

Thank you for purchasing the H2U series programmable logic controller (PLC) independently developed by Inovance Control Technology Co., Ltd. Read the manual carefully to be familiar with the product features and be able to use the product safely.

This manual describes the specification, features and usage of the H2U series PLC. For the developing environment and design method of user programs, see the Autoshop On-line Help of Inovance.

The H2U series PLC has the following features:

- ◆ The built-in program memory space reaches up to 16K steps.
- ♦ The internal large-capacity power supply can directly apply power to sensors, HMI, and external auxiliary relays.
- ◆ It provides multiple high-speed I/O terminals, and has rich motion and positioning control functions.
- ♦ It has four independent communication ports and supports various communication protocols including Modbus, facilitating system integration
- ◆ The comprehensive encryption function protects intellectual property rights of the user.
- ♦ It comes with fast execution speed and supports up to 128 subprograms and 21 interrupt subprograms. Each subprogram has the parameter call and independent password security functions.

Safety Information and Precautions

In Design

ADANGER

- ◆ Provide a safety circuit outside the PLC in the application so that the control system can still work safely even if external power failure or PLC fault occurs
- ♦ In the external circuit of the PLC, an emergency stop circuit, a protection circuit, an interlock circuit of forward/reverse rotation operation, and position upper/lower limit interlock circuit are necessary to prevent equipment damage
- ♦ The PLC is designed for indoor electric environment and is installed in an overvoltage category 2 environment. A lightning protection device must be installed for the power supply system, so that lightening overvoltage is not applied on terminals of the PLC, avoiding damage to the equipment.

During Installation

WARNING

- ♦ Install the PLC in places free from dust, oil smoke, conducting dust, corrosive gas, combustible gas, high temperature, condensation, wind & rain, vibration and shock. In addition, electric shock, fire, malfunction may also cause damage and deterioration to the equipment.
- ◆ During screw hole processing and wiring, ensure that no metal filing and cable end fall into the ventilation hole of the controller, because such stuff may cause a fire, fault, or malfunction.
- ♦ After installation of the newly purchased PLC is complete, ensure that there is no foreign stuff on the surface of ventilation. Failure to comply may result in poor cooling effect during running, which may lead to a fire fault or malfunction
- ◆ The installation and wiring must be secure and reliable. Poor contact may cause malfunction.

At Wiring

ADANGER

- Ensure that all power supplies are cut off before installation or wiring.
- ◆ During screw hole processing and wiring, ensure that no metal filings or cable end drops into ventilation holes of the controller. Failure to comply may result in a fire, fault or malfunction.
- ◆ Perform wiring or plug/remove the cable connector only after power-off. Failure to comply may result in electric shock or damage to the circuit.

- ◆ Use shielded cables for high-frequency signal input/output in applications with severe interference to enhance anti-interference capacity of the system.
- Suitable earthing connection shall be provided by the end system. The earth wire must be connected only to the earthing point on terminal which is marked with the earth symbol. The earth must be over 2 mm².

◆ The specification and installation requirement of external cables must comply with the local safety regulations and related IEC standards. The size in the table below is for recommendation.

Copper Wire	Cross-section Area	Recommended Code
AC power wire	1.0-2.0 mm ²	AWG 12, 18
Earthing wire	2.0 mm²	AWG12
Input signal wire	0.8–1.0 mm²	AWG18, 20

◆ The terminal of wire must be insulated according to the local safety regulations. Ensure that the insulation distance shall not be reduced when the wire is connected to the terminals. Otherwise, electric shock or damage to circuit may result.

During Running and Maintenance

- ◆ Connection or removal of the communication cable, cables of the extension card and cables of the control unit, or other servicing can be performed only after power-off. Failure to comply may result in damage to the equipment or malfunction.
- ♦ Operations such as online modification, forcible output, RUN and STOP can be performed only after you read the manual and guarantee safety.

- ♦ Installation or removal of the extension card can be performed only after power-off
- ◆ Make sure to replace button cell after power-off. If replacement at poweron is required, only authorized electrical technician is allowed to complete replacement within 30 seconds. Failure to comply may result in data loss.
- Treat scrapped PLC as ordinary industrial waste.

