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PROGRAMMABLE CONTROLLER

STATE OF THE PROGRAMMABLE CONTROLLER

TO STATE OF THE

User's Manual

type A2C I/O unit



REVISIONS

*The manual number is given on the bottom left of the back cover.

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INTRODUCTION

Thank you for choosing the Mitsubishi MELSEC-A Series of General Purpose Programmable Controllers. Please read this manual carefully so that the equipment is used to its optimum. A copy of this manual should be forwarded to the end User.

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1. INTRODUCTION

This manual describes handling instructions and specifications for the A2C I/O unit, remote terminal block I/O unit and remote connector I/O unit (to be referred to as MINI remote I/O in this manual) to be used with the A2CCPU unit (to be referred to as A2CCPU in this manual).

The MINI remote I/O is a simple I/O unit of baseless building block type which connects itself to the A2CCPU with twisted pair cables without a base unit. The maximum length of twisted pair cables allowed for this connection is 100 meters (3.28 ft).

The MINI remote I/O can be mounted easily to the DIN rail using an optional DIN rail adapter.

The MINI remote I/O can be used as the I/O module for the MELSECNET/MINI-S3 data link system (to be referred to as MINI-S3 link in this manual).

2. NOTES ON SELECTING THE I/O UNITS



2. NOTES ON SELECTING THE I/O UNITS

2.1 Modules that can Control the MINI Remote I/O Unit

Modules that can control the MINI remote I/O are as shown below.

A2CCPU (C24) AJ71PT32-S3 (AJ71PT32) A1SJ71PT32-S3 A52GCPU (T21B)

POINT

Since an A2C I/O unit, remote terminal block I/O unit or remote connector unit is a remote I/O module for the twisted pair data link, cable connection can be made only with twisted pair cables.

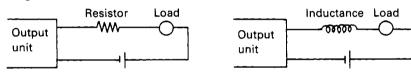


2.2 Notes on Selecting the I/O Units

- (1) Triac output units should be used instead of relay contact output units when:
 - The outputs are being switched very frequently.
 - A large inductive load is being switched.
 - An inductive load with a low power factor is being switched.

The life of a relay switching any of the above conditions will be substantially reduced.

- (2) The ON time and OFF time for any inductive load switched by an output unit must be more than one second.
- (3) Beware of rush currents when a transistor output unit of which maximum load current is 0.3 A is used to switch a load incorporating a DC/DC converter (e.g. a timer or counter). Either connect a resistive or inductive load in series with the load or use an output unit of which maximum load current is large.



(4) Since overload protection is not provided, an external fastblow fuse should be used at each point where fuse protection is required.

The following external fast-blow fuses are recommended.

AC : HP fuse GP fuse DC : MP fuse

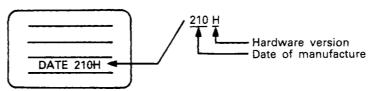


POINT

The following versions are applicable to the I/O modules in this manual.

Model name	Applicable version
AY13C	Version H or later
AX10Y10C	Version H or later
AX40Y10C	Version J or later
AX80Y10C	Version C or later

Name plate

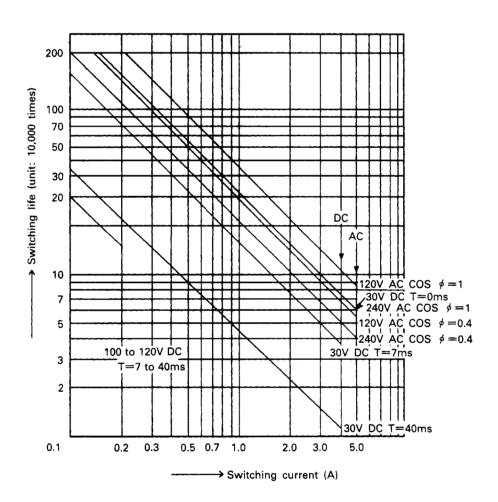


[Changed contents]

item	Old version	New version
Rated switching current (current value per point)	24V DC	24V DC (resistance load) 2A/point, 240V AC (cos \$\delta = 1) 2A/common
6 1 - 4 - 4 196	200V AC <u>0.4A</u> 240V AC <u>0.3A</u> (cos ≠ = 0.7)	200V AC <u>1.5A</u> 240V AC <u>1A</u> (cos ≠ = 0.7)
Electrical life	200V AC $0.14A$ 240V AC $0.12A$ (cos $\phi = 0.35$)	200V AC <u>1A</u> 240V AC <u>0.5A</u> (cos \neq = 0.35)
Max. switching frequency	3500 times/hour	3600 times/hour

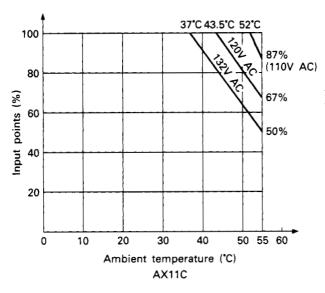


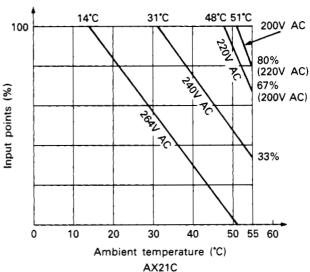
(5) The relay life for relay output units is shown below. Relay output units should be selected with reference to these characteristics and to the frequency of operation.

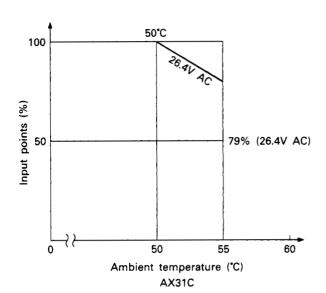


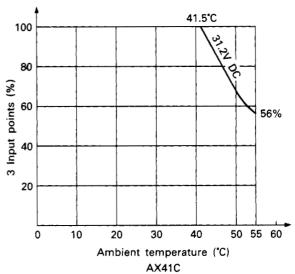


(6) The maximum number of input points which may be simultaneously ON in the AX C input unit varies with input voltage and ambient temperature as shown below. Select the number of simultaneous ON points referring to the figures shown below.



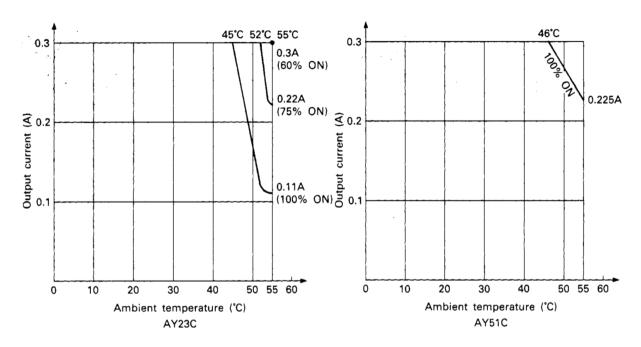


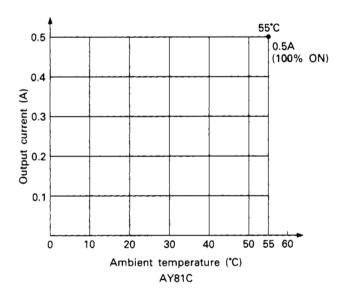






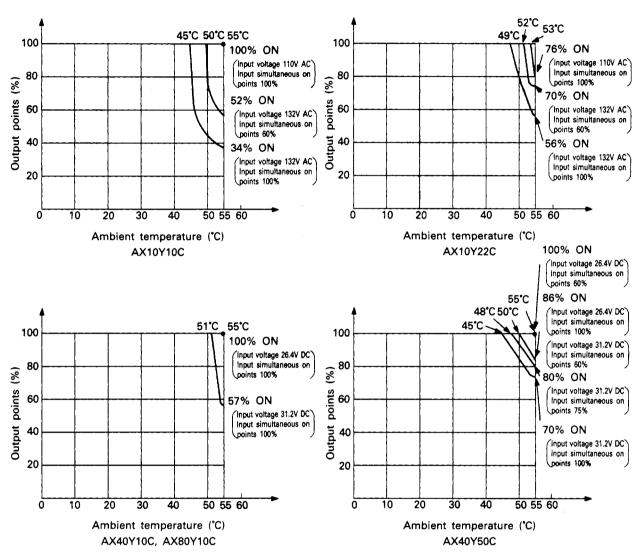
(7) The maximum number of output points which may be simultaneously on in the AY Coutput unit varies with output current and ambient temperature as shown below. Select the number of simultaneous on points referring to the figures shown below.

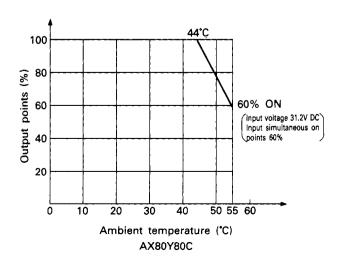






(8) The maximum number of output points which may be simultaneously ON in the AX Y C input/output unit varies with input voltage, output current per one point and ambient temperature as shown below. Select the number of simultaneous ON points referring to the figures shown below.



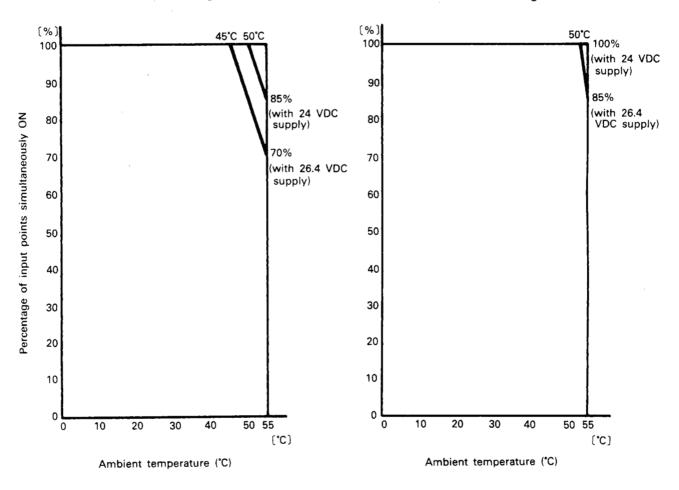




(9) The maximum number of input points which may be simultaneously ON in the AJ35TB1-16D and AJ35TC1-32D input units varies according to the input voltage and the ambient temperature. Determine the number of points simultaneously ON by reference to the diagrams below.



AJ35TC1-32D derating curve



3. SPECIFICATIONS

3.1 Specifications Common to the A2CI/O Units

Table 3.1 shows the specifications common to the input units, output units and input/output units of the A2CI/O.

Table 3.1 A2CI/O Common Specifications

74510 0.1 74201	70 Common Openingations
Item	Description
Indication	1 LED per point
External connection	50-point terminal block connector (M3.5 × 7 screws)
Applicable wire size	0.75 to 2mm² (14 AWG) (tightening torque: 7kg-cm)
Applicable solderless terminal	1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3 V1.25-YS3A V2-S3 V2-YS3A



3.2 Input Units

3.2.1 Type AX11C 100V AC input unit (32 points, 6mA) and the provided and the second and the sec

Specification	ns	Туре	jo st	rearente de la composição Para la composição	AX11C	nad em Balvyon		Termi	inal Arrangen	nent
lnı	put points	3			32 points			-		
Insul	ation syst	em	di aregi	ado ⊃\ Pt	notocoupler	én careca no manda de como		BDA -		
Rated	input vol	tage		100-1	20V AC 50/60)Hz		SG -		SDA SG SDR
Rated	input cui	rent	e consuler over Marie.	Approx. 6r	nA (100V AC	. 60Hz)	A secretary	SLO .		NC.
	g voltage				AC (50/60Hz	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		FG-		+24V
	nultaneou				neous ON (1		more in the same	246		246
	ısh currei					7 	-	ا ا		<u> </u>
			1, 1,	/lax. 200mA,						<u> </u>
	age/ON c		511.3		nigher/5mA c			5		
OFF volt	age/OFF	current	1.00		lower/1mA					16
Input	t impedar	nce	Аррі	ox. 18kΩ (6	0Hz), approx.	21kΩ (50	Hz)	COM1		<u>EM</u>
Pospodos t	OF	F → ON		15ms or le	ss (100V AC	60Hz)	A-1, 3			9
Response t	10	V → OFF	V 650	30ms or le	ess (100V AC	60Hz)				ıB 📗
Comr	non term	inal			oints/commo					₽ ↓
1	angemen			•	terminals)	•		COME		E]
Numbe	er of occu	pied				· · · · · · · · · · · · · · · · · · ·		r⊘ .cous III		<u>™4</u> ⊘J
	stations				4			Ë		
I/O module pov	ver supply	Voltage		15.6	to 31.2V DC					.62kg
(+24V, 24G t		Current			ower (at 24\			Weight		.02kg .36lb)
Terminal No.			1	0011171 01 1	0W01 (dt 24)	, , , , ,	1	11010-1-1	Terminal No.	
TB1	RDA	1							TB26	SDA
TB2	SG								TB27	SG
TB3	RDB		Г	IN		IN	٦		TB28	SDB
TB4	SLD	ļ	TB1				TB26		TB29	NC
TB5	+24V	↓ >C::>	$(\int \overline{1}B2)$	•	DC/DC	+5V	TB27 /	Δxx-	TB30	+24V
TB6	FG	4 ====	- V ∕⊞3(-	DC/DC converter	- φ	TB28\1		TB31	NC NC
TB7	24G	24V E	TB4 C TB5	+24V	Converter	///	TB30	<u> </u>	TB32	24G
TB8	X0	247	C 189	₹24V	↓		→ 1030		TB33	X10
TB9	X1	1 T	<u>TB7</u> 2	24G			TB32		TB34	X11
TB10	X2		TB8	R R	+5V +5V	RR	TB33		TB35	X12
TB11 TB12	X3 X4	\downarrow		R DO BR≥K	\$)' '⟨ ≯ /₹	DOR +		.)	TB36	X13
TB13	X5	-	TB15	Photoco	Links District	-			TB37	X14
TB14	X6	- 	TB16 I	†	upler Photocoι +5V +5V	pier	TB40	<u>~~~</u>	TB38	X15
TB15	X7	┧╶┟┈	TB17	J.R. A	→ → → → · · · · · · · · · · · · · · · ·	BR	TB41		TB39	X16
TB16	COM1	1 7,	Y	IR TO THE REPORT OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO THE PERS	7 755	7. Fint	Ĭ	~~~	TB40 TB41	X17 COM3
TB17	X8	1 '	TDO	KARA	<u> </u>	KAK J		(TB42	X18
TB18	X9	1 + 0 0	TB24 TB25	1 1	upler Photocou	pler	TB49	_ _ _ _	TB43	X10
TB19	XA	1 └♡	1525	A	В	>++	1 000	—⊙—'	TB44	X1A
TB20	XB	1	L				<u>.</u>		TB45	X1B
TB21	XC	1							TB46	X1C
TB22	XD	1							TB47	X1D
TB23	XE	1							TB48	X1E
TB24	XF	1							TB49	X1E
TB25	COM2								TB50	COM4



3.2.2 Type AX21C 200V AC input unit (32 points, 5mA)

Specificatio	ns	Type	AX21C% 🐔	Terminal Arrangement
In	put point	S	32 points	. Emilios testas
Insul	ation sys	tem	Photocoupler (%)	ske kees o tilestusei
	input vo	77	200 240V AC 50/60Hz	
	input cu		Approx. 5mA (200V AC, 60Hz)	RDA XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
	g voltage		170 to 264V AC (50/60Hz ±5%)	**************************************
	multaneo		80% simultaneous ON (200V AC and 60	
	ush curre			
			Max. 500mA, 1ms or less (264V AC)	
	tage/ON o		80V AC or higher/3mA or higher	
	tage/OFF		30V AC or lower/0.8mA or higher	
Inpu	t impeda	nce	Approx. $39k\Omega$ (60Hz), approx. $46k\Omega$ (50	Hz) 5 (
Response t	0	FF → ON	30ms or less (200V AC, 60Hz)	
nesponse i	0	N → OFF	55ms or less (200V AC, 60Hz)	
Comi	mon term	inal	16 points/common	
ar	rangemer	ıt	(2 terminals)	
Numb	er of occi	upied		
5 434	stations		4	
I/O unit powe	er supply	Voltage	15.6 to 31.2V DC	
(+24V, 24G	terminal)	Current	58mA or lower (at 24V, TYP)	BANKER OF BERKER
	Weight		0.65kg (1,43lb)	
			0.05KU_(1.45ID)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
****	v. o.g.i.c	radices a sa		A supplied to the second secon
Terminal No.		<u> </u>	External Connection	Terminal No Signal N
Terminal No. TB1				Terminal No. Signal No. TB26 SDA
	Signal No			Terminal No. Signal No. TB26 SDA TB27 SG
TB1	Signal No		External Connection	TB26 SDA
TB1 TB2	Signal No RDA SG	N	External Connection	TB26 SDA TB27 SG TB28 SDB TB29 NC
TB1 TB2 TB3	Signal No RDA SG RDB	· · · · · · · · · · · · · · · · · · ·	External Connection	TB26 SDA TB27 SG TB28 SDB TB29 NC TB26 A TB30 +24V
TB1 TB2 TB3 TB4	Signal No RDA SG RDB SLD	<u> </u>	External Connection IN IN +5V TB1 TB2 DC/DC DC/DC	TB26 SDA TB27 SG TB28 SDB TB29 NC TB26 TB30 +24V
TB1 TB2 TB3 TB4 TB5	Signal No RDA SG RDB SLD +24V		External Connection IN IN +5V	TB26 SDA TB27 SG TB28 SDB TB29 NC TB27 TB30 +24V
TB1 TB2 TB3 TB4 TB5 TB6	Signal No RDA SG RDB SLD +24V FG	24V D	External Connection IN IN IN TB1 TB2 TB2 TB3 TB4 C TB5 +24V	TB26 SDA TB27 SG TB28 SDB TB29 NC TB27 TB20 TB30 +24V TB31 NC
TB1 TB2 TB3 TB4 TB5 TB6 TB7	Signal No RDA SG RDB SLD +24V FG 24G	XX	External Connection IN IN F5V TB1 TB2 TB3 TB4 C TB5 TB5 TB6	TB26 SDA TB27 SG TB28 SDB TB29 NC TB27 TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB34 X11
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8	Signal No RDA SG RDB SLD +24V FG 24G X0	XX	External Connection IN IN +5V TB2 TB3 TB4 C TB5 +24V TB6 TB7 24G	TB26 SDA TB27 SG TB28 SDB TB29 NC TB27 TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB34 X11 TB32 TB35 X12
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9	Signal No RDA SG RDB SLD +24V FG 24G X0 X1	XX	External Connection IN IN F5V TB1 TB2 TB3 TB4 C TB5 TB5 TB6	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB34 X11 TB32 TB35 X12
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11	Signal No RDA RDB SLD +24V FG 24G X0 X1 X2 X3	XX	External Connection IN IN +5V TB2 TB3 TB4 C TB5 +24V TB6 TB7 24G	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB34 X11 TB32 TB35 X12 TB33 TB36 X13
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3	XX	External Connection IN IN TB1 TB2 TB3 TB4 C TB5 TB6 TB7 24G TB8 R R R R R R R R R R R R R R R R R R R	TB26 SDA TB27 SG TB28 SDB TB29 NC TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB34 X11 TB32 TB35 X12 TB33 TB36 X13 TB37 X14 TB38 X15
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5	XX	External Connection IN IN TB1 TB2 TB3 TB4 C TB5 TB6 TB7 24G TB8 R R R R Photocoupler Photocoupler	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB34 X11 TB34 X11 TB33 TB36 X13 TB37 X14 TB37 X14 TB38 X15
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6	XX	External Connection IN IN IN TB1 TB1 TB2 DC/DC Converter TB6 TB7 TB6 TB7 Photocoupler TB16 TB16 TB16 TB16 TB16 TB16 TB16 TB16	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB34 X11 TB32 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB39 X16
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7	XX	External Connection IN IN TB1 TB2 TB3 TB4 C TB5 TB6 TB7 24G TB8 R R R R Photocoupler Photocoupler	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB33 TB36 X13 TB37 X14 TB37 X14 TB38 X15 TB39 X16 TB41 TB40 TB40 X17
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1	XX	External Connection IN IN IN TB1 TB1 TB2 DC/DC Converter TB6 TB7 TB6 TB7 Photocoupler TB16 TB16 TB16 TB16 TB16 TB16 TB16 TB16	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB34 X11 TB32 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB39 X16 TB41 TB40 X17 TB41 COM3
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1 X8 X8	24V D	External Connection IN IN IN TB1 TB1 TB2 DC/DC Converter TB6 TB7 TB6 TB7 Photocoupler TB16 TB16 TB16 TB16 TB16 TB16 TB16 TB16	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB37 X14 TB38 X15 TB41 TB39 X16 TB41 TB40 X17 TB40 TB41 COM3 TB41 COM3 TB41 COM3
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1 X8 X9	XX	External Connection IN IN IN TB1 TB2 TB2 TB4 C TB5 TB6 TB7 24G TB8 TB1 Photocoupler Photocoupler TB16 TB17 R R R R R R R R R R R R R R R R R R R	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB41 TB40 X17 TB41 COM3 TB41 COM3 TB49 TB42 X18 TB49 TB43 X19
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB19	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1 X8 X9 XA	24V D	External Connection IN IN IN IN IN IN IN IN IN I	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB41 TB42 TB40 X17 TB41 COM3 TB41 COM3 TB49 TB42 X18 TB49 TB43 X19 TB44 X1A
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB19 TB20	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1 X8 X9 XA XB XB	24V D	External Connection IN IN IN TB1 TB2 TB2 TB4 C TB5 TB6 TB7 24G TB8 TB1 Photocoupler Photocoupler TB16 TB17 R R R R R R R R R R R R R R R R R R R	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB41 TB40 X17 TB41 COM3 TB49 TB42 X18 TB49 TB40 X17 TB49 TB40 X17
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB19 TB20 TB21	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1 X8 X9 XA XB XC XC XB XC XC XC XC	24V D	External Connection IN IN IN TB1 TB2 TB2 TB4 C TB5 TB6 TB7 24G TB8 TB1 Photocoupler Photocoupler TB16 TB17 R R R R R R R R R R R R R R R R R R R	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB41 COM3 TB41 COM3 TB49 TB42 X18 TB49 TB44 X1A TB45 X1B TB45 X1B
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB19 TB20 TB21 TB21	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1 X8 X9 XA XB XC XD XD XD XD XD XD XD	24V D	External Connection IN IN IN TB1 TB2 TB2 TB4 C TB5 TB6 TB7 24G TB8 TB1 Photocoupler Photocoupler TB16 TB17 R R R R R R R R R R R R R R R R R R R	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB27 TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB41 TB40 X17 TB41 COM3 TB49 TB42 X18 TB49 TB40 X17 TB49 TB40 X17
TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB19 TB20 TB21 TB22 TB23	Signal No	24V D	External Connection IN IN IN TB1 TB2 TB2 TB4 C TB5 TB6 TB7 24G TB8 TB1 Photocoupler Photocoupler TB16 TB17 R R R R R R R R R R R R R R R R R R R	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB40 TB38 X15 TB41 COM3 TB41 COM3 TB49 TB42 X18 TB49 TB44 X1A TB45 X1B TB45 X1B
TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB19 TB20 TB21 TB22	Signal No RDA SG RDB SLD +24V FG 24G X0 X1 X2 X3 X4 X5 X6 X7 COM1 X8 X9 XA XB XC XD XD XD XD XD XD XD	24V D	External Connection IN IN IN TB1 TB2 TB2 TB4 C TB5 TB6 TB7 24G TB8 TB1 Photocoupler Photocoupler TB16 TB17 R R R R R R R R R R R R R R R R R R R	TB26 SDA TB27 SG TB28 SDB TB29 NC TB29 NC TB29 NC TB30 +24V TB31 NC TB32 24G TB30 TB33 X10 TB32 TB35 X12 TB35 X12 TB36 X13 TB37 X14 TB40 TB37 X14 TB40 TB39 X16 TB41 COM3 TB41 COM3 TB41 COM3 TB49 TB40 X17 TB49 TB40 X17 TB40 X17 TB41 COM3 TB41 COM3 TB44 X1A TB45 X1B TB46 X1C TB47 X1D

