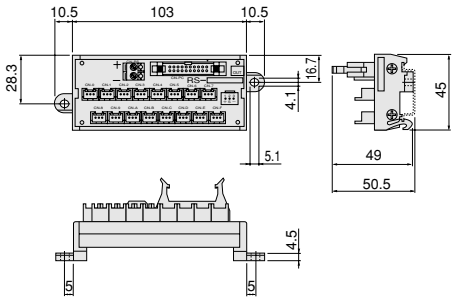
Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-OD415CN, C200H-OD215, C500-MD211CN, and C200H-MD215. For details, see p.1032.
3. For details of applicable mating housings and terminals, see p.994.

Connector Type 16-output Unit
DIN Rail Mounting Type

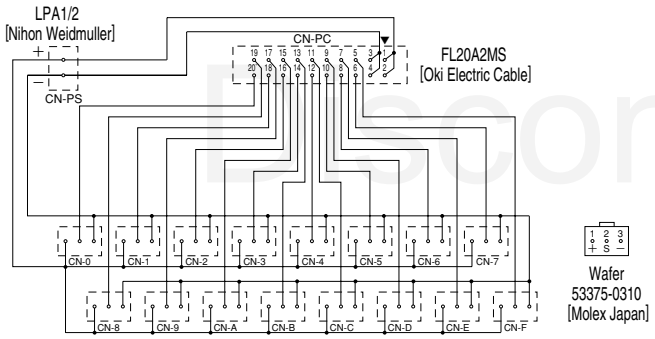
●Connector type 16-output unit (DIN rail mounting type)
FMA-TC1016



Dimensions (mm)



Circuit diagram



Specifications

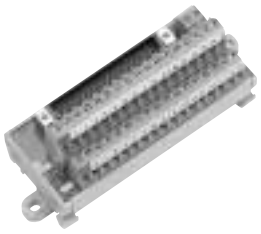
Parts		Connector type 16-output unit
Model		FMA-TC1016
Rated voltage		DC24V
Rated current		0.3A/output, 2A/unit
Dielectric strength		AC500V r.m.s.
Power supply terminal	Tightening torque for the terminal screw	0.4～0.6N・m {0.04～0.06kgf・m} [3.5～5.3in・lbf]
	AWG	No.26...14
	Connecting wire size (Terminal block)	0.13～2.5mm² [0.00020～0.00388in²]
	Solid wire 〈H05 (07) V-U〉	0.5～2.5mm² [0.00078～0.00388in²]
	Stranded wire 〈H05 (07) V-K〉	0.5～2.5mm² [0.00078～0.00388in²]
	Exposed wire length (Terminal block)	7mm [0.276in.]
	Installed terminal block (For power supply)	LPA1/2 〈Made by Nihon Weidmuller〉
Installed MIL connector (20 pins)		FL20A2MS 〈Made by Oki Electric Cable〉
Mating MIL connector (20 pins)		FL20A2FO 〈Made by Oki Electric Cable〉 or equivalent
Installed wafer (3 pins)		53375-0310 〈Made by Molex Japan〉
Mating housing (3 pins)		51103-0300 〈Made by Molex Japan〉
Mating terminal		50351-8100 〈Made by Molex Japan〉 ● Applicable wire Lead wire size: AWG No.28...22 Insulation outer diameter: φ1.15～φ1.8mm [φ0.0453～φ0.071in.] Exposed wire length: 2.3～2.8mm [0.091～0.110in.]
Operating temperature range		−25～80°C [−13～176°F]
Mass		70g [2.47oz.]

Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-OD415CN, C200H-OD215, C500-MD211CN, and C200H-MD215. For details, see p.1032.
3. For details of applicable mating housings and terminals, see p.994.

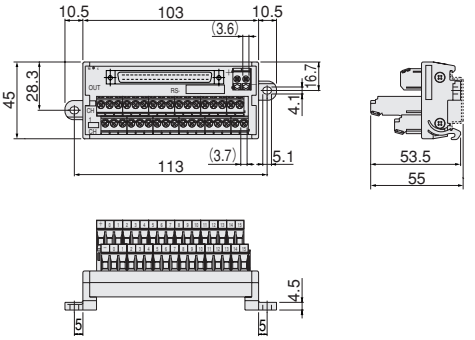
32-output Common Reduction Unit For OMRON, Output

For the circuit diagrams and specifications of output units for other manufacturers, consult us.

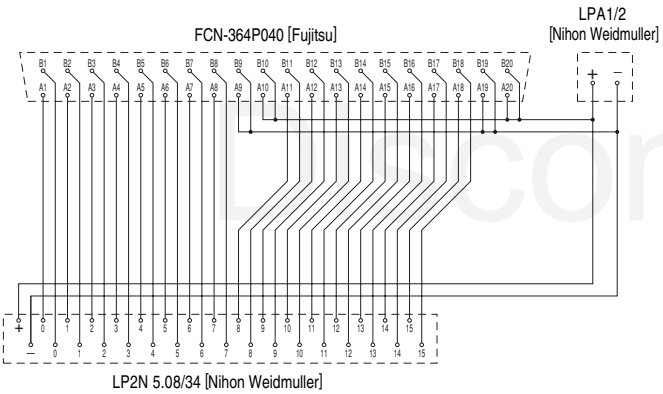
●**32-output common reduction unit**
FMA-TH1032-OR
FCN connector type



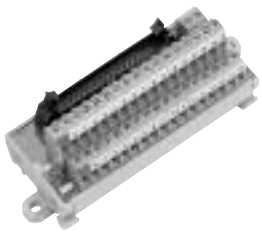
Dimensions (mm)



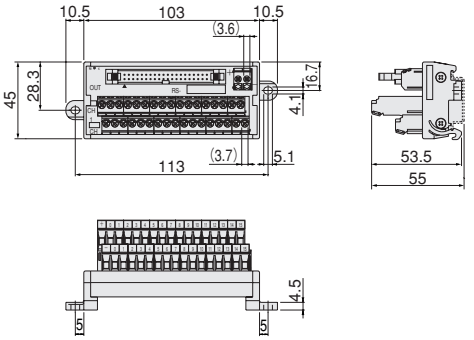
Circuit diagram



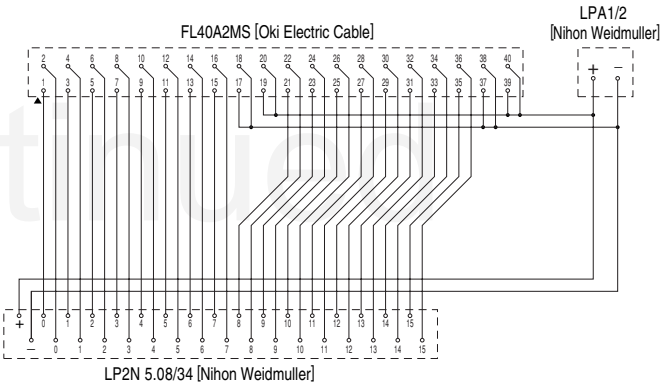
●**32-output common reduction unit**
FMA-TG1032-OR
MIL connector type



Dimensions (mm)



Circuit diagram



Specifications

Parts		32-output common reduction unit FCN connector type	32-output common reduction unit MIL connector type
Model		**FMA-TH1032-OR**	**FMA-TG1032-OR**
Compatible PC	PC manufacturer	OMRON	
	Compatible with 32-output model	C200HOD218, CQM1-OD213	
	Compatible with 64-output model (32-output×2)	C500-OD213, C200H-OD219	
Rated voltage		DC24V	
Rated current		0.3A/output, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw (terminal block for output / terminal block for power supply)		0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]／0.4～0.6N·m {0.04～0.06kgf·m} [3.5～5.3in·lbf]	
AWG (terminal block for output / terminal block for power supply)		No.26...12／No.26...14	
Connecting wire size (terminal block for output / terminal block for power supply)		0.13～4mm² [0.00020～0.00620in.²]／0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire 〈H05 (07) V-U〉 (terminal block for output / terminal block for power supply)		0.5～4mm² [0.00078～0.00620in.²]／0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire 〈H05 (07) V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Terminal block for output		LP2N5.08/34 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040 〈Made by Fujitsu〉	FL40A2MS 〈Made by Oki Electric Cable〉 Note
Mating connector (40 pins)		FCN-367J040 〈Made by Fujitsu〉	FL40A2FO 〈Made by Oki Electric Cable〉 or equivalent Note
Terminal block for power supply		LPA1/2 〈Made by Nihon Weidmuller〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		135g [4.76oz.]	130g [4.59oz.]

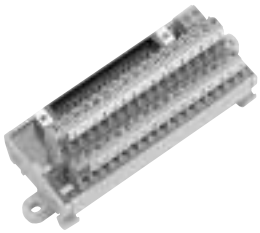
Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

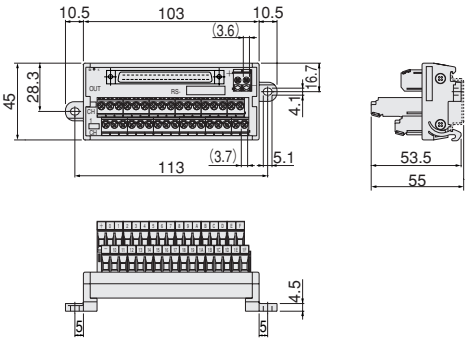
32-output Common Reduction Unit For Mitsubishi Electric, Output

For the circuit diagrams and specifications of output units for other manufacturers, consult us.

