



PLC Renewal Adapter MELSEC-A/K Series
(Mitsubishi)

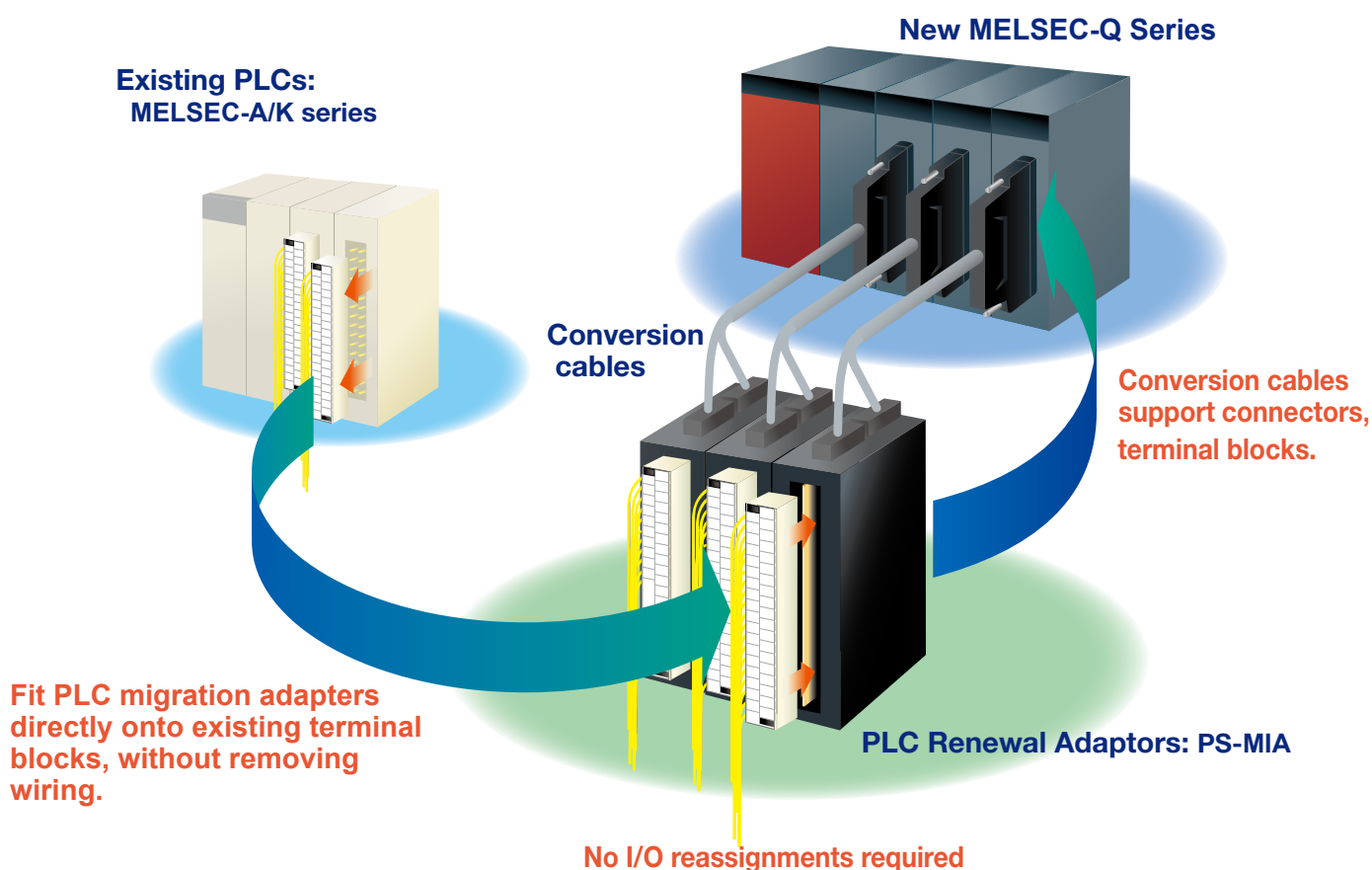
PS series

Migrating outdated PLCs into new PLCs without wiring

The PLC Renewal Adapter allows you to migrate Mitsubishi MELSEC-A/K series PLCs into new MELSEC-Q series PLCs without rewiring and reconnecting cables or rechecking I/O assignments.

● Features

- Renew old PLCs with various manufacturers including Mitsubishi, JTEKT, Omron and more.
- Voltage conversion models allow new PLCs to be rated at 24 VDC.
- Toho custom-builds cable that adapt PLCs from all major manufacturers with changing connector pin assign.
- Small-footprint installation mounts available upon request.
- “Low-profile” models available.



●PLC Renewal Adaptor Selection

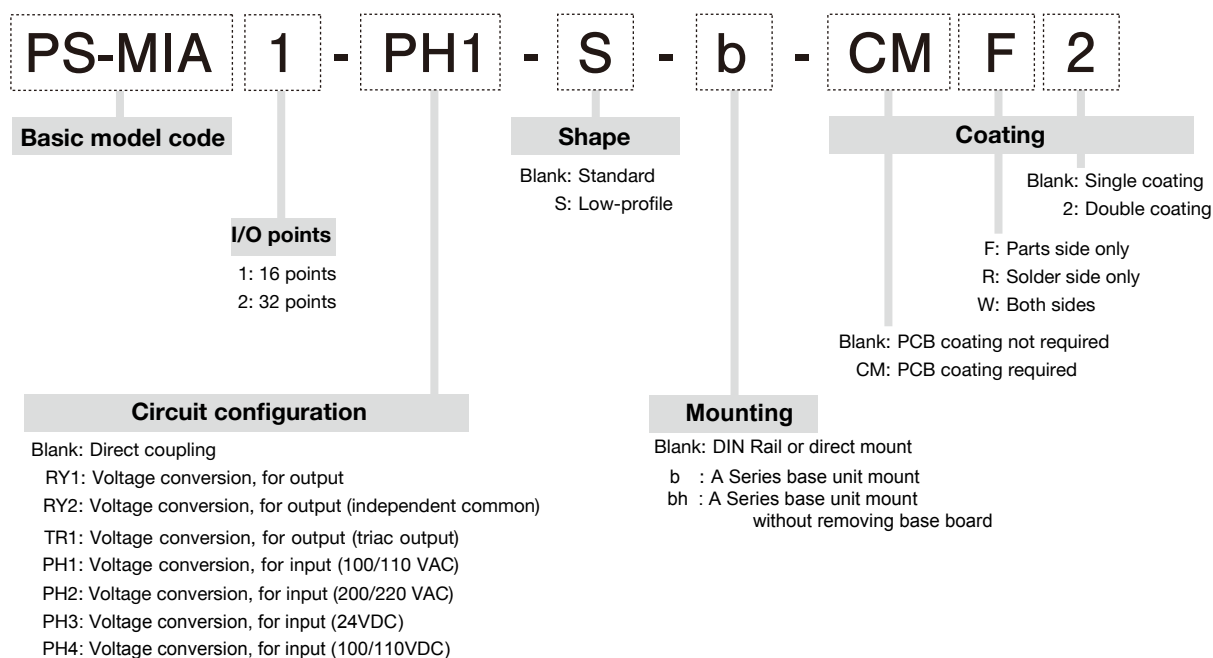
Existing PLC				New PLC	PLC Renewal Adaptor		
Series name	Model name	Voltage rating	Number of I/O points	Voltage rating	Model name	Circuit	Reference page
Mitsubishi MELSEC-A	20-pole terminal block unit	125 VAC/DC max	16	Same as existing PLC	PS-MIA1	Direct coupling	6
					PS-MIA1-S	Direct coupling	6
	38-pole terminal block unit	125 VAC/DC max	32	Same as existing PLC	PS-MIA2	Direct coupling	7
					PS-MIA2-S	Direct coupling	7
	AY10 AY11E AY11 AY11EEU	250 VAC/30VDC Output	16	DC24V	PS-MIA1-RY1	Relay	8
					PS-MIA1-RY1-S	Relay	8
	AY10A AY11AEU AY11A	AC250V/DC30V Output	16	DC24V	PS-MIA1-RY2	Relay	8
					PS-MIA1-RY2-S	Relay	8
	AY13	AC250V/DC30V Output	32	DC24V	PS-MIA2-RY1	Relay	9
					PS-MIA2-RY1-S	Relay	9
	AY22	AC240V/DC24V Output	16	DC24V	PS-MIA1-TR1	SSR	10
					PS-MIA1-TR1-S	SSR	10
	AY23	AC240V/DC24V Output	32	DC24V	PS-MIA2-TR1	SSR	11
					PS-MIA2-TR1-S	SSR	11
	AX10	AC100/110V Input	16	DC24V	PS-MIA1-PH1	Photocoupler	12
					PS-MIA1-PH2-S	Photocoupler	12
	AX11 AX11EU	AC100/110V Input	32	DC24V	PS-MIA2-PH1	Photocoupler	13
					PS-MIA2-PH2-S	Photocoupler	13
	AX20	AC200/220V Input	16	DC24V	PS-MIA1-PH2	Photocoupler	14
					PS-MIA1-PH2-S	Photocoupler	14
	AX21 AX21EU	AC200/220V Input	32	DC24V	PS-MIA2-PH2	Photocoupler	15
					PS-MIA2-PH2-S	Photocoupler	15
	AX41	DC24V	32	DC24V	PS-MIA2-PH3-S	Photocoupler	16
	AX60 AX60-S1	DC100/110V Input	16	DC24V	PS-MIA1-PH4	Photocoupler	17
Mitsubishi MELSEC-K	20-pole terminal block unit	Max. AC250V	16	Same as existing PLC	PS-MIK1A22	Direct coupling	18
	KX11N	AC100/110V Input	32	DC24V	PS-MIK2-PH1	Photocoupler	19
	KX21	AC200/220V Input	32	DC24V	PS-MIK2-PH2	Photocoupler	20

* Please contact us for other existing PLC models than those listed on the above table.