^{*} External wiring to input should be 50 m or less.



3.2.3 Type AX31C DC/AC input unit (32 points, 4mA/8.5mA)

Specification	ns	Туре	АХЗ	1C 12.8 11	Terminal Arrangement
Inp	out point	s	32 pc	pints	and the second second
Insula	ation sys	tem	Photoc		
	· · · · · · · · · · · · · · · · · · ·		12/24V DC	12/24V AC (50/60Hz)	POA SOA
Insulation system Rated input voltage Rated input current Operating voltage range Max. simultaneous ON ON voltage/ON current OFF voltage/OFF current Input impedance OFF → ON ON → OFF OMMON OFF			4mA (12V AC/DC), 8		S6- X X X S6 R06- X X X S06
nateu	iliput cu	rrent			s.o. <u>(X) (X) (X) (X) (X) (X) (X) (X) (X) (X) </u>
		10.2 to 26.4V DC (ripple ratio: within 5%)	10.2 to 26.4V AC (50/60Hz ±5%)		
Max. sir	nultaneo	us ON	75% simultaneou	s ON (26.4V AC)	
ON volt	age/ON o	current	7V DC/AC or high	er/2mA or higher	
OFF volt	age/OFF	current	2.5V DC/AC or low	er/0.7mA or lower	
			Approx.		5 × × × × × × × × × × × × × × × × × × ×
	i i i j		30ms or less	35ms or less	2 SOM3 SOM3 - 1
	0	FF → ON	(12/24V DC)	(12/24V AC, 60Hz)	
Response ti	me 一	**	30ms or less	30ms or less	
	0	$N \rightarrow OFF$	(12/24V DC)	(12/24V AC, 60Hz)	
`ommon tei	minal a	rangement	16 points/commo		
					AC/CC COMP (X)
Number of			4		AC/00
I/O unit powe		Voltage	15.6 to 3		
(+24V, 24G t	erminal)	Current	56mA or lower	(at 24V, TYP)	
	Weight		0.62kg	1.36lb)	eren eren eren eren eren eren eren eren
			External	Connection	
erminal No.	Signal No).	error team of part and the control of the control o		Terminal No. Signal
TB1	RDA				TB26 SDA
TB2	SG	·			TB27 SG
TB3	RDB		IN IN	IN 1	TB28 SDE
TB4	SLD				TB29 NC
TB5	+24V	$\dashv \overline{\gamma} = \overline{\gamma}$	¬ TB1	+5V TB26	TB30 +24
TB6 TB7	FG 24G	1 ====	₩XTB3P	DC/DC TB28	TB31 NC
TB8	X0		\ <u>184</u> L	Solivertee 7	TB32 240
TB9	X1	247 0	C TB5 +24V TB6	<u></u>	TB33 X10
TB10	X2	┤ 후	TB7] 24G	TB32	TB35 X12
TB11	X3	┤╶╌╴	TB8 +5V	+5V TB33	TB36 X13
TB12	X4	$\exists \mid \exists s^{s}$	R LR HELE	LIST DIRELE	TB37 X14
TB13	X5				TB38 X15
TB14	X6	│ 	TB15 Photocoupler	1 1040	- TB39 X16
TB15	X7	7	TB17 A +5V	+5V B TB41	TB40 X17
TB16	COM1				TB41 COM
TB17	X8	│			₹ TB42 X18
TB18	X9] +	TB24 Photocoupler	Photocoupler TB49	TB43 X19
TB19	XA	L _{AC/D}	TB25	В ТВ50	C/DC TB44 X1A
TB20	XB				TB45 X1E
TB21	XC				TB46 X10
TB22	XD				TB47 X10
TB23	XE				TB48 X1E
TB24	XF				TB49 X1F
TB25	COM2				TREO



3.2.4 Type AX41C 12/24V DC input unit (sink loading, 32 points, 3mA/7mA)

Specifications		Туре			AX410	s de la companya del companya de la companya del companya de la co		Termin	al Arrangem	ent
Input	points			3	2 poir	ts		F#		No. 15 g/A
Insulation	n syste	em		Ph	otocou	pler		80A .		
Rated inp		A 4		12V DC		24V DC		sc. (C 808- 840-		3 , 1, 3, 7
Rated inp			Δι	pprox. 3mA		Approx. 7m	νΔ	50 C		24V
	* -			· · · · · · · · · · · · · · · · · · ·	/rinal-	ratio: within		26		24G
Operating v										<u>"</u>
Max. simulta			·			ON (26.4V DC				1
ON voltage	/ON ci	urrent		8V DC or hi	gher/2	mA or higher				1
OFF voltage	OFF o	urrent		4V DC or l	ower/1	mA or lower	· ·			1
Input re	sistan	ce		App	rox. 3	.3kΩ		20M1 C		1
	OF	F → ON		10ms o	r less	(24V DC)				1
Response time		l → OFF		· · · · · · · · · · · · · · · · · · ·		(24V DC)				1
Common						 				1
Common	ement				termir	mmon	- 32			4.
Number of oc		T. T			4	1015)				
				<u> </u>					The state of the s	
I/O module power s	. ' ' / <u> </u>	Voltage			to 31.	the state of the s	<u></u>	Weight		.6kg
(+24V, 24G termi		Current		55mA or le	ower (at 24V, TYP)		•		32lb)
Terminal No. Sign									Terminal No.	
	RDA								TB26	SDA
	SG	4						****	TB27	SG
	RDB	ł	10.0	IN	——	IN .			TB28	SDB
	SLD	-		IIN		UN :			TB29	NC
	-24V	===	TB1				TB26 /		TB30	+24V
TB6	FG	│	TB2 TB3	·	D0	Z/DC	TB27	XX_	TB31	NC .
	24G		TB4		con	verter	TB28X\\		TB32	24G
TB8	X0	24V D		+24V			TB30		TB33	X10
TB9	X1	1 I	TB6						TB34	X11
TB10	X2		TB7	24G	1	1.57	TB32		TB35	X12
TB11	Х3		TB8 [-• ^{+5∨}	4 ^{+5V}	TB33	~'~	TB36	X13
TB12	X4	.		[™] R∏(≹ <u>Ҳ Қ</u>)	(<u>≯</u> ≯ ₽ ₽ R H		}	TB37	X14
	X5		TB15				TB40	ا د	TB38	X15
	X6	"	TB16 C	OM Å	_+5V	_+5V B	COM TB41	~ ~	TB39	X16
	X7	1 +	TB17			<u></u>	TB42	→ →	TB40	X17
	OM1	}	3.4	"R∏(<u>‡ < K</u>))	⟨ ≥ ∠≱⟩₽₽ĸ	1 1	} '	TB41	COM3
	X8	 	TB24					المحم	TB42	X18
	X9	ئا ا	TB25			B			TB43	X19
	XA	1	[<u>C</u>	ОМ			сом	1.0	TB44	X1A
	XB					Parameter			TB45	X1B
	XC	1			100		**		TB46	X1C
	XD	1							TB47	X1D
	XE	1							TB48	X1E
	XF	l .							TB49	X1F
	OM2	1							TB50	COM4



3.2.5 Type AX81C 12/24V DC input unit (sink/source loading, 32 points, 3mA/7mA)

Specifica	tions	Туре	AX	B1C	Terminal	Arrangem	ent
Numl	per of inpu	ut points	3	2 11:30:12 10:31	A Section of the second	2.13th	Estado, Mesos Director Terror desambles, como
2	Isolation			oupler			
Rat	ted load v		12V DC	24V DC	ROA (100)		edigitoù Sart de la servicion Sart de la servicion
1	ed input o		Approx. 3mA	Approx. 7mA	ss 🔘		3
	ating voltag	THE RESIDENCE OF THE PARTY OF T			s (X		+24V
			10.2 to 31.2V DC (rip	pie ratio. Within 5%)			<u> </u>
	umber of aneous inp		100% switched on simu	Itaneously. At 26.4V DC			17 - 250 23 - 243
ON v	oltage/ON/	current	8V or more/2	?mA or more			
OFF \	oltage/OFI	- current	4V max./1	mA max.			
i Ir	nput resist	ance	Approx	. 3.3kΩ		<u> </u>	
		OFF to ON		. (24V DC)			
Respons	e time ⊢	ON to OFF	10ms max				
	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						er G
	Commo		to secondary to a contrast to a contrast to the contrast to th	on (2 terminals)			, p
The second second		s occupied	The second secon	A CONTRACTOR OF THE PARTY OF TH			
4	nodule	Voltage	15.6 to 3	31.2V DC			,, 00-1
power	r supply	Current	55mA (TYI	P. 24V DC)			PRO VENT
Just Ignar	Weight		0.6kg (1.32lb)			dis la Erg
1800			External	Connection	3		1.11
Terminal Number	Signal					Terminal Number	Signal
TB1	RDA		januari in	I III	1	TB26	SDA
TB2	SG		TB1 RDA	SDA	TB26	TB27	SG
TB3	RDB	00000	SG	SG SG	130000	TB28	SDB
TB4	SLD		RDB	DC/DC SDB	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	TB29	NC
TB5	+24V		TB5 SLD +24V	777 NC	P	TB30	+24V
TB6	FG	24V DC	• FG	NC-	[TB31	NC .
TB7	24G		TB7	24G	О трээ	TB32	24G
TB8	X0	<u> </u>	X1 R A	φ φ <u>* R X10</u> X11	TB33	TB33	X10
TB9	X1) $($ 2 $)$ 1 $)$ 2 $)$ 2 $)$ 1 $)$ 2 $)$ 2 $)$ 2 $)$ 3 $)$ 3 $)$ 4 $)$ 5 $)$ 5 $)$ 7 $)$ 7 $)$ 1 $)$ 9 $)$ 9 $)$ 9 $)$ 9 $)$ 9 $)$ 9 $)$ 9 $)$ 9	1	TB34	X11
TB10	X2	-	([X3 -]	X13	I (TB35	X12
TB11	X3)) [<u>X4</u> X5 A	↓ X14 B X15	∤) 	TB36	X13
TB12 TB13	X4 X5		$\frac{\lambda^{3}}{X6}$	X15 X16	† ′ ′ ′	TB37	X14
TB14	X6		B15 X7	X <u>17</u>	TB40	TB38 TB39	X15 X16
TB15	X7	la ana la air	B16 COM B17 X8 —	COM	TB41	TB40	X16 X17
TB16	COM1	 		4 4 X18 X19	TB42	TB41	COM3
TB17	X8				† . -	TB42	X18
TB18	X9	1 ((XB	X1B	Į (TB43	X19
TB19	XA)	XC	X1C	†))	TB44	X1A
TB20	ХВ	and the second of the second of the second	XE	X <u>1D</u>		TB45	X1B
TB21	XC		B24 XF	X _{1F}	TB49	TB46	X1C
TB22	XD		B25 COM A	B > COM	TB50	TB47	X1D
TB23	XE	[-4F-3	L			TB48	X1E
TB24	XF	12/24V DC	Maria de la companya		12/24V DC	TB49	X1F
TB25	COM2					TB50	COM4



