

UB-10-ID32A
UB-10-OR16A
UB-10-OR16B
UB-10-OT32A

Instruction Sheet

安 裝 說 明
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External Terminal Modules
配線模組
配线模块



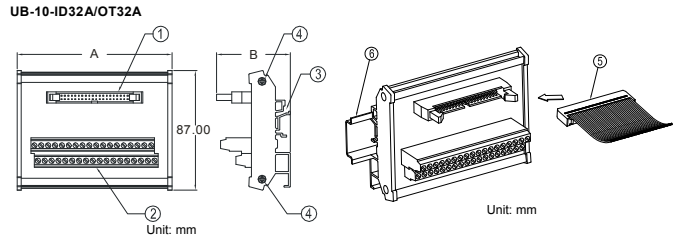
Warning ENGLISH

- ✓ Please read this instruction sheet carefully before using the product.
- ✓ It is an OPEN-TYPE device. It should be installed in a control cabinet free of airborne dust, humidity, electric shock and vibration. To prevent the non-maintenance staff from operating the product, or to prevent an accident from damaging the product, the control cabinet should be equipped with a safeguard. For example, the control cabinet is unlocked with a special tool or key.
- ✓ DO NOT connect the input AC power supply to any of I/O terminals; otherwise serious damage may occur. Check all the wiring again before switching on the power supply. Do NOT touch any terminals when the power supply is switched on.

1 Introduction

Thanks for adopting Delta accessories UB-10-ID32A, UB-10-OR16A, UB-10-OR16B, and UB-10-OT32A. These accessories are external terminal modules connected to Delta I/O modules. UC-ET010-24A and UC-ET010-24C are I/O extension cables connecting these external terminal modules and Delta I/O modules.

2 Product Profile & Outline



- 40-pin latch connector*1
- 36-pin input terminal block
- Clip
- Set screw
- 40-pin IDC connector*2
- DIN rail

*1: Terminal layouts

X0	10	0 2	X1	Y0	10	0 2	Y1	Y0	10	0 2	Y1
X2	30	0 4	X3	Y2	30	0 4	Y3	Y2	30	0 4	Y3
X4	50	0 6	X5	Y4	50	0 6	Y5	Y4	50	0 6	Y5
X6	70	0 8	X7	Y6	70	0 8	Y7	Y6	70	0 8	Y7
X10	90	0 10	X11	Y10	90	0 10	Y11	Y10	90	0 10	Y11
X12	110	0 12	X13	Y12	110	0 12	Y13	Y12	110	0 12	Y13
X14	130	0 14	X15	Y14	130	0 14	Y15	Y14	130	0 14	Y15
X16	150	0 16	X17	Y16	150	0 16	Y17	Y16	150	0 16	Y17
S/S	170	0 18	S/S	ZP	170	0 18	ZP	Y16	150	0 16	Y17
NC	190	0 20	NC	UP	190	0 20	UP	ZP	170	0 18	ZP
X20	210	0 22	X21	Y20	210	0 22	Y21	UP	190	0 20	UP
X22	230	0 24	X23	Y22	230	0 24	Y23	Y20	210	0 22	Y21
X24	250	0 26	X25	Y24	250	0 26	Y25	Y22	230	0 24	Y23
X26	270	0 28	X27	Y26	270	0 28	Y27	Y24	250	0 26	Y25
X30	290	0 30	X31	Y30	290	0 30	Y31	Y26	270	0 28	Y27
X32	310	0 32	X33	Y32	310	0 32	Y33	Y28	290	0 30	Y31
X34	330	0 34	X35	Y34	330	0 34	Y35	Y30	290	0 30	Y31
X36	350	0 36	X37	Y36	350	0 36	Y37	Y32	310	0 32	Y33
S/S	370	0 38	S/S	ZP	370	0 38	ZP	Y34	330	0 34	Y35
NC	390	0 40	NC	UP	390	0 40	UP	Y36	350	0 36	Y37