Product Information

Designation Rules

H2u-3232MRAX-XP 1 2 3 4 5 6 7 8 9

No.	Name	Description
1	Product information	H: Inovance controller
2	Series No.	2U: Second generation of controller
3	Input points	32: 32 inputs
4	Output points	32: 32 outputs
5	Module	M: Main module of general-purpose controller, P: Positioning
5	classification	controller, N: Network controller, E: Extension module
6	Output type	R: Relay, T: Transistor
7	Dower ounnly type	A: 220 VAC (220 VAC by default if null), B: 110 VAC, C: 24
'	Power supply type	VAC output, D: 24 VDC
8	Special function	High-speed input/output, analog function
9	XP auxiliary version	-

Basic Parameters

	Total		I/O Feature	s (Input V	/oltage: 24 VD	C)	Order
PLC Model	I/Os	Total Inputs	Hi-Speed Inputs	Total Outputs	High-Speed Outputs	Output Type	Code
H2U-1010MR-XP	20	10	2 x 60 kHz	10	-	Relay	01022078
H2U-1010MT-XP	20	10	6 x 10 kHz	10	3 x 100 kHz	Transistor	01022079
H2U-1616MR-XP	32	16	6 x 60 kHz	16	-	Relay	01022040
H2U-1616MT-XP	32	10	0 X 00 KHZ	10	3 x 100 kHz	Transistor	01022041
H2U-2416MR-XP			2 x 60 kHz		-	Relay	01022048
H2U-2416MT-XP	40	24	4 x 10 kHz	16	2 x 100 kHz	Transistor	01022049
H2U-2416MTQ-F01			6 x 100 kHz		5 x 100 kHz	Halisistoi	01028063
H2U-3624MR-XP	60	36	2 x 60 kHz	24	-	Relay	01022046
H2U-3624MT-XP	00	30	4 x 10 kHz	24	2 x 100 kHz	Transistor	01022047
H2U-3232MR-XP			6 x 60 kHz		-	Relay	01022050
H2U-3232MT-XP	64	32	0 X 00 KHZ	32	3 x 100 kHz		01022045
H2U-3232MTQ	04	32	6 x 100 kHz	32	5 x 100 kHz	Transistor	01022015
H2U-3232MTP			-		8 x 100 kHz		01022061
H2U-4040MR-XP	80	40	6 x 60 kHz	40	-	Relay	01022042
H2U-4040MT-XP	00	40	0 X 00 KHZ	40	3 x 100 kHz	Transistor	01022062
H2U-6464MR-XP	128	64	6 x 60 kHz	64	-	Relay	01022043
H2U-6464MT-XP	120	04	U X UU KHZ	04	3 x 100 kHz	Transistor	01022044

Note: Total inputs include hi-speed inputs. High-speed input terminals can be used for common inputs. Total frequency of H2U-XP high-speed inputs cannot exceed 70 kHz. Total frequency of H2U-3232MTQ and H2U-2416MTQ highspeed inputs cannot exceed 600 kHz. Total frequency of high-speed inputs of other H2U models cannot exceed 100 kHz.

General Specifications

	Enviro	nment Parameters		Use	Transportation	Ctorogo
	Туре	Parameter	Unit	USE	rransportation	Storage
on	Ambient	Low temperature	°C	-5	-40	-40
condition	temperature	High temperature	°C	55	70	70
	Humidity	Relative humidity	%	95	95	
Climate	Humaity	Relative flufflulty	/0	(30 ± 2 °C)	$(40 \pm 2 ^{\circ}\text{C})$	-
<u>=</u>	Air progetto	Low pressure	kPa	70	70	70
O	Air pressure	High pressure	kPa	106	106	106

Environment Parameters Storage Transportation Use 3.5 mm Sine (5-9 Hz) vibration 10 m/s² (9-150 Hz) m²/s³ 5-20 Hz: 1.92 dB Acceleration 20-200 Hz: -3 dB Random spectral density (dB/Oct) vibration Frequency range 5-200 X/Y/Z Vibration direction Half-sine Туре Shock Acceleration m/s² 180

m

Mechanical Design Mounting

Model	Total I/Os	Mounting [Dimension	Dimension
iviodei	10tai 1/0s	A (mm)	B (mm)	W × H × D (mm)
H2U-1010M_	20	120	80	130 x 90 x 88
H2U-1616M_	32	160	80	170 x 90 x 88
H2U-2416M_	40	160	80	170 x 90 x 88
H2U-3624M_	60	210	80	220 x 90 x 88
H2U-3232M_	64	210	80	220 x 90 x 88
H2U-4040M_	80	275	80	285 x 90 x 88
H2U-6464M_	128	340	80	350 x 90 x 88