3.3 Output Units (Add purious to low State Color and Author or the Cast to the state of the Cast to th

3.3.1 Type AY13C relay output unit (24V DC/100-240V AC, 32 points, 0.5A)

Specification	ns	Тур	e	,	Y13C		Te	rminal	Arrange	ment
Out	tput p	oints		્ર⊹ાહ32	points)			anct	ev bed	Desert.
Insula	ation	system			tocoupler		F		10 11	-
1		tching urrent	1	DC (resistance			RDA+			·SDA
		ng load		A - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -	DC 1mA	<u> </u>	RDB ·			SDB ·SDB
		g voltage			C, 110V DC		SLD	$\otimes \Vdash$		×∥ ooe
	1.5	ent (OFF)			0mA		+24V ·			×) - CITE
Loukage	, <u></u>	OFF → ON				elyi ja v	246 .			
Response ti	ime	OFF → ON			s or less	24 1				
					s or less		┌╙╌╟			X 11 11 1
	-	Mechanical			times or more		2			2 1 12
			At		g voltage/ current le d times or more	oad	<u>3</u>			
Life			200	the transfer of the second of the second of the	OV AC 1A (COS φ = ad times or more	=0.7)	<u>5</u> _6			S)
		Electrical*1	200		AC 0.5A (COS ϕ = od times or more	0.35)	<u>7</u> _⊙ <u>com</u> 1			
		i isy'n		•	V DC 0.1A (L/R=7m	ns)				×) 14 -
Max. swite	ching	frequency*1	-7	3500	times/hour	3 8 8 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	B 			×) + -
External power suppl					ole voltage 4Vp-p o	r less				
(CTL+, CTLG to					TYP. all points Of		E			<u>> 기</u> 트 -
	ırge k				The second secon					S) 1F COM4
	41 9 C N									→ IICOM4〜
	non t			inot.	provided		COMS	⊗⊨		\nearrow
Comn		erminal			provided its/common		L ⊘ _{COMS}			3
Comn arr	anger	erminal nent			its/common		L⊗ _{COM3}			
Comn arr Number of	anger occu	erminal nent pied stations		8 poin	its/common		L⊗com2	⊗ <u>`</u>		2
Comn arr Number of I/O module pow	anger occu ver sup	erminal nent pied stations ply Voltage	197	8 poin	o 31.2V DC	5 1 1 5 8 8 5 1 1 1 8 8 5 1 1 1 1 8 8 1 1 1 1	Vei	⊗ L		0.7kg
Comn arr Number of I/O module pow (+24V, 24G t	canger occu ver supperminal	erminal nent pied stations ply Voltage Current	197	8 poin	its/common					0.7kg 1.54lb)
Comn arr Number of I/O module pow	canger occu ver supperminal	erminal nent pied stations ply Voltage Current No.	197	8 poin	o 31.2V DC					0.7kg 1.54lb) o. Signal I
Comn arr Number of //O module pow (+24V, 24G t	canger occu ver supperminal Signal	erminal nent pied stations bly Voltage Current No.	197	8 poin	o 31.2V DC wer (at 24V, TYP)	X 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2			(minal N	0.7kg 1.54lb)
Commarr Number of Number of O module pow (+24V, 24G to erminal No. TB1 TB2 TB3	occu ver supperminal Signal RD SC RD	erminal nent pied stations ply Voltage Current No. A B B	197	8 poin 15.6 to 90mA or lov	o 31.2V DC wer (at 24V, TYP)				minal No TB26 TB27 TB28	0.7kg 1.54lb) b. Signal I SDA SG SDB
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4	occu ver supperminal Signal RD SC RD	erminal nent pied stations oly Voltage Current No. A B B D	197	8 poin 15.6 to 90mA or lov	o 31.2V DC ver (at 24V, TYP)	TR26			(minal No. TB26 TB27 TB28 TB29	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5	ranger occu wer supperminal Signal RD SC RD SLL +24	erminal nent pied stations Oly Voltage Current No. A B B D 4V	50 % 50 % 	8 poin 15.6 to 90mA or lov	o 31.2V DC wer (at 24V, TYP)	TB26			(minal No. TB26 TB27 TB28 TB29 TB30	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6	occu ver supplerminal Signal RD SC RD SLL +24	erminal nent pied stations Voltage Current No. A B B D AV G B D AV G C C C C C C C C C C C C C C C C C C	TB1 X TB2 TB3	8 poin 15.6 to 90mA or lov	o 31.2V DC ver (at 24V, TYP)	TB27 TB28			(minal No. TB26 TB27 TB28 TB29 TB30 TB31	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB6	ranger occu ver supperminal Signal RD SC RD SLI +24	erminal nent pied stations Voltage Current No. A B B D AV G G G G G A C C C C C C C C C C C C C C	TB1 X TB2 TB3 TB4	8 poin 15.6 to 90mA or lov	o 31.2V DC wer (at 24V, TYP) OUT +5V DC/DC DC/DC DC/DC DC/DC DT	TB27 TB28 TB29	Wei	Tei	TB26 TB27 TB28 TB29 TB30 TB31 TB32	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6	occu ver supplerminal Signal RD SC RD SLL +24	erminal nent pied stations Oly Voltage Current No. A B B D AV G G G G A C C C C C C C C C C C C C C C	TB1 TB2 TB3 TB4 DC TB5	8 poin 15.6 to 90mA or lov	o 31.2V DC ver (at 24V, TYP) OUT OUT OUT CONVERTED OUT CTL+	TB27 TB28 TB29 TB30	Wei	Ter	TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB6 TB7 TB8	occu ver supplerminal Signal RD SC RD SLI +24 FC 244	erminal nent pied stations ply Voltage Current No. A B B D AV B C C C C C C C C C C C C C C C C C C	TB1 TB2 TB3 TB4 DC TB5	8 poin 15.6 to 90mA or lov OUT +24V 24G	o 31.2V DC ver (at 24V, TYP) OUT DC/DC Converter CTLG	TB27 TB28 TB29 TB30 TB31 TB31	Wei	Ter	TB26 TB27 TB28 TB29 TB30 TB31 TB32	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB8	occu ver supplerminal Signal RD SC RD SLI +24 FC 244 YC	erminal nent pied stations ply Voltage Current No. A B B D AV B C C C C C C C C C C C C C C C C C C	TB1 TB2 TB3 TB4 DC TB5	8 poin 15.6 to 90mA or lov OUT +24V 24G	o 31.2V DC ver (at 24V, TYP) OUT DC/DC Converter CTLG	TB27 TB28 ↓ TB29 ↓ TB30 ↓ TB31	Wei	Ter	TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB33	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB7 TB8 TB9 TB10	occu ver supperminal Signal RD SC RD SL +24 YC Y1	erminal nent pied stations ply Voltage Current No. A B B D AV B C C C C C C C C C C C C C C C C C C	TB1 TB2 TB3 TB4 DC TB5	8 poin 15.6 to 90mA or lov OUT +24V 24G CTL+ +5\	OUT OUT OUT OUT OUT OUT OUT OUT	TB27 TB28 TB29 TB30 TB31 TB32 TB33	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11	ranger occu ver supplerminal Signal RD RD RD SL +24 -40 -41 -42 -41 -42 -41 -42 -43 -43	erminal ment pied stations pled stations Oly Voltage Current No. A	TB1 TB2 TB3 TB4 DC TB5 TB7 TB8	8 poin 15.6 to 90mA or lov OUT +24V 24G CTL+ +51	o 31.2V DC ver (at 24V, TYP) OUT OUT DC/DC converter CTLC V +5V CTL+	TB27 TB28 TB29 TB30 TB31 TB32 TB32 TB33	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13
Commarr Number of /O module pow (+24V, 24G terminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12	ranger occu ver supplerminal Signal RD SC RD SL +24 -70 -71 -72 -73 -72 -73	erminal ment pied stations ply Voltage Current No. A B B D AV B B B B D B B B B B B B B B B B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8	OUT OUT +24V 24G TCTL+ +5V	OUT OUT OUT OUT OUT OUT OUT OUT	TB27 (TB28) TB28 TB30 TB31 TB31 TB32 TB33	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15
Commarr Number of (0 module pow (+24V, 24G terminal No.) TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13	ranger occu ver supplerminal Signal RD SC RD SL +24 -240 -71 -72 -72 -72 -72 -72 -72 -72 -72 -72	erminal ment pied stations pled stations Voltage Current No. A B D A B B B B B B B B B	TB1 TB2 TB3 TB4 DC TB5 TB7 TB8	8 poin 15.6 to 90mA or lov OUT +24V 24G CTL+ +51	o 31.2V DC ver (at 24V, TYP) OUT OUT OUT OUT OUT OUT CTL+ CTLG V OOT OOT CTL+ CTLG OOT OOT OOT OOT OOT OOT OOT	TB27 TB28 TB29 TB30 TB31 TB32 TB32 TB33	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB11 TB12 TB13 TB14	ranger occu ver supplerminal Signal RD RD RD SLI +24 -244	erminal ment pied stations pled stations Voltage Current No. A A B D A A B B B B B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8	8 poin 15.6 to 90mA or lov OUT +24V 24G CTL+ +51	DC/DC OTL+ DC/DC OTL+ CTLG Otocoupler CTLG	TB27 (TB28) TB28 TB30 TB31 TB31 TB32 TB33	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38 TB38	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB11 TB12 TB13 TB14 TB15	ranger	erminal ment pied stations pled stations Voltage Current No. A B D A B D A B B B B B B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8	OUT OUT 15.6 to 90mA or lov OUT CTL Ph CTLG Ph CTL Ph CTL Ph	o 31.2V DC ver (at 24V, TYP) OUT OUT OUT OUT CTL4 CTLG V +5V CTL+ CTLG V +5V CTL+ CTLG	TB27 TB28 TB28 TB29 TB30 TB31 TB32 TB32 TB33 TB40 TB41	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38 TB39 TB40	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17
Commarr Number of (0 module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB11 TB12 TB13 TB14 TB15 TB14 TB15 TB16	ranger	erminal ment pied stations pled stations Voltage Current No. A B D A B B B B B B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8	0UT OUT OUT CTLG Ph CTLG RA CTL+ +5V RA	OUT OUT OUT OUT OUT OUT OUT OUT	TB27 TB28 ↓ TB29 ↓ TB30 ↑ TB31 ↑ TB32 ↑ TB32 ↑ TB40 ↑ TB41 ↑ TB42	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38 TB39 TB40 TB41	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 COM:
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB11 TB12 TB13 TB14 TB15 TB16 TB17	ranger Occu ver supplerminal Signal RD SC RD SLL +24 FC 244 YC	erminal ment pied stations pled stations Voltage Current No. A B D A B D A B B B B B B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8 TB15 TB16 TB17	OUT OUT 15.6 to 90mA or lov OUT CTL Ph CTLG Ph CTL Ph CTL Ph	o 31.2V DC ver (at 24V, TYP) OUT OUT OUT OUT CTL4 CTLG V +5V CTL+ CTLG V +5V CTL+ CTLG	TB27 TB28 TB28 TB29 TB30 TB31 TB32 TB32 TB33 TB40 TB41	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38 TB39 TB40 TB41 TB42	0.7kg 1.54lb) o. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 COM: Y18 Y19
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB16	Occu	erminal ment pied stations voltage Current No. A B D A A B D A A B D A A B D A A B B D A A B B D A A B B D A A B B D A A B B D A A B B D A A B B D A A B B D A B B D A B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D B B B D B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8 TB16 TB16 TB17 TB24	8 poin 15.6 to 90mA or lov OUT CTL+ +5V CTLG RA Ph	OUT OUT OUT OUT OUT OUT OUT OUT	TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB40 TB41 TB42	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38 TB39 TB40 TB41 TB42 TB43	0.7kg 1.54lb) b. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 COM: Y18
Commarr Number of /O module pow (+24V, 24G to erminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB16 TB17	Occu	erminal ment pied stations voltage Current No. A B D A A B D A A B B D A A B B D A A B B D A A B B D A A B B B D A A B B B D A A B B B D A A B B B D A B B B D A B B B D A B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8 TB16 TB16 TB17 TB24	OUT OUT OUT +24V 24G CTLG Ph CTLG CTL+ +5V CTLG RA	OUT OUT OUT OUT OUT OUT OUT CTL+ CTLG OTCONVERTER OTCONVERTE	TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB40 TB41 TB42	Wei	Ter	minal No. TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38 TB39 TB40 TB41 TB42 TB43 TB44	0.7kg 1.54lb) o. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 COM: Y18 Y19
Commarr Number of /O module pow (+24V, 24G to erminal No.) TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB16 TB17 TB18 TB19 TB18	ranger Occu ver supplerminal Signal RD SC RD SLL +24 FC 240 YC Y1 Y2 Y2 Y2 Y6 Y7 COM Y8 Y8 Y8	erminal ment pied stations oly Voltage Current No. A B D A V S S S S S S S S S S S S S S S S S S	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8 TB16 TB16 TB17 TB24	8 poin 15.6 to 90mA or lov OUT CTL+ +5V CTLG RA Ph	OUT OUT OUT OUT OUT OUT OUT OUT	TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB40 TB41 TB42	Wei	Ter	minal Not TB26 TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB34 TB35 TB36 TB37 TB38 TB39 TB40 TB41 TB42 TB43 TB44 TB45	0.7kg 1.54lb) o. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 COM3 Y18 Y19 Y1A Y1B
Commarr Number of //O module pow (+24V, 24G to Ferminal No. TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB16 TB17 TB18 TB19 TB20 TB21	ranger Occu ver supplerminal Signal RD SC RD SL +24 FC 244 YC Y1 Y2 Y2 Y2 Y6 Y7 COM Y8 Y8 Y8	erminal nent pied stations oly Voltage Current No. A B D A V S S S C S S C S S S S S S S S S S S S	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8 TB16 TB16 TB17 TB24	8 poin 15.6 to 90mA or lov OUT CTL+ +5V CTLG RA Ph	OUT OUT OUT OUT OUT OUT OUT OUT	TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB40 TB41 TB42	Wei	Ter	TB42 TB43 TB44 TB45 TB46 TB46	0.7kg 1.54lb) o. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 COM: Y18 Y19 Y1A Y1B Y1C
Commarr Number of /O module pow (+24V, 24G to erminal No.) TB1 TB2 TB3 TB4 TB5 TB6 TB7 TB8 TB9 TB10 TB11 TB12 TB13 TB14 TB15 TB16 TB17 TB18 TB16 TB17 TB18 TB19 TB20 TB21 TB22	ranger Occu wer supplerminal RD Signal RD SC RD SL +24 YC Y1 Y2 Y2 Y2 Y6 Y7 COM Y8	erminal nent pied stations oly Voltage Current No. A B D A A B B D A A B B D A A B B D A A B B D A A B B D A A B B D A A B B D A A B B D A A B B B D A A B B B D A A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B D A B B B B	TB1 X TB2 TB3 TB4 DC TB5 TB7 TB8 TB16 TB16 TB17 TB24	8 poin 15.6 to 90mA or lov OUT CTL+ +5V CTLG RA Ph	OUT OUT OUT OUT OUT OUT OUT OUT	TB27 TB28 TB29 TB30 TB31 TB32 TB33 TB40 TB41 TB42	Wei	Ter	TB40 TB40 TB44 TB45 TB46 TB47	0.7kg 1.54lb) o. Signal I SDA SG SDB CTL+ +24V CTLG 24G Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 COM3 Y18 Y19 Y1A Y1B Y1C Y1D

^{* :} Power supply for driving relay coil.
*1 : See Section 2.2.



3.3.2 * Type AY23C triac output unit (100-240V AC, 32 points, 0.3A)

Specification	ns	Туре		AY23C			Termin	al Arrangem	ent
Out	tput poin	ts		32	2 points	u se se se que u			
Insul	ation sys	tem		Pho	tocoupler		70		
Rated	load vo	tage		100-240V	AC, 40 to 70Hz		ROA-		SDA SG
7.00	load vol		<u> </u>	2	64V AC		ROS.		SDB NC
Max.	load cur	rent		0.3A/point (60°	% simultaneous	ON)	FG		+54V
Min. load	voltage	current	18V A		AC 10mA, 240V		■246		246
	nrush cu				ms or shorter		<u> </u>		19 LD
					nA (120V AC 60H	lz)			12 -
Leakage	e current	(OFF)			nA (240V AC 60H				<u>.</u>
May vo	ltage dro	n (ON)			er (100 to 300mA ver (50 to 100mA	the second of the second of the second			16 7 DK3
IVIAX. VU	itage urc	p (ON)			ver (10 to 50mA		_ <u></u>		
	0	FF → ON			s or less		<u> </u>		A -
Response t	ime —	N → OFF		· · · · · · · · · · · · · · · · · · ·	+ 1ms or less		F = 10		
9.	urge kille			***************************************	r (0.01 μ F + 68 Ω	2)			[]
	non term			Ch absorber	(0.01µF + 001	2.)			
7.777	non tern angemer			8 poir	nts/common				
Number of	occupie	d stations	7.5	ALL F	. 4	Also Villa			
I/O module pov	ver supply	Voltage		15.6 t	to 31.2V DC	ar produc	\A/-: L.	0.	75kg
(+24V, 24G 1	terminal)	Current		180mA or lo	ower (at 24V, TY	P)	Weight	l l	65lb)
Terminal No.	Signal No	<u>.</u>					1 2020	Terminal No.	Signal No
TB1	RDA) }				in galac	TB26	SDA
TB2	SG				e de Maria de Se	n de la companya de La companya de la co		TB27	SG
TB3	RDB		·	OUT	T out			TB28	SDB
TB4	SLD							TB29	NC
TB5	+24V	1 2:3	TA TB1	-		L TB		TB30	+24V
TB6	FG	1 ====	TEST		— DC/DC — Φ +!	TB2		TB31	. NC
TB7	24G		TB41	-	converter	φ 1.62	<u>₩</u> :=	TB32	24G
TB8	Y0	24V DC		+24V	Land the state of	Îтвз	80	TB33	Y10
TB9	Y1		Į	FG 24G				TB34	Y11
TB10	Y2]	10/	FG 24G	All of the first the	Ттва		TB35	Y12
TB11	Y3	7 <u>~</u> 5	TB8		• • •	TB3	<u>13</u>	TB36	Y13
TB12	Y4	7 L	TB15	† * (\$	+5V +5V (****) 2	▼ †		TB37	Y14
TB13	Y5	7 		R Photocoup	oler Photocoupler	R TB4		TB38	Y15
TB14	Y6	7	1		i	<u> </u>	<u>''</u>	TB39	Y16
TB15	Y7	┨╴┌╧┈	TB17		P <u> </u>	TB4	2 <u>L</u> _	TB40	Y17
TB16	COM1	7 [± ★ (★≥★)	+5V +5V +5V	k ‡		TB41	COM3
TB17	Y8	│ ├──	TB24	H DESTRICT		T₃H ↓™		TB42	Y18
TB18	Y9	┤ └──	1025	- 1 Luorocont	oler Photocoupler	L [™]	<u> </u>	TB43	Y19
TB19	YA	1				aga l		TB44	Y1A
TB20	YB	1						TB45	Y1B
TB21	YC	1	·					TB45	Y1C
TB22	YD	1			nan and a second and				
TB23	YE	1						TB47	Y1D
TB24	YE			1	and the second			TB48	Y1E
		-		er i il				TB49	Y1F
TB25	COM2	11 37			Commission of the commission o			TB50	COM4

^{* :} See Section 5.2.2, Example 4.



3.3.3 Type AY51C transistor output unit (sink loading, 12/24V DC, 32 points, 0.3A)

Specificatio	ns	Туре	AY51C			ninal Arrangen	nent
Ou	tput poin	ts		32 points			i i
Insul	ation sys	tem .	:	Photocoupler			e e
Rated	load vol	tage		12/24V DC	PIOA SG	$\otimes \otimes \otimes$	-SDA -SG
Operating		<u> </u>		10.2 to 31.2V DC	POB SLD		· SD8
	load cur		0.24/poi		+24V		· CITE
				nt (75% simultaneous ON	246		246
	inrush cu		1.	2A 10ms or shorter			** *****
Leakage	e current	(OFF)		0.1mA or lower			12
Max. vo	ltage dro	p (ON)	0.9V (TY	P) 0.3A, 1.5V (MAX.) 0.3A	3		13 14
Тур	e of outp	ut		Sink loading	5		15 16
_	. 0	F → ON		2ms or less	- <u>7</u>		17 COH3 1
Response t	ime OI	V → OFF	2ms	or less (resistive load)			18 GL
External power suppl		Voltage			 		14
(CTL+, CTLG			12/241	/ DC (10.2 to 31.2V DC)			1B 1C
		Current		64mA (24V DC)			10 1E
	ırge killer			Zener diode			1F COH4 - 1
Common te	rminal ar	rangement	32 poir	its/common (4 terminals)			 P
Number of	occupied	stations		4	The state of the s		
I/O module pov	ver supply	Voltage		15.6 to 31.2V DC			71
(+24V, 24G t		Current	93mA	or lower (at 24V, TYP)	Weigh		.7kg .54lb)
Terminal No.	Signal No			01 10WC1 (dt 24V, 111)			ar against a sa
TB1	RDA	1	t tree is a second			Terminal No.	SDA
TB2	SG	1	ÓU	T OUT		TB27	SG
TB3	RDB] =:>	TB1		TB26	TB28	SDB
TB4	SLD]:) <u>TB2</u>] XTB3]	DC/DC - +5V	TB27 / X X	TB29	CTL+
TB5	+24V]	TB4	converter	TB28X\/ TB29	TB30	+24V
TB6	FG	24V DC	TB5 \ +24V		TB3024/12V	TB31	CTLG
TB7	24G	∮	TB6] TB7] 24G	CTLG	TB31 TDC	TB32	24G
TB8	Y0			CTL+ +5V +5V CTL+ Zener d	TB32	TB33	Y10
TB9	Y1	. I	TB8	中 _ + □ + □ - □ - □ - □ - □ - □ - □ - □ - □		TB34	Y11
TB10	Y2]	IBO A A A	DIST TEXT R	TB33 R	TB35	Y12
TB11	Y3	-	Pho	tocoupler Photocoupler	, ↑	TB36	Y13
TB12	Y4	↓	↓ c	TLG CTLG		TB37	Y14
TB13	Y5	-	TB15 Zener	Zener	TB40 R	TB38	Y15
TB14	Y6	4	TB16 diode C	TL+ +5V +5V CTL+ diode	TB41	TB39	Y16
TB15	Y7	<u>R</u>	тв17		TB42 R	TB40	Y17
TB16	COM1		T HE	(<u>\$</u>		TB41	СОМЗ
TB17	Y8	1 C	1 1 1	otocoupler Photocoupler		TB42	Y18
TB18	Y9	R-	ΓB24 + C	TLG CTLG	TR49 R	TB43	Y19
TB19 TB20	YA	1 []	TB25	보존사람이다 기계 때문 사람이 되었다.	TB50	TB44	Y1A
	YB	4		1. 함께 경험		TB45	Y1B
TB21	YC	1	<u> </u>			TB46	Y1C
TB22	YD					TB47	Y1D
TB23 TB24	YE	1	ga 1944.			TB48	Y1E
TB24	YF COM2	1				TB49	Y1F
						TB50	



3.3.4 Type AY61CE transistor output unit (5 to 24V DC, 32 points, 1.0A, source loading)

Specifications	Туре	AY61CE	Terminal Arrangement
Input p	oints	32 points a MC	aning a grad
Insulation	system	Photocoupler and a second seco	Parties And Compare
Rated load	l voltage	5V/12V/24V DC	
Rated load vo	oltage_range	4.5 to 26.4V DC	70A × × × × × × × × × × × × × × × × × × ×
Max. load	current	1.0A/point, 4A/common	***
Max. inrus	h current	8A, 10ms or less	
Leakage curr	ent at OFF	0.1mA or lower	
Max. voltage	drop at ON	0.13V (TYP), 1.0 A 0.2V (Max.),1.0 A	
Output	type	Source loading	
Boom on the state of	OFF → ON	2ms or less	
Response time	ON → OFF	10ms or less (resistance load)	
Surge	killer	Zener diode	
Common termina	al arrangement	8 points/common (4 terminals)	
Number of occi	upied stations	i sa marang 4 marang arawan na kabagai ita	
I/O unit power supp	oly Voltage	15.6 to 31.2V DC	
(+24V, 24G termina	Current	150mA or lower (at 24V, TYP)	
Weig	ght 💮 💮	o. 0.7kg (1.54lb)	
Tour Complete Control for	and and the second of the seco	External Connection	

Terminal Number	Signal		Terminal Number	Signal
TB1	RDA		TB26	SDA
TB2	SG	[[] - 스크홈 및 []	TB27	SG
TB3	RDB	OUT OUT	TB28	SDB
TB4	SLD	TB26	TB29	NC .
TB5	+24V	X = X $TB2$ $TB27$ $TB27$	TB30	+24V
TB6	FG	TB28X Converter	TB31	NC
TB7	24G	24V DC TB5 +24V	TB32	24G
TB8	Y0	⊥ тв6 Т тв71 24G Гтв31 Т тв71 24G Гтв32	TB33	Y10
TB9	Y1		TB34	Y11
TB10	Y2	L TB8 Zener diode +5V → →+5V Zener diode TB33 L	TB35	Y12
TB11	Y3	226116 01000 11833	TB36	Y13
TB12	Y4		TB37	Y14
TB13	Y5	Photocoupler Photocoupler +	TB38	Y15
TB14	Y6	TB15 TB16	TB39	Y16
TB15	Y7	COM1 GOM3 H	TB40	Y17
TB16	COM1	TB17 Zener diode +5V + +5V Zener diode TB42	TB41	сомз
TB17	Y8		TB42	Y18
TB18	Y9	Photocoupler Photocoupler	TB43	Y19
TB19	YA	TB24 TB25	TB44	Y1A
TB20	YB	COM2 COM4	TB45	Y1B
TB21	YC	5V-24V DC	TB46	Y1C
TB22	YD	t that the fill zee of the second former describes placed for the complete publication of programmer and with the experience of the complete publication of the complete p	TB47	Y1D
TB23	YE		TB48	Y1E
TB24	YF		TB49	Y1F
TB25	COM2		TB50	COM4