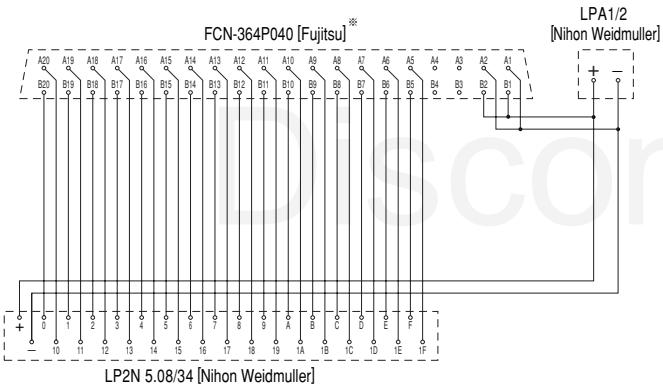
●**32-output common reduction unit**
FMA-TH1032-MB
FCN connector type



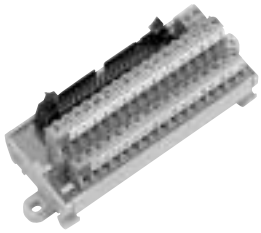
Dimensions (mm)



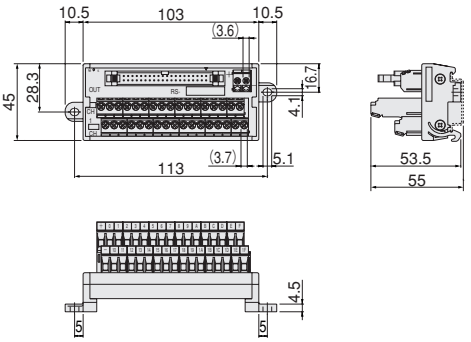
Circuit diagram



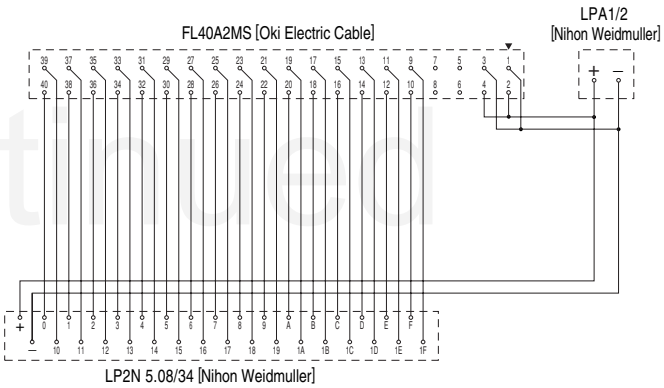
●**32-output common reduction unit**
FMA-TG1032-MB
MIL connector type



Dimensions (mm)



Circuit diagram



※Differs from Mitsubishi Electric's pin arrangement identification method.

Specifications

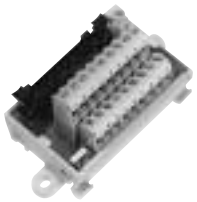
Parts		32-output common reduction unit FCN connector type	32-output common reduction unit MIL connector type
Model		**FMA-TH1032-MB**	**FMA-TG1032-MB**
Compatible PC	PC manufacturer	Mitsubishi Electric	
	Compatible with 32-output model	A1SY41, AJ35TC1-32T	
	Compatible with 64-output model (32-output×2)	AY42, A1SY42	
Rated voltage		DC24V	
Rated current		0.3A/output, 2A/unit	
Dielectric strength		AC500V r.m.s.	
Tightening torque for the terminal screw (terminal block for output / terminal block for power supply)		0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]／0.4～0.6N·m {0.04～0.06kgf·m} [3.5～5.3in·lbf]	
AWG (terminal block for output / terminal block for power supply)		No.26...12／No.26...14	
Connecting wire size (terminal block for output / terminal block for power supply)		0.13～4mm² [0.00020～0.00620in.²]／0.13～2.5mm² [0.00020～0.00388in.²]	
Solid wire 〈H05 (07) V-U〉 (terminal block for output / terminal block for power supply)		0.5～4mm² [0.00078～0.00620in.²]／0.5～2.5mm² [0.00078～0.00388in.²]	
Stranded wire 〈H05 (07) V-K〉		0.5～2.5mm² [0.00078～0.00388in.²]	
Exposed wire length (Terminal block)		7mm [0.276in.]	
Terminal block for output		LP2N5.08/34 〈Made by Nihon Weidmuller〉	
Installed connector (40 pins)		FCN-364P040 〈Made by Fujitsu〉	FL40A2MS 〈Made by Oki Electric Cable〉 Note
Mating connector (40 pins)		FCN-367J040 〈Made by Fujitsu〉	FL40A2FO 〈Made by Oki Electric Cable〉 or equivalent Note
Terminal block for power supply		LPA1/2 〈Made by Nihon Weidmuller〉	
Operating temperature range		−25～55°C [−13～131°F]	
Mass		135g [4.76oz.]	130g [4.59oz.]

Note : For the compatible model of **-KY**: KEYENCE, the installed connector (34 pins) is Oki Electric Cable's FL34A2MS. The mating connector should be FL34A2FO (made by Oki Electric Cable) or equivalent.

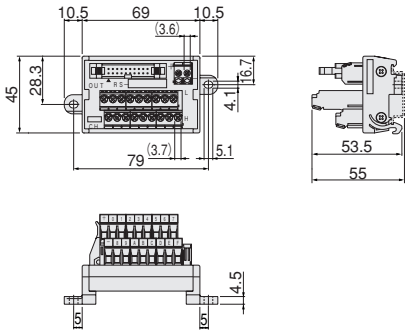
Remark : Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.

16-output Common Reduction Unit
DIN Rail Mounting Type

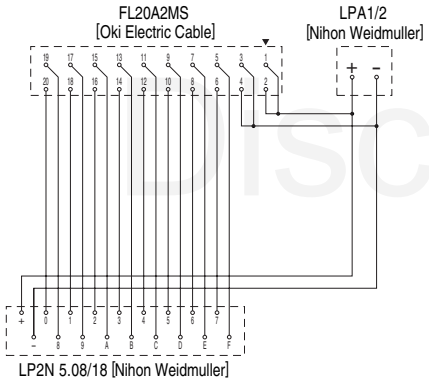
●**16-output common reduction unit (DIN rail mounting type)**
FMA-TH1016



Dimensions (mm)



Circuit diagram



Specifications

Parts	**16-output common reduction unit (DIN rail mounting type)**
Model	**FMA-TH1016**
Rated voltage	DC24V
Rated current	0.3A/output, 2A/unit
Dielectric strength	AC500V r.m.s.
Tightening torque for the terminal screw (terminal block for output / terminal block for power supply)	0.5～0.6N·m {0.05～0.06kgf·m} [4.4～5.3in·lbf]／0.4～0.6N·m {0.04～0.06kgf·m} [3.5～5.3in·lbf]
AWG (terminal block for output / terminal block for power supply)	No.26...12／No.26...14
Connecting wire size (terminal block for output / terminal block for power supply)	0.13～4mm² [0.00020～0.00620in.²]／0.13～2.5mm² [0.00020～0.00388in.²]
Solid wire〈H05 (07) V-U〉(terminal block for output / terminal block for power supply)	0.5～4mm² [0.00078～0.00620in.²]／0.5～2.5mm² [0.00078～0.00388in.²]
Stranded wire〈H05 (07) V-K〉	0.5～2.5mm² [0.00078～0.00388in.²]
Exposed wire length (Terminal block)	7mm [0.276in.]
Terminal block for output	LP2N5.08/18〈Made by Nihon Weidmuller〉
Terminal block for power supply	LPA1/2〈Made by Nihon Weidmuller〉
Installed MIL connector (20 pins)	FL20A2MS〈Made by Oki Electric Cable〉
Mating MIL connector (20 pins)	FL20A2FO〈Made by Oki Electric Cable〉or equivalent
Operating temperature range	−25～80°C [−13～176°F]
Mass	80g [2.82oz.]

Remarks: 1. Rating is for the unit alone. When other connection units exist, their ratings must also be taken into consideration.
2. Can be connected to OMRON's C500-OD415CN, C200H-OD215, C500-MD211CN, and C200H-MD215. For details, see p.1032.

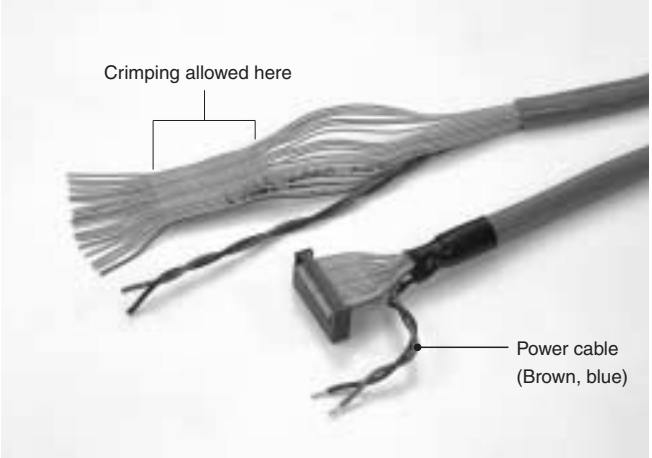
About Circuit Diagrams and Specifications

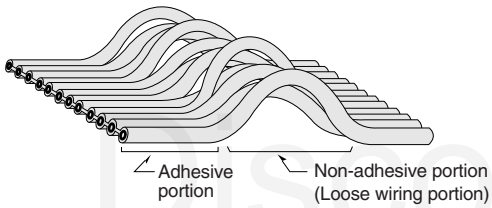
This catalog does not contain the circuit diagrams, specifications, etc. for all compatible models. For the circuit diagrams, specifications, etc. of units not listed in this catalog, consult us.
For details of compatible models, confirm the order codes on p.1025～1026.