●Ordering Information

PLC Renewal Adaptor

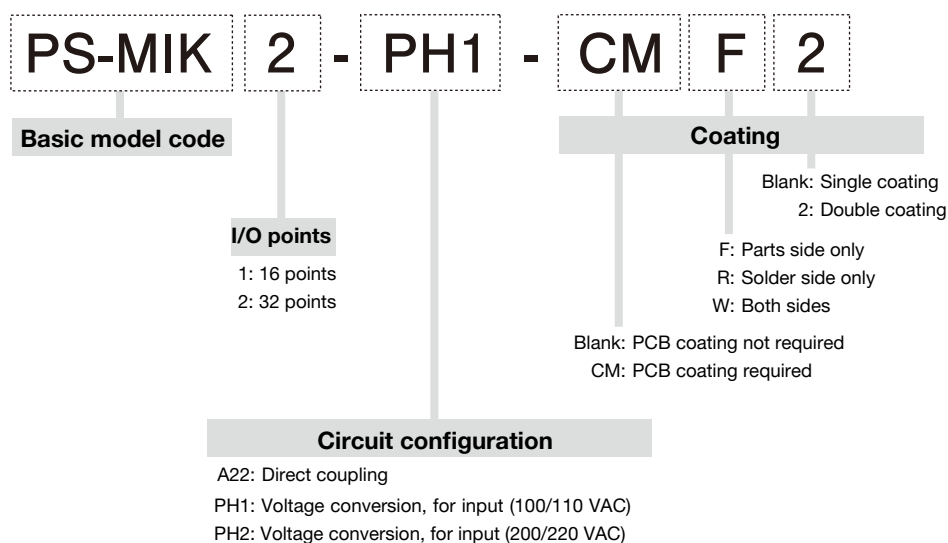
MELSEC-A Series



*1 Low-profile model only mounts directly to the panel.

*2 Please see specifications for "PH2" regarding low-profile AC100V input.

MELSEC-K Series



Conversion cables

- Can be custom-made, according to your specification. See page

5.

Installation mounts

- Can be custom-made, according to your space availability. See pages 5 and 22.

Ordering Procedure

The following outlines the ordering procedure.

1

PLC Renewal Adaptor

Choose a new PLC model you want to use in place of the existing PLC model.

Advise us of the model names of the existing PLC and the new PLC you have chosen.
(You may be requested to provide us with additional information on the PLCs concerned.)

We will provide a recommendation for a PLC Renewal Adapter model.

Choose what PLC Renewal Adaptor model to use.

Some working or loading conditions could hinder the proper function of the Adaptor. Pay due attention to these conditions in advance.

2

Conversion Cable

Advise us of the I/O signal names of the existing and new PLCs.

We prepare a delivery specification and submit it for your approval.

The specification is checked.

The specification is confirmed.

3

Installation Mount

(see page 26)

Provide us with information including outer dimensions of the existing mount and the space available for the new mount.

We prepare a delivery specification and submit it for your approval.

The specification is checked.

The specification is confirmed.

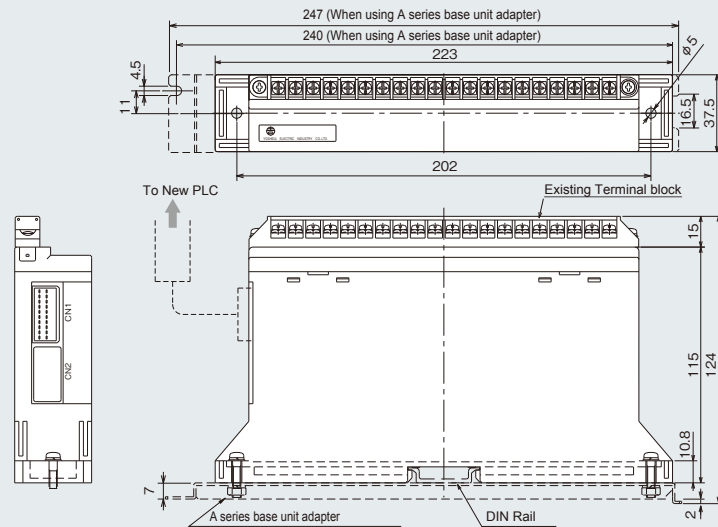
Direct-coupling models

For 16-point input/output module
Circuit configuration: Direct coupling

Standard

PS-MIA1

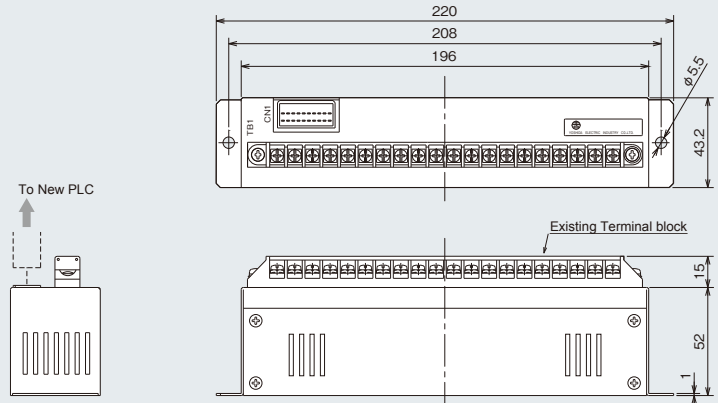
16 Points 24 - 100VAC



Low Profile

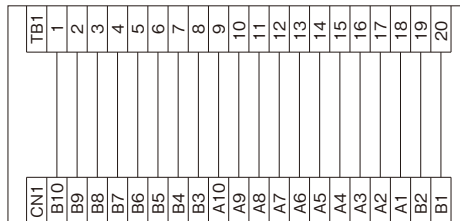
PS-MIA1-S

16 Points 24 - 100VAC



* The product comes with no terminal block.

Circuit diagram



Specifications

Installed Connector	1376137-1 (TYCO)
Rated Voltage	AC/DC125V
Rated Current	1A
Mounting Scheme	Panel mount, DIN Rail, A series base unit mount
Insulation Resistance	>1000MΩ with ground (500 VDC megger)
Dielectric Strength	AC2000V / min with ground
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground
Vibration Resistance	10~55Hz, 0.5mm/p-p
Impact Resistance	98m / S ² (10G)

Low-profile model only mount directly to the panel.

Cables

	Existing PLC unit (MELSEC-A)	New PLC unit (MELSEC-Q)	Cable
Input	AX10	QX10	16MI-H0955-()
	AX40	QX40	
		QX40-S1	
	AX70	QX70	16MI-H0957-()
	AX80	QX80	
Output	AY10	QY10	16MI-H0955-()
	AY11		
	AY11E		
	AY11EEU		
	AY22	QY22	16MI-H0960-()
	AY40	QY40P	
	AY40P		
	AY70	QY70	
	AY50	QY50	
AY80	QY80	16MI-H0961-()	

Please specify the cable length by each 10cm in ().

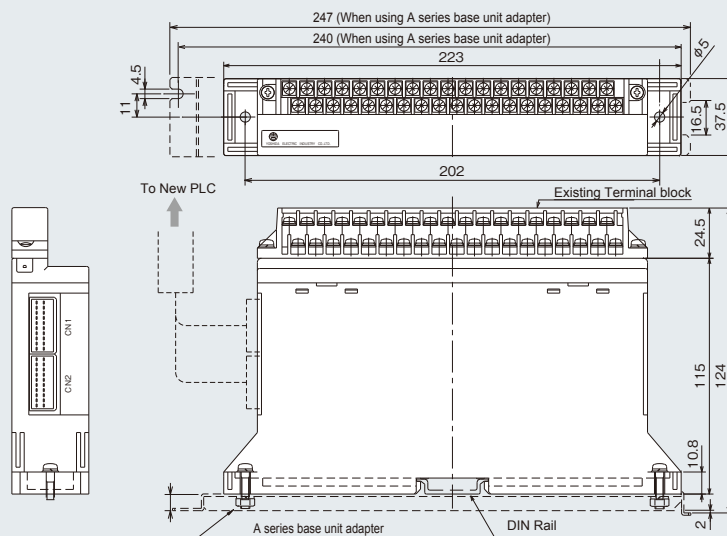
Direct-coupling models

For 32-point input/output module
Circuit configuration: Direct coupling

Standard

PS-MIA2

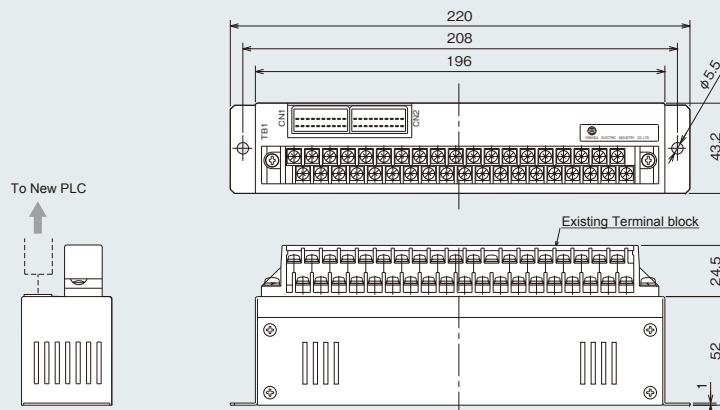
32 Points 24 - 100VAC



Low Profile

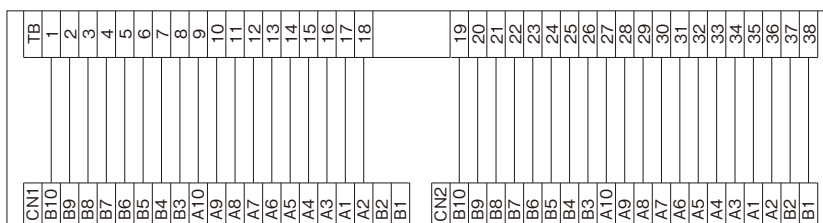
PS-MIA2-S

32 Points 24 - 100VAC



* The product comes with no terminal block.