3.3.5 Type AY81C transistor output unit (24V DC, 32 points, 0.5A)

Specifications	Туре	AY81C	Terminal Arrangement
Number of outpo	ut points	32	enson i vento i di la compressione della compressione della compressione della compressione della compressione Safratti e la compressione della compressione della compressione della compressione della compressione della c
Isolation	1 4 30	Photocoupler	ger for Market and Employed American State of the State o
Rated load vo	oltage	24V DC	
Operating load vol		21.6 to 26.4V DC	ADA. O O O O
Max. load cu		0.5A/point (60% switched on simultaneously)	56- 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Max. inrush c	1.00 1.00	2A, 10 msec or less	S.D. (X)
Leakage urrent		0.1mA max.	FG:
Max. voltage dro		0.9 (TYP) 0.5A, 1.5V (MAX) 0.5A	
Output typ			
	The state of the state of the	Source loading	
Response time	OFF to ON	2ms max.	
	ON to OFF	2ms max. (resistance load)	
Surge suppre		Zener diode	
Common		32 points/common (4 terminal)	
Number of station	occupied	4	
I/O module	Voltage	15.6 to 31.2V DC	
power supply	Current	100mA (TYP. 24V DC)	
Output exterminal	Voltage	24V DC (21.6 to 26.4V DC)	
		<u> </u>	
supply power	Current	17mA (TYP. 24V-DC)	e no procedura a a some de l'est a mais a come de some de l'est de l'est a come de l'est de l
	Current		i arreite da de care de care
Weight erminal Signal	Current	17mA (TYP. 24V-DC) 0.7kg (1.54lb) External Connection	Terminal Number Signal
erminal Signal TB1 RDA TB2 SG	Current	0.7kg (1.54lb) External Connection	
Weight Ferminal Signal TB1 RDA TB2 SG TB3 RDB	Current	0.7kg (1.54lb)	Number Signal TB26 SDA
weight Framework Fra	Current	O.7kg (1.54lb) External Connection OUT OUT TB1 TB26	Number Signal
Weight Figure 1 Weight Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V	Current	0.7kg (1.54lb) External Connection OUT OUT TB26 TB2 TB2 TB2 TB2 TB2 TB2 TB28 TB28	Number Signal
weight Framework Fra		0.7kg (1.54lb) External Connection OUT OUT TB1 TB2 TB2 TB3 TB4 DC/DC +5V TB27 TB28 TB4 TB4	Number Signal TB26 SDA TB27 SG TB28 SDB TB29 NC TB30 +24V TB31 CTLG
weight Figure 1 Figure 2 Figure 2 Figure 3 Figure 3 Figure 4 Figure 4	Z-X-X-24V D	0.7kg (1.54lb) External Connection OUT OUT TB26 TB20 TB20 TB31 TB20 TB30 TB30 TB30 TB30 TB30 TB30 TB31 TB31	Number Signal TB26 SDA TB27 SG TB28 SDB TB29 NC TB30 +24V TB31 CTLG TB32 24G TB32 24G TB32 24G TB32 CTLG TG32 CTLG TG32
weight Framework Fra		0.7kg (1.54lb) External Connection OUT OUT TB26 TB2 DC/DC +5V TB27 TB30 TB4 CTB5 +24V TB30	Number Signal TB26 SDA TB27 SG TB28 SDB TB29 NC TB30 +24V TB31 CTLG TB32 24G TB33 Y10 TB33 Y10
erminal lumber Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0		0.7kg (1.54lb) External Connection OUT OUT TB26 TB2 DC/DC ⊕+5V TB27 TB30 TB4 CTB5 +24V TB30 TB6 TB7 24G TB31 TB32	Number Signal TB26
erminal lumber Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0 TB9 Y1		0.7kg (1.54lb) External Connection OUT OUT TB26 TB20 TB20 TB31 TB20 TB30 TB30 TB30 TB30 TB30 TB30 TB31 TB31	Number Signal TB26 SDA TB27 SG TB28 SDB TB29 NC TB30 +24V TB31 CTLG TB32 24G TB33 Y10 TB33 Y10
erminal Jumber Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0 TB9 Y1 TB10 Y2		0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB4 CTB5 TB6 TB7 24G TB8 Zener diode +5V + +5V Zener diode TB33 TB8 R Photo-Photo-R	Number Signal TB26
erminal lumber Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0 TB9 Y1 TB10 Y2 TB11 Y3 TB12 Y4 TB13 Y5	24V D	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB4 TB3 TB4 TB5 TB5 TB7 Zener diode +5V +5V Zener diode TB33 TB8 Zener diode +5V +5V Zener diode TB33 TB8 TB8 TB8 TB8 TB8 TB8 TB8	Number Signal TB26
### Weight Signal File	24V D	0.7kg (1.54lb) External Connection OUT	Number Signal TB26
### Weight Signal File	24V D	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB4 CTB5 TB5 TB6 TB7 Zener diode +5V +5V Zener diode TB32 TB15 TB15 TB15 TB16 CTL+ TB17 Zener diode +5V +5V Zener diode TB42	Number Signal TB26
### Weight Signal Figure Figure	24V D	0.7kg (1.54lb) External Connection TB26 TB2 TB2 TB27 TB28 TB3 TB40 TB31 TB31 TB31 TB32 TB31 TB31 TB32 TB31 TB31 TB31 TB31 TB32 TB31 TB31 TB31 TB31 TB32 TB31 TB31 TB31 TB33 TB31 TB31 TB31 TB31	Number Signal TB26
### Weight Signal File	24V P	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB4 TB5 TB6 TB7 TB8 Zener diode +5V +5V Zener diode TB33 TB15 TB15 TB15 TB16 TB17 Zener diode +5V +5V Zener diode TB41 TB17 TB17 TB17 TB18 TB19 TB19	Number Signal TB26
### Weight Signal Figure Figure	24V P	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB3 TB4 CTB5 TB8 Zener diode +5V +5V Zener diode TB33 TB15 TB15 TB17 Zener diode +5V +5V Zener diode TB41 TB17 TB17 TB17 TB17 TB18 TB19 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB28 TB27 TB28 TB28 TB28 TB29 TB29 TB20 TB31 TB31 TB31 TB32 TB31 TB32 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB33 TB31 TB32 TB33 TB31 TB33 TB33 TB31 TB33 TB33 TB33 TB33 TB33 TB34 TB33 TB34	Number Signal TB26
### Weight Figure Figure	24V P	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB4 TB5 TB6 TB7 TB8 Zener diode +5V +5V Zener diode TB33 TB15 TB15 TB15 TB16 TB17 Zener diode +5V +5V Zener diode TB41 TB17 TB17 TB17 TB18 TB19 TB19	Number Signal
erminal Number Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0 TB9 Y1 TB10 Y2 TB11 Y3 TB12 Y4 TB13 Y5 TB14 Y6 TB15 Y7 TB16 COM1 TB17 Y8 TB18 Y9 TB19 YA TB20 YB	24V P	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB3 TB4 CTB5 TB8 Zener diode +5V +5V Zener diode TB33 TB15 TB15 TB17 Zener diode +5V +5V Zener diode TB41 TB17 TB17 TB17 TB17 TB18 TB19 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB28 TB27 TB28 TB28 TB28 TB29 TB29 TB20 TB31 TB31 TB31 TB32 TB31 TB32 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB33 TB31 TB32 TB33 TB31 TB33 TB33 TB31 TB33 TB33 TB33 TB33 TB33 TB34 TB33 TB34	Number Signal TB26
erminal Number Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0 TB9 Y1 TB10 Y2 TB11 Y3 TB12 Y4 TB13 Y5 TB14 Y6 TB15 Y7 TB16 COM1 TB17 Y8 TB18 Y9 TB19 YA	24V P	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB3 TB4 CTB5 TB8 Zener diode +5V +5V Zener diode TB33 TB15 TB15 TB17 Zener diode +5V +5V Zener diode TB41 TB17 TB17 TB17 TB17 TB18 TB19 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB28 TB27 TB28 TB28 TB28 TB29 TB29 TB20 TB31 TB31 TB31 TB32 TB31 TB32 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB33 TB31 TB32 TB33 TB31 TB33 TB33 TB31 TB33 TB33 TB33 TB33 TB33 TB34 TB33 TB34	Number Signal TB26
Weight Ferminal Number Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0 TB9 Y1 TB10 Y2 TB11 Y3 TB12 Y4 TB13 Y5 TB14 Y6 TB15 Y7 TB16 COM1 TB17 Y8 TB18 Y9 TB19 YA TB20 YB TB21 YC	24V P	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB3 TB4 CTB5 TB8 Zener diode +5V +5V Zener diode TB33 TB15 TB15 TB17 Zener diode +5V +5V Zener diode TB41 TB17 TB17 TB17 TB17 TB18 TB19 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB28 TB27 TB28 TB28 TB28 TB29 TB29 TB20 TB31 TB31 TB31 TB32 TB31 TB32 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB33 TB31 TB32 TB33 TB31 TB33 TB33 TB31 TB33 TB33 TB33 TB33 TB33 TB34 TB33 TB34	Number Signal TB26
Weight Ferminal Number Signal TB1 RDA TB2 SG TB3 RDB TB4 SLD TB5 +24V TB6 FG TB7 24G TB8 Y0 TB9 Y1 TB10 Y2 TB11 Y3 TB12 Y4 TB13 Y5 TB14 Y6 TB15 Y7 TB16 COM1 TB17 Y8 TB18 Y9 TB19 YA TB20 YB TB21 YC TB22 YD	24V P	0.7kg (1.54lb) External Connection TB1 TB2 TB2 TB3 TB3 TB4 CTB5 TB8 Zener diode +5V +5V Zener diode TB33 TB15 TB15 TB17 Zener diode +5V +5V Zener diode TB41 TB17 TB17 TB17 TB17 TB18 TB19 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB27 TB28 TB28 TB28 TB27 TB28 TB28 TB28 TB29 TB29 TB20 TB31 TB31 TB31 TB32 TB31 TB32 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB32 TB33 TB31 TB33 TB31 TB32 TB33 TB31 TB33 TB33 TB31 TB33 TB33 TB33 TB33 TB33 TB34 TB33 TB34	Number Signal TB26



3.4 I/O Units

3.4.1 Type AX10Y10C I/O unit (100V AC, input:16 points, relay output:16 points)

	INPUT SPECIFICATIONS			$\neg \neg$	OUTPUT SPECIFICATIONS					
Input	points	1	16 pc	ints		Output	points		16 points	
Insulation	n system		Photocoupler			Insulation system Photocoupler			notocoupler	
Rated inp	ut voltage		100-120V A	AC 50/60Hz		Rated s		24V DC (resistance load) / 2A/point 240V AC (cos • = 1) / 4A/common		
Rated inp	ut current		Approx. 6mA (1	00V AC, 60Hz)						ommon
Operating w	okage range	L	85 to 132V AC	85 to 132V AC (50/60Hz ±5%)			Min. switching load Max. switching voltage 29		V DC/1mA	
ON voltage	VON current		80V AC or higher	/5mA or higher					AC, 110V DC	
OFF voltage	OFF current		30V AC or lower	r/1mA or lower		Max. switchi	Mechanical		on times or more	
Inrush	current	<u> </u>	Max. 200mA, withi	n 1ms (132V AC)			Wiecharical			at load
Input im	pedance	A	pprox. 18kΩ (60Hz),	approx. 21kΩ (50H	iz)			100 thous	hing voltage/current sand times or mor	re
Response time	OFF → ON	+	15ms o		{	Life		200V AC 1.5A, 100 thous	240V AC 1A (COS	♦ = 0.7)
	terminal	-	30ms o		-		Electrical		10V AC 0.5A (COS	
arrang	ement	ļ	16 points/commo						sand times or more	
Max. simulta	aneously ON	 	100 % simultaneou	IS ON (110V AC)				100 thous	sand times or mor	e
					- 1	Response	OFF → ON	10	Oms or less	
		1			l	time	ON → OFF	1:	2ms or less	
					İ	External power supply requirement	Voltage	24V DC ±10% R	ipple voltage 4Vp-	p or less
					[supply requirement (CTL+, CTLG terminal)	Current	92mA (24V [OC TYP. all points	ON)
					1	Surge	killer	N	ot provided	
							terminal ement	8 p	oints/common	
Number of oc	cupied stations						4			
VO module power supply (+24V, 24G	Voltage					15.6 to 3	31.2V DC			
(+24V, 24G terminal)	Current				741	mA or lowe	r (at 24V, TY	P)		
Wei	ight					0.66kg	(1.45lb)			
Terminal (No. Signa	No.			-				Terminal No.	Signal No.
TB1	RD	A							TB26	SDA
TB2	S	3	۲	IN	T	ŌŪ	T		TB27	SG
TB3	RD	В	TB1					TD26	TB28	SDB
TB4	SL	D	X X TB1	•		+5	v {	TB26	TB29	CTL+
TB5	+2	4V	→ → → → → → → → → →	٠ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ	1 -	c/oc ⊢	•	TB28 X	TB30	+24V
TB6	FC	3	TB4		Con	verter	•	TB29	TB31	CTLG
TB7	24	G	24V DC TB5	+24V	1.		CTL+ 4	TR30 1 For relay	TB32	24G
TB8	X	0	+ TB7	24G			CTLG +	TB31 7 24V DC	TB33	Y10
TB9	X	1	TB8		-	CTL	+ +	_TB32 	TB34	Y11
TB10	X	2			→	+ .		~~~~~	TB35	Y12
TB11	X	3	1 >	T RY	/+5V -	, ,,	'i' \(\text{''})	TB36	Y13
TB12	X	4	1,	Photocoup	pler	(* \\S)	7	`	TB37	Y14
TB13	X	5	TB15	, A	Phot	ocoupler .	.	TB40 L	TB38	Y15
TB14	X	6		-			TLG	TB41	TB39	Y16
TB15	X	7	TB17	7	+5V -	СТ	L+ -D	TB42 L	TB40	Y17
TB16	COI	V 1	· · · · · · · · · · · · · · · · · · ·	TRIPASS		•	Τ		TB41	COM3
TB17	X	В	}	T BANGE CO				}	TB42	Y18
TB18	X	9	- TB24	Photocoup	pler	¥ 1.62	٦	TB49 ⊾	TB43	Y19
TB19	X		TB25	A A	Pho	tocoupler	📥 📘 🖰	TB50	TB44	Y1A
TB20	X					C	TLG		TB45	Y1B
TB21	X	С	1						TB46	Y1C
TB22	XI		_					1	TB47	Y1D
TB23	X								TB48	Y1E
TB24	X								TB49	Y1F
TB25	CO								TB50	COM4

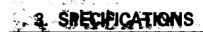
^{* :} Power supply for driving relay coil.



3.4.2 Type AX40Y10C I/O unit (12/24V DC, input:16 points, relay output:16 points)

		NPUT SPECIFICATIO	NS		C	UTPUT SPECIFICA	TIONS	
Input	points	16	points	Output points 16 points				
Insulation	n system	Photo	coupler	Insulatio	n system	Ph	Photocoupler	
Rated inp	ut voltage	12V DC	24V DC		witching current	24V DC (resista 240V AC (cos •	nce load) /2A/p	oint ommon
Rated inp	ut current	Approx. 3mA	Approx. 7mA		ching load		V DC/1mA	5111111011
Operating vi	oltage range	10.2 to 31.2V DC (ri	pple ratio: within 5%)		ning voltage		AC, 110V DC	
ON voltage	ON current	8V DC or high	er/2mA or higher	·	ing frequency		0 times/hour	
	OFF current		er/1mA or lower		Mechanical		n times or more	
	sistance		x. 3.3kΩ	}			ing voltage/curren	it load
Type o	of input		loading	ł	}		and times or mor	
Response time	OFF → ON	 	ess (24V DC) ess (24V DC)	Life		200V AC 1.5A, 2 100 thousa	40V AC 1A (COS) and times or more	φ = 0.7) e
	terminal jement		non (2 terminals)	1	Electrical		V AC 0.5A (COS ond times or more	
<u>*</u>	aneously ON	100% simultane	ous ON (26.4V DC)	1			0V DC 0.1A (L/R= and times or mor	
				Page	OFF → ON		ms or less	
1				Response time	ON → OFF		ms or less	
				External power	Voltage	24V DC ±10% Ri		p or less
				requirement (CTL+, CTLG terminal)	Current		C TYP. all points	
•					killer	No	ot provided	
					terminal gement	8 pc	ints/common	
Number of oc	cupied stations				4			
VO module power supply (+24V, 24G	Voltage			15.6 to	31.2V DC			
terminal)	Current		7.	2mA or lowe	r (at 24V, TY	′P)	 	
	ight	 	 	0.65kg	(1.43lb)			,
Terminal							Terminal No.	
TB1	RD/	——	IN	OUT			TB26	SDA
TB2	SG			± 5\/	<u> </u>	B26 A	TB27	SG
TB3	RDI		o	+5∨ 2/DC -Ф	0 -	B27 / XX_	TB28	SDB
TB5	+24	—— —		verter	. Y 7	B28	TB29 TB30	CTL+
TB6	FG	24V DC TDS	<u> </u>	<u>c⊤L⊣</u>	₋Ф ~~~}′	TB30 For relay	TB31	+24V CTLG
TB7	240		24G	CTLG		TB31 T 24V DC	TB32	24G
TB8	X0					TB32	TB33	Y10
TB9	X1	─┤ ┌ [─] ── ──	├ ── ─	+5V CTL+	¯₱ ┌─∳	TB33	TB34	Y11
TB10	X2	- 1	RU(\$ \lambda \k)	RA		,	TB35	Y12
TB11	Х3		Photocoupler	(FIRE			TB36	Y13
TB12	X4	1)	A Dha	tocoupler .	.	\	TB37	Y14
TB13	X5	/_ TB15		CTI	G)	TB38	Y15
TB14	X6			311	·- -	TB40 L	TB39	Y16
TB15	X7		R +5V	CTI	<u> </u> ┕╾┿	1841 Ori	TB40	Y17
TB16	COM	11 , , , , ,		CTL- +5V	'₱ ┌┷	TB42	TB41	COM3
TB17	X8		RD(\$ \ \ \)	† RA		()	TB42	Y18
TB18	X9		Photocoupler	(XX	-	(TB43	Y19
TB19	XA		DI.			\	TB44	Y1A
TB20	XB		1 (1	tocoupler 👍 CTI		<i>)</i>	TB45	Y1B
TB21	XC	TR26	59 J	GII	-	TB49	TB46	Y1C
TB22	XD		A		L_	TB50	TB47	Y1D
TB23	XE						TB48	Y1E
TB24	XF		L				TB49	Y1F
TB25	COM	12	 				TB50	COM4

^{• :} Power supply for driving relay coil.





3.4.3 Type: AX18Y22C:1/O unit (100V: AC, input:16 points, *triac output:16: points):

		H	PUT SPECIFICATIO	ONS		0	UTPUT SPECIFICA	TIONS	
Input	point	s	16	points		Output points		16 points	
Insulatio	n sys	tem	Phot	tocoupler		Insulation system	Pi	notocoupler	,
Rated inp				V AC 50/60Hz		Rated load voltage	100-240V AC 40 to 70Hz		
Rated inp	out cu	rrent	Approx. 6mA	(100V AC, 60Hz)		Max. load voltage		264V AC	
Operating v	oltage	range	85 to 132V A	C (50/60Hz ±5%)		Max. load current	0.3A/point (7	5% simultaneous	ON)
ON voltage	/ON	current	80V AC or hig	her/5mA or higher		Min. load voltage, current	18V AC 10m/	A, 100V/240V AC 1	l0mA
OFF voltage	OFF (current	30V AC or lo	wer/1mA or lower		Max. inrush current	20A 1	0ms or shorter	
Inrush	curre	ent -	Max. 200mA, w	ithin 1ms (132V AC)		Leakage current (OFF)	Approx. 1.5	mA (120V AC 60)	1z)
Input im	peda	nce	Approx. 18kΩ (60H	z), approx. 21kΩ (50i	Hz)]		mA (240V AC 60)	
Response	OFF	→ ON	15ms or less	s (100V AC 60Hz)		Max. voltage drop (ON)	1.5V or lower (0.1 to 0. 2.5V or lo	ower (10 to 50mA	u to Tooma),
time	ON	→ OFF	30ms or less	(100V AC 60Hz)		Response OFF → ON	1	ms or less	
Common arrang			16 points/com	mon (2 terminals)		time ON → OFF	0.5 cycle	es + 1ms or less	
Max, simulta			60% eimultane	eous ON (110V AC)		Surge killer	CR absor	ber (0.01 μ F+68 Ω)
1410A, 31111UI(3.1600	7, 011	OO /o Samulane	OGS ON (TIOV AC)		. Common terminal	8 pd	oints/common	
Number of oc	ounied.	- tations				arrangement 4			-
VO module	T	ltage		· · · · · · · · · · · · · · · · · · ·		15.6 to 31.2V DC			
power supply (+24V, 24G terminal)	├	rrent			11	6mA or lower (at 24V, T)	/P)		
	ight	rrent	·			0.68kg (1.50lb)	· · · · · · · · · · · · · · · · · · ·		
Terminal	<u> </u>	Signal	lo.			0.00kg (1.50lb)		Terminal No.	Signal No.
TB1		RDA	-				7	TB26	SDA
TB2	_	SG	− − тв	IN IN		OUT		TB27	SG
TB3		RDB	-1 \times \times \wedge $+\frac{1}{16}$			+5V	TB26	TB28	SDB
TB4		SLD		 o- i	<u>D</u>	C/DC + o	TB27	TB29	NC
TB5		+24\	<u> </u>	4	Cor	nverter	TB28X	TB30	+24V
TB6		FG	24V_DC_TB	5 +24V			TB30	TB31	NC
T87		24G		240			Т Т ТВ32	TB32	24G
TB8		XO		24G	+5V ⁻	LEV.♣	↑ 1832 1 TB33	TB33	Y10
TB9		X1	一 「°,° ~~~	THE TOTAL	♥+5V =		 	TB34	Y11
TB10		X2	7 (Late 6				TB35	Y12
TB11		Х3		Photocoup	oler	Photocoupler R		TB36	Y13
TB12		X4		Å				TB37	Y14
TB13		X 5		<u>5</u>			TB40	TB38	Y15
TB14		X6		Ī	LEV		TB41	TB39	Y16
TB15		X7		7	+5V - †	+5V ↑	TB42 L	TB40	Y17
TB16		COM		RIRITER	5	() N =	·	TB41	сомз
TB17		X8	_ (L RYVE VA	ب	Photocoupler IR		TB42	Y18
TB18		X9	_	Photoco	upter	Photocoupler UR		TB43	Y19
TB19		XA	_] [Ţ)	TB44	Y1A
TB20		XB		4			TB49	TB45	Y1B
TB21		XC		→ ≺A			TB50	TB46	Y1C
TB22		XD						TB47	Y1D
TB23	_	XE		L				TB48	Y1E
TB24	_	XF						TB49	Y1F
TB25		COM	_1					TB50	COM4

^{• :} See 5.3.2, Example 4.