Okiflex Cable Achieves Aesthetically Pleasing Wiring Between Units

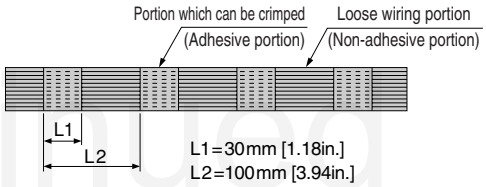
- Okiflex cable is a remarkable cable that integrates a flat cable and power lines into a sheath for easy crimping connections. In addition, it eliminates the need for separate wiring for power lines.
- While cables with built-in harnesses for PC connectors had set standard lengths, Okiflex cable lets customers crimp connectors, resolving problems like wire length, delivery issues, increasing costs, etc.
- For the heat-shrink tube and various other tools, see p.1026 and 1027.

Note: Okiflex cable is for fixed wiring. For use in moving applications, consult us.

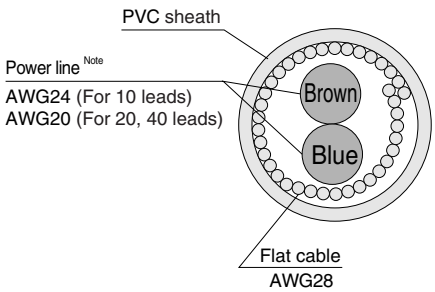




●Detailed diagram of the flat cable portion

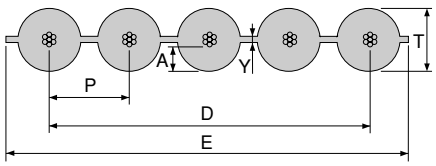


●Sectional view of Okiflex



Note: Power line colors have been changed, from red to brown, and from black to blue.

●Flat cable sectional view



Item \ Model	FMA-CX10×□	FMA-CX20×□	FMA-CX40×□
Flat cable	Conductive construction: 7 leads/0.127mm [0.0050in.] (AWG 28)		
	10 leads	20 leads	40 leads
Power cable	Conductive construction: 11 leads/0.16mm [0.0063in.] (AWG24)	Conductive construction: 21 leads/0.18mm [0.0071in.] (AWG 20)	
Insulation outer diameter (standard)	7.3mm [0.287in.]	10.6mm [0.417in.]	12.3mm [0.484in.]

mm [in.]

Number of leads	A	D	E
10	Over 0.18 [0.0071]	11.43±0.28 [0.4500±0.0110]	12.70±0.38 [0.5000±0.0150]
20		24.13±0.28 [0.9500±0.0110]	25.40±0.38 [1.0000±0.0150]
40		49.53±0.38 [1.9500±0.0150]	50.80±0.51 [2.0000±0.0201]

mm [in.]

Number of leads	P	T	Y
10	1.27 [0.0500] (standard)	0.98±0.07 [0.0386±0.0028]	Over 0.16 [0.0063]
20			
40			

PC Wiring System
Crimping Tool

●Crimping tool FMA-HT151

Features

- Crimping tools can handle all crimping connectors used in PC wiring systems.
- Combinations of dies enables the Fujitsu 360 type, the IDEC Izumi JM series, and the Oki Electric Cable FL series connectors crimping by a single tool.
- MIL standard conforming connectors can also be crimped.
- Because this tool is compact and lightweight, you can use it without becoming fatigued.

Instructions for Use

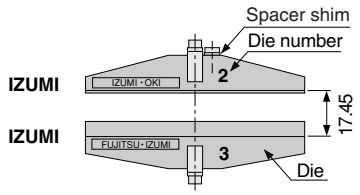
- Use the hexagon wrench supplied with the body to change the die direction so that the die combination number for the connector to be crimped comes to the front side.
- When the crimping force is insufficient, fit supplied spacer shims into the grooves at the top and bottom of the die.

Specifications

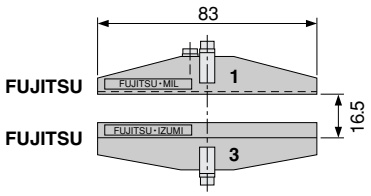
Applicable connector		Made by Fujitsu 360 type (FCN-367J0□□)
		Made by IDEC Izumi JM series (JM1S-□□□3)
		Oki Electric Cable FL series (FL-□□A2□O)
		Other connectors of MIL standard conformity
Connector length		Max. 83mm [3.27in.]
Body length		220mm [8.66in.]
Mass		520g [18.34oz.]
Materials	Main body	Steel/black
	Die	Aluminum/black anodized
	Grip	Polypropylene/orange
Size of die mounting screw		M3 hexagon socket head bolt
Applicable hexagon wrench		Nominal size 2.5

Dimensions (mm)

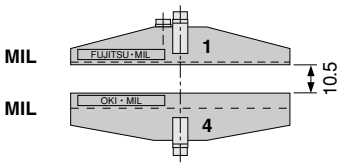
● Combination for IDEC Izumi JM series (Die numbers **2** and **3**)



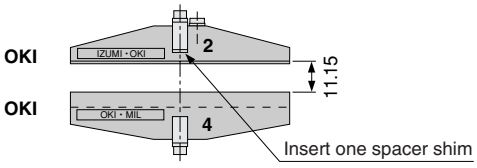
● Combination for Fujitsu 360-type connector（Die numbers **1** and **3**）

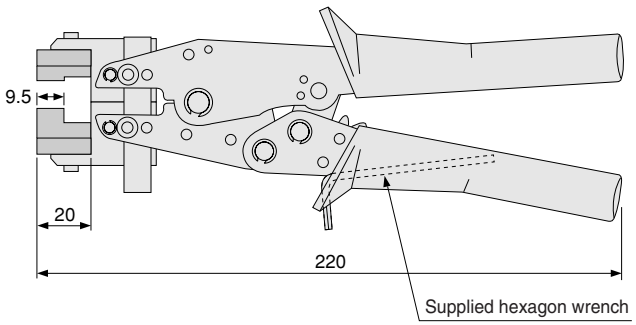


● Combination for MIL standard conforming products (Die numbers **1** and **4**)
Connector crimping height: 10.5mm [0.413in.]



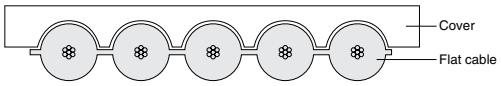
● Combination for Oki Electric Cable FL series (Die numbers **2** and **4**)





Cautions: **1**. The connector crimping height can vary somewhat in each connector. Check the dimensions carefully before use.

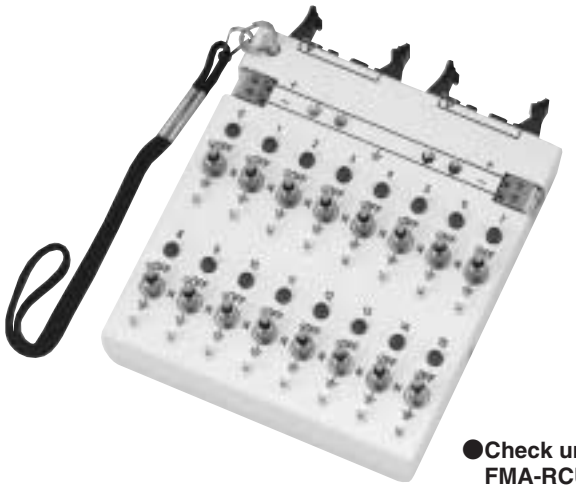
2. Ensure that the flat cable wiring is securely conforming to the connector cover's grooves, and then crimp them.



PC Wiring System
Check Unit

The check unit eases the functional check for all units and sensors.

Using this unit during system maintenance, or software and hardware debugging can shorten working time and improve system's accuracy.

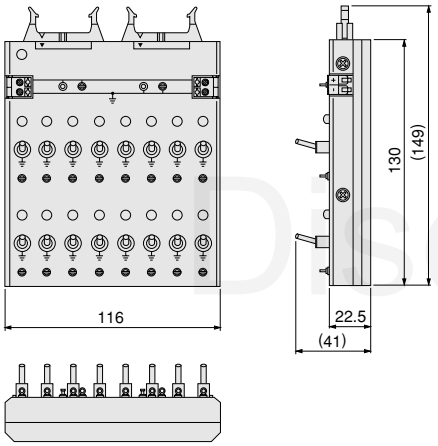


●**Check unit**
FMA-RCU16F

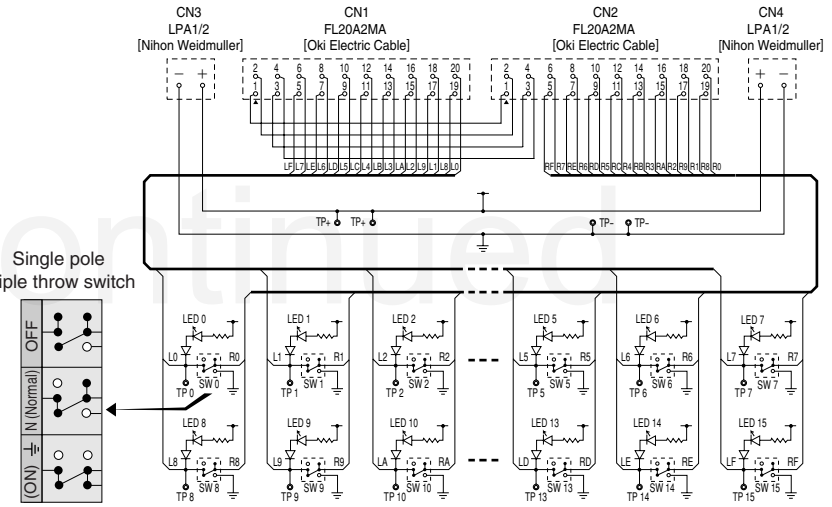
Functions

- ●Forced ON/OFF for loads or sensors.
- ●By connecting it to an oscilloscope or high coder, etc., the measurement of timing between sensors, timing between loads, and the monitoring and recording of waveforms become possible.
- ●Voltage measurement of loads, sensors, etc.
- ●To check system operating conditions.
- ●Simultaneous use of 2 check units enables measurement of timing between sensors and loads, or waveform monitoring.