■ Requirements on Installation Position

- 1) Do not remove the paper tape that prevents foreign objects from dropping into the unit during installation. Once installation is completed, remove the paper tape before power-on so as to prevent overheating.
- 2) To prevent overheating inside the PLC, wall-mount PLC with 300 mm clearance at top and bottom for heat dissipation, as shown in Figure 2.
- 3) Leave 50 mm or more space between PLC and other devices or structures. Keep PLC far away from high-voltage cables and devices, and power devices.

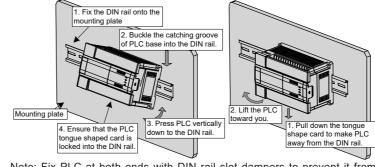
Mounting Methods

Dip

Dip height

1) Mounting or removing PLC

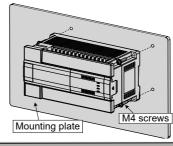
Figure 1 Mount or remove PLC



Note: Fix PLC at both ends with DIN rail slot dampers to prevent it from sliding left and right.

2) Mounting and fixing PLC with screws (wall-mounting mode) In applications with big impct, mount and fix PLC with four M4 screws.

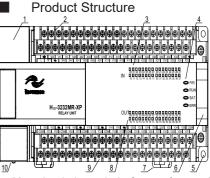
Figure 2 Mount and fix PLC with four M4 screws



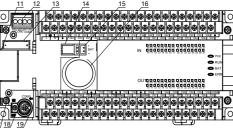
Electrical Design

The following figures show the I/O terminals of the main H2U series PLC unit. The H2U series PLC has different output types, relay and transistor, but has the same terminal configuration.

3



- 1. Foldaway
- 2. Power supply, auxiliary power supply and detachable terminals for signal input
- 3. Input status indicators
- 4. Running status indicators
- PWR: Power indicator; RUN: Running indicator: Flashing indicates PLC normal running); BAT: Battery low-voltage indicator; ERR: Fault indicator
- 5. Mounting holes x 4; 6. Cover of extension module interface (R: Relay; T: Transistor) 7. DIN rail slot dampers x 2; 8. Output status indicator LEDs;
- 9. Detachable terminals for signal output; 10. Cover of user program downloading port (COM0)

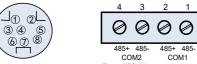


11. Special function adapter board knock-down hole (It need be cut off before installation of the board.); 12. Wiring terminal for RS485 communication port (COM1/COM2); 13. Special function extension card and special function adapter board interface; 14. System program downloading port (Unauthorized operation is prevented here.); 15. Battery socket (BAT) (Neber reverse the polarity.); 16. Coin battery (provided by Inovance); 17. Special function extension card and special function adapter board fixed bolts; 18. RUN/STOP switch; 19. User program downloading port (COM0)

■ Communication Interface Definition

The H2U series PLC has two communication ports and H2U-XP has four communication ports. The COM0 hardware is standard RS485 and RS422. determined by jumper JP0. If JP0 is connected, RS422 is selected. If JP0 is disconnected, the RS422 and RS485 are compatible. COM0 hardware of H2U-XP is standard RS422, which does not require jumper connection. Otherwise, the PLC cannot work normally.

The terminal interface is mini-DIN8 socket.



COM2 Figure 5 RS485 com Figure 4 RS485 c

Note: Figure 4 is the communication port of H2U-XP. Figure 5 is the communication port of H2U-1010M_XP. COM2 is the COM0 of H2U.

PLC can be connected to PC or HMI through COM0 in the following ways:

- 1) (JP0 connected): PLC side is RS422 and PC side is USB. PC is connected to the PLC COM0 port via the dedicated USB downloading cable (see Figure 3). (The H2U-XP does not require JP0 connection.)
- 2) (JP0 connected): PLC side is RS422 and the PC side is RS232. PC is connected to the PLC COM0 port via the dedicated serial port download cable (see Figure 3). (The H2U-XP does not require JP0 connection.)
- 3) (JP0 disconnected): PLC side is RS485 and PC side is RS485. They are connected through the terminal as shown in Figure 4. The connecting cable is determined by the user.