Circuit diagram



Specifications

Installed Connector	1376137-1 (TYCO)
Rated Voltage	AC/DC125V
Rated Current	1A
Mounting Scheme	Panel mount, DIN Rail, A series base unit mount
Insulation Resistance	>1000MΩ with ground (500 VDC megger)
Dielectric Strength	AC2000V / min with ground
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground
Vibration Resistance	10~55Hz, 0.5mm/p-p
Impact Resistance	98mJ/S ² (10G)

Low-profile model only mount directly to the panel.

Cables

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Input	AX41	QX41	32MI-H0958-(※)
	AX31-S1	QX41-S1	
	AX41-S1	QX71	
	AX71	QX71	32MI-H0959-(※)
	AX81	QX81	
	AX81-S1	QX81	
	AX11	QX10×2	32MI-H0964-(※) -CN1 32MI-H0964-(※) -CN2
	AX11EU	QX10×2	
	AX81-S2 (DC48V)	QX50×2	

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Output	AY41	QY41P	32MI-H0962-()
	AY41P	QY71	
	AY71	QY71	
	AY81	QY81P	32MI-H0963-()
	AY81EP	QY81P	
	AY10A	QY18A×2	
	AY11A	QY18A×2	32MI-H0965-()
	AY11AEU	QY18A×2	
	AY13	QY10×2	
	AY13E	QY10×2	32MI-H0964-()-CN1 32MI-H0964-()-CN2
	AY13EU	QY10×2	
	AY23	QY22×2	
	AY51	QY50×2	32MI-H1329-()-CN1 32MI-H1329-()-CN2
	AY51-S1	QY50×2	

Please specify the cable length by each 10cm in ().

Voltage conversion model

For 16-point output module
Circuit configuration: Relay

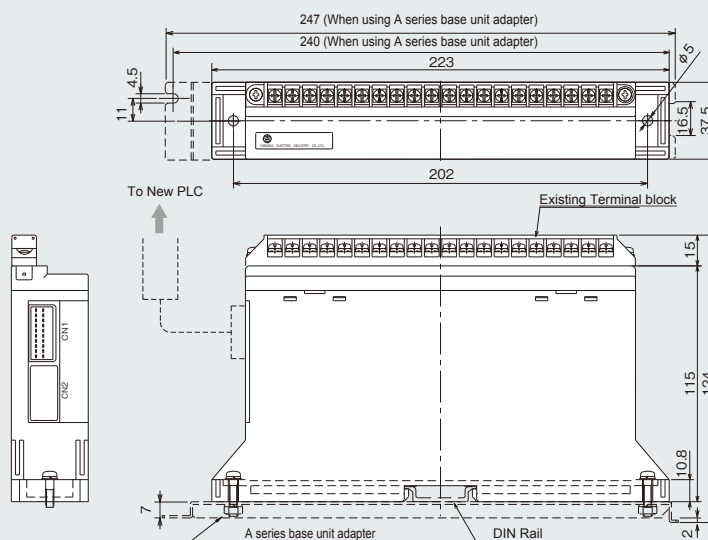
Standard

PS-MIA1-RY1

16 Points Contact Output

PS-MIA1-RY2

16 Point Independent Common



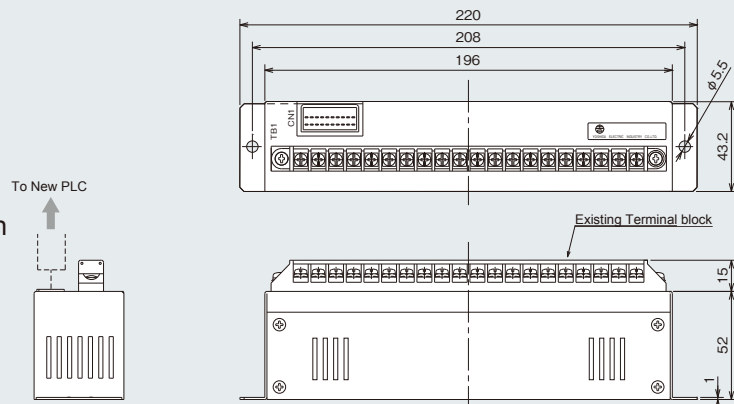
Low Profile

PS-MIA1-RY1-S

16 Points Contact Output

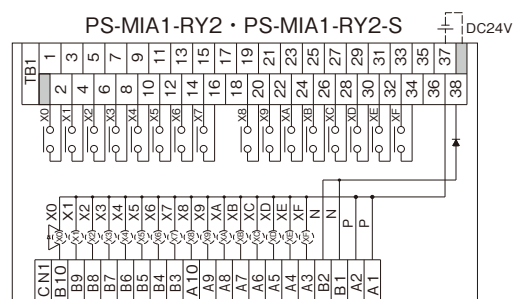
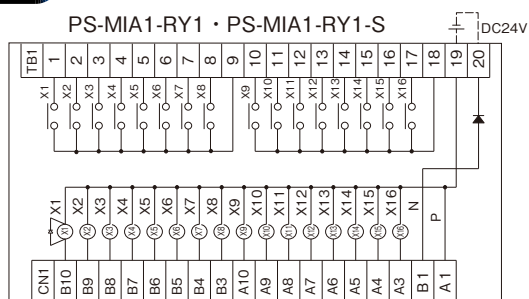
PS-MIA1-RY2-S

16 Point Independent Common



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	8 points /common
	New PLC	16 points / common
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	Existing PLC	AC250V/DC30V
	New PLC	DC24V
Rated Current (Output)		
2A(8A / Common)		
Voltage Conversion		
Relay		
Mounting Scheme		
Panel mount, DIN Rail, A series base unit mount		
Insulation Resistance		
>1000MΩ with ground (500 VDC megger)		
Dielectric Strength		
AC2000V / 1 min with ground		
Lighting Impulse (1.2/50 μs)		
±4000V 3 times with ground		
Vibration Resistance		
10~55Hz, 0.5mm/p-p		
Impact Resistance		
98m / S ² (10G)		

Low-profile model only mount directly to the panel.

Cables

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Output	AY10 AY11 AY11E AY11EEU	QY41P QY42P *QY71 (DC12V) QH24P (Output)	32MI-AOP-H0064-()

Please specify the cable length by each 10cm in ().

Please contact Toho technology when using QY71.

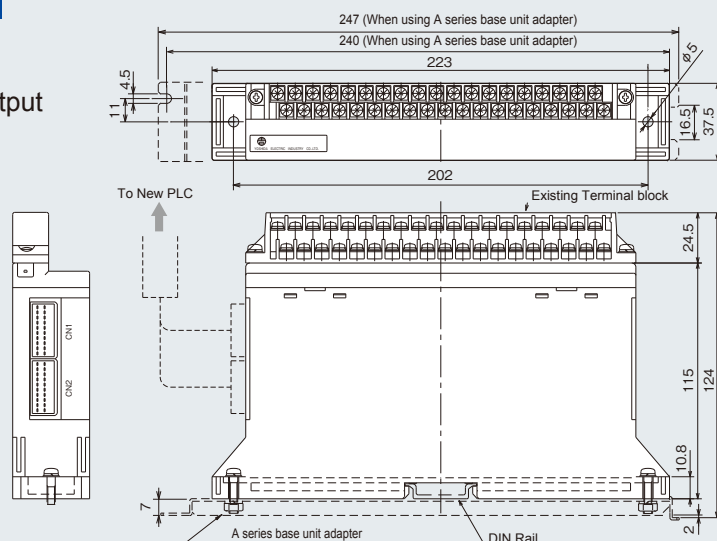
Voltage conversion model

For 32-point output module
Circuit configuration: Relay

Standard

PS-MIA2-RY1

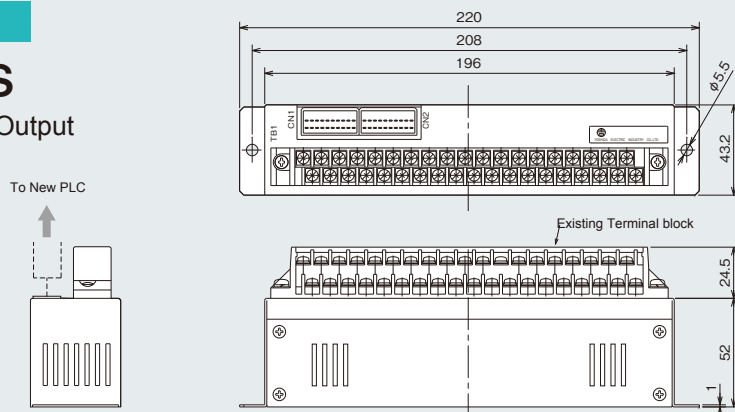
32 Points Relay Contact Output



Low Profile

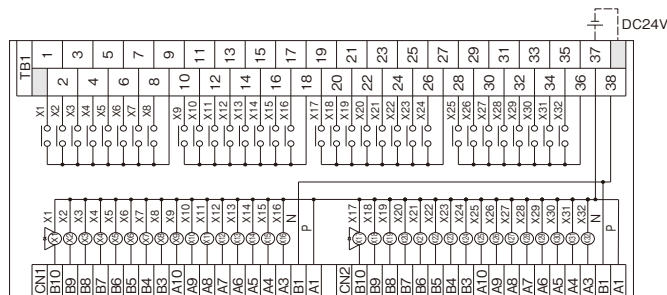
PS-MIA2-RY1-S

32 Points Relay Contact Output



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	8 points/Common
	New PLC	32 points / Common
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	Existing PLC	AC250V/DC30V
	New PLC	DC24V
Rated Current (Output)	2A (8A/1 Common)	
Voltage Conversion	Relay	
Mounting Scheme	Panel mount, DIN Rail, A series base unit mount	
Insulation Resistance	>1000MΩ with ground (500 VDC megger)	
Dielectric Strength	AC2000V / 1 min with ground	
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground	
Vibration Resistance	10~55Hz, 0.5mm/p-p	
Impact Resistance	98m/S ² (10G)	

Low-profile model only mount directly to the panel.