UB-10-OR16A/B

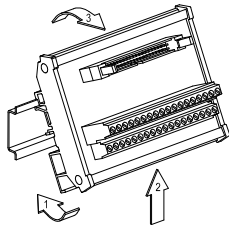
C0	Y0	Y1	Y2	Y3	C1	Y4	Y5	Y6	Y7	C2	Y10	Y11	Y12	Y13	C3	Y14	Y15	Y16	Y17
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UB-10-OT32A

Upper row	Y0	Y2	Y4	Y6	Y10	Y12	Y14	Y16	Y20	Y22	Y24	Y26	Y30	Y32	Y34	Y36	+24V	+24V
Lower row	Y1	Y3	Y5	Y7	Y11	Y13	Y15	Y17	Y21	Y23	Y25	Y27	Y31	Y33	Y35	Y37	GND	GND

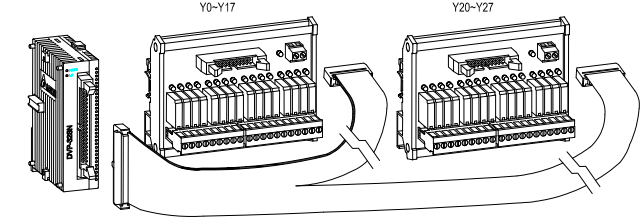
Installation

Installing a DIN rail:



Fix one side first.
Next, put the external terminal module on the DIN rail. Please make sure that the external terminal module is tightly combined with the DIN rail.
If you want to remove the external terminal module, push the external terminal module in the direction indicated by arrow 2, and pull it in the direction indicated by arrow 3.

Example: DVP32SN11TN is connected to UB-10-OR16A in the way shown below.



Points for attention about the environment:

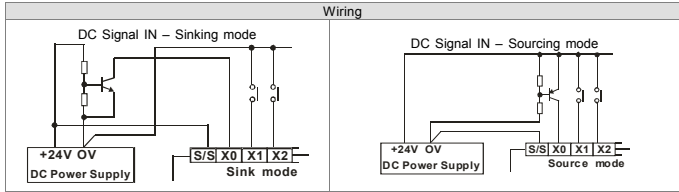


- **DO NOT** install the module in an environment exposed to corrosive substances such as chloride gas and sulfide gas, flammable substances such as oil mist and cutting powder, or dirt.
- **DO NOT** install the module in a high-temperature an humid environment, or in a place which is shocked and vibrated.
- **DO NOT** bind the signal cables and the power cables together or use multicore cables.

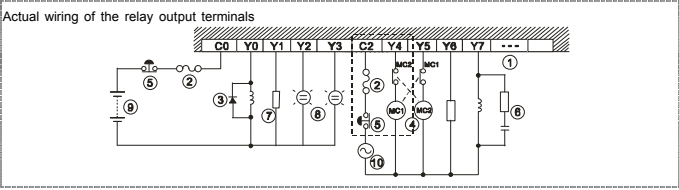
Wiring the I/O Terminals

Wiring the input terminals:

The input signals are DC inputs. Sinking and sourcing are current driving capabilities of a circuit. They are defined as follows.



Wiring the output terminals:



- Other output terminals
- Fuse
- Reverse current protection diode*1
- Mutually exclusive output*2
- Emergency stop: An external switch is used.
- Surge absorber *3
- Inductive load
- Incandescent lamp (resistive load)
- DC power supply
- AC power supply

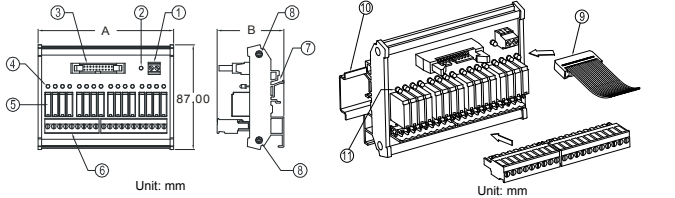
*1: There is no internal protection circuit inside the output relays of UB-10-OR16A/B. Therefore, if UB-10-OR16A/B is connected to a DC inductive load, please connect a reverse current protection diode in parallel to extend the life of the contact. The reverse current protection diode must meet the following specifications.