Dimensions (mm)



Circuit Diagrams



Major Parts and Instructions

①PC-side cable connector

②Sensor/load-side cable connector

③Common terminal (+) for check

④Common terminal (−) for check
Use as common terminals for measurement (monitoring) between each address (1bit unit) check terminals ⑧-③ and ⑧-④.

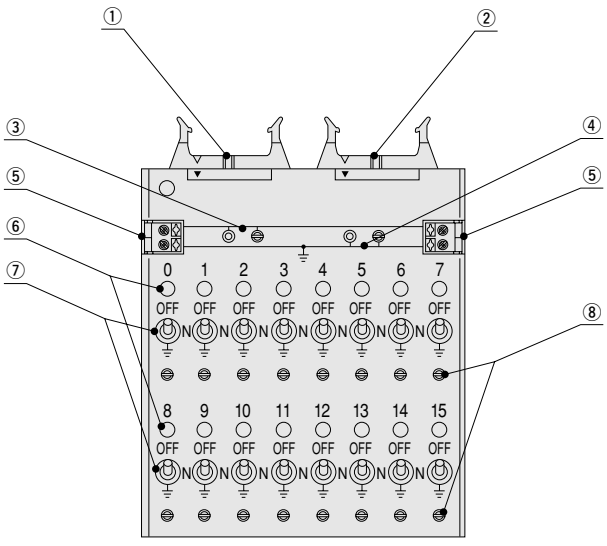
⑤Power supply terminal block
Connects the power supply lines in the Okiflex cable on the PC side or sensor/load side.
※Check unit: Also used as a power supply for a monitor LED.

⑥Monitor LED
The monitor LED is connected to the PC-side connector, and is used for confirmation of operating conditions.

⑦Switch

OFF	Forcibly turns OFF the circuits of the connected sensors and loads 1 bit at a time between the ① and ② connectors (Opens the circuits).
N (normal)	Shorts the circuits 1 bit at a time between the ① and ② connectors. Use this position when leaving equipment in normal operation without performing forced ON/OFF.
⏚(ON)	When the switch is set in this position, the circuit for this bit only is forcibly connected to the GND, and forcibly turned ON, regardless of the operating condition of the sensor and the load connected to the ② connector.

⑧Check terminal
One check terminal is provided for each bit. Between the check terminal of the bit to be measured and the ③/④ common terminals, the voltage and the waveforms of each bit can be obtained.



Check Unit Application Example

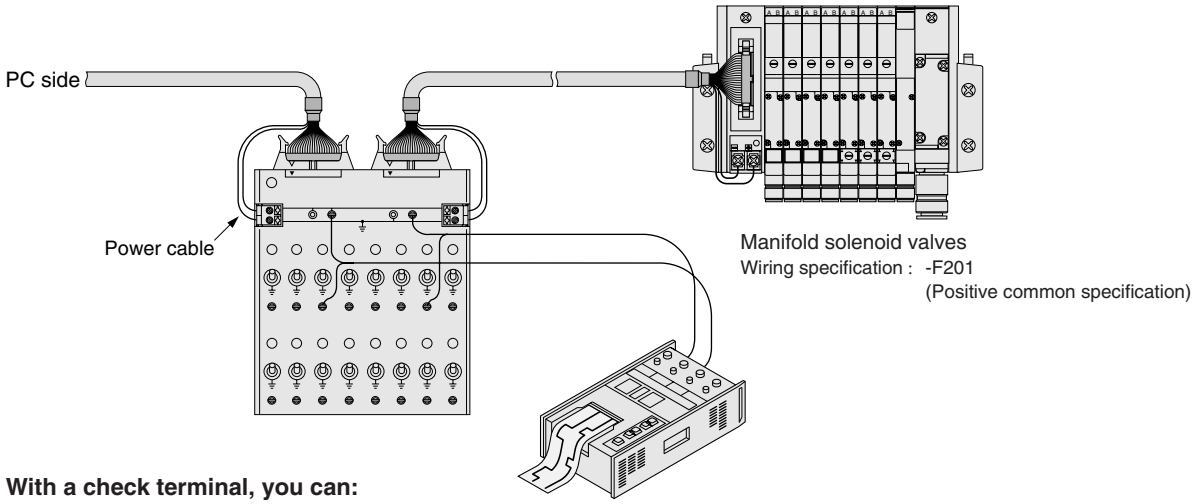
●When used to connect with a circuit

The check unit can be connected between a PC and a manifold, making the following operations possible:

- Send a PC signal to the manifold valve
- Forcibly turn a valve ON
- Forcibly turn a valve OFF

Even if the PC programs, etc. are at an incomplete stage, sensor switches' minor adjustment, etc. can easily be done by manual override operation of valves, etc.

※While the valve is categorized as an output, the same goes for inputs (sensor switches, etc.).



With a check terminal, you can:

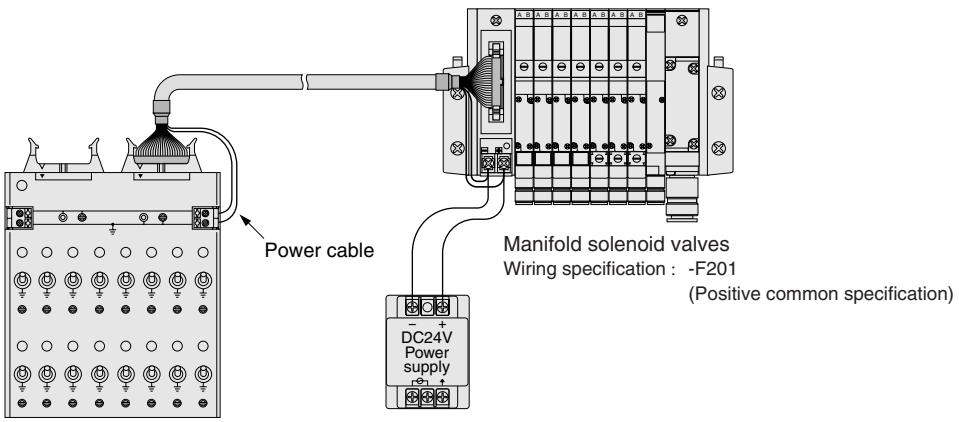
- Measure the applied voltage on a valve
- Measure the time between 2 valves

※While the above illustration shows a high coder being used, monitoring can also be performed with testers or oscilloscopes.

Caution: For details about the check unit's connectable locations, see the connection map on p.1033 and 1034.

●When used as a stand-alone

Even if the PC programs, etc. are at an incomplete stage, sensor switches' fine adjustment etc. can easily be done by manual override operation of valves, etc.



Order Codes

●Branch unit

Compatible types			Order code		Package unit
			FCN connector type	MIL connector type	
OMRON Direct connecting type	Input	C200H-ID216, C500-ID219, C200H-ID217	**FMA-TF3120-OR**	———	1
	Output	C200H-OD218, C500-OD213, C200H-OD219	**FMA-TF3020-OR**	———	1
Mitsubishi Electric Direct connecting type	Input	A1SX41, AX42, A1SX42[Note]	**FMA-TF3120-MBA** **FMA-TF3120-MBB**	———	1
	Output	A1SY41, AY42, A1SY42[Note]	**FMA-TF3020-MBA** **FMA-TF3020-MBB**	———	1
OMRON	Input	C200H-ID216, CQM1-ID213, C500-ID219, C200H-ID217	**FMA-TF4120-OR**	**FMA-TE4120-OR**	1
	Output	C200H-OD218, CQM1-OD213, C500-OD213, C200H-OD219	**FMA-TF4020-OR**	**FMA-TE4020-OR**	1
Mitsubishi Electric	Input	A1SX41, AJ35TC1-32D, AX42, A1SX42	**FMA-TF4120-MB**	**FMA-TE4120-MB**	1
	Output	A1SY41, AJ35TC1-32T, AY42, A1SY42	**FMA-TF4020-MB**	**FMA-TE4020-MB**	1
Fuji Electric FA Component & Systems	Input	FTU125A, NS-X64-I, NV1X3204(-W), NV1X3206 NC1X3204, NC1X3206, NC1X6404, NC1X6406	**FMA-TF4120-FJ**	**FMA-TE4120-FJ**	1
	Output	FTU222A, NS-Y64-TI, NV1Y32T05P1 NC1Y32T05P1, NC1Y64T05P1-1	**FMA-TF4020-FJ**	**FMA-TE4020-FJ**	1
TOSHIBA	Input	DI335, DI-6241	**FMA-TF4120-TB**	**FMA-TE4120-TB**	1
	Output	DO335, DO-6242	**FMA-TF4020-TB**	**FMA-TE4020-TB**	1
YASKAWA ELECTRIC	Input	JAMSC-B2605	**FMA-TF4120-YS**	**FMA-TE4120-YS**	1
	Output	JAMSC-B2604	**FMA-TF4020-YS**	**FMA-TE4020-YS**	1
SHARP	Input	JW-34NC, JW-234N, JW-64NC, JW-264N	**FMA-TF4120-SP**	**FMA-TE4120-SP**	1
	Output	JW-32SC, JW-232S, JW-62SC, JW-262S	**FMA-TF4020-SP**	**FMA-TE4020-SP**	1
YOKOGAWA ELECTRIC	Input	F3XD32-3N, F3XD64-3N	**FMA-TF4120-YG**	**FMA-TE4120-YG**	1
	Output	F3YD32-1A, F3YD64-1A	**FMA-TF4020-YG**	**FMA-TE4020-YG**	1
KOYO ELECTRONIC INDUSTRIES	Input	U-09N	**FMA-TF4120-KD**	**FMA-TE4120-KD**	1
	Output	U-19T	**FMA-TF4020-KD**	**FMA-TE4020-KD**	1
Hitachi	Input	XDC24D2H	———	**FMA-TE4120-HT**	1
	Output	YTR24DH	———	**FMA-TE4020-HT**	1
Matsushita Electric Works	Input	AFP23067, AFP33027, AFP33028, AFP33068	———	**FMA-TE4120-MS**	1
	Output	AFP23407, AFP33487	———	**FMA-TE4020-MS**	1
KEYENCE	Input	KZ-C32X	———	**FMA-TE4120-KY**	1
	Output	KZ-C32T	———	**FMA-TE4020-KY**	1