Cables

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Output	AY13 AY13EU AY13E	QY41P QY42P *QY71 (DC12V) QH24P (Output)	32MI-AOP-H0064-()

Please specify the cable length by each 10cm in ().

Please contact Toho technology when using QY71.

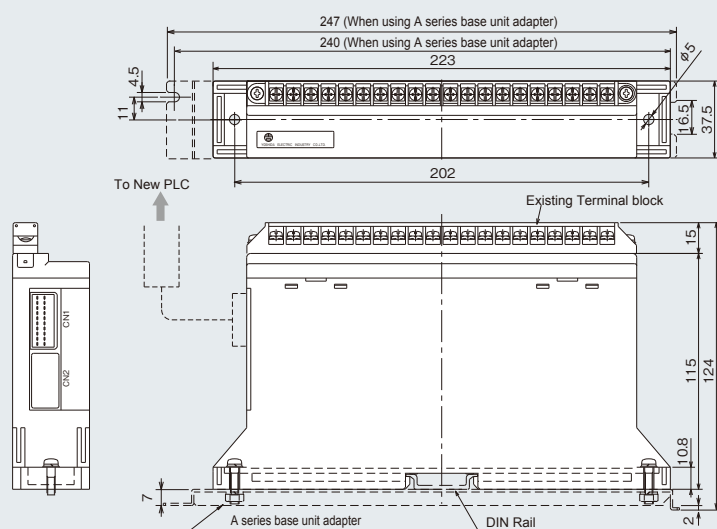
Voltage conversion model

For 16-point output module
Circuit configuration: SSR

Standard

PS-MIA1-TR1

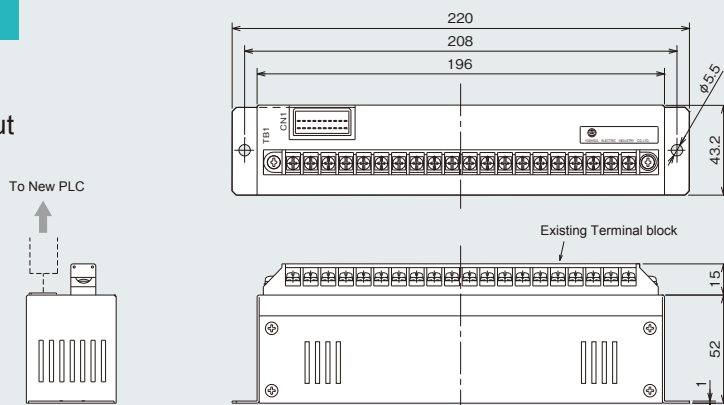
16 Points MOSFET Output



Low Profile

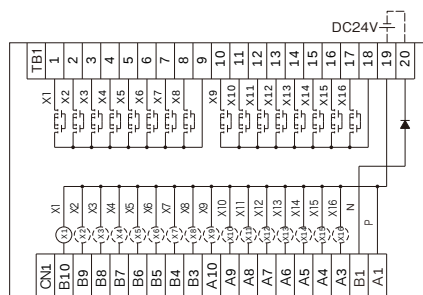
PS-MIA1-TR1-S

16 Points MOSFET Output



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	16 Points / Common
	New PLC	32 Points / Common
Installed Connector		1376137-1 (Tyco)
Rated Voltage	Existing PLC	AC240V, DC24V
	New PLC	DC24V
Rated Current (Output)		0.6A (1Point) (2.4A/Common)
Voltage Conversion		SSR
Mounting Scheme*		Panel mount, DIN Rail, A series base unit mount
Insulation Resistance		>1000MΩ with ground (500 VDC megger)
Dielectric Strength		AC2000V / 1 min with ground
Lighting Impulse (1.2/50 μs)		±4000V 3 times with ground
Vibration Resistance		10~55Hz, 0.5mm/p-p
Impact Resistance		98m/s ² (10G)

*Low-profile model only mount directly to the panel.

* Rated current is not the same as AY22. (AY22: 2A/point, 33A/common)

Cables

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Output	AY22	QY41P QY42P	32MI-AOP-H0064-()

PS-MIA1-TR1/TR1-S... Using 2 units

Please specify the cable length by each 10cm in ().

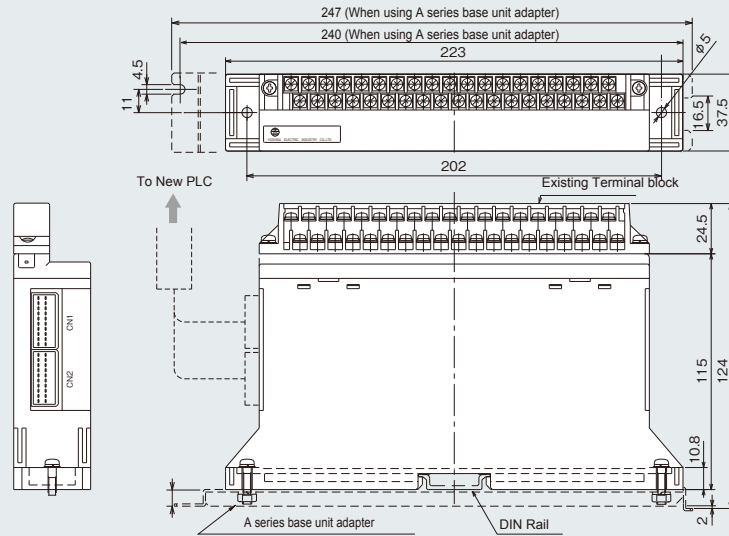
Voltage conversion model

For 32-point output module
Circuit configuration: SSR

Standard

PS-MIA2-TR1

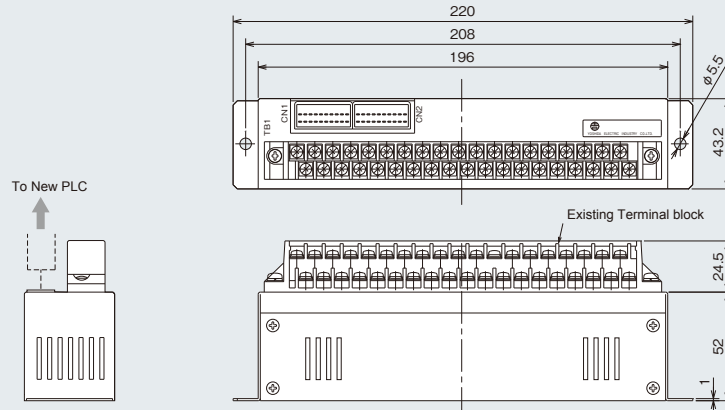
32 Points MOSFET Output



Low Profile

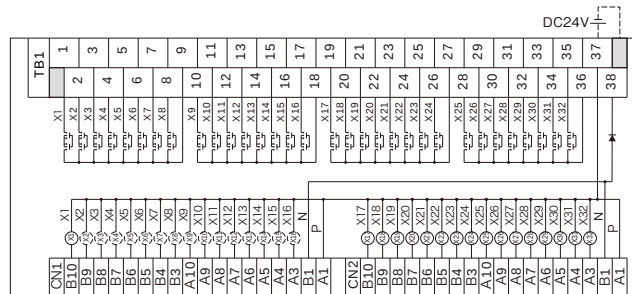
PS-MIA2-TR1-S

32 Points MOSFET Output



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	32 Points / Common
	New PLC	32 Points / Common
Installed Connector		1376137-1 (Tyco)
Rated Voltage	Existing PLC	AC240V, DC24V
	New PLC	DC24V
Rated Current (Output)		0.6A (1Point) (2.4A/Common)
Voltage Conversion		SSR
Mounting Scheme*		Panel mount, DIN Rail, A series base unit mount
Insulation Resistance		>1000MΩ with ground (500 VDC megger)
Dielectric Strength		AC2000V / 1 min with ground
Lighting Impulse (1.2/50 μs)		±4000V 3 times with ground
Vibration Resistance		10~55Hz, 0.5mm/p-p
Impact Resistance		98m/S ² (10G)

*Low-profile model only mount directly to the panel.

Cables

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Output	AY23	QY41P QY42P	32MI-AOP-H0064-()

Please specify the cable length by each 10cm in ().