COM1/COM2 hardware is standard RS485 and is interface terminal. For definition of COM1/COM2, see Figure 4. They are connected to other devices via on-site wiring by the user. Both support the half-duplex communication mode only. COM3 of H2U-XP can be available through extension card.

Pin No.	Signal	Description	Pin No.	Signal	Description
1	RXD-	Receive negative data.	5	+5V	Provide power supply +5 V to external devices. It is the same with the internal logic +5 V.
2	RXD+	Receive positive data.	6	ccs	Communication direction control cable
3	GND	Must be grounded. No electrical connections for 9 and 10	7	TXD+/ RXD+	Send positive data to external devices. If it is RS485, it can receive positive data.
4	TXD-/ RXD-	Send negative data to external devices. If it is RS485, it can receive negative data (H2U).	8	NC	Non-pin

	Item	Hi-speed Inputs X0-X5	General Inputs
Signal input	mode		rminal S/S is shorted to 24V. It is minal s/s is shorted to COM.
	Detection voltage	24 VDC	
Electrical	Input resistance	3.3 kΩ	4.3 k Ω
parameters	Input ON	Input current > 4.5 mA.	Input current > 3.5 mA.
	Input OFF	Input current < 1.5 mA	Input current < 1.5 mA.
Filter	Digital filter	X0 to X7 has digital filter for 0-60 msec.	unction. The filter time should be
function	Hardware filter	Except X0 to X7, the other The filter time is about 10	r I/O terminals are hardware filter. msec.
Hi-speed fur	nction	interrupt and pluse captur Maximum frequency of X0 frequency of H2U-XP is 60 Maximum frequency of X2 I/O terminals). Maximum frequency of X2	and X1 is 100 kHz. (Maximum
Common co	nnection terminal	Only a common port S/S	

S/S connecting to 24V+ or COM determines the Sink or Source input mode. The connecting mode is effective to all input points of the PLC.

Output Specifications

The H2U series PLC has relay output and transistor output. Their parameters are quite differently. Please select the correct output type so as to avoid misuse. Failure to comply may result in damage to the PLC.

The current of transistor output terminals must be less than the allowable maximum current. If the output current of multiple transistor terminals is greater than 100 mA, they should be evenly arranged but not be arranged adjacently, convenient for heat dissipation.

It is suggested that the output points, which are set to ON simultaneously, do

not exce	ed 70% of t	otal output points for long.	
	Item	Relay outputs	Transistor outputs
Circuit po	ower voltage	< 250 VAC, or < 30 VDC	5–24 VDC
Circuit ins	sulation	Relay mechanical insulation	Opto-coupling insulation
LED indic	ator	When the relay output contact closes, the LED indicator becomes ON.	When the opto-coupling is driven, the LED indicator becomes ON.
Leakage o	current during uit	-	Less than 0.1 mA/30 VDC
Min. load		2 mA/5 VDC	5 mA (5-24 VDC)
Max.	Resistive load	2A/1 point 8A/4 points common port 8A/8 points common port	0.5A/point 0.8A/4 points 1.6A/8 points
output current	Inductive load	220 VAC, 80 VA	High speed terminal: 7.2 W/24 VDC Others: 12 W/24 VDC
	Lamp Load	220 VAC, 100 W	High speed terminal: 0.9 W/24 VDC Others: 12 W/24 VDC
ON respo	nse delay	20 ms (max.)	High speed output: 10 μs
OFF resp	onse delay	20 ms (max.)	Others: 0.5 ms
High-spee frequency		-	100 kHz per channel (max.)
Output co	mmon port	Each group shares a common	port and the groups are isolated .
Fuse prot	ection	Without fuse protection	·

Internal Equivalent Circuit

PLC has a built-in power supply (24 VDC) to detect user switch status, so you only need to connect input signals of dry contact. OC output type is needed if you connect an active transistor or sensor

PLC signal input and internal equivalent circuit are shown as Figure 6 below. Circuit of the user and the PLC internal circuit are connected by the terminal. Figure 6 shows the SINK input mode, determined by short connection of the terminal S/S and the terminal 24V.