Note: When using A1SX42 and A1SY42, always use in combination with **FMA-TF3120-MBA** and **FMA-TF3120-MBB**, or **FMA-TF3020-MBA** and **FMA-TF3020-MBB**.
Remark: The metal box to store the unit is also available as a special.

●32-input and output unit

Compatible types			Order code		Package unit
			FCN connector type	MIL connector type	
OMRON	Input	C200H-ID216, CQM1-ID213, C500-ID219, C200H-ID217	**FMA-TM1132-OR**	**FMA-TL1132-OR**	1
	Output	C200H-OD218, CQM1-OD213, C500-OD213, C200H-OD219	**FMA-TM1032-OR**	**FMA-TL1032-OR**	1
Mitsubishi Electric	Input	A1SX41, AJ35TC1-32D, AX42, A1SX42	**FMA-TM1132-MB**	**FMA-TL1132-MB**	1
	Output	A1SY41, AJ35TC1-32T, AY42, A1SY42	**FMA-TM1032-MB**	**FMA-TL1032-MB**	1
Fuji Electric FA Component & Systems	Input	FTU125A, NS-X64-I, NV1X3204(-W), NV1X3206 NC1X3204, NC1X3206, NC1X6404, NC1X6406	**FMA-TM1132-FJ**	**FMA-TL1132-FJ**	1
	Output	FTU222A, NS-Y64-TI, NV1Y32T05P1 NC1Y32T05P1, NC1Y64T05P1-1	**FMA-TM1032-FJ**	**FMA-TL1032-FJ**	1
TOSHIBA	Input	DI335, DI-6241	**FMA-TM1132-TB**	**FMA-TL1132-TB**	1
	Output	DO335, DO-6242	**FMA-TM1032-TB**	**FMA-TL1032-TB**	1
YASKAWA ELECTRIC	Input	JAMSC-B2605	**FMA-TM1132-YS**	**FMA-TL1132-YS**	1
	Output	JAMSC-B2604	**FMA-TM1032-YS**	**FMA-TL1032-YS**	1
SHARP	Input	JW-34NC, JW-234N, JW-64NC, JW-264N	**FMA-TM1132-SP**	**FMA-TL1132-SP**	1
	Output	JW-32SC, JW-232S, JW-62SC, JW-262S	**FMA-TM1032-SP**	**FMA-TL1032-SP**	1
YOKOGAWA ELECTRIC	Input	F3XD32-3N, F3XD64-3N	**FMA-TM1132-YG**	**FMA-TL1132-YG**	1
	Output	F3YD32-1A, F3YD64-1A	**FMA-TM1032-YG**	**FMA-TL1032-YG**	1
KOYO ELECTRONIC INDUSTRIES	Input	U-09N	**FMA-TM1132-KD**	**FMA-TL1132-KD**	1
	Output	U-19T	**FMA-TM1032-KD**	**FMA-TL1032-KD**	1
Hitachi	Input	XDC24D2H	———	**FMA-TL1132-HT**	1
	Output	YTR24DH	———	**FMA-TL1032-HT**	1
Matsushita Electric Works	Input	AFP23067, AFP33027, AFP33028, AFP33068	———	**FMA-TL1132-MS**	1
	Output	AFP23407, AFP33487	———	**FMA-TL1032-MS**	1
KEYENCE	Input	KZ-C32X	———	**FMA-TL1132-KY**	1
	Output	KZ-C32T	———	**FMA-TL1032-KY**	1

Remark: The metal box to store the unit is also available as a special.

●8-, 16-input and output unit

I/O numbers/Specifications	Order code	Package unit
8-input/DIN rail mounting type	**FMA-TM1108**	1
16-input/DIN rail mounting type	**FMA-TM1116**	1
8-input/Box-mounting type	**FMA-TM2108**	1
16-input/Box-mounting type	**FMA-TM2116**	1
8-output/DIN rail mounting type	**FMA-TM1008**	1
16-output/DIN rail mounting type	**FMA-TM1016**	1
8-output/Box-mounting type	**FMA-TM2008**	1
16-output/Box-mounting type	**FMA-TM2016**	1

●8 LO/HI-only input and output unit

I/O numbers/Specifications	Order code	Package unit
8 LO-only inputs/DIN rail mounting type	**FMA-TJ1108**	1
8 HI-only inputs/DIN rail mounting type	**FMA-TK1108**	1
8 LO-only inputs/Box-mounting type	**FMA-TJ2108**	1
8 HI-only inputs/Box-mounting type	**FMA-TK2108**	1
8 LO-only outputs/DIN rail mounting type	**FMA-TJ1008**	1
8 HI-only outputs/DIN rail mounting type	**FMA-TK1008**	1
8 LO-only outputs/Box-mounting type	**FMA-TJ2008**	1
8 HI-only outputs/Box-mounting type	**FMA-TK2008**	1

●Connector type 8-, 16-input and output unit

I/O numbers/Specifications	Order code	Package unit
8-input (main)/DIN rail mounting type	**FMA-TC1108**	1
8-input (sub-unit)/DIN rail mounting type	**FMA-TD1108**	1
16-input/DIN rail mounting type	**FMA-TC1116**	1
8-output (main)/DIN rail mounting type	**FAM-TC1008**	1
8-output (sub-unit)/DIN rail mounting type	**FMA-TD1008**	1
16-output/DIN rail mounting type	**FMA-TC1016**	1

●16-output common reduction unit

Number of outputs/Specifications	Order code	Package unit
16-output/DIN rail mounting type	**FMA-TH1016**	1

●32-output common reduction unit

Compatible models			Order code		Package unit
			FCN connector type	MIL connector type	
OMRON	Output	C200H-OD218, CQM1-OD213, C500-OD213, C200H-OD219	**FMA-TH1032-OR**	**FMA-TG1032-OR**	1
Mitsubishi Electric		A1SY41, AJ35TC1-32T, AY42, A1SY42	**FMA-TH1032-MB**	**FMA-TG1032-MB**	1
Fuji Electric FA Components & Systems		FTU222A, NS-Y64-TI, NV1Y32T05P1, NC1Y32T05P1, NC1Y64T05P1-1	**FMA-TH1032-FJ**	**FMA-TG1032-FJ**	1
TOSHIBA		DO335, DO-6242	**FMA-TH1032-TB**	**FMA-TG1032-TB**	1
YASKAWA ELECTRIC		JAMSC-B2604	**FMA-TH1032-YS**	**FMA-TG1032-YS**	1
SHARP		JW-32SC, JW-232S, JW-62SC, JW-262S	**FMA-TH1032-SP**	**FMA-TG1032-SP**	1
YOKOGAWA ELECTRIC		F3YD32-1A, F3YD64-1A	**FMA-TH1032-YG**	**FMA-TG1032-YG**	1
KOYO ELECTRONIC INDUSTRIES		U-19T	**FMA-TH1032-KD**	**FMA-TG1032-KD**	1
Hitachi		YTR24DH	———	**FMA-TG1032-HT**	1
Matsushita Electric Works		AFP23407, AFP33487	———	**FMA-TG1032-MS**	1
KEYENCE		KZ-C32T	———	**FMA-TG1032-KY**	1

●Unit for Mitsubishi Electric FX2, FX2C series only

(For FX2-32MT-C, FX2-64MT-C, FX2C-64MT, FX2C-96MT, FX2C-128MT, FX2C-160MT)

I/O numbers/Specifications	Order code	Package unit
8-input/DIN rail mounting type	**FMA-TM1108-MB**	1
16-input/DIN rail mounting type	**FMA-TM1116-MB**	1
8-input/Box-mounting type	**FMA-TM2108-MB**	1
16-input/Box-mounting type	**FMA-TM2116-MB**	1
8-output/DIN rail mounting type	**FMA-TM1008-MB**	1
16-output/DIN rail mounting type	**FMA-TM1016-MB**	1
8-output/Box-mounting type	**FMA-TM2008-MB**	1
16-output/Box-mounting type	**FMA-TM2016-MB**	1