Voltage conversion model

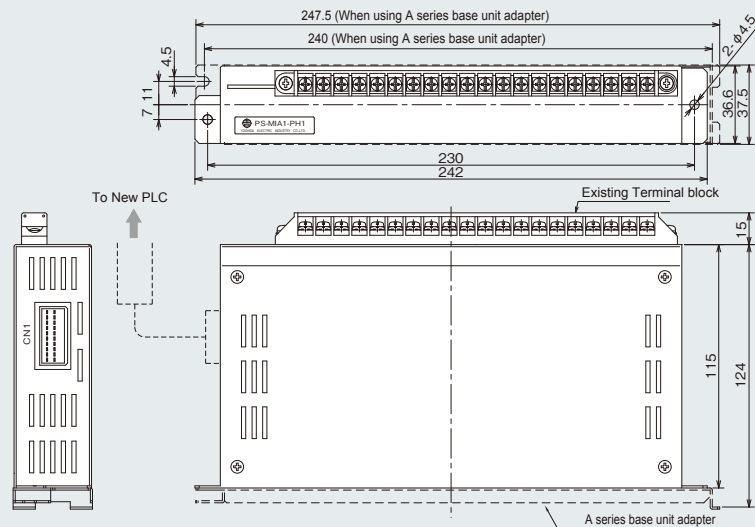
For 16-point 100/110 VAC input module

Circuit configuration: Photocoupler

Standard

PS-MIA1-PH1

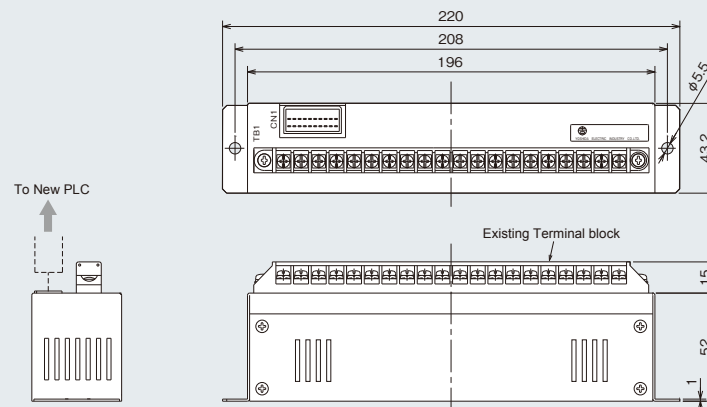
(Conversion of
100/110 VAC to 24 VDC)



Low Profile

PS-MIA1-PH2-S

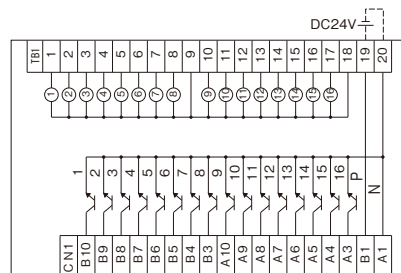
(Conversion of
100/110 VAC to 24 VDC)



* These models can be used with either of 100/110 AC and 200/240 VAC.

* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	16 Points / Common
	New PLC	32 Points / Common
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	Existing PLC	AC100/110V
	New PLC	DC24V
Rated Current (Input)	10mA	
Voltage Conversion	Photocoupler	
Photocoupler ON Voltage	AC50V	
Mounting Scheme	Panel mount, A series base unit mount	
Insulation Resistance	>1000MΩ with ground (500 VDC megger)	
Dielectric Strength	AC2000V / 1 min with ground	
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground	
Vibration Resistance	10~55Hz, 0.5mm/p-p	
Impact Resistance	98m/S ² (10G)	

Existing PLC supported

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Input	AX10	QX41 QX42 QX71 QX72	32MI-AI-H0063-()

PS-MIA1-PH1/PH2-S...2 units

Please specify the cable length by each 10cm in ().

Voltage conversion model

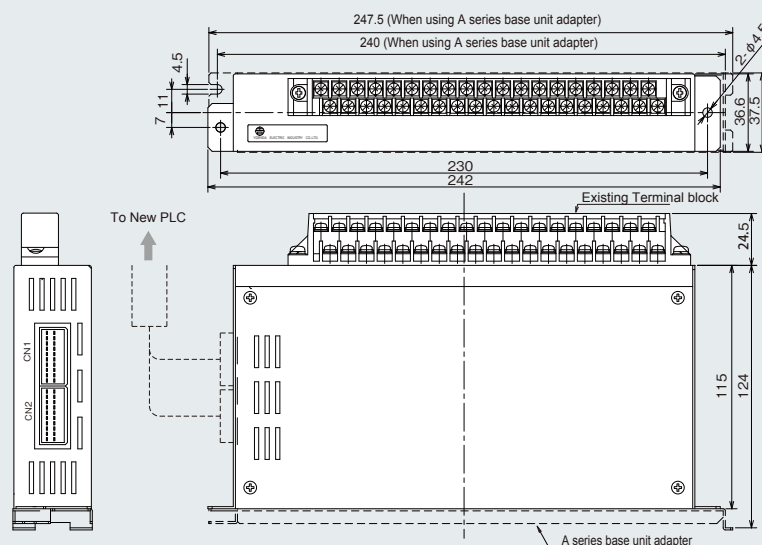
For 32-point 100/110 VAC input module

Circuit configuration: Photocoupler

Standard

PS-MIA2-PH1

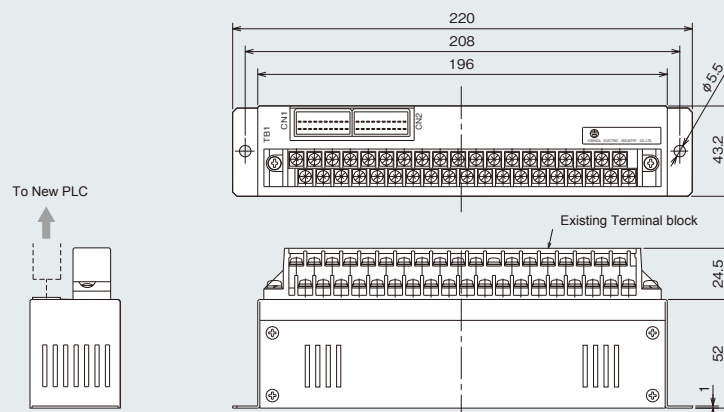
(Conversion of
100/110 VAC to 24 VDC)



Low Profile

PS-MIA2-PH2-S

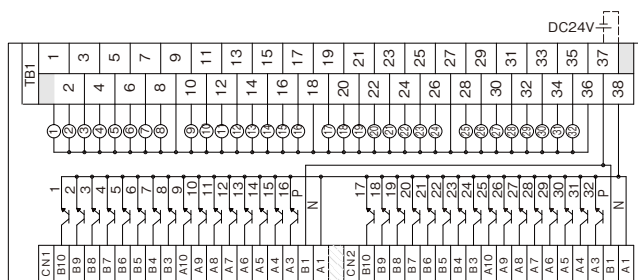
(Conversion of
100/110 VAC to 24 VDC)



* These models can be used with either of 100/110 AC and 200/240 VAC.

* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	32 Points / Common
	New PLC	32 Points / Common
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	Existing PLC	AC100/110V
	New PLC	DC24V
Rated Current (Input)	10mA (Standard), 5mA (Low-Profile)	
Voltage Conversion	Photocoupler	
Photocoupler ON Voltage	AC50V	
Mounting Scheme	Panel mount, A series base unit mount	
Insulation Resistance	>1000MΩ with ground (500 VDC megger)	
Dielectric Strength	AC2000V / 1 min with ground	
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground	
Vibration Resistance	10~55Hz, 0.5mm/p-p	
Impact Resistance	98m/S ² (10G)	

Existing PLC supported

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Input	AX11	QX41	32MI-AI-H0063-()
	AX11EU	QX42 QX71 QX72	

Please specify the cable length by each 10cm in ().

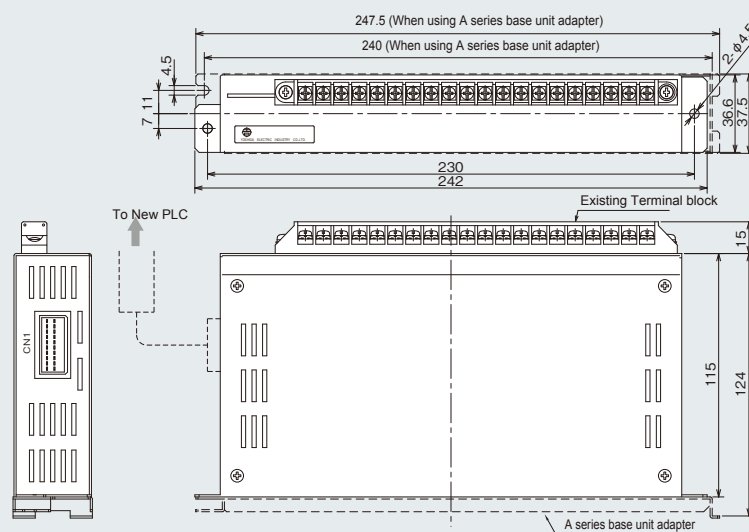
Voltage conversion model

For 16-point 200/220 VAC input module
Circuit configuration: Photocoupler

Standard

PS-MIA1-PH2

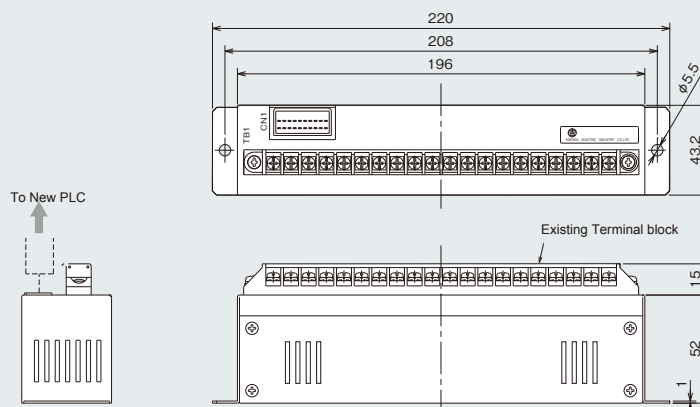
(Conversion of
200/220 VAC to 24 VDC)



Low Profile

PS-MIA1-PH2-S

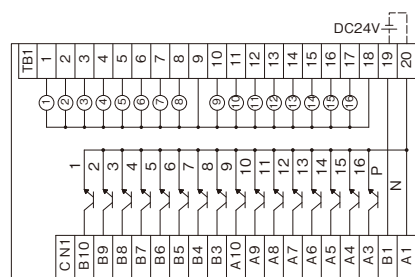
(Conversion of
200/220 VAC to 24 VDC)



* These models can be used with either of 100/110 AC and 200/240 VAC.

* The product comes with no terminal block.

Circuit diagram



Specifications

	PS-MIA1-PH2	PS-MIA1-PH2-S
Common Points	16 Points / Common	(New PLC)
Common Points	32 Points / Common	(Existing PLC)
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	AC200/220V (Existing PLC), DC24V (New PLC)	
Rated Current (Input)	10mA	5mA
Voltage Conversion	Photocoupler	
Photocoupler ON Voltage	AC100V	AC50V
Mounting Scheme	Panel mount, A series base unit mount	
Insulation Resistance	>1000MΩ with ground (500 VDC megger)	
Dielectric Strength	AC2000V / 1 min with ground	
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground	
Vibration Resistance	10~55Hz, 0.5mm/p-p	
Impact Resistance	98m/S ² (10G)	

Existing PLC supported

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Input	AX20	QX41 QX42 QX71 QX72	32MI-AI-H0063-()

Please specify the cable length by each 10cm in ().