3.4.4 Type AX40Y50C I/O unit (12/24V DC, input:16 points, transistor output:16 points)

		INPUT SPECIFICATION	NS .	T	C	UTPUT SPECIFICA	TIONS	
Input	points	16 (points	Output	points		16 points	
	n system		coupler		n system		hotocoupler	
	out voltage	12V DC	24V DC		d voltage		12/24V DC	
	out current	3mA	7mA	Operati	ng load	10.2	to 31.2V DC	
Operating v	voltage range	10.2 to 31.2V DC (ri	ople ratio: within 5%)		range d current		5% simultaneous	ON)
ON voltage	e/ON current	8V DC or highe	er/2mA or higher	-				JN)
OFF voltage	e/OFF current	4V DC or lowe	er/1mA or lower		sh current irrent (OFF)		MA or lower	
Input re	esistance	Approx	c. 3.3kΩ		e drop (ON)		.3A, 1.5V (MAX.) (124
Type o	of input	Sink	oading		output		ink loading).3A
Response	OFF → ON	10ms	or less		OFF → ON		ms or less	
time	ON - OFF	10ms	or less	Response time	ON → OFF		ess (resistive load)	
Common	n terminal gement	16 points/comm	non (2 terminals)	External power				
	taneously ON	60% simultaneo	us ON (26.4V DC)	- euppiy	Voltage	12/24V DC	(10.2 to 31.2V DC	
Max. Simol	tarieousiy Olv	00% Simultaneo	25 OI4 (20.44 DC)	requirement (CTL+, CTLG terminal)	Current	64mA (TYP.	24V DC per comm	ion)
ł				Surge	killer	Z	ener diode	
					terminal jement	16 points/co	ommon (2 termina	ls)
Number of oc	ccupied stations				4			
VO module	Voltage			15.6 to	31.2V DC			
power supply (+24V, 24G terminal)	Current		7	4mA or lowe	r (at 24V, TY	(P)		
We	eight			0.65kg	(1.43lb)			
Terminal	No. Signa	No.					Terminal No.	Signal No.
TB1	RC	A	IN T	OU	T	7	TB26	SDA
TB2	S	3				TB26 /	TB27	SG
TB3	RE	B X X TB2		+5V		TB27 / X	TB28	SDB
TB4	SL			C/DC		TB28	TB29	CTL+
TB5	+2	24V DC TDC	-	verter	CTL+ D-	TB29	TB30	+24V
TB6	F	3 24V DC TB5	+24V			TB30 I 24/12V	TB31	CTLG
TB7	24	G T T87	24G		CTLG +	TB32	TB32	24G
TB8	X			++5V []	Zener ₁ diode	T	TB33	Y10
TB9	X	 1 1 /	R D (ZK) +5V	CTL	+ -	TB33	TB34	Y11
TB10	X		Bhasaannia (<u> </u>	` ∔\`‡	1 / []	TB35	Y12
TB11	X	 \	Photocoupler	Photocouple	. / !	1 (TB36	Y13
TB12	X		A	CTLG	—	\	TB37	Y14
TB13	X		,		1	1) 1	TB38	Y15
TB14	X		+5V	· · · · · ·		TB40 L	TB39	Y16
TB15	X		T3V +5	V CTL+ Z	ener diode	↑1 04 1	TB40	Y17
TB16	co		R DEXX	TEEN B		TB42 L	TB41	COM3
TB17	X		I Photocourier 7	_ 	>+K	7 7 1 -	TB42	Y18
TB18	X		Photocoupler 7	Photocouple	. / 1		TB43	Y19
TB19	X			CTLG	-	\	TB44	Y1A
TB20	X		.				TB45	Y1B
TB21	X		A			TB49	TB46	Y1C
TB22	X				L	TB50	TB47	Y1D
TB23	X]	TB48	Y1E
TB24	X						TB49	Y1F
TB25	co	M2					TB50	COM4





3.4.5 Type AX80Y10C I/O unit (12/24V DC, input: 16 points/relay output: 16 points)

		INPUT SPECIFICATIO	NS	1	0	UTPUT SPECIFICAT	TIQNS	
Input	points	16	points	Output points 16 points				
Insulatio	n system	Photo	coupler	Insulatio	n system	Pho	otocoupler	
Rated inp	out voltage	12V DC	24V DC		witching	24V DC (resista	nce load) 2A/	point
Rated inp	out current	Approx. 3mA	Approx. 7mA		, current	240V AC (cos #		common
Operating v	oltage range	10.2 to 31.2V DC (ri	pple ratio: within 5%)		ching load		DC/1mA	
ON voltage	VON current	8V DC or high	er/2mA or higher		ning voltage		AC, 110V DC times/hour	
OFF voltage	OFF current	4V DC or low	er/1mA or lower	THIRAX. SWITCH	Mechanical		n times or more	
	esistance	Approx	k. 3.3kΩ	1	Wiechanical		ng voltage/curren	t load
Type o	of input	Sink/sour	ce loading	1	ł i		nd times or mor	
Response	OFF → ON	10ms or le	ess (24V DC)	1:4-	[200V DC 1.5A, 2	40V AC 1A (cos)	=0.7)
time	ON → OFF	10ms or le	ess (24V DC)	Life	Electrical	200V DC 1A, 240		
	n terminal gement	16 points/comm	non (2 terminals)			100 thousa	nd times or mor	е
Max. simul	ltaneous ON	100% simultaned	ous ON (26.4V DC)]		24V DC 1A, 100 100 thousa	V DC 0.1A (L/R7 nd times or mor	msec)
				Response	OFF → ON	10r	ns or less	
1				time	ON → OFF	12r	ms or less	
				requir	ower supply* rement LG terminal)	24V DC ±10%, Rip 92mA (24V DC	ople voltage 4Vp- C TYP, all points	p or less ON)
		•			killer	No	t provided	
ĺ					terminal gement	8 poi	ints/common	
Number of oc	ccupied stations				4			
VO unit power supply (+24V, 24G	Voltage			15.6 to	31.2V DC			
terminal)	Current		7:	2mA or lowe	r (at 24V, TY	P)		
	eight			0.65kg	(1.43lb)		T=	Ja:
	No. Signal		IN	OL	IT		Terminal No.	Signal No.
TB1	RD					TB26 ~	TB26 TB27	SDA SG
TB2	SC RD	V 7/ T02	<u> </u>	+5	V	TB27	TB28	SDB
TB4	SL	——		C/DC — o	CTI I	TB28	TB29	CTL+
TB5	+24	·1 \ 184	Ļ ;;'—	Verter	CTL+	TB29	TB30	+24V
TB6	FC		+24V		Ψ'	TB30 _ For relay	TB31	CTLG
TB7	240	 _	246	CTL	G 🛼	TB31 J 24V DC TB32	TB32	24G
TB8	X		·			_	TB33	Y10
- TB9	X		+5V	+5V CTL	7 [TB33 -	TB34	Y11
TB10	X	 	<u> </u>	T A		/	TB35	Y12
TB11	X:		Photocoupler	(* 1 K)			TB36	Y13
TB12	X4		A PH	notocoupler.		\ \	TB37	Y14
TB13	X:	/	1		TLG		TB38	Y15
TB14	X	TB16	†	·		TB40 L	TB39	Y16
TB15	X	' [1		L	} ''``	TB40	Y17
TB16	COM	11 TB17	◇────────────────────────────────────	+5V CTL	++	TB42	TB41	сомз
TB17	1 40.	(,	R R (()	Ϋ́ R		/ I	TB42	Y18
TB18	X	 /	1 7 1					, ,,,,,
	X		Photocoupler		i'	[[TB43	Y19
TB19	X8 X8 XX			(F1B)			TB44	Y1A
TB19 TB20	XS XS XA		Photocoupler	otocoupler -			TB44 TB45	Y1A Y1B
	X8 X9 X0 X6	TB24	Photocoupler		TLG	TRAS	TB44 TB45 TB46	Y1A Y1B Y1C
TB20 TB21 TB22	3X 2X 2X 3X 3X 3X	TB24	Photocoupler			TB49 (TB50 (C)	TB44 TB45 TB46 TB47	Y1A Y1B Y1C Y1D
TB20 TB21 TB22 TB23	X8 X9 X0 X0 X0 X1	TB24	Photocoupler				TB44 TB45 TB46 TB47 TB48	Y1A Y1B Y1C Y1D Y1E
TB20 TB21 TB22	X8 X9 X0 X0 X0 X1 X1	TB24	Photocoupler				TB44 TB45 TB46 TB47	Y1A Y1B Y1C Y1D

^{• :} Power supply for driving relay coil. *1 : See Section 2.2.



3.4.6 Type AX80Y80C I/O unit (12/24V DC, input: 16 points/transistor output: 16 points)

		NPUT SPECIFICATIO	NS		0	UTPUT SPECIFICA	ATIONS	
Input	points	16 (points	Output	Output points 16 points			
Insulation	system	Photo	coupler	Insulatio	n system	Р	hotocoupler	
Rated inpu		12V DC	24V DC		witching		24V DC	
Rated inpu	ut current	Approx. 3mA	Approx. 7mA		, current		247 50	
Operating vo	oltage range	10.2 to 31.2V DC (ri	pple ratio: within 5%)	Operati voltage	ing load e range	21.6	6 to 26.4V DC	
ON voltage/	ON current	8V DC or highe	er/2mA or higher		hing voltage	250\	/ AC, 110V DC	
OFF voltage/	OFF current	4V DC or lowe	er/1mA or lower		ish current		10ms or less	
Input res	sistance	Approx	c. 3.3kΩ		urrent (OFF)		mA or lower	
Input	type	Sink/sour	ce loading		e drop (ON)		0.5A, 1.5V (MAX) (0.5A
Response	OFF → ON	10 ms or 1	ess (24V DC)		ut type		ource loading	:=:
time	ON → OFF	10 ms or l	ess (24V DC)	Response	OFF → ON		2ms or less	
Common		16 points/comn	non (2 terminals)	time	ON → OFF		ess (resistance load	d)
Max. simult		60% simultaneo	us ON (26.4V DC)	External power	Voltage	24V DC	(21.6 to 26.4V DC)	
		22.00		supply requirement	Current	10	mA (24V DC)	
1				Surge	e killer		Zener diode	
					terminal			
				arrang	gement	16 points/c	common (2 termina	ais)
Number of occ	supied stations				4			
VO unit power supply (+24V, 24G	Voltage			15.6 to	31.2V DC			
(+24V, 24G terminal)	Current			82mA or lowe	er (at 24V, TY	(P)		
Wei	ght			0.65kg	(1.43lb)			
Terminal I	No. Signal	No.					Terminal No.	Signal No.
TB1	RD/	\	!N	OUT		1	TB26	SDA
TB2	SG	TB1		001		TB26 ~	TB27	SG
TB3	RDI	X X/ TB2	-	+5V	1	TB27 (X X	TB28	SDB
TB4	SLO			DC/DC ├─◆		TB28X	TB29	NC
TB5	+24		- -	converter		TB29	TB30	+24V
TB6	FG	24V DC TB5	+24V			TB30 1 24V DC	TB31	CTLG
TB7	240	T TR7	24G		CTLG 🛌	TB31 T 244 DC	TB32	24G
TB8	X0		R	♦ +5V R		1	TB33	Y10
TB9	X1		R (\$\frac{1}{2}\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot	ن کھی م		TB33 L	TB34	Y11
TB10	X2	 (15-1	455			TB35	Y12
TB11	X3	$ \cdot $	Photocoupler	_		(TB36	Y13
TB12	X4		Α	CTL	G		TB37	Y14
TB13	X5)	TB38	Y15
TB14	X6	TB16				TB40 -	TB39	Y16
TB15	X7	TB17	R ++5	V _{+5V} R	أحجى	TB41	TB40	Y17
TB16 TB17	COM	<u> </u>	7	ت برید	╼═╅	TB42	TB41	COM3
TB18	X8 X9		1 "The T	<u> (* 2 K)</u>	',	\	TB42 TB43	Y18 Y19
TB19	XA		Photocoupler	Photocoupler			TB44	Y19 Y1A
TB20	XB	 1 1		CTL	G }		TB44	Y1B
TB21	XC	─ ─)	TB46	Y1B Y1C
TB22	XD	TD25			}	TB49	TB46	Y1D
TB23	XE		^		Ł	TB50	TB47	Y1E
TB24	XF						TB49	Y1F
TB25	CON	12	-			4	TB50	COM4
·	1 001	-					1 1000	COM



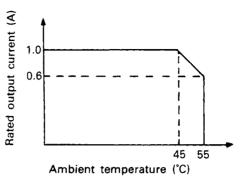


3.5 Power Supply Unit (A66PC)

	ltem		Specification			
	Input voltag	е	100-120V AC/200-240V AC (85 to 132V AC/170 to 264V AC) -15 to +10%E			
	Input frequen	су	50/60Hz ±3Hz			
	Max. input apparer	nt power	110VA or lower			
	Inrush curre	nt	20Ap/20Ap or lower			
*1 R	ated output current	24V DC ±5%	0 to 0.6A			
*2 Ov	vercurrent protection	24V DC	1.25A ±20% (inverted L type suspension characteristic)			
*3 Ov	vervoltage protection	24V DC	35V DC ±10%			
	Efficiency		65% or higher			
	Power indicate	or	Power LED display			
	Terminal screw	size	M3.5 × 7			
	Applicable wire	size	0.3 to 2mm ²			
	Applicable solderless	s terminal	V1.25-3, V1.25-YS3A V2-S3, V2-YS3A			
Applicable tightening torque			8.5 (7.36) to 11.5kg·cm (9.96lb·inch)			
	External dimensions	mm (inch)	170 (6.70) × 64 (2.52) × 80 (3.15)			
	Weight kg (I	b)	0.66 (1.45)			
	Allowable momentary p	ower failure	20ms max.			

POINT

*1: Rated output current varies with ambient temperature as shown below.



*2: Overcurrent protection

The overcurrent protection device shuts off the 24V DC circuit and stops the system if the current flowing in the circuit exceeds the specified value. When this device is activated, the power supply unit LED is switched off. In this case, remove any cause of overcurrent and start up the system.

*3: Overvoltage protection

The overvoltage protection device shuts off the 24V DC circuit and stops the system if 31.5 to 38.5V is applied to the circuit. When this device is activated, the power supply unit LED is switched off. In this case, switch off, then on the input power to restart the system. The power supply unit must be changed if the system is not booted and the LED remains off.

If voltage setting on the unit does not conform with the supplied voltage, problems will occur as described below.

	Power Supply Voltage		
	100V AC	200V AC	
Set at 100V AC (terminals of ② are shorted)		The power supply unit will be broken. (no problem on CPU)	
Set at 200V AC (terminals of ② are open)	No problem on the unit. The I/O unit does not work.		



3.6 DIN Rail Adapter (A6DIN1C)

ltem	Specification		
Applicable unit	A2CI/O unit, power supply unit		
External dimensions mm (inch)	174 (6.85) × 68 (2.68) × 10 (0.39)		
Weight kg (lb)	0.06 (0.13)		
Applicable DIN rail type (*JIS C2812)	TH35-7.5Fe TH35-7.5AI TH35-15Fe		

^{*}JIS: Japanese Industrial Standard

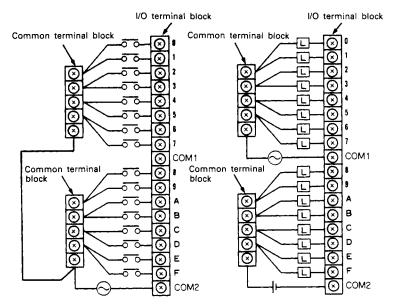
3.7 Common Terminal Block (A2CCOM-TB)

Item	Specifications	
Applicable unit	A2C I/O unit	
External dimensions mm (inch)	125 (4.92) × 54 (2.13) × 13 (0.51)	
Weight kg (lb)	0.12 (0.26)	

[Example of using an A2CCOM-TB]

① Example when installed to the input unit AX11C:

② Example when installed to the output unit AY13C:

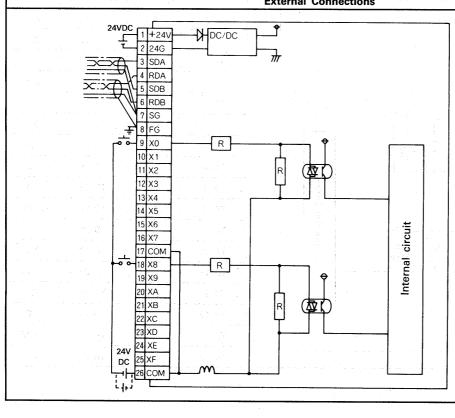




3.8 Remote Terminal Block I/O Units and Remote Connector I/O Units

3.8.1 AJ35TB1-16D input unit

Type Specifications		DC input unit (sink/source common type)	
		AJ35TB1-16D	Appearance
Number of input points		16 points	
Insulation system		Photocoupler	
Rated input voltage		24 VDC	
Rated input current		Approx. 7 mA	
Operating voltage range		19.2 to 26.4 VDC (ripple: less than 5%)	81-188
Max. simultaneous input points		70% simultaneously ON (with 26.4 VDC supply)	4 5 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ON voltage/ON current		14 VDC or higher/3.5 mA or higher	0 1 2 3 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
OFF voltage/OFF current		6 VDC or less/1.7 mA or less	
Input resistance		Approx. 3.3 KΩ	₹□ ₽□ 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
D .:	OFF → ON	10 msec. or less	6
Response time	ON → OFF	10 msec. or less	\$ 6
Common		16 points/common (2 common terminals)	× 76.
Operation information		"ON" indication (LEDs)	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
External wiring system		26-point terminal block (M3 × 7 screws)	SIAT.
Applicable wire size		0.75 to 2mm ²	S S S S S S S S S S S S S S S S S S S
Applicable solderless terminals		1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3 V1.25-YS3A V2-S3 V2-YS3A	BISH 50 B 50 B
Accessories		None	MITSU 1 1 1 1 1 1 1 1 1
Number of occupied stations		2	
I/O unit power suppl	Voltage	15.6 to 31.2 VDC (peak voltage: 31.2 VDC)	
	Current	45 mA or less (with 24 VDC supply)	
Weight		0.3kg (0.66lb)	