●Connectors

Parts	Order code	Package unit	Remarks
20 pins half pitch connector	**FMA-BF20HA**	1	IDEC Izumi JM1S-0203
20 pins flat cable connector	**FMA-BF20KA**	10	Oki Electric Cable FL20A2FO
34 pins flat cable connector	**FMA-BF34KA**	1	Oki Electric Cable FL34A2FO
40 pins flat cable connector	**FMA-BF40KA**	1	Oki Electric Cable FL40A2FO
24 pins 360 type connector	**FMA-BF24JA**	1	Fujitsu FCN-367J024
40 pins 360 type connector	**FMA-BF40JA**	1	Fujitsu FCN-367J040
3 pins Molex connector set	**FMA-BM03A**	10	Housing: 51103-0300
		30	Terminal: 50351-8100

●Check unit, connecting cable, and crimping tool

Parts			Order code (package unit)	Remarks
Check unit			**FMA-RCU16F** (1 unit)	
Connecting cable[Note]	Okiflex	10 leads	**FMA-CX10×10** (10m [32.8ft.]), **FMA-CX10×100** (100m [328ft.])	Flat cable with insulation containing power cable
		20 leads	**FMA-CX20×20** (20m [65.6ft.]), **FMA-CX20×100** (100m [328ft.])	Flat cable with insulation containing power cable
		40 leads	**FMA-CX40×20** (20m [65.6ft.]), **FMA-CX40×100** (100m [328ft.])	Flat cable with insulation containing power cable
	Okiflex with shield	20 leads	**FMA-CY20×20** (20m [65.6ft.]), **FMA-CY20×100** (100m [328ft.])	Flat cable with insulation containing power cable
		40 leads	**FMA-CY40×20** (20m [65.6ft.]), **FMA-CY40×100** (100m [328ft.])	Flat cable with insulation containing power cable
Crimping tool			**FMA-HT151** (1 set)	Crimping tool for flat cable

Note: Production of oil-resistant specifications, and deliveries in cable lengths other than package unit lengths, are also possible. Consult us.

Applicable Tools and Parts

Applicable tools and parts for use when wiring PC Wiring System are available in other companies, see the table below:

Parts	Order code		Product number	Package unit	Remarks
Phillips' screw driver	SD-3H1×75		**994519**	1	Made by Nihon Weidmuller
Flatblade screw driver	SD		**903700**	1	Made by Nihon Weidmuller
Heat-shrink tube	FUE2	(Nominal size 10mm [0.39in.])	—	1m [3.3ft.], 50m [164ft.]	Made by Fujikura (for Okiflex 10 leads)
		(Nominal size 13mm [0.51in.])	—	1m [3.3ft.], 50m [164ft.]	Made by Fujikura (for Okiflex 10, 20 leads)
		(Nominal size 16mm [0.63in.])	—	1m [3.3ft.], 50m [164ft.]	Made by Fujikura (for Okiflex 20, 40 leads)
Crimp-style terminal (bar terminal)	BT1.25-9-1		—	1000	Made by Nichifu for 0.25～1.65mm^2 [0.00039～0.00256in.^{2}]
Crimper for crimp-style terminal	HTN21		**901471**	1	Made by Nihon Weidmuller
Crimp-style sleeve	H0.25/12		**902576**	500	Made by Nihon Weidmuller for 0.25mm^2 [0.00039in.^{2}] twisted wire (AWG24)
	H0.34/12		**902577**	500	Made by Nihon Weidmuller for 0.34mm^2 [0.00053in.^{2}] twisted wire (AWG22)
	H0.5/12		**040950**	500	Made by Nihon Weidmuller for 0.5mm^2 [0.00078in.^{2}] twisted wire (AWG20)
	H0.75/12		**040960**	500	Made by Nihon Weidmuller for 0.75mm^2 [0.00116in.^{2}] twisted wire (AWG18)
	H1/12		**040970**	500	Made by Nihon Weidmuller for 1.0mm^2 [0.00155in.^{2}] twisted wire (AWG17)
Crimper for crimp-style sleeve	PZ1.5		**900599**	1	Made by Nihon Weidmuller (for 0.25mm^2～1.5mm^2 [0.00039～0.00233in.^{2}])
	PZ4		**901250**	1	Made by Nihon Weidmuller (for 0.5mm^2～4mm^2 [0.00078～0.00620in.^{2}])
Cutter for flat cable	RC80		**901704**	1	Made by Nihon Weidmuller

Cable assemblies are made to order. For delivery, consult us.

PCW-J400□-□

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

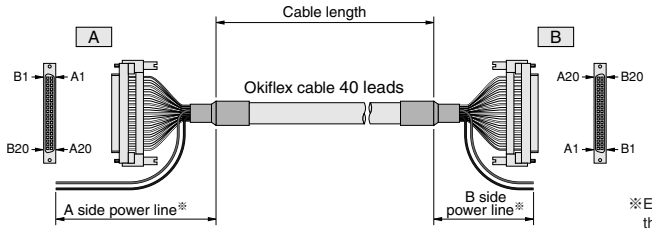
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
40 pins 360-type connector
FCN-367J040 (Made by Fujitsu)

Compatible Equipment
FCN connector type (40 pins)
OMRON, Mitsubishi, TOSHIBA, Fuji Electric FA Components & Systems, YASKAWA ELECTRIC, SHARP, YOKOGAWA ELECTRIC, KOYO ELECTRONICS INDUSTRIES



●B side (PC side)
40 pins 360-type connector
FCN-367J040 (Made by Fujitsu)

※End processing of power lines can vary depending on the power line specification.

PCW-J40A□-□

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

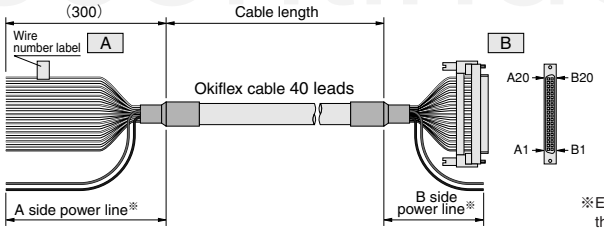
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
Wires w/o end processing

Compatible Equipment
PC, controller



●B side (PC side)
40 pins 360-type connector
FCN-367J040 (Made by Fujitsu)

※End processing of power lines can vary depending on the power line specification.

PCW-J40Y□-□

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

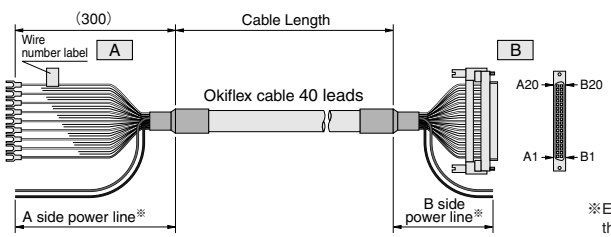
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
Wires w/o end processing, with Y terminals

Compatible Equipment
PC, controller



●B side (PC side)
40 pins 360-type connector
FCN-367J040 (Made by Fujitsu)

※End processing of power lines can vary depending on the power line specification.

Remark: Cable lengths of 20m [65.6ft.] or more are also available as a special. Consult us.

Cable assemblies are made to order. For delivery, consult us.

PCW - F400 □ - □

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

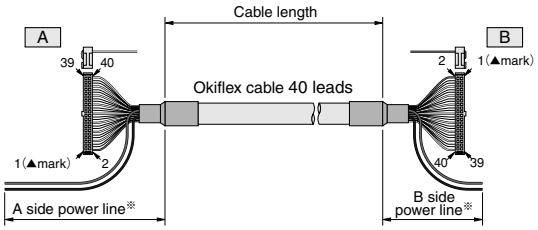
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
40 pins flat cable connector
FL40A2FO (Made by Oki Electric Cable) or equivalent

Compatible Equipment
MIL connector type (40 pins)
Hitachi, Matsushita Electric Works



●B side (PC side)
40 pins flat cable connector
FL40A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.

PCW - F40A □ - □

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

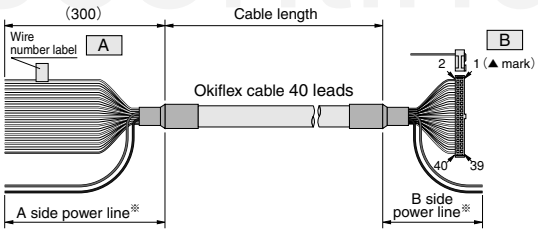
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
Wires w/o end processing

Compatible Equipment
PC, controller



●B side (PC side)
40 pins flat cable connector
FL40A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.

PCW - F40Y □ - □

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

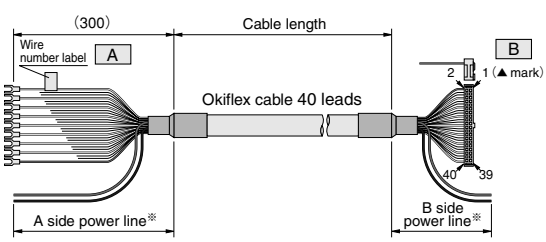
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
Wires w/o end processing, with Y terminals

Compatible Equipment
PC, controller



●B side (PC side)
40 pins flat cable connector
FL40A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.

Remark: Cable lengths of 20m [65.6ft.] or more are also available as a special. Consult us.

Cable assemblies are made to order. For delivery, consult us.