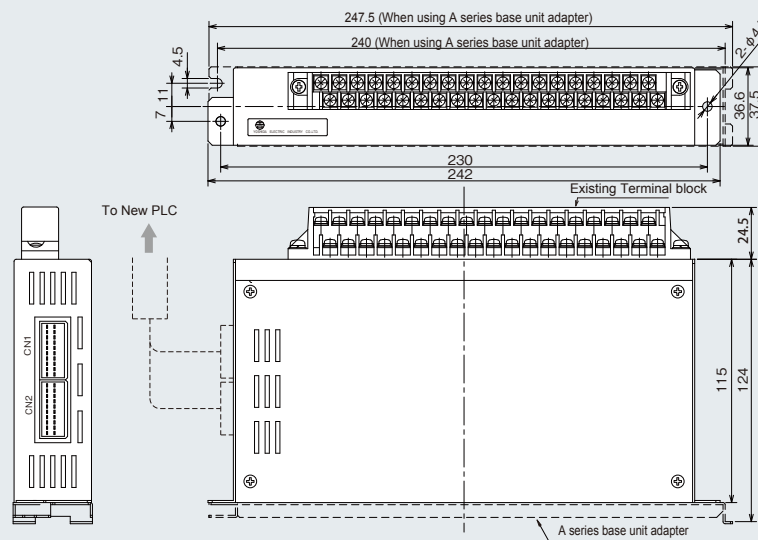
Voltage conversion model

For 32-point 200/220 VAC input module
Circuit configuration: Photocoupler

Standard

PS-MIA2-PH2

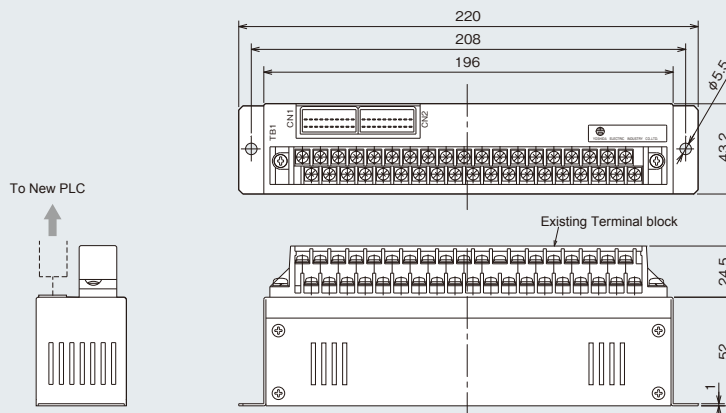
(Conversion of
200/220 VAC to 24 VDC)



Low Profile

PS-MIA2-PH2-S

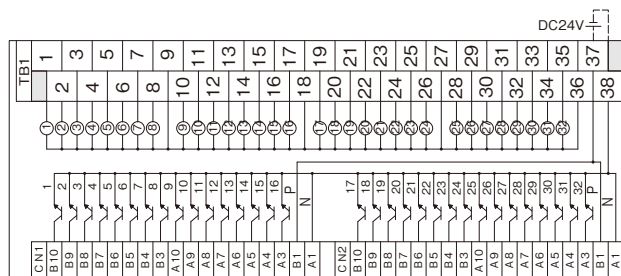
(Conversion of
200/220 VAC to 24 VDC)



* These models can be used with either of 100/110 AC and 200/240 VAC.

* The product comes with no terminal block.

Circuit diagram



Specifications

	PS-MIA1-PH2	PS-MIA1-PH2-S
Common Points	32 Points / Common (New PLC)	
Common Points	32 Points / Common (Existing PLC)	
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	AC200/220V (Existing PLC), DC24V (New PLC)	
Rated Current (Input)	10mA	5mA
Voltage Conversion	Photocoupler	
Photocoupler ON Voltage	AC100V	AC50V
Mounting Scheme	Panel mount, A series base unit mount	
Insulation Resistance	>1000MΩ with ground (500 VDC megger)	
Dielectric Strength	AC2000V / 1 min with ground	
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground	
Vibration Resistance	10~55Hz, 0.5mm/p-p	
Impact Resistance	98m/S ² (10G)	

Existing PLC supported

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Input	AX21 AX21EU	QX41 QX42 QX71 QX72	32MI-AI-H0063-()

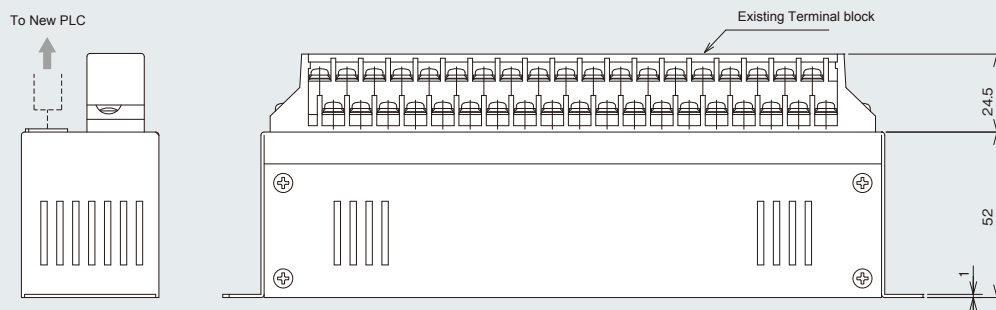
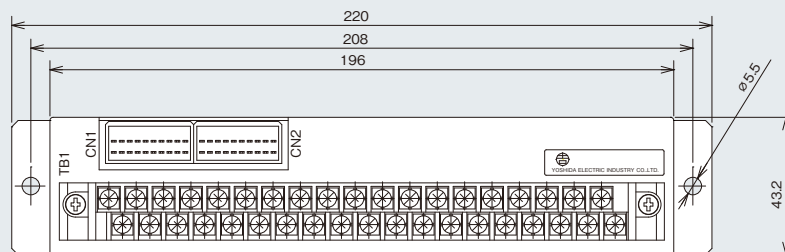
Please specify the cable length by each 10cm in ().

Voltage conversion model

For 32-point 24 VDC input module
Circuit configuration: Photocoupler

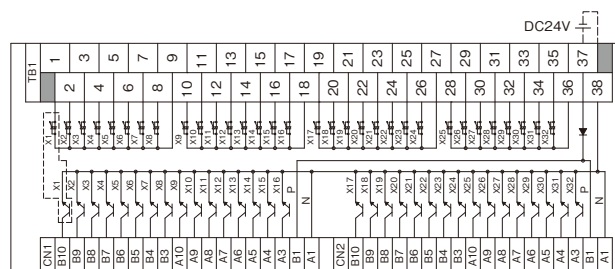
PS-MIA2-PH3-S

(Conversion of
8 point common to 32 point common)



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	8 Points / Common
	New PLC	32 Points / Common
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	Existing PLC	DC24V
	New PLC	DC24V
Rated Current (Input)	10mA	
Voltage Conversion	Photocoupler	
Photocoupler ON Voltage	DC9V	
Mounting Scheme	Panel mount	
Insulation Resistance	>100MΩ with ground (500 VDC megger)	
Dielectric Strength	AC2000V / 1 min with ground	
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground	
Vibration Resistance	10~55Hz, 0.5mm/p-p	
Impact Resistance	98m/S ² (10G)	

Existing PLC supported

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Input	AX41	QX41	32MI-AI-H0063-(※)

Please specify the cable length by each 10cm in ().

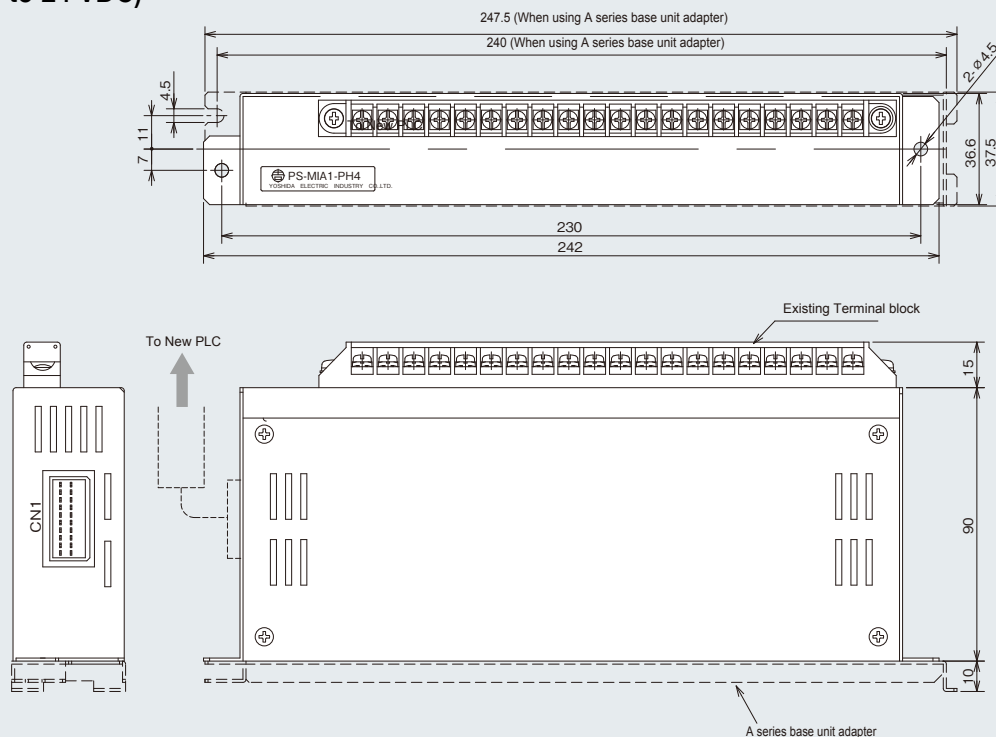
Voltage conversion model

For 16-point 100/110 VDC input module

Circuit configuration: Photocoupler

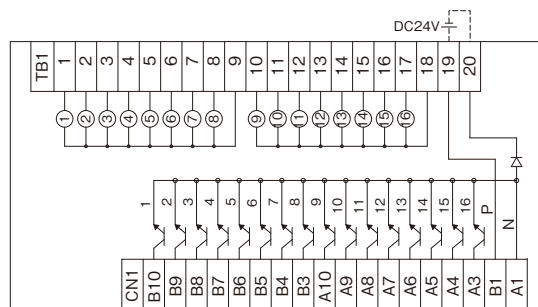
PS-MIA1-PH4

(Conversion of
100/110 VDC to 24 VDC)