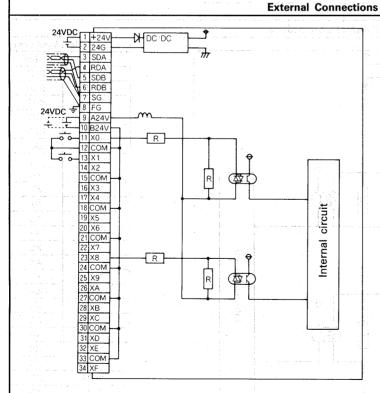


Terminal No.	Signal name
TB 1	+24V
TB 2	24G
TB 3	SDA
TB 4	RDA
TB 5	SDB
TB 6	RDB
TB 7	SG
TB 8	FG
TB 9	X0
TB 10	X1
TB 11	X2
TB 12	Х3
TB 13	X4
TB 14	X5
TB 15	X6
TB 16	X7
TB 17	COM
TB 18	X8
TB 19	X9
TB 20	XA
TB 21	XB
TB 22	XC
TB 23	XD
TB 24	XE
TB 25	XF
TB 26	СОМ



3.8.2 AJ35TB2-16D input funition was about the series of the second feeding? The second is

Туре		DC input unit (sink/source of	common type)	
Specifications		AJ35TB2-16D	Appearance	
Number of input points		took to the shall self points	And the second of the second o	
Insulation system		Photocoupler		4.3
Rated input	voltage	24 VDC		
Rated input	current	Approx. 7 mA	225 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
Operating voltage range		19.2 to 26.4 VDC (ripple: less than 5%)	PDA S	
Max. simultaneous input points		100% simultaneously ON (with 26.4 VDC supply)	808 7 ¥	
ON voltage/ON current		14 VDC or higher/3:5 mA or higher		
OFF voltage/OFF current		6 VDC or less/1.7 mA or less	© SY, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,	
Input resistance		Approx. 3.3 KΩ	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Response time	OFF → ON	sa 10 msec. on less		
	ON → OFF	10 msec. or less		
Comm	on	16 points/common (2-wire terminal block, 8 common terminals)	20 20 20 20 20 20 20 20 20 20 20 20 20 2	
Operation information		"ON" indication (LEDs)	23	
External wiring system		34-point terminal block (M3 × 7 screws)	A 20	
Applicable wire size		0.75 to 2mm ²	3 27 DB DB	
Applicable solderless terminals		1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3 V1.25-YS3A V2-S3 V2-YS3A	8 29 31 88 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Accessories		None None	A.35182	viji je
Number of occupied stations		2	182-1	
I/O unit power supp	Voltage	15.6 to 31.2 VDC (peak voltage: 31.2 VDC)	2	
	Current	45 mA or less (with 24 VDC supply)		
Weigl	nt	0.35kg (0.77lb)	그는 사람들이 얼마를 받으니다 그가 얼마다	5 5

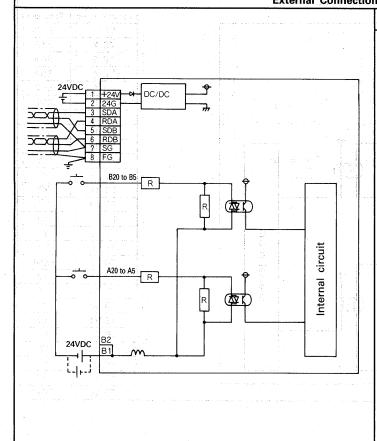


Terminal No.	Signal name	Terminal No.	Signal name
TB 1	+24V	TB 18	сом
TB 2	24G	TB 19	X5
TB 3	SDA	TB 20	X6
TB 4	RDA	TB 21	сом
TB 5	SDB	TB 22	X7
TB 6	RDB	TB 23	X8
TB 7	SG	TB 24	сом
TB 8	FG	TB 25	X9
TB 9	A24V	TB 26	XA
TB 10	B24V	TB 27	сом
TB 11	X0	TB 28	ХВ
TB 12	сом	TB 29	хс
TB 13	X1	TB 30	сом
TB 14	X2	TB 31	XD
TB 15	сом	TB 32	XE
TB 16	Х3	TB 33	COM
TB 17	X4	TB 34	XF



3.8.3 AJ35TC1-32D input unit

	Туре	Auto Story Marriage auto DC	input unit (sink/source	commo	n type)			A Company of the Control of the Cont
Specifications		AJ35TC1-32D		Appearance		Ardi Folkage		
Number of ing	put points	32 points		white augst he witch		togaf.		
Insulation s	system	Photoc	coupler				4361.21	
Rated input	voltage	24	VDC 4			88	18 181	
Rated input	current	Approx	(J35TC1-320		8gC
Operating volt	age range	19.2 to 26.4 VDC (r	ipple: less than 5%)			< <		7
Max. simultaneous	s input points	85% simultaneously ON	(with 26.4 VDC supply)		500 500 500	CHRUSTE		7.47
ON voltage/O	N current	17.5 VDC or highe	r/3.5 mA or higher		20 50		000	1.424
OFF_voltage/O	FF current	6 VDC or less/	1.7 mA or less		100 100 100	1 301	000	xs\+
Input resis	stance	Approx. 4.7 KΩ					0 0	
Paspanea time	OFF → ON	10 msec	Cas 10 msec or less to bake, S		\$0.50		000	n bis abid
Response time	ON → OFF	10 msec	10 msec. or less			essa	0 0	
Comm	on	(a see 32 points/common requests reacted				7.1.		
Operation inf	ormation	"ON" indication (LEDs)			140 13.			
External wirin	ig system	40-pin connector	8-point terminal block	-55	2 3	5,500	V Sara	- J
Applicable v	vire size	0.3mm ²	0.75 to 2mm ²		SIATION X10 X10 X10 X10 X10 X10 X10 X10 X10 X10			
Applicable solderl (for connections to			BA 2-S3 2-YS3A BA V2-S3 V2-YS3A	ai:	8	_	S SG BO BOB FG	as sirings
Accesso	ries	Soldering type connect	ctor for external wiring			35	A S S	
Number of occupied stations			4		Richard 1	MITSUBISHI	2 4 2 4 BZ B PD	arher!
I/O unit power supp	Voltage	15.6 to 31.2 VDC (pe	ak voltage: 31.2 VDC)		7, 1451	₹	- 8	
VO unit power supp	Current	55 mA or less (with 24 VDC supply)		nen i la con	(211)			}
Weight		0.25kg (0.55lb)						
		External	Connections			· · · · · · · · · · · · · · · · · · ·		

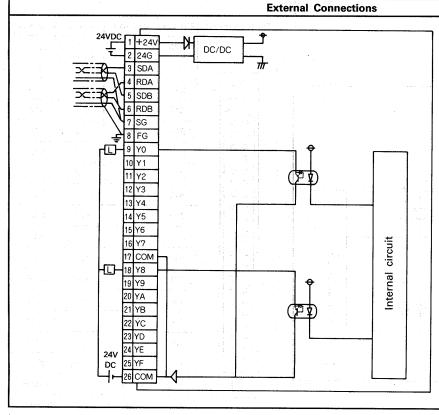


Pin	arrangement	Pin No.	Signal name	Pin No.	Signal name
		B20	X00	A20	X10
~-		B19	X01	A19	X11
	0	B18	X02	A18	X13
v 1		B17	X03	A17	X13
	0 0	B16	X04	A16	X14
	0 0	B15	X05	A15	X15
1	0 0	B14	X06	A14	X16
	0 0	B13	X07	A13	X17
	0 0	B12	X08	A12	X18
		B11	X09	A11	X19
	0 0	B10	X0A	A10	X1A
	0 0	В9	X0B	A9	X1B
	00	В8	X0C	A8	X1C
	0 0	B7	X0D	A7	X1D
	0 0	В6	X0E	A6	X1E
		B5	X0F	A5	X1F
	0	B4	Vacant	A4	Vacant
-10-1-	• • • • • • • • • • • • • • • • • • •	В3	Vacant	А3	Vacant
		B2	сом	A2	Vacant
		B1	сом	A1	Vacant



3.8.4 AJ35TB1-16T transistor output unit

	Type	with the second design of the Transistor output unit (si	ink type)
Specifications		AJ35TB1-16T	Appearance
Number of inp	ut points	16 points	Lander Combined Section
Insulation sy	/stem	Photocoupler	
Rated input v	oltage	24 VDC	
Operating load vo	Itage range	19.2 to 26.4 VDC (ripple: less than 5%)	
Max. load c	urrent	0.1 A/point, 1.6 A/common	7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Max. inrush	current	0.4 A, 10 msec. or less	Ausstrat-167
Leakage current (when OFF)	0.1 mA or less	
Max. voltage drop	(when ON)	1.5 VDC or less (at 0.1 A)	
Doonones times	OFF → ON	2 msec. or less	
Response time	ON → OFF	2 msec. or less (resistance load)	118
Surge abso	rber	Zener diode	υ <u>τ</u>
Commo	n	16 points/common (2 common terminals)	2 0 m
Operation info	rmation	"ON" indication (LEDs)	STATION NO.
External wiring	system	26-point terminal block connector (M3 X 7 screws)	SIATION NO.
Applicable wi	re size	0.75 to 2mm ²	الله الله الله الله الله الله الله الله
Applicable solderle	ss terminals	1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3 V1.25-YS3A V2-S3 V2-YS3A	S S S B B B B B B B B B B B B B B B B B
Accessories		None Page 19 Aug 19	175UE SDA 4 8 18 18 18 18 18 18 18 18 18 18 18 18 1
Number of occupied stations		2	
I/O unit novem summi	Voltage	15.6 to 31.2 VDC (peak voltage: 31.2 VDC)	
I/O unit power supply Current		130 mA or less (with 24 VDC supply)	
Weight		0.3kg (0.66lb)	



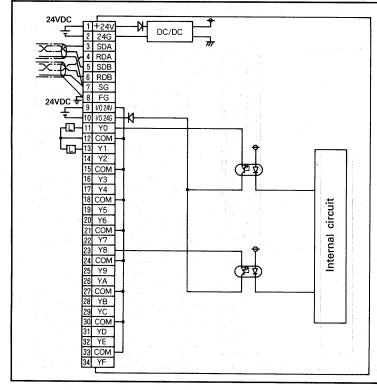
Terminal No.	Signal name
TB 1	+24V
TB 2	24G
TB 3	SDA
TB 4	RDA
TB 5	SDB
TB 6	RDB
TB 7	SG
TB 8	FG
TB 9	Y0
TB 10	Y1
TB 11	Y2
TB 12	Y3
TB 13	Y4
TB 14	Y5
TB 15	Y6
TB 16	Y7
TB 17	СОМ
TB 18	Y8
TB 19	Y9
TB 20 .	YA
TB 21	YB
TB 22	YC
TB 23	YD
TB 24	YE
TB 25	YF
TB 26	COM



3.8.5 AJ35TB2-16T transistor output unit

Туре		Transistor output unit (s	(sink type)		
Specifications		AJ35TB2-16T	Appearance		
Number of out	put points	16 points	and the second of the second o		
Insulation s	system	Photocoupler			
Rated load	voltage	24 VDC			
Operating load ve	oltage range	19.2 to 26.4 VDC (ripple: less than 5%)	3.4 5.6 7.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		
Max. load o	current	0.1 A/point, 1.6 A/common	Ausen 1 1 1 1 1 1 1 1 1		
Max. inrush	current	0.4 A, 10 msec. or less	0 1 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Leakage current	(when OFF)	0.1 mA or less	3-6		
Max. voltage drop	(when ON)	1.5 VDC or less (at 0.1 A)			
Pagnanas tima	OFF → ON	2 msec. or less	25 25		
Response time ON → OFF		2 msec. or less (resistance load)			
Surge abs	orber	Zener diode	2 8		
Commo	on	16 points/common (2-wire terminal block, 8 common terminals)	12 19 19		
Operation info	ormation	"ON" indication (LEDs)	4 5		
External wiring	g system	34-point terminal block connector (M3 X 7 screws)	2.5.00.		
Applicable w	/ire size	0.75 to 2mm ²	SIATION NO.		
Applicable solderle	ess terminals	1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3 V1.25-YS3A V2-S3 V2-YS3A	888		
Accessories		None	150 DE 1 1 1 1 1 1 1 1 1		
Number of occupied stations		2	MITSUBISHI		
I/O unit nower arms	Voltage	15.6 to 31.2 VDC (peak voltage: 31.2 VDC)			
I/O unit power supp	Current	130 mA or less (with 24 VDC supply)			
Weigh	ıt -	0.35kg (0.77lb)			
		External Connections			

External Connections

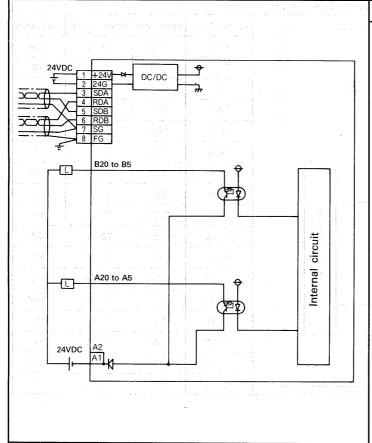


Terminal No.	Signal name	Terminal No.	Signal name
TB 1	+24V	TB 18	сом
TB 2	24G	TB 19	Y5
TB 3	SDA	TB 20	Y6
TB 4	RDA	TB 21	сом
TB 5	SDB	TB 22	Y 7
TB 6	RDB	TB 23	Y8
TB 7	SG	TB 24	сом
TB 8	FG	TB 25	Y9
TB 9	I/O 24V	TB 26	ΥA
TB 10	I/O 24G	TB 27	сом
TB 11	Y0	TB 28	YB
TB 12	сом	TB 29	YC
TB 13	Y1	TB 30	сом
TB 14	Y2	TB 31	YD
TB 15	сом	TB 32	YE
TB 16	Y3 -	TB 33	сом
TB 17	Y4	TB 34	YF



3.8.6 AJ35TC1-32T transistor output unit

	Туре	and the them of the	Transistor output unit	sink ty	/pe)			and the second
Specifications		AJ35	TC1-32T		Appearance		aprili org	
Number of in	put points	32	points		many and the second of the second		Table.	
Insulation	system	Photocoupler			,	F	e váter	
Rated load	voltage	24	VDC			-321		
Operating load v	oltage range	19.2 to 26.4 VDC (ripple: less than 5%)			Ausste1-		
Max. load	current	0.1 A/point,	, 2 A/common		9D 9D			
Max. inrush	current	0.4 A, 10 I	msec. or less		~ C ~ C	DECEM		
Leakage current	(when OFF)	0.1 m/	A or less		4	2.0	0 0	
Max. voltage dro	p (when ON)	1.5 VDC or	less (at 0.1 A)		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		000	i y sved
Dnono timo	OFF → ON	2 mse	c. or less		\$0.60 		0 0	
Response time	ON → OFF	2 msec. or less	s (resistance load)		\$0 80 20 80		000	Mag Lines
Surge absorber		Zene	r diode		3.4	1 4 1	000	
Comm	on	32 points/common						
Operation inf	ormation	"ON" indication (LEDs)						
External wirin	ig system	40-pin connector	8-point terminal block		2 6	ani a	1.7 81	kr ()
Applicable v	vire size	0.3mm ²	0.75 to 2mm ²		STATION NO. X10			1
Applicable solderl (for connections to		1.25-3 1.25-YS3A 2-S3 2-YS3A V1.25-3 V1.25-YS3A V2-S3 V2-YS3A			12 J		SG BB FG	
Accesso	ries	Soldering type conne	ector for external wiring			SE SE	5 7 4 SDB SG 4 6 E	1000
Number of occupied stations			4			MITSUBISHI	8 1	
VO - nit name	Voltage 15.6 to 31.2 VDC (peak voltage:		eak voltage: 31.2 VDC)		3 - 10 2	Σ		14, 141, 1
I/O unit power supp	Current	55 mA or less (v	nA or less (with 24 VDC supply)					}
Weigl	nt	0.25kg (0.55lb)						
		Externa	I Connections			- 11		

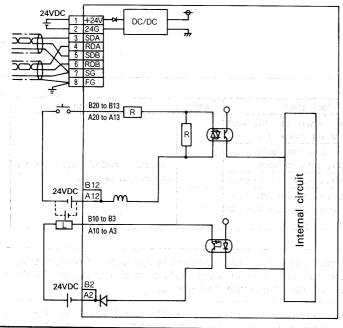


Pin arrangement		Pin No.	Signal name	Pin No.	Signal name
		B20	Y00	A20	: Y10
		B19	Y01	A19	Y11
	0	B18	Y02	A18	Y12
		B17	Y03	A17	Y13
	00	B16	Y04	A16	Y14
	0 0	B15	Y05	A15	Y15
	0 0	B14	Y06	A14	Y16
	0 0	B13	Y07	A13	Y17
	0 0	B12	Y08	A12	Y18
	0 0	B11	Y09	A11	.Y19
	0 0	B10	Y0A	A10	Y1A
	0 0	В9	Y0B	A9	Y1B
	0 0	B8	Y0C	A8	Y1C
	0 0	B7	Y0D	A7	Y1D
	0 0	В6	Y0E	A6	Y1E
	00	B5	Y0F	A5	Y1F
		B4	Vacant	A4	Vacant
		В3	Vacant	A3	Vacant
		B2	Vacant	A2	сом
		B1	Vacant	A1	сом



3.8.7 AJ35TC1-32DT input/output composite unit

		AJ35T0	1-32DT				7.944	Anne	arance	
WARDO BRI	nput specifi	cations	· · · · · · · · · · · · · · · · · · ·	utput specif	icatio	ns		прро		
Number of in		16 points	Number of ou			16 points				
Insulation	system	Photocoupler	Insulation	· · · · · · · · · · · · · · · · · · ·	F	hotocoupler				
Rated input	voltage	24 VDC	Rated load		-	24 VDC			25/15/	
Rated inpu	current	Approx. 5 mA	Operatin voltage	•	1	.2 to 26.4 VDC le: less than 5%)	se,;:= s = n = rso (a	7
Operating vol	tage range	19.2 to 26.4 VDC (ripple: less than 5%)	Max. load	Max. load current 0.1		.1 A/point 1.6 A/common	, and		Aussrct-320	<u></u>
Max. simu input p		100% simultaneously ON (with 26.4 VDC supply)	Max. inrusl	Max. inrush current 0		, 10 msec or less			Section 1	
ON voltage/0	N current	17.5 VDC or higher/3.5 mA or higher	Leakage current	(when OFF)	0.	I mA or less				
OFF voltage/C	F voltage/OFF current 6 VDC or less/ 1.7 mA or less		Max. voltage drop (when ON) 1.5 VDC or le		DC or less (0.1 A)					
Input res	stance	Approx. 4.7KΩ	13.50	OFF → ON	2	ms or less				0
Response time	OFF → ON	10 ms or less	Response time	ON → OFF	i i	ms or less sistance load)				
	ON → OFF	10 ms or less	Surge ab	sorber	2	Zener diode		-		-1
Comm	ion	16 points/common	Comn	non	16 p	oints/common		2 Q		
Operation in	formation		ON display	(LEDs)				STATION NO.		= 1
External wiring system		40-pin conn	ector	8-point	term	inal block			l g	2
Applicable	wire size	0.3mm ²		0.75	to :	2mm²		5		ROB
Applicable solder for connections to			-3 1.25-YS3A 3 V1.25-YS3A	0 1 1 1 1 1 1 1		BA			3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	PAG ROA
Accesso	ories	Solder	type connector	for externa	l wiri	ng		2		
Number of occu	pied stations	rangam ki 1980'ilan y	. 10 To 10 10 14 1	ur pulkas	anj"	visa gan jagan CI	l	u Karina ka a .		\exists
I/O unit power	Voltage	15.6 to	31.2 VDC (peak voltage: 31.2 VDC)							
supply Current 137 mA or less (with 24 VDC supply)) 8 (2001) Mill			a1,177 (L			
Weight (0.25kg (0	0.25kg (0.55lb)		v arain				
			Exte	rnal Connec	tions	· · · · · · · · · · · · · · · · · · ·				****



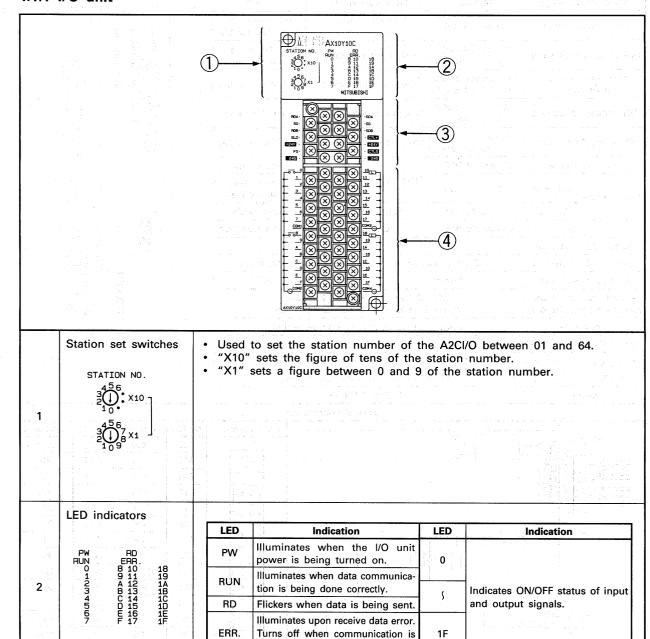
Pin arrangement		Pin No.	Signal name	Pin No.	Signal name	
			B20	X00	A20	X10 ·
	0		B19	X01	A19	X8
			B18	X02	A18	X9
	00		B17	X03	A17	XA
	0 0		B16	X04	A16	XB
	0 0		B15	X05	A15	XC
	0 0		B14	X06	A14	XE
1.4	00	7	B13	X07	A13	XF
	0 0		B12	COM1	A12	COM1
	00	45	B11	Vacant	A11	Vacant
	0 0		B10	Y10	A10	Y18
	0 0		B9	Y11	A9	Y19
1415	0 0		B8	Y12	A8	Y1A
4.5	0 0		B7	Y13	A7	Y1B
	0 0		B6	Y14	A6	Y1C
ŧ.	00	11.48	B5	Y15	A5	Y1D
e Na	ال	: 40	B4	Y16	A4	Y1E
1,72	0		B3	Y17	А3	Y1F
- 1	\mathcal{L}		B2	COM2	A2	COM2
			B1	Vacant	A1	Vacant

4. PART IDENTIFICATION AND INSTALLATION

4.1 Part Identification

This section describes names of parts of the A2CI/O, the power supply unit and the DIN rail adapter.