PCW-G400□-□

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

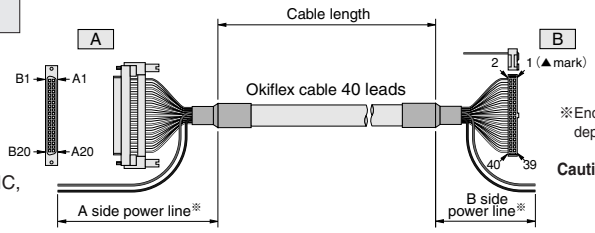
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
40 pins 360-type connector
FCN-367J040 (Made by Fujitsu)

Compatible Equipment
FCN connector type (40 pins)
OMRON, Mitsubishi, TOSHIBA
Fuji Electric FA Components & Systems, YASKAWA ELECTRIC, SHARP, YOKOGAWA ELECTRIC, KOYO ELECTRONICS INDUSTRIES



●B side (PC side)
40 pins flat cable connector
FL40A2FO
(Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.

Caution: This is for the types that the A and B connector numbers are mismatched. See the diagram on the right.

A Connector No.	Sheathed wiring table	B Connector No.
A1		1
B1		2
A2		3
B2		4
A3		5
B3		6
A4		7
B4		8
A5		9
B5		10
A6		11
B6		12
A7		13
B7		14
A8		15
B8		16
A9		17
B9		18
A10		19
B10		20
A11		21
B11		22
A12		23
B12		24
A13		25
B13		26
A14		27
B14		28
A15		29
B15		30
A16		31
B16		32
A17		33
B17		34
A18		35
B18		36
A19		37
B19		38
A20		39
B20		40

PCW-H200□-□

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

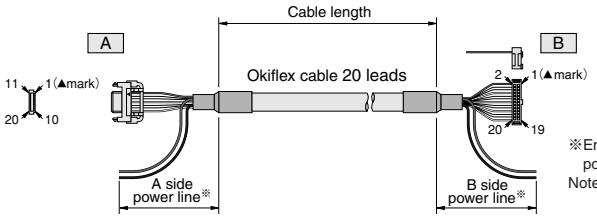
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal (Relay terminal, others)
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal (For 8-, 16-signal input/output units)Note
4	300mm [11.8in.] with Y terminal	100mm [3.9in.] with round terminal (For Koganei F201 specification manifold)
5	100mm [3.9in.] with bar terminal	100mm [3.9in.] with Y terminal (Relay terminal, others)
6	100mm [3.9in.] with bar terminal	100mm [3.9in.] with bar terminal (For 8-, 16-signal input/output units)Note
7	100mm [3.9in.] with bar terminal	100mm [3.9in.] with round terminal (For Koganei F201 specification manifold)

Remark: Y terminal is for M3.5, round terminal is for M3.

●A side (controller side)
20 pins half pitch connector
JM1S-0203 (Made by IDEC Izumi)

Compatible Equipment
Branch unit
Direct connecting type



●B side (PC side)
20 pins flat cable connector
FL20A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.
Note: Can also handle connector type 8- and 16-input/output units.

PCW-F200□-□

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

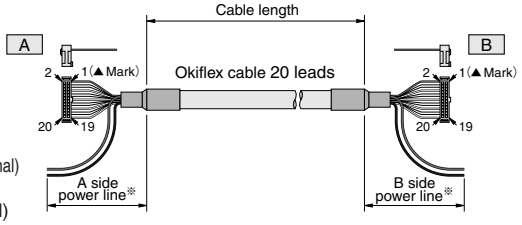
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal (Relay terminal, others)
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal (For 8-, 16-signal input/output units)Note
4	300mm [11.8in.] with Y terminal	100mm [3.9in.] with round terminal (For Koganei F201 specification manifold)
5	100mm [3.9in.] with bar terminal	100mm [3.9in.] with Y terminal (Relay terminal, others)
6	100mm [3.9in.] with bar terminal	100mm [3.9in.] with bar terminal (For 8-, 16-signal input/output units)Note
7	100mm [3.9in.] with bar terminal	100mm [3.9in.] with round terminal (For Koganei F201 specification manifold)

Remark: Y terminal is for M3.5, round terminal is for M3.

●A side (controller side)
20 pins flat cable connector
FL20A2FO (Made by Oki Electric Cable) or equivalent

Compatible Equipment
Relay terminal
Branch unit (Cannot select power line with Y terminal)
8-, 16-input/output unitNote
(Cannot select power line with Y terminal)



●B side (PC side)
20 pins flat cable connector
FL20A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.
Note: Can also handle connector type 8- and 16-input/output units.

Remark: Cable lengths of 20m [65.6ft.] or more are also available as a special. Consult us.

Cable assemblies are made to order. For delivery, consult us.

PCW - F340 □ - □

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

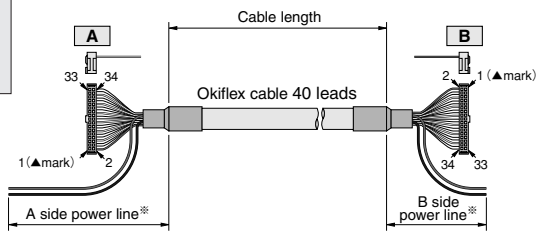
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
34 pins flat cable connector FL34A2FO (Made by Oki Electric Cable) or equivalent

Compatible Equipment
MIL connector type (34 pins)
KEYENCE



●B side (PC side)
34 pins flat cable connector FL34A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.

PCW - F34A □ - □

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

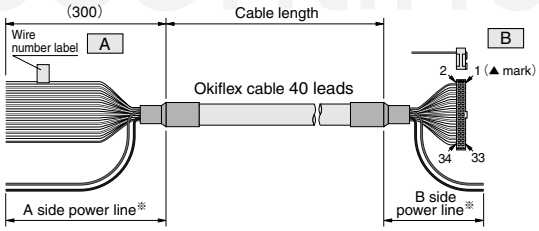
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
Wires w/o end processing

Compatible Equipment
PC, controller



●B side (PC side)
34 pins flat cable connector FL34A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.

PCW - F34Y □ - □

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

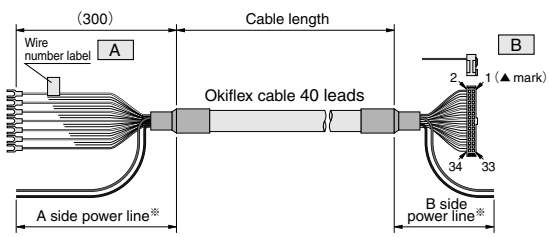
Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal

Remark: Y terminal is for M3.5.

●A side (controller side)
Wires w/o end processing, with Y terminals

Compatible Equipment
PC, controller



●B side (PC side)
34 pins flat cable connector FL34A2FO (Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.

Remark: Cable lengths of 20m [65.6ft.] or more are also available as a special. Consult us.

Cable Assembly Order Codes

Cable assemblies are made to order. For delivery, consult us.

PCW - J240 □ - □

Cable length (m) Note: Enter by the 0.5m pitch (MAX.20m [65.6ft.]).

Power line specification

Code	A side (controller side)	B side (PC side)
0	Without power line	Without power line
1	300mm [11.8in.] wire w/o end processing	100mm [3.9in.] wire w/o end processing
2	300mm [11.8in.] with Y terminal	100mm [3.9in.] with Y terminal (Relay terminal, others)
3	300mm [11.8in.] with Y terminal	100mm [3.9in.] with bar terminal (For 8-, 16-input/output units)Note
4	300mm [11.8in.] with Y terminal	100mm [3.9in.] with round terminal (For Koganei F201 specification manifold)

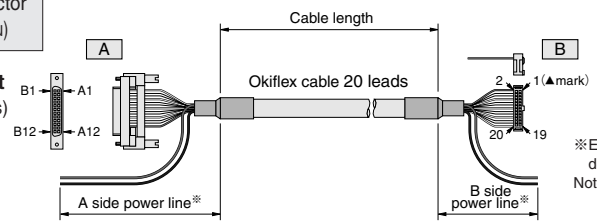
Remark: Y terminal is for M3.5, round terminal is for M3.

Caution:
The A and B side connector numbers are mismatched. See the diagram below.

A Connector No.	Sheathed wiring table	B Connector No.
A1		20
B1		19
A2		18
B2		17
A3		16
B3		15
A4		14
B4		13
A5		12
B5		11
A6		10
B6		9
A7		8
B7		7
A8		6
B8		5
A9		4
B9		3
A10		2
B10		1
A11		
B11		
A12		
B12		

●A side (controller side)
24 pins 360-type connector
FCN-367J024 (Made by Fujitsu)

Compatible Equipment
FCN connector type (24 pins)
OMRON

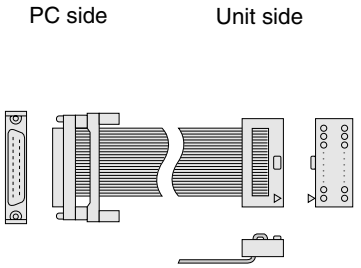


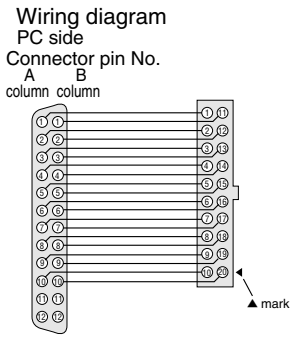
●B side (PC side)
20 pins flat
Cable connector
FL20A2FO
(Made by Oki Electric Cable) or equivalent

※End processing of power lines can vary depending on the power line specification.
Note: Can also handle connector types 8- and 16-input/output units.