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	8 Points / Common
	New PLC	32 Points / Common
Installed Connector	1376137-1 (Tyco)	
Rated Voltage	Existing PLC	DC100/110V
	New PLC	DC24V
Rated Current (Input)	30mA	
Voltage Conversion	Photocoupler	
Photocoupler ON Voltage	DC50V	
Mounting Scheme	Panel mount	
Insulation Resistance	>100MΩ with ground (500 VDC megger)	
Dielectric Strength	AC2000V / 1 min with ground	
Lighting Impulse (1.2/50 μs)	±4000V 3 times with ground	
Vibration Resistance	10~55Hz, 0.5mm/p-p	
Impact Resistance	98m/S ² (10G)	

	Existing (MELSEC-A)	New (MELSEC-Q)	Cable
Input	AX60	QX41	32MI-AI-H0063-()
	AX60-S1		

Please specify the cable length by each 10cm in ().

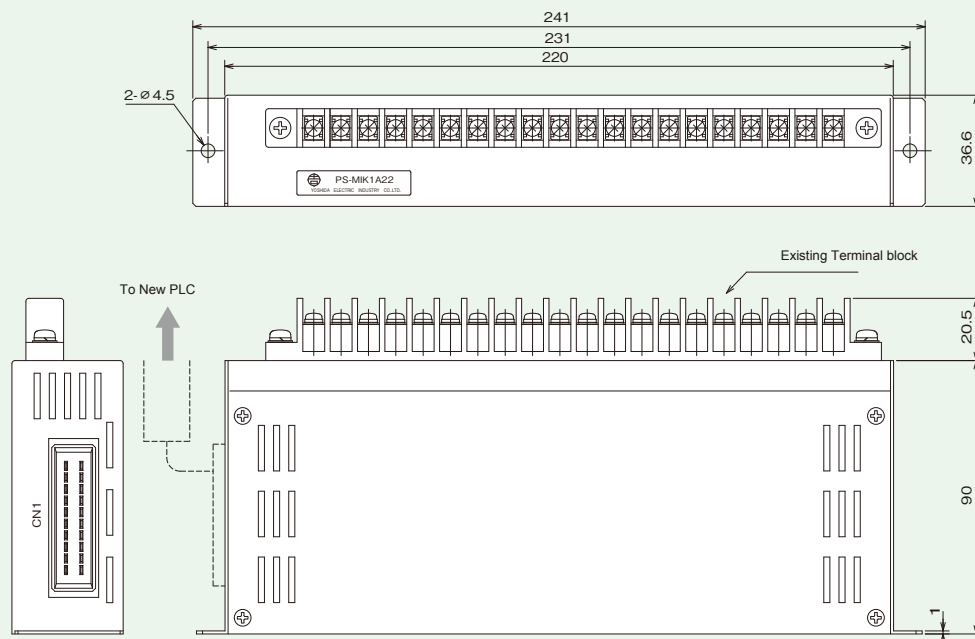
PS-MIA1-PH4...2 units

Direct-coupling models

For 16-point input/output module
Circuit configuration: Direct coupling

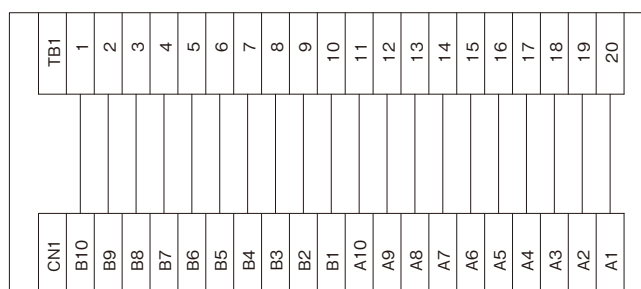
PS-MIK1A22

(24 – 250 V supported)



* The product comes with no terminal block.

Circuit diagram



Specifications

Installed Connector	178308-2(Tyco)
Rated voltage	AC/DC250V
Rated current	2A
Mounting scheme	Panel mount
Insulation resistance	>1000MΩ with ground (500 VDC megger)
Dielectric strength	AC2000V / 1 min with ground
Lighting impulse	±4000V 3 times with ground (1.2/50 μs)
Vibration resistance	10~55Hz, 0.5mm/p-p
Impact resistance	98m / S ² (10G)

Existing PLC supported

Existing (MELSEC-K)	New (MELSEC-Q)	Cable
KY10N KY11N	QY10	16MI-H0149-()
KX10N KX20N	QX28	16MI-H0189-()

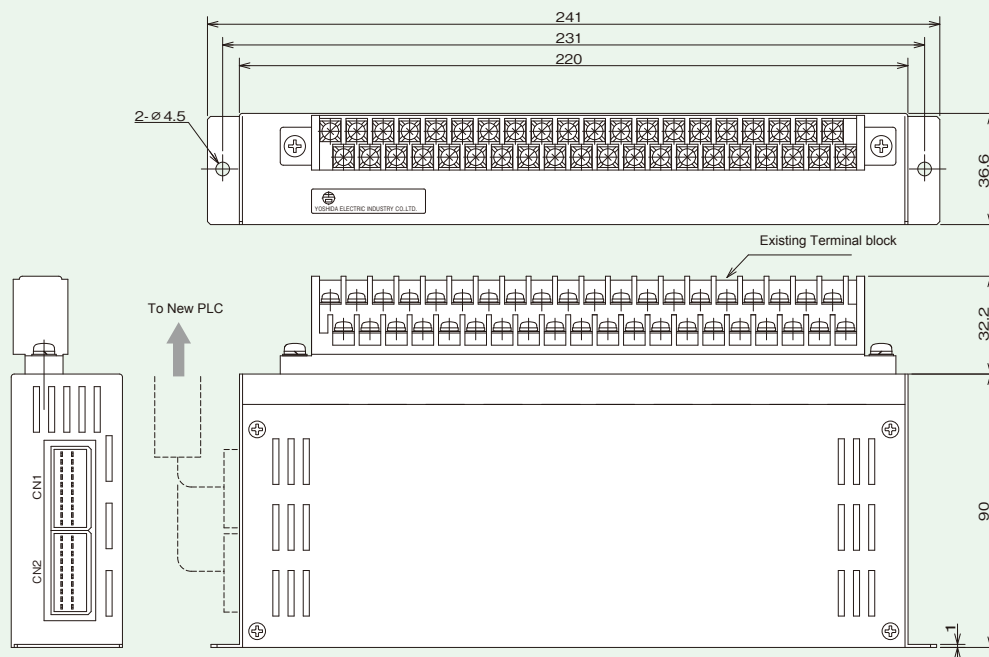
Please specify the cable length by each 10cm in ().

Voltage conversion model

For 32-point 85 - 132 VAC input module
Circuit configuration: Photocoupler

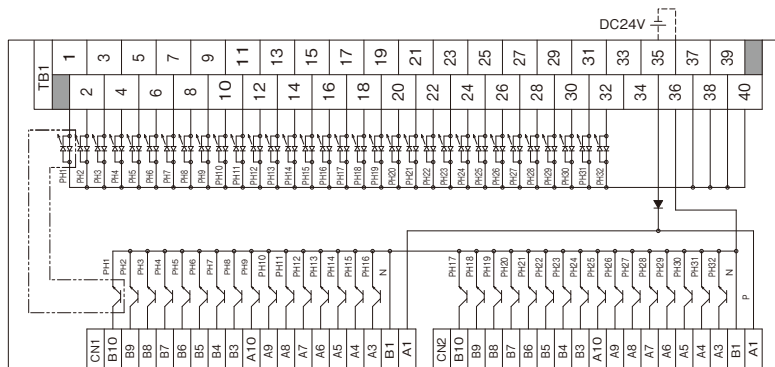
PS-MIK2-PH1

(Conversion of
85 - 132 VAC to 24 VDC)



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	32 Points / Common
	New PLC	32 Points / Common
Installed Connector		1376137-1 (Tyco)
Rated Voltage	Existing PLC	AC85~132V
	New PLC	DC24V
Rated Current (Input)		30mA
Voltage Conversion		Photocoupler
Photocoupler ON Voltage		AC50V
Mounting Scheme		Panel mount
Insulation Resistance		>100MΩ with ground (500 VDC megger)
Dielectric Strength		AC2000V / 1 min with ground
Lighting Impulse (1.2/50 μs)		±4000V 3 times with ground
Vibration Resistance		10~55Hz, 0.5mm/p-p
Impact Resistance		98m/S ² (10G)

Existing PLC supported

Existing (MELSEC-K)	New (MELSEC-Q)	Cable
KX11N	QX41	32MI-H0148-()