4.1.1 I/O unit



Terminal

connecting

pair cables

Terminal block for in-

put and output signals

3

block for

twisted

A2CCPU User's Manual for connection and wiring.

Terminal block to which the twisted pair data link is connected. Connect twisted

pair cables when other stations are connected with twisted pair cables. Read the

Used to connect input and output signal lines. See Section 3 for wiring. Terminal

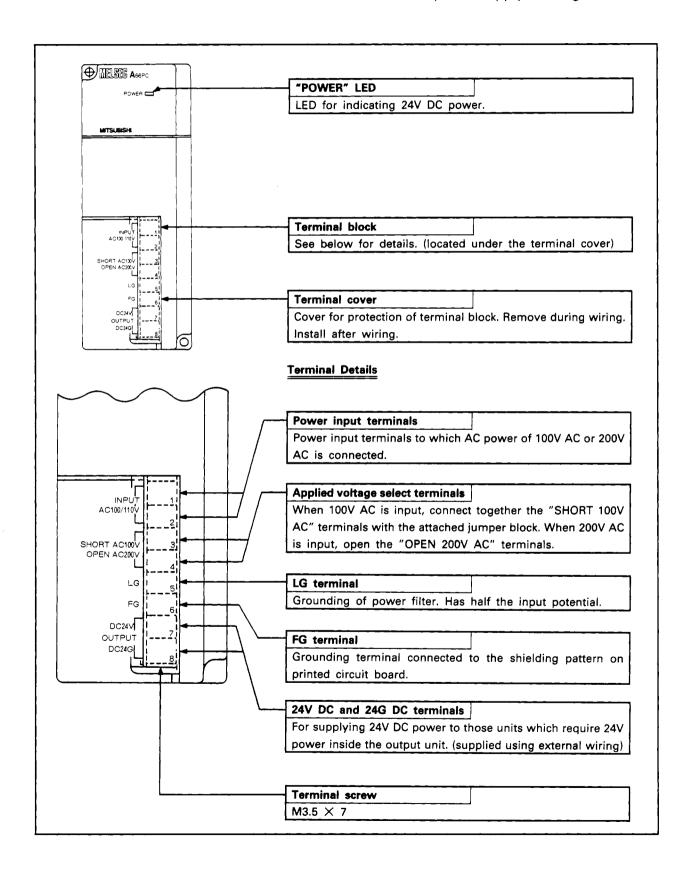
screws: M3.5 × 7 Tightening torque: 8.5 (7.36) to 11.5kg·cm (9.96lb·inch)

being done correctly.



4.1.2 Power supply unit

Part identification of the A66PC power supply unit is given below.

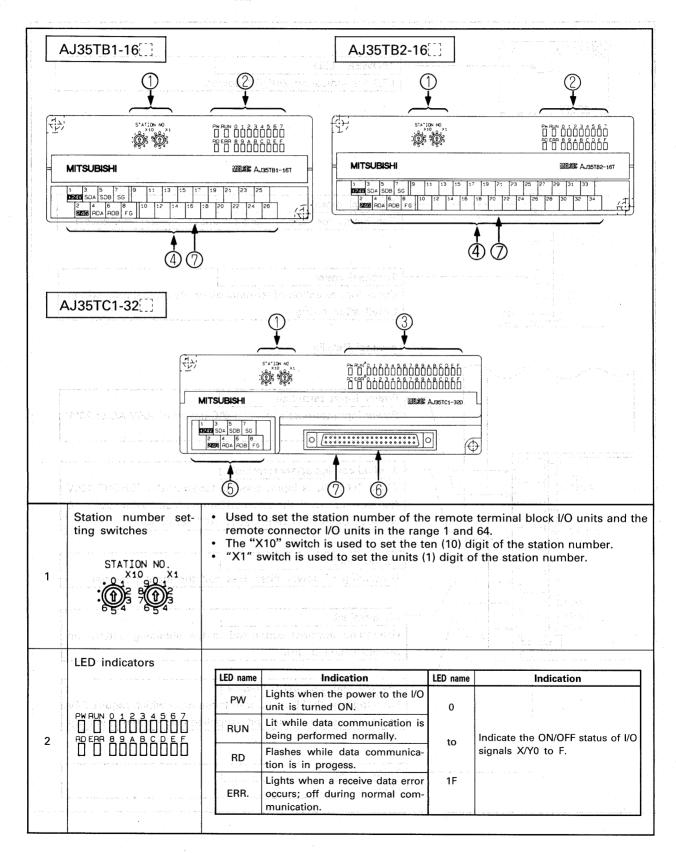


4. PART IDENTIFICATION AND INSTALLATION



4.1.3 Remote terminal block I/O unit, remote connector I/O unit

The name of the parts of the remote terminal block I/O unit (AJ35TB[:]-16[:]) and the remote connector I/O unit (AJ35TC1-32[:]) are indicated below.



4. PART IDENTIFICATION AND INSTALLATION



	LED indicators						
		LED name	Indication	LED name	Indication		
		PW	Lights when the power to the I/O unit is turned ON.	A0	Indication the ON/OFF status of		
3	addadadadadadadadadadadadadadadadadada	RUN	Lit while data communication is being performed normally.	to F	I/O signals X/Y0 to F		
		RD	Flashes while data communication is in progess.	В0			
		ERR.	Lights when a receive data error occurs; off during normal communication.	to F	Indicate the ON/OFF status of I/O signals X/Y10 to 1F.		
4	Terminal block		inal block serves to connect th and the I/O signals.	e I/O uni	t power supply, the twisted pair		
5	Terminal block	This terminal block serves to connect the I/O unit power supply and the twisted pair data link.					
6	Connector	This connector is used to connect the I/O signals.					
7	Hook for the DIN rail	This hook	is used to install the DIN ra	il.			



4.2 Installation

This section gives cautions on installation and procedures of installation of the MINI remote I/O.

4.2.1 Cautions on installation

- (1) To provide good ventilation and to make unit replacement easy, allow a clearance of 80mm (3.15inch) or more between the top side of the unit and surrounding structure or parts. (See Fig. 4.1.)
- (2) Choose a flat surface for mounting the unit. Waves and warpage of the mounting surface will cause printed circuit boards in the unit to be strained or twisted, which lead to malfunction.
- (3) Mount the unit on a separate panel or away from large electromagnetic contactors and no-fuse circuit breakers which produce vibrations.
- (4) To avoid influence of radiation of noise or heat, allow a clearance of 100mm (3.94inch) or more if the PC faces such noise or heat radiating devices (when such devices are mounted on the back side of the door). (See Fig. 4.2.) Also, allow a clearance of 50mm (1.97inch) or more between the side face of the MINI remote I/O and other devices.

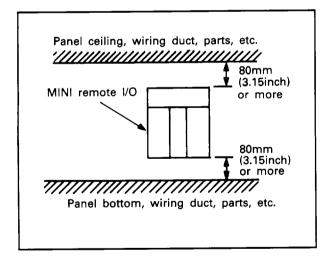


Fig. 4.1 Installing position of unit

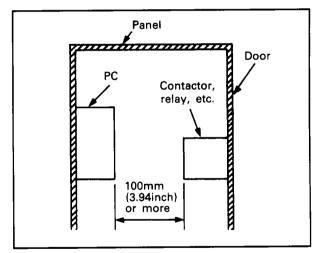


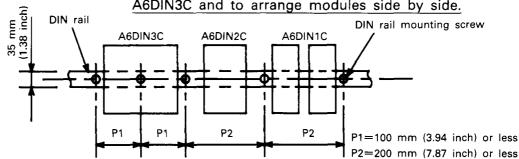
Fig. 4.2 Clearance between PC and other devices



4.2.2 Cautions on handling the DIN rail adapter

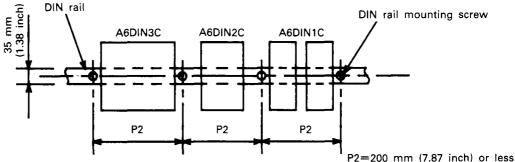
- (1) Do not drop or give intense shocks to the DIN rail adapter since it is made of plastic.
- (2) DIN rail mounting screw intervals
 When using a DIN rail adapter, mount a DIN rail according to the following distance.
 - (a) When mounting a DIN rail TH35-7.5Fe or TH35-7.5Al When mounting a DIN rail TH35-7.5Fe or TH35-7.5Al, fix the position of mounting screws providing a distance of 200 mm (7.87 inch) or less between each two screws.

 <u>Use a distance of 100 mm (3.94 inch) or less to install an A6DIN3C and to arrange modules side by side.</u>



(b) When mounting a DIN rail TH35-15Fe When mounting a DIN rail TH35-15Fe, fix the position of mounting screws providing a distance of 200 mm (7.87 inch) or less between each two screws. Also, use the same intervals to install an A6DIN3C and to

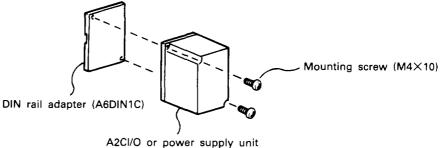
Also, use the same intervals to install an A6DIN3C and to arrange modules side by side.



4.2.3 Fixing the unit to the DIN rail adapter

Fix the A2CI/O and the power supply unit (A66PC) to the DIN rail adapter as described below.

Tightening torque should be 8 to 12 kg·cm (6.93 to 10.39 lb/inches).



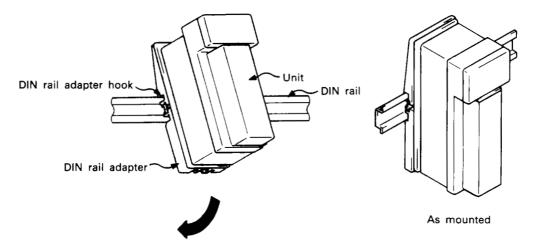


4.2.4 Mounting to the DIN rail

(1) Mounting procedure

After fixing the DIN rail adapter to the unit, mount the unit to the DIN rail as follows.

- (a) Engage the hook of the adapter with the rail from above the rail.
- (b) Push the unit onto the rail and fix it in position.

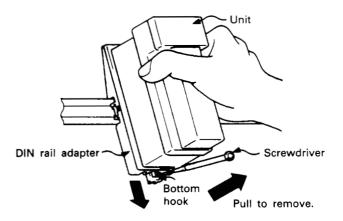


(c) When two adapters with unit are mounted to the rail side by side without leaving a clearance between them, a 4 mm clearance is allowed between the units. (See Appendix 1, External Dimensions for dimensions of the DIN adapter.)

(2) Removing procedure

Remove the unit from the DIN rail as follows.

- (a) Pull down the bottom hook of the adapter using a screwdriver.
- (b) Pull the unit away from the rail while pulling down the bottom hook.

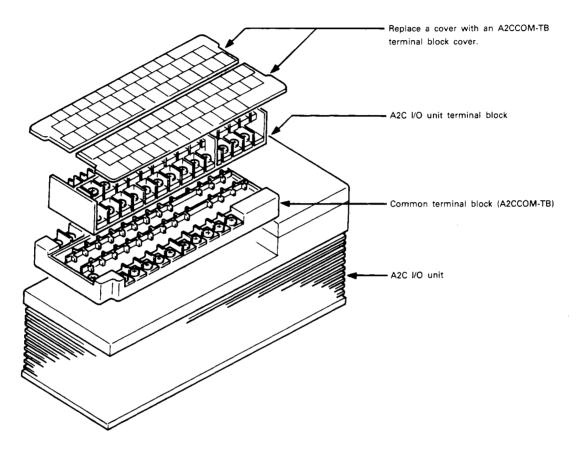


4. PART IDENTIFICATION AND INSTALLATION



4.2.5 Installing a common terminal block

Install a common terminal block (A2CCOM-TB) between A2C I/O unit terminal block and A2C I/O unit as shown below. Tightening torque should be 8 to 12 kg·cm (6.93 to 10.39 lb/inches).

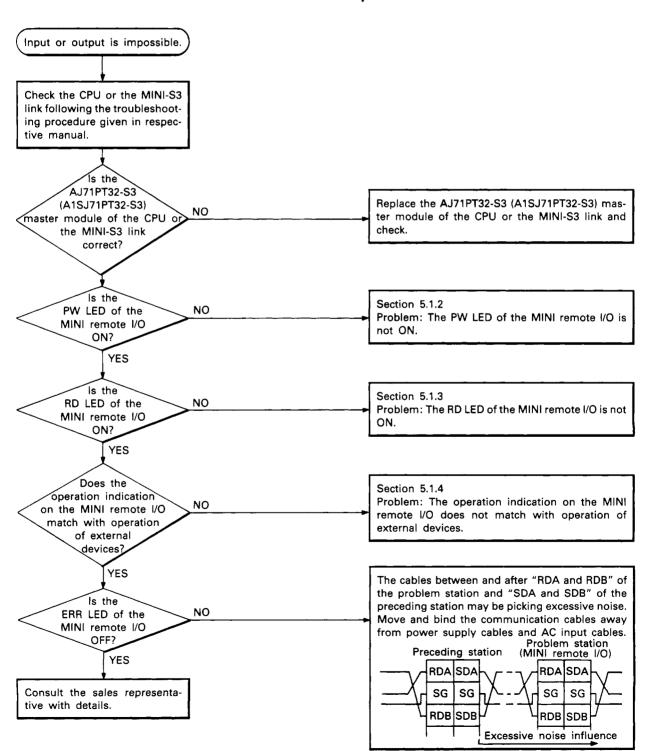


5. TROUBLESHOOTING

5.1 Troubleshooting

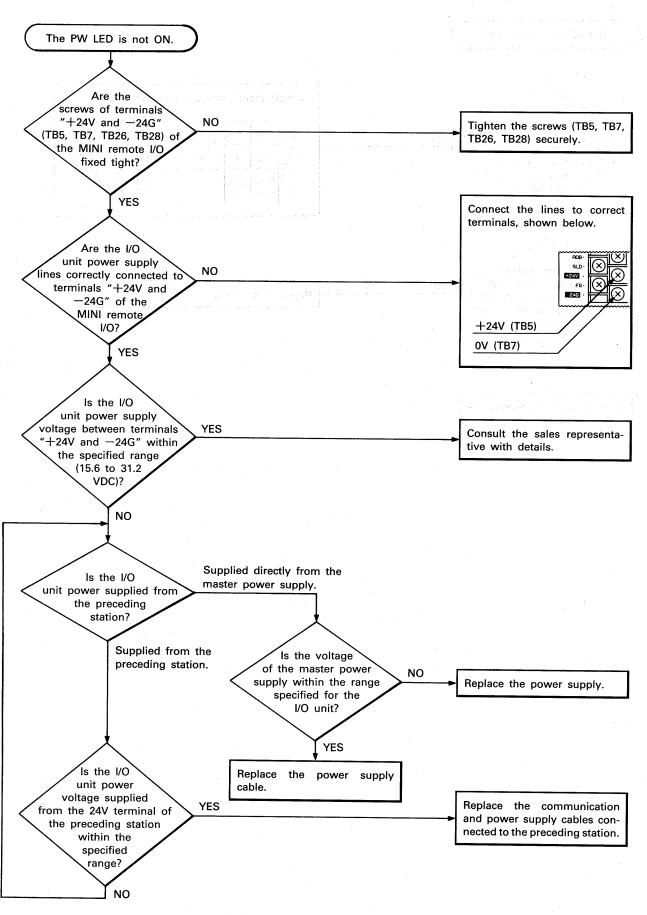
This section describes the procedures for solving communication problems when the MINI remote I/O is used. For solving problems concerning the PC CPU module or the MINI-S3 link, read respective User's Manual.

5.1.1 Problem: Input signals from the MINI remote I/O cannot be received or output signals sent to the MINI remote I/O cannot be output.





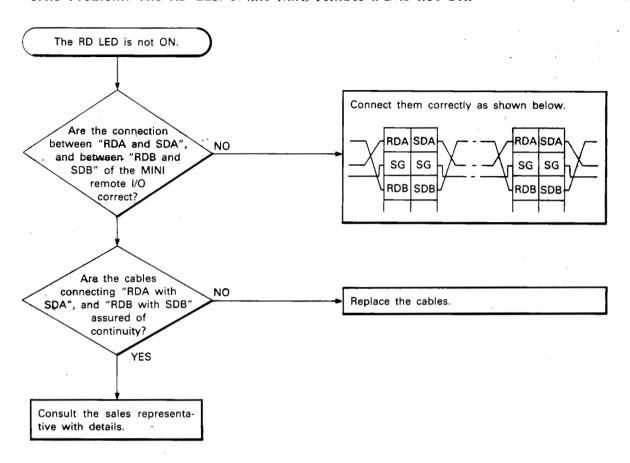
5.1.2 Problem: The PW LED of the MINI remote I/O is not ON.



5. TROUBLESMOOTING

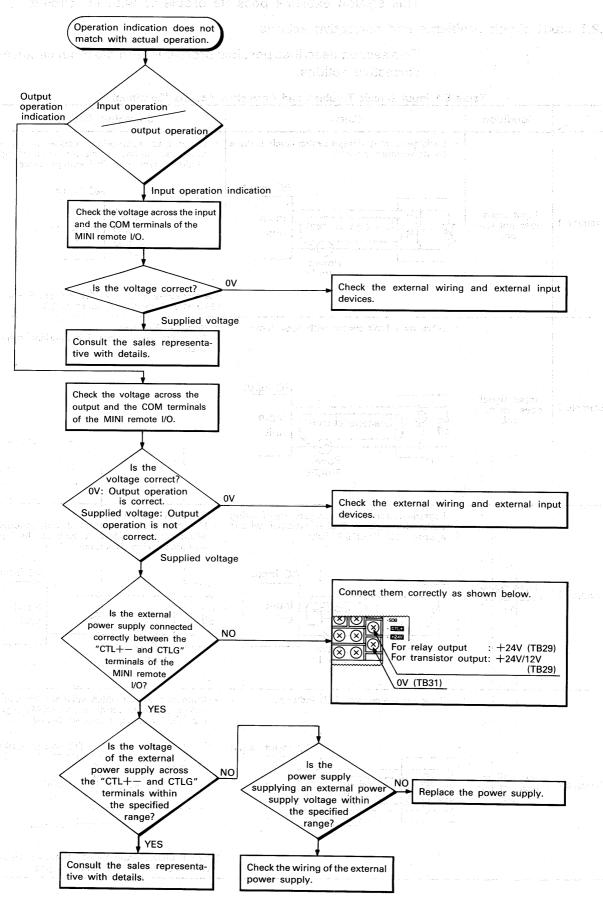


5.1.3 Problem: The RD LED of the MINI remote I/O is not ON.





5.1.4 Problem: The operation indication on the MINI remote I/O does not match with operation of external devices.





5.2 I/O Connection Troubleshooting

This section explains possible problems with I/O circuits.

5.2.1 Input circuit problems and corrective actions

This section describes possible problems with the input circuit and corrective actions.