Figure 6 SINK input mode

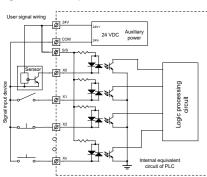


Figure 7 SOURCE input mode

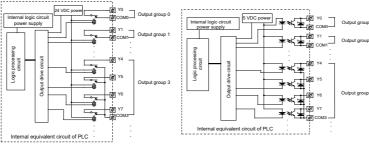
The following figure shows the internal The following figure shows the connected with different power circuits. used for 24 VDC load circuit only.

PLC in the relay output mode

equivalent circuit of PLC in the relay internal equivalent circuit of PLC in output mode. The output terminals are the transistor output mode. The output divided into several groups, and the terminals are divided into several groups are electrically isolated. The groups, and the groups are electrically output contacts of different groups are isolated. The transistor output can be

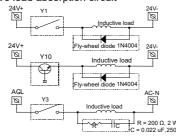
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Figure 8 Internal equivalent circuit of Figure 9 Internal equivalent circuit of PLC in the transistor output mode



For the inductive load in AC circuit, you need add an RC component instead, and for the inductive load in DC circuit, you need add a freewheeling diode, as shown in the following figure.

Figure 10 Inductive load absorption circuit



Power Supply Specification

	Item	Unit	Min. Value	Typical Value	Max. Value	Remark
Rated or	perating voltage	VAC	100	220	240	Normal startup and running range
Input vol	tage limit	VAC	85	-	264	Derated in the range of 85–100 VAC and 240–264 VAC
Input cur	rent	Α	-	-	1	85 VAC input, full-load output
Input pov	wer	W/VA	-	-	50/85	
	5V/GND	V	4.75	5	5.25	Output 1
Output	24VDD/GND	V	21.6	24	26.4	Output 2
voltage	24VCC/COM	V	21.6	24	26.4	Output 3
	5V/GND	mA	-	-	900	The sum of capacity load is the internal consumption and the
Output current	24VDD/GND	mA	-	-	500	expansion module. The maximum output power shall
	24VCC/COM	mA	-	-	500	be the sum of each full load. Natural cooling is adopted.

Output 3 applies power to sensor. It can also provide external power supply to special function modules. Output 2 provides power supply to the main module and the relay of I/Os of expansion module. Output1 provides power to all modules. During system configuration, make sure that the demand of each power supply does not exceed its maximum capacity.

Power Supply Capacitance and Expansion Capacity

The main module and active expansion module of PLC provide power supply to expansion modules, extension cards and adapters. The I/O points of expansion modules and the number of special function expansion modules must be within the power supply capacitance of the main module or active expansion module. For calculation on power supply capacitance, take the following aspects into

- Each power supply capacitance should be calculated independently.
- The expansion capacity is decided by the smaller power supply

For example: 24VDD allows connection of six expansion modules, while +5V only allows connection of eight expansion modules. So the system can only be extended up to six expansion modules.

Selection of Extension Device

When designing an H2U series PLC system, we must consider the following

- ◆ Total I/Os should be within 256 for a main PLC system.
- Power supply capacitance (see Power Supply Specification)
- ♦ main modules and active expansion modules can provide 24 VDC and 5 VDC power supply to expansion modules and special modules. But total power consumption of all expansion units should be restricted within the power supply capacitance of main module or the active expansion module.
- ◆ The H2U series PLC can be connected to maximum 8 special modules.

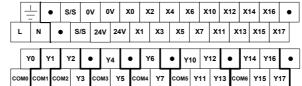
Terminal Block Definition

Terminal block definition of H2U-1010MR-XP and H2U-1010MT-XP

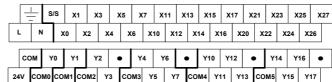


When using H2U-1010MT-XP, Y0, Y1 and Y2 require external power supply. The user can connect 24VDC $(24 \text{ V} \pm 20\%)$ power supply to Y11 terminals V+ and V- Terminal V- has been shorted to COM0 internally.