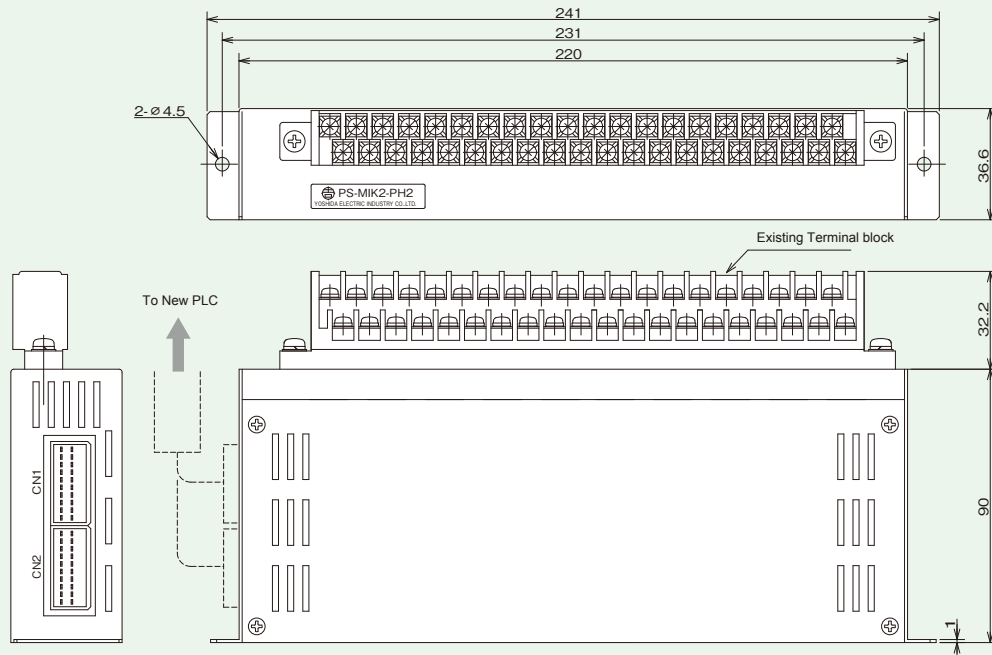
Please specify the cable length by each 10cm in ().

Voltage conversion model

For 32-point 200/220 VAC input module
Circuit configuration: Photocoupler

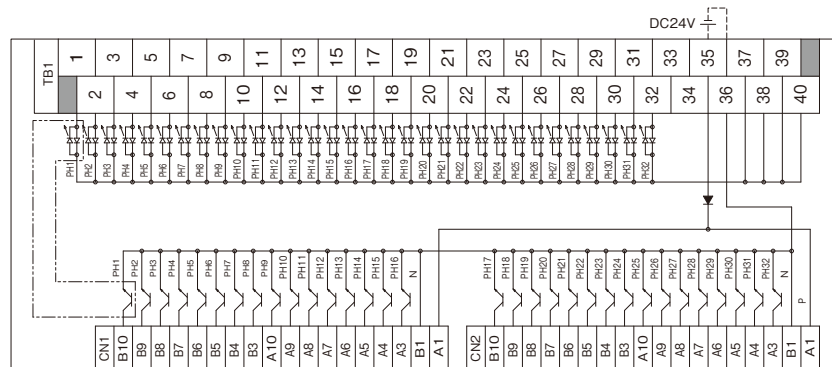
PS-MIK2-PH2

(Conversion of
200/220 VAC to 24 VDC)



* The product comes with no terminal block.

Circuit diagram



Specifications

Common Points	Existing PLC	32 Points / Common
	New PLC	32 Points / Common
Installed Connector		1376137-1 (Tyco)
Rated Voltage	Existing PLC	AC200/220V
	New PLC	DC24V
Rated Current (Input)		30mA
Voltage Conversion		Photocoupler
Photocoupler ON Voltage		AC100V
Mounting Scheme		Panel mount
Insulation Resistance		>100MΩ with ground (500 VDC megger)
Dielectric Strength		AC2000V / 1 min with ground
Lighting Impulse (1.2/50 μs)		±4000V 3 times with ground
Vibration Resistance		10~55Hz, 0.5mm/p-p
Impact Resistance		98m / S ² (10G)

Existing PLC supported

Existing (MELSEC-K)	New (MELSEC-Q)	Cable
KX21N	QX41	32MI-H0148- ()

Please specify the cable length by each 10cm in ().

Operating Precautions

Reference information regarding models having relays

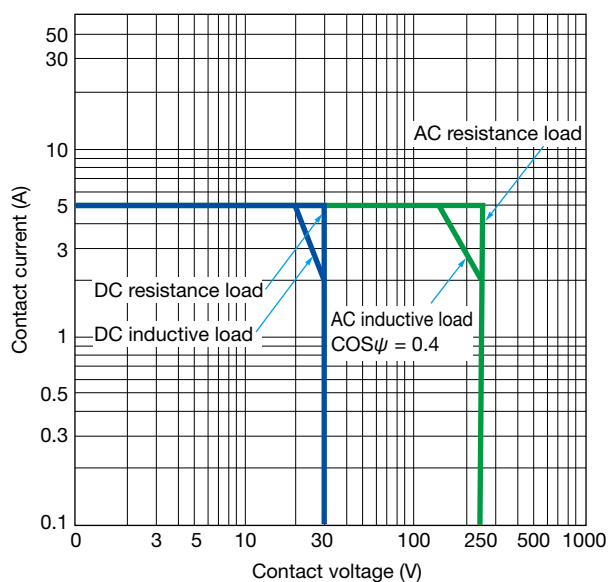
1. Relay ratings

Rated voltage	Rated current	Coil resistance	Operating voltage	Release voltage	Max. permissible voltage	Power consumption
24 VDC	8.3 mA	2.880Ω±10%	70% max.	10% min.	Approx. 110%	200 mW/point

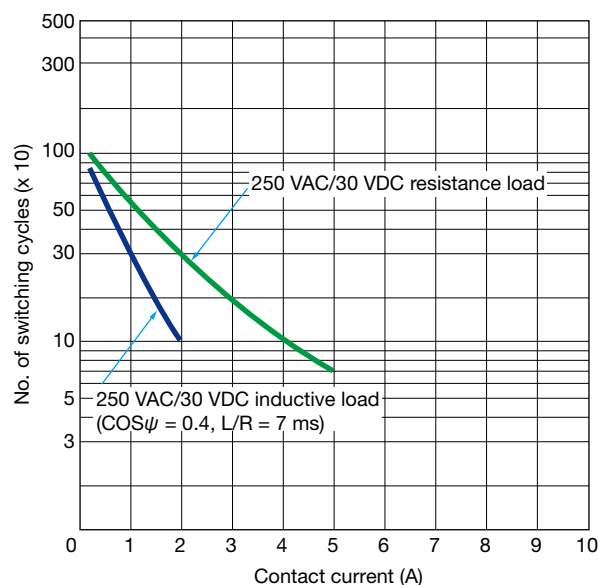
2. Switching performance

Item	Load	
Resistance load	250 VAC/2 A, 24 VDC/2 A	
Contact resistance	100 Mohm max. (initial value)	
Durability	Mechanical	At least 20 × 10 ⁶ switching cycles at a rate of 1800 cycles/h
	Electrical	At least 3 × 10 ⁵ 250 VAC/2 A resistance load cycles
		At least 3 × 10 ⁵ 30 VDC/2 A resistance load cycles at a switching rate of 1800 cycles/h
Failure rate (P level)	5 VDC/10 mA	

Max. Switching Capacity



Durability Curves



3. Notes

- The applicable adapter models are rated at 2 A although the relays used are rated at 5 A.
- Relays used are not of socket type, and cannot be replaced.
Pay due attention to working and operating conditions of the adapters prior to using them.
- The durability of relays may vary significantly depending on the switching conditions.
- L-load actuated by a relay may cause reverse voltage to occur at switching off, resulting in noise.
Be sure to use a surge absorption circuit when using L-load.

Installation Mount



● Features

- The installation mount allows you to take advantage of the space in the depth direction of the control panel so as to install new PLCs without the need for occupying a space outside the control panel.
- The lockable upper cover of the installation mount can be opened for smooth and easy installation and maintenance of PLC modules, and is able to withstand up to 10 kg of weight.
- Installation mounts are custom-made, depending on the size and number of PLCs from various manufacturers that are available at time of order.
- The mounting space of existing PLC modules can be used for the installation mount.

● Installation procedure



1

Place PLC renewal adapters on the bottom of the installation mount and fit terminal blocks to the adapters.



2

Connect conversion cables to the adapters.

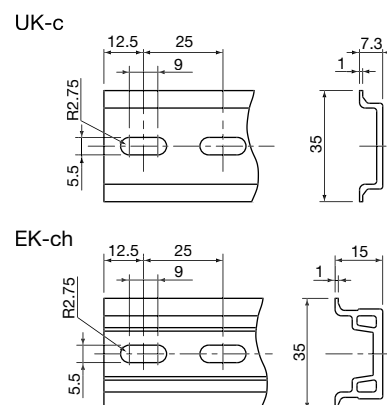


3

Place new PLC modules on top of the installation mount and plug the connector of the conversion cables into new modules.

Accessories

Item	Model name	Applicable Rail	Length	No. of pieces per package
Mounting Rail	UK-c	—	1000, 1500, 2000	10
	EK-ch	—	1000, 1500, 2000	10
Rail End Cap	UK-ec	UK-c	—	100
	EK-ec	EK-ch	—	100
End Bracket	UK-b	UK-c, EK-ch	—	100
	EK-b	UK-c, EK-ch	—	100



Mounting Rail



UK-c

Rail End Cap



EK-ec

End Bracket



UK-b



EK-b

Safety Precautions



- Please use appropriate current and voltage according to the manual.
- Our products were not designed or manufactured for use in devices or systems directly related to human life. Users who intend to use the product described in this manual for special purposes must contact Toho Technology Inc. beforehand.
- If this product is to be involved in a life and death situation or in a facility where failure may cause a serious accident, safety devices MUST be installed to minimize the likelihood of any accident.

★The products and specifications described in this manual or the content and presentation of the manual may be changed without notice to improve the product and/or the manual.



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