Table 5.1 Input Circuit Troubles and Corrective Actions (Continue)

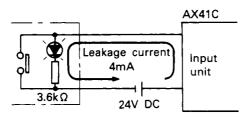
	Condition	Cause	Corrective Action
		 Leakage current of input switch (such as drive by non-contact switch). 	Connect an appropriate resister which will make the voltage across terminals of input module lower than OFF voltage value.
Example 1	Input signal does not turn off.	AC input Input unit Power supply	AC input
			It is recommended to use 0.1 to 0.47 μ F $+$ 47 to 120 Ω (1/2W) for the constant of CR.
		Drive by a limit switch with neon lamp.	Same as Example 1. Or make up another independent display circuit.
Example 2	Input signal does not turn off.	Leakage current Input unit	
		Leakage current due to line capacity of wiring cable. Line capacity C of twisted pair wire is approx. 100 PF/m(39.37inch).	Same as Example 1. However, leakage current is not generated when power supply is located on the input equipment side as shown below.
Example 3	Input signal does not turn off.	Leakage current unit	AC input Input unit
		Drive by switch with LED indicator.	Connect a resistor which will make the voltage across the input terminal and COM1 higher than OFF voltage, as shown below.
Example 4	Input signal does not turn off.	DC input (sink) Leakage	resistor Input unit
			*The calculation example of connected resistor value is shown in the following page.



Table 5.1 Input Circuit Troubles and Corrective Actions

	Condition	Cause	Corrective Action
		Sneak path due to the use of two power supplies.	 Use only one power supply. Connect a sneak path prevention diode. (Figure below)
Example 5	Input signal does not turn off.	E_1 E_2 $E_1 > E_2$ E_2 $E_1 > E_2$	DC input Input unit

Calculation example for Example 4

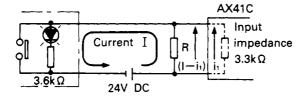


The switch with LED indicator is connected to AX41C and there is 4mA leakage current.

 The voltage V_™ across terminal and common is obtained by the following expression:

$$V_{TB} = 4 \text{ [mA]} \times 3.3 \text{ [k}\Omega] = 13.2 \text{ [V]}$$
 (Voltage drop in LED is ignored.)

Since the voltage does not satisfy the OFF voltage of 4V or lower, the input signal does not turn OFF. Therefore, connect a resistor as shown below.



R: Resistor

i₁: Internal current of AX41C

(I-i₁): Current flows to the resistor R

 Calculate the resistor value R as shown below. For an input voltage of 4V or lower, current I must be:

$$(24 - 4 \text{ [V]}) \div 3.6 \text{ [k}\Omega] = 5.55 \cdots \text{[mA]} \div 5.56 \text{ [mA]}$$

Resistor R must be selected to make current I 5.56mA or higher.



• Hence, for resistor R:

(Input voltage [V] of AX41C)
$$\div$$
 R > (I-i₁) [mA] 4 [V] \div R > 5.56 — 1.21 [mA] 4 [V] \div 4.35 [mA] > R 919.5 [Ω] > R

For R = 0.9 [k Ω] or lower (0.82 [k Ω]), power capacity W must be:

 $W = (applied \ voltage)^2 / R \quad (or W = (maximum \ current)^2 \times R)$

Resistor R terminal voltage is:

$$\frac{3.3 \times 0.82}{3.3 + 0.82}$$
 [k\O]: $\frac{3.3 \times 0.82}{3.3 + 0.82} + 3.6$ [k\O] = X: 24 [V] X = 3.7 [V]

Therefore, the power capacity W of resistor R is:

$$W = (3.7 \text{ [V]})^2 / 0.82 \text{ [k}\Omega] = 0.017 \text{ [W]}$$

 Use a safety factor of 3 to 5. Resistor should therefore be rated at 0.5 to 1 [W].

A 0.82 [k Ω], 0.5 to 1 [W] resistor should therefore be connected across the relevant input terminal and its COM.



5.2.2 Output circuit problems and corrective actions

This section describes possible problems with the output circuit and corrective actions.

Table 5.2 Output Circuit Failures and Corrective Actions (Continue)

	Condition	Cause	Corrective Action
Example 1	When output in off, excessive voltage is applied to load.	Load is half-wave rectified inside (seen in some solenoids). Output unit with CR absorber When the polarity of power supply is as shown by ①, C (or capacitive varistor) is charged. When the polarity is as shown by ②, voltage charged in C (or capacitive varistor) plus line voltage are applied across D1. Max. voltage is approx. 2.2E.	• Connect a resistor of several ten $k\Omega$ to several hundred $k\Omega$ across the load. It a resistor is used in this way, it dose not pose problem to output element but may sometimes cause the diode, which is built in the load, to deteriorate, resulting in burning etc.
Example 2	Load does not turn off. (Triac output)	Leakage current due to built-in noise suppression Output unit Load Leakage current Company to the comp	• Connect C and R across the load. When wiring distance from output card to load is long, there may be a leakage current due to the line capacity. $ \begin{array}{c} C & R \\ \hline Load \\ \end{array} $ It is recommended to use 0.1 to 0.47 μ F + 47 to 120 Ω (1/2W) for the constant of CR.
Example 3	Load turns off with a delay.	Leakage current due to load noise suppressor High frequency current Output unit Load A Resistor Load	8 Remove noise suppessor from both sides of the load and connect a resistor. When wiring distance from output card to load is long, there may be a leakage current due to the line capacity. Resistor Recommended resistance At 100V AC: 5 to 10 kΩ, 5 to 3W At 200V AC: 10 to 20 kΩ, 15 to 10W
Example 4	When load is CR type timer, time constant fluctuates.	Output unit CR timer Leakage current	Reduce the power supplies from two to one. Connect a sneak path prevention diode. When the load is a relay or similar device, it is necessary to connect reverse-voltage absorbing diode to the load. (Shown by the dotted line in the figure at left) CR timer Calculate the CR constant depending on the load.



Table 5.2 Output Circuit Failures and Corrective Actions

	Condition	Cause	Corrective Action	
Example 5	Load turns ON only for an instant when output turns OFF.	Counter electromotive voltage due to ON/OFF operation of external relays. Triac output unit with CR absorber Contact ⓐ Relay ON→OFF RA1 ON and output ② is OFF, and when contact ③ is turned from ON to OFF, the counter electromotive voltage produced at external relay RA1 makes output ② turn ON for an instant and external relay RA2 turn ON for an instant.	Connect a varistor to both ends of the load or triac output. Triac output unit with CR absorber Contact ③ Relay ON ON ON RA1 Varistor Varistor of which element diameter is 7mm or more and of 430V is recommended.	

POINT

Specifications recommended for the capacitor and resistor used in Examples 2 and 4 are as follows.

1) Combination of capacitors and resistors

С	0.1 μ F	0.47 µ F	0.5 μ F
R	120 Ω	47Ω	50 Ω

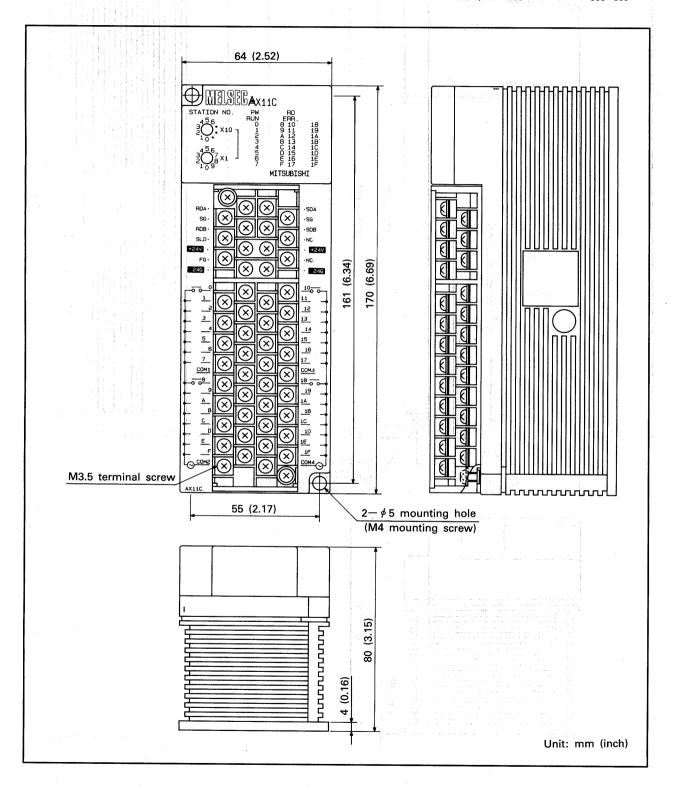
- 2) Rated voltage of C is 630V DC or 200V AC.
- 3) Power capacity of R is 1/2W or more.
- 4) When power consumption of load is 30V A or larger, use C and R of 0.47 μ F + 47 Ω .



APPENDIX

APPENDIX 1 EXTERNAL DIMENSION DIAGRAM

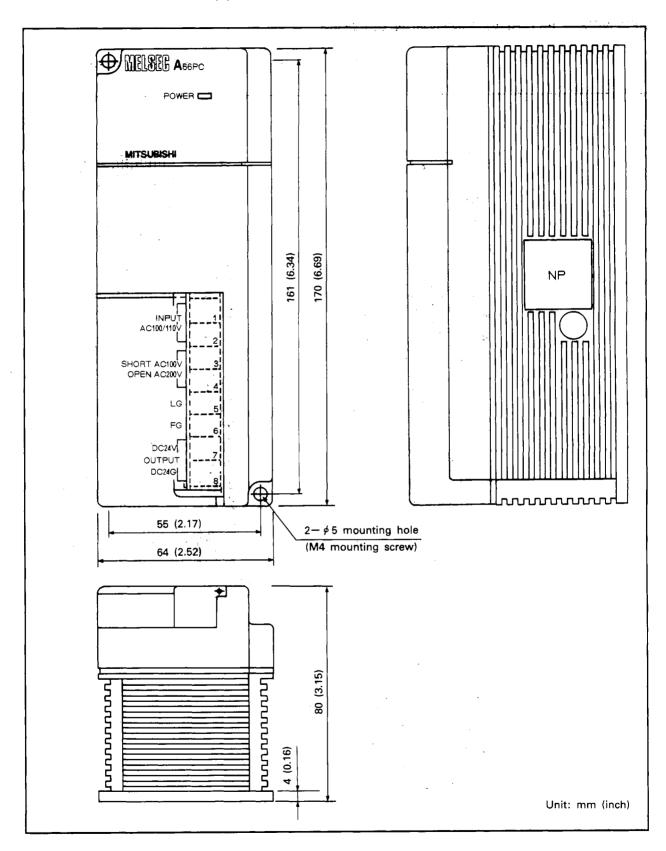
(1) External dimensions of the AX[[]C, AY[[]C and AX[[]Y[[]C







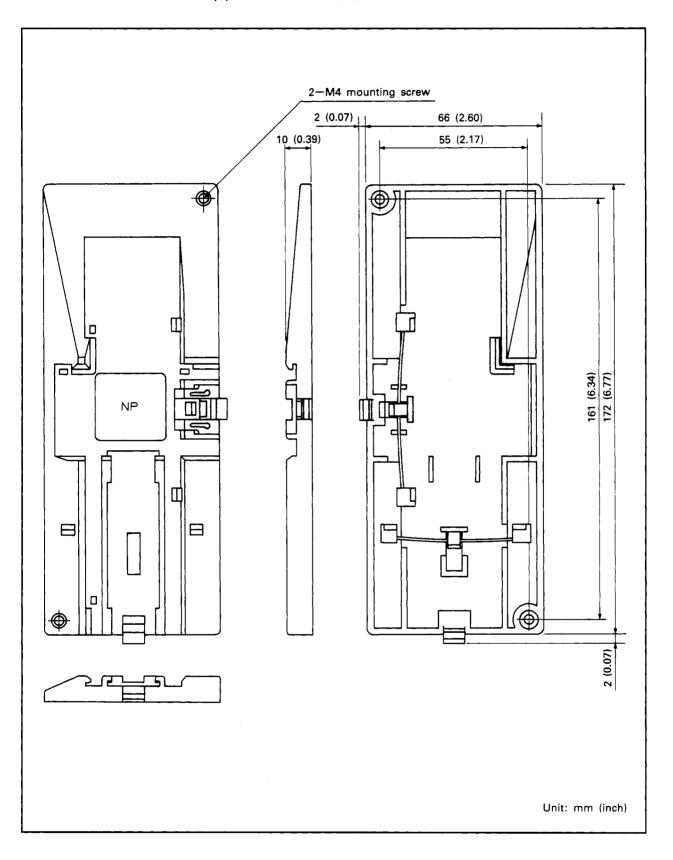
(2) External dimensions of the A66PC



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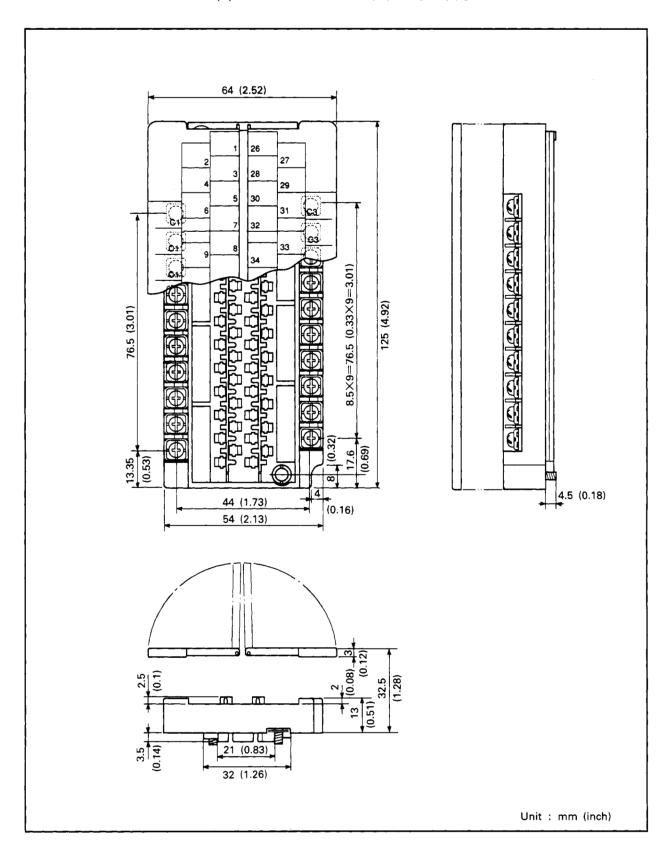


(3) External dimensions of the A6DIN1C



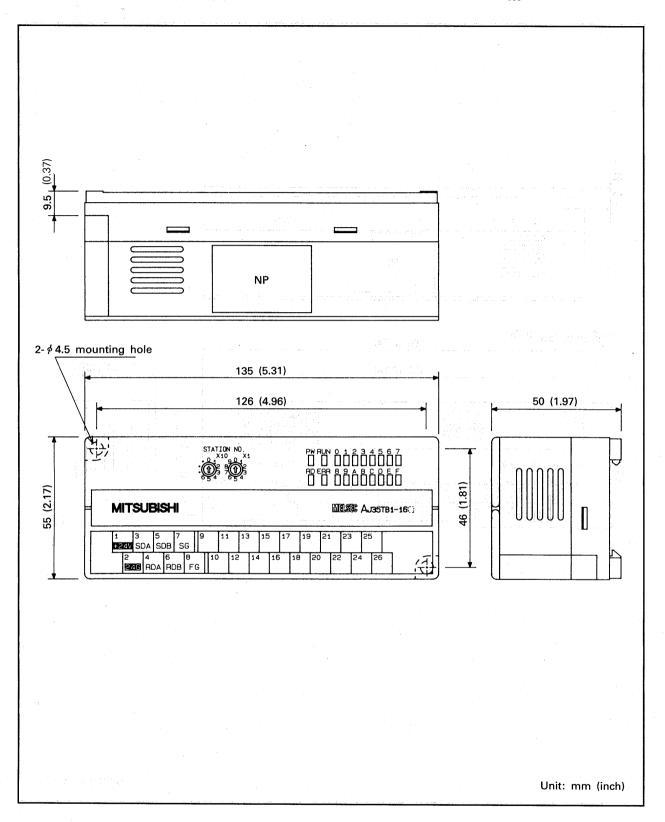


(4) External dimensions of the ACCOM-TB



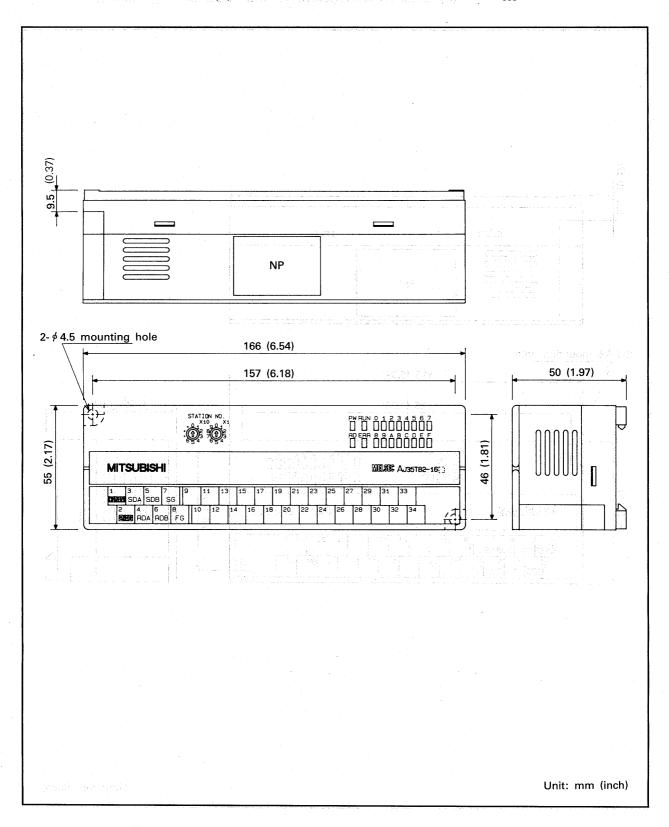


(5) External dimensions of the AJ35TB1-16[] series.

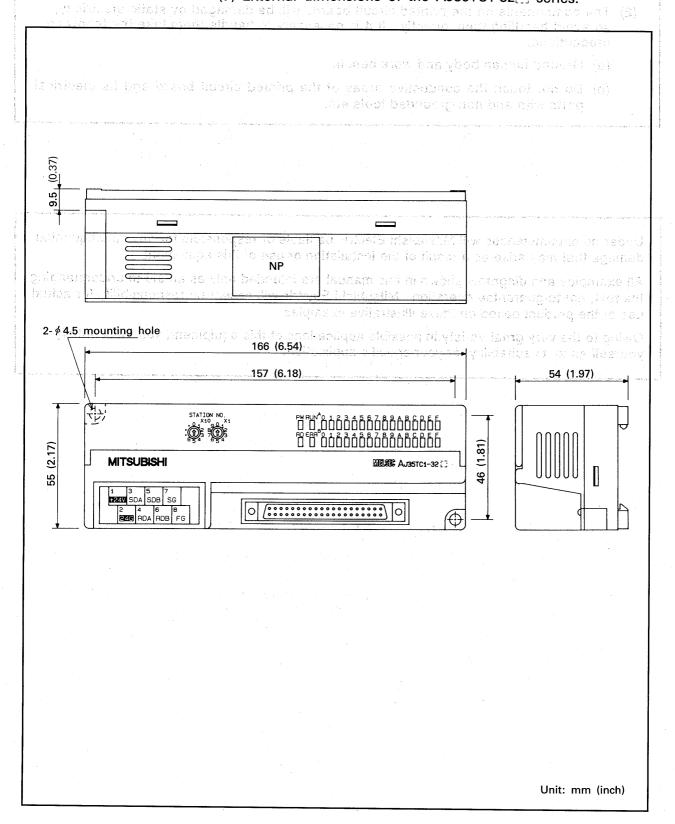




(6) External dimensions of the AJ35B2-16[]] series.



(7) External dimensions of the AJ35TC1-32 series.



IMPORTANT

- (1) Design the configuration of a system to provide an external protective or safety inter locking circuit for the PCs.
- (2) The components on the printed circuit boards will be damaged by static electricity, so avoid handling them directly. If it is necessary to handle them take the following precautions.
 - (a) Ground human body and work bench.
 - (b) Do not touch the conductive areas of the printed circuit board and its electrical parts with and non-grounded tools etc.

Under no circumstances will Mitsubishi Electric be liable or responsible for any consequential damage that may arise as a result of the installation or use of this equipment.

All examples and diagrams shown in this manual are intended only as an aid to understanding the text, not to guarantee operation. Mitsubishi Electric will accept no responsibility for actual use of the product based on these illustrative examples.

Owing to the very great variety in possible applications of this equipment, you must satisfy yourself as to its suitability for your specific application.



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