- It must endure 5~10 times at most the amount of the load voltage
 - Its forward current has to be bigger than the load current.
- *2: The mutually exclusive output uses an external circuit and forms an interlock circuit. The interlock circuit and the program in a PLC ensure that there are protective measures if an abnormal condition occurs.
- *3: There is no internal protection circuit inside the output relays of UB-10-OR16A/B. Therefore, if UB-10-OR16A/B is connected to an AC inductive load, please connect it to a surge absorber (0.1 uF + "100 ohm to 120 ohm") in parallel to reduce the noise generated by the AC load and extend the life of the contact.

Note: Please select proper diameters of cables. If modules are operated for a long time, and diameters of cables are not sufficient, the cables may be overheated and sparks..

*2: You can use the Delta standard I/O extension cable UC-ET010-24A (IDC 40P-40P)

UB-10-OR16A/B



- 2-PIN power input terminal block
- Power LED indicator
- 20-pin latch connector
- Output LED indicator
- Output relay
- 9-pin and 11-pin output terminal blocks
- Clip
- Set screw
- 20-pin IDC connector*3
- DIN rail
- Output LED indicator

*3: You can use the Delta standard I/O extension cable UC-ET010-24C (IDC 40P-20Px2)

UB-10-	ID32A/OT32A	OR16A/B
A	113.00	113.00
B	53.60	55.30

Model Description

Model Name	Power	Input Unit		Output Unit		Applicable I/O module
		Number of inputs	Type	Number of outputs	Type	
UB-10-ID32A	N/A	32	Please refer to the specifications for the module connected.	0	N/A	DVP32SM11N AH32AM10N-5C AH64AM10N-5C
UB-10-OR16A	24 V DC#	0	N/A	16	Relay	DVP32SN11TN AH32AN02T-5C AH64AN02T-5C
UB-10-OR16B						AH32AN02P-5C AH64AN02P-5C
UB-10-OT32A	24 V DC#	0	N/A	32	Please refer to the specifications for the module connected.	DVP32SN11TN AH32AN02T-5C AH32AN02P-5C AH64AN02T-5C AH64AN02P-5C

#: +24V and GND must connect to the 24V DC auxiliary power supply (-15% ~ +20%), and the rated current consumption is 1 mA/point.

I/O Extension cable

Model	Length	Number of pins	Connector	Applicable model
UC-ET010-24A	1 m	40P-40P	IDC connectors at the both ends	UB-10-ID32A and UB-10-OT32A

Model	Length	Number of pins	Connector	Applicable model
UC-ET010-24C	1 m	40P-20Px2	IDC connectors at the both ends	UB-10-OR16A and UB-10-OR16B

3 Specifications

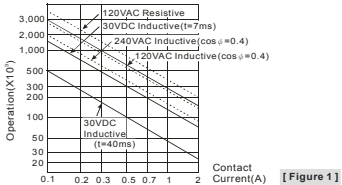
Electrical Specifications

Item	Model	UB-10-ID32A/OT32A	UB-10-OR16A/B
		> 5 MΩ (The insulation voltage between all inputs/outputs and the ground is 500 V DC.)	
Operation/Storage		Operation: 0~55°C (temperature); 5~95% (humidity); pollution degree 2 Storage: -25~70°C (temperature); 5~95% (humidity)	
Weight (g)		166 g	216 g

Specifications for the Outputs on UB-10-OR16A/B

Type	Relay-R
Current specification	2 A/point (5A/COM)
Voltage specification	< 250 V AC; below 30 V DC
Maximum load	Inductance
	Bulb
Response time	Approximately 10 ms

#: Life cycle curve



3 Installation & Wiring

Terminals on the External Terminal Module

	UB-10-ID32A															
	Upper row	X0	X2	X4	X6	X10	X12	X14	X16	X20	X22	X24	X26	X30	X32	X34
Lower row	X1	X3	X5	X7	X11	X13	X15	X17	X21	X23	X25	X27	X31	X33	X35	X37