●For connecting OMRON's C500-ID218CN, C200H-ID215, C500-OD415CN, C200H-OD215, C500-MD211CN, or C200H-MD215 with 8- or 16-input/output units, manufacture and use the cable assemblies shown in the diagram below:

PC-side connector	Made by Fujitsu	FCN-365P024
PC-side applicable connector	Made by Fujitsu	FCN-367J024
Unit-side connector	Made by Oki Electric Cable	FL20A2MS
Unit-side applicable connector	Made by Oki Electric Cable	FL20A2FO (equivalent)



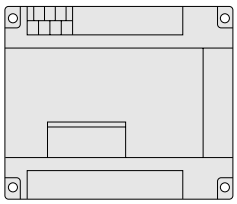


Note: The connector pin numbers are assigned for convenience. Use the ▲ mark as the reference.

Remark: Although the method of pin No. identification varies, a cable assembly with connectors already crimped is available. The model is **PCW-J240□-□**. (See diagram above)

PC Wiring System Connection Map

(16-I/O×2)× n

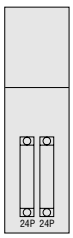


With I/O connector
micro sequencer

Mitsubishi Electric
FX2-32MT-C
FX2-64MT-C
FX2C-64MT
FX2C-96MT
FX2C-128MT
FX2C-160MT

Caution: Input/output unit for FX2, FX2C series is a specialized unit

32-I/O
(16-I/O×2)

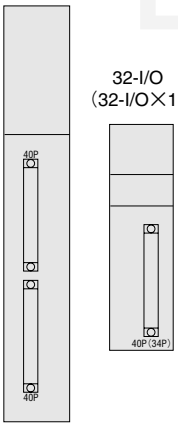


PC
multi-signal I/O unit

OMRON
Input : C500-ID218CN, C200H-ID215
Output : C500-OD415CN, C200H-OD215
Combination : C500-MD211CN, C200H-MD215
Note : When connecting the above input/output cards, please refer to p.1032.

64-I/O
(32-I/O×2)

32-I/O
(32-I/O×1)



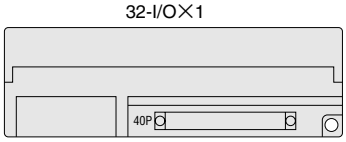
PC
multi-signal I/O unit

OMRON
Input : C500-ID219, C200H-ID217, C200H-ID216,CQM1-ID213 Note
Output : C500-OD213, C200H-OD219, C200H-OD218, CQM1-OD213 Note
Mitsubishi Electric
Input : AX42, A1SX42, A1SX41
Output : AY42, A1SY42, A1SY41
Fuji Electric FA Components & Systems.
Input : FTU125A, NS-X64-I, NV1X3204 (-W), NV1X3206 NC1X3204, NC1X3206, NC1X6404, NC1X6406
Output : FTU222A, NS-Y64-TI, NV1Y32T05P1 NC1Y32T05P1, NC1Y64T05P1-1
TOSHIBA
Input : DI335, DI-6241
Output : DO335, DO-6242
YASKAWA ELECTRIC
Input : JAMSC-B2605
Output : JAMSC-B2604
SHARP
Input : JW-64NC, JW-34NC, JW-234N, JW-264N
Output : JW-62SC, JW-32SC, JW-232S, JW-262S
YOKOGAWA ELECTRIC
Input : F3XD64-3N, F3XD32-3N
Output : F3YD64-1A, F3YD32-1A
KOYO ELECTRONICS INDUSTRIES
Input : U-09N
Output : U-19T

Matsushita Electric Works
Input : AFP23067, AFP33027, AFP33028, AFP33068
Output : AFP23407, AFP33487
Hitachi
Input : XDC24D2H
Output : YTR24DH
KEYENCE
Input : KZ-C32X
Output : KZ-C32T

Note: The branch unit (direct connecting type) is not applicable.

32-I/O×1

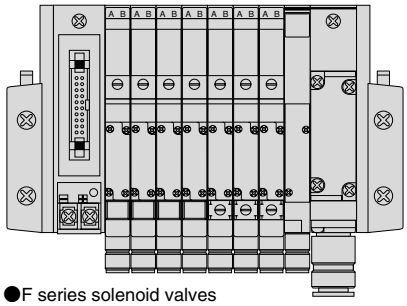


Serial remote
connector I/O unit

Mitsubishi Electric
Input : AJ35TC1-32D Note
Output : AJ35TC1-32T Note

Note: The branch unit (direct connecting type) is not applicable.

Manifold solenoid valve



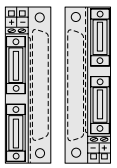
●F series solenoid valves
Wiring specifications : -F201 type (Positive common specification)
●FM Solid Manifold X80M, X88M series
Wiring module : FMCR-F201, FMC-F201 type (Positive common specification)

Cable Assembly
PCW-F200□

Cable Assembly
PCW-J240□

Branch unit
(Direct connecting type)

Direct connecting type
For OMRON and Mitsubishi Electric only

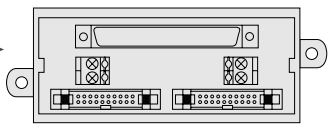


Cable Assembly
PCW-H200□

For input : FMA-TF3120-□
For output : FMA-TF3020-□

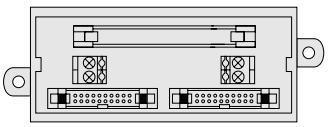
Cable Assembly
PCW-F200□

Branch unit 32-I/O →16-I/O ×2



Cable Assembly
PCW-J400□

For input : FMA-TF4120-□
For output : FMA-TF4020-□



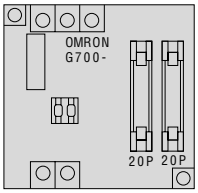
Cable Assembly
PCW-G400□
PCW-F400□
PCW-F340□

For input : FMA-TE4120-□
For output : FMA-TE4020-□

Cable Assembly
PCW-G400□
PCW-F400□
PCW-F340□

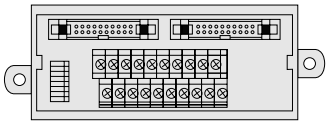
●For models other than those listed above, consult us.

Serial transmission sub-station
OMRON



SYSMAC BUS/2
G700-EOD32（Output 16×2）
G700-EID32（Input 16×2）
G700-EMD32（Output 16×1, Input 16×1）
SYSBUS
G71-OD16（Output 16×1）
G71-IC16（Input 16×1）

8-input/output Unit

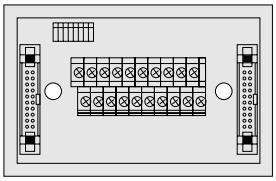


For input : FMA-TM1108
For output : FMA-TM1008
For input : FMA-TK1108
For output : FMA-TK1008

※Cascade connection (2 units) possible

Cable Assembly PCW-F200□

8-input/output Unit
（Box-mounting type）

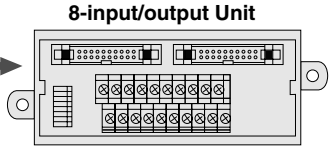


For input : FMA-TM2108
For output : FMA-TM2008
For input : FMA-TK2108
For output : FMA-TK2008

※Cascade connection (2 units) possible

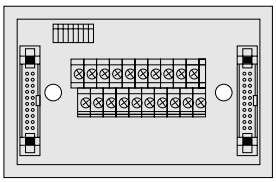
Cable Assembly PCW-F200□

8-input/output Unit



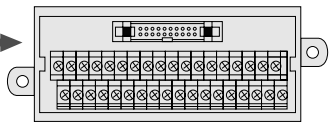
For input : FMA-TM1108
For output : FMA-TM1008
For input : FMA-TJ1108
For output : FMA-TJ1008

8-input/output Unit
（Box-mounting type）



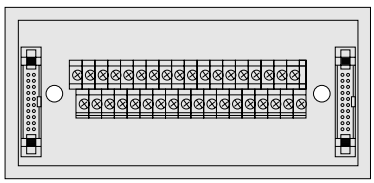
For input : FMA-TM2108
For output : FMA-TM2008
For input : FMA-TJ2108
For output : FMA-TJ2008

16-input/output Unit



For input : FMA-TM1116
For output : FMA-TM1016
※Unable to increase units.

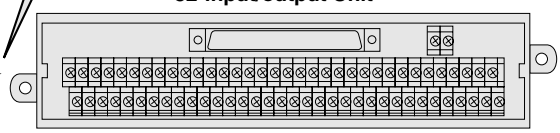
16-input/output Unit
（Box-mounting type）



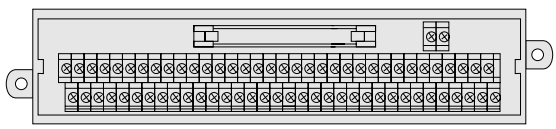
For input : FMA-TM2116
For output : FMA-TM2016

Cable Assembly PCW-J400□

32-input/output Unit

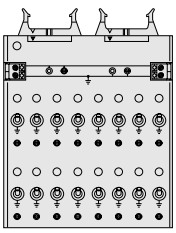


For input : FMA-TM1132-□
For output : FMA-TM1032-□



For input : FMA-TL1132-□
For output : FMA-TL1032-□

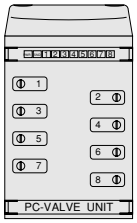
Check Unit



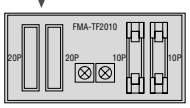
FMA-RCU16F

※ ◎ : Marks where the check units can be connected.

PC-VALVE UNIT（8 outputs）
PCV201□



Wiring branch unit
（16 outputs → 8 outputs×2）



（FMA-AF101-F-###）

FMA-TF2010
※Refer to PC-VALVE UNIT（p.790）.

Connection Example between Branch Unit and Equipment

The following products can also be directly connected to the various companies' programmable controllers to reduce wiring.