Terminal block definition of H2U-1616MR and H2U-1616MT



Terminal block definition of H2U-2416MR and H2U-2416MT



Terminal block definition of H2U-2416MTQ-F01

	<u>-</u>	s	/S	0	v	V	x	x	2	Х4	>	(6	X10	x-	12	X1	14 X	16	X20	X	22 X	24 X	(26	•	•		•	•	•	
L		N		•	24	/ 24	IV	X1	X:	3	X5	X	.	X11	X1	13	X15	X1	7 X	21	X23	X25	X2	7	•	•	•		•	
	Y0		Y2	Y:	3	/ 4	Y	Y	6	ОМ	5 Y	11	Y13	Y1	14	Y10	6	,	•	•	•		•	•	•	1	•	•	•	_
со	мо	Y1	СС	М1	CON	12C0	DM3	COM4	Υ	7	Y10	Y1:	2 C	ОМ6	Y1	15	Y17	•	١,	•	•	•	•		•	•	•	Ţ	•	

Terminal block definition of H2U-3624MR and H2U-3624MT

	<u>-</u>	s	s/S	X1	ХЗ	x	(5	Х7	Х1	1 X	13)	(15	(17	X2	11 2	K23	X25	x	27	X31	X33	хз	5 X	37 X	41 X	43	•
l	L	N	X	0)	(2	X4	X6	х	10	X12	X14	X16	X	20	X22	X	24)	(26	X30	X	32 X	34	X36	X40	X42	•	
	COM	,	YO	Y1	Y2	ŀ	•	Y4	Y	· [• Y	10	12	•	Ţ,	/14	Y16	ŀ	•	Y20	Y22	•	Y	24 Y	26	•	•
24	4V C	OMO	co	м1С	OM2	Y3	CON	ИЗ Ү	5	Y7	COM	Y11	Y	13	COM	5 Y1	15 Y	/17	сом	16 Y2	21 Y	23	сом7	Y25	Y27	•	

◆ Terminal block definition of H2U-3232MR and H2U-3232MT | = | S/S | OV | OV | X0 | X2 | X4 | X6 | X10 | X12 | X14 | X16 | X20 | X22 | X24 | X26 | X30 | X32 | X34 | X36 | •

Y0 Y2 • Y4 Y6 • Y10 Y12 • Y14 Y16 • Y20 Y22 Y24 Y26 Y30 Y32 COM1 Y1 Y3 COM2 Y5 Y7 COM3 Y11 Y13 COM4 Y15 Y17 COM5 Y21 Y23 Y25 Y27 Y31 Y3				1	7,20	^2.		^''	X15	AIS	X 11	^/	^5	<u>'</u>	_^3	^1	24V	••		1-		-
COM1 V1 V3 COM2 V5 V7 COM3 V11 V13 COM4 V15 V17 COM5 V21 V23 V25 V27 V31 V	Y34 Y36 CO	Y32 Y	Y30	Y26	Y24 Y	Y22	Y20	•	16	14 Y	Y	•	Y12	Y10	•	,	Y6	Y4	•	Y2	0	Y
55ml 11 13 55ml 13 17 55ml 11 13 55ml 12 12 12 12 12 13 13	3 Y35 Y37	31 Y33	7 Y3	5 Y27	3 Y25	1 Y23	15 Y21	CON	Y17	Y15	COM4	Y13	/11 Y	мз ү	CON	Y7	Y5	OM2	з Со	Y3	Y1	COM1

◆ Terminal block definition of H2U-3232MTQ (same as that of H2U-3232MTP)

-	<u>_</u>	s	/S	οv	0\	/ >	(0	X2	X	4)	(6 X	10	(12	X14	x	16	K20	X22	x	24 X	26	X30	x	32 X	34	K36	•
L	'	N	•	24	4V	24V	X)	(3	X5	Х7	X11	X1	3 >	(15	X17	X2	1)	(23	X25	X2	7 X	31	X33	X35	x	37
	Y0	Υ	2	/3	Y4	4 Y	5	Y6	coi	M5 Y	11 Y	13 Y	14	Y16	со	M7 \	721	Y23	Y2	24 Y	26	Y30	Y	32 Y	34	Y36	CON
СОМ	0 Y	1	COM	СО	M2	сомз	COI	/4 Y	77	Y10	Y12	соме	Y1	5 Y	17	Y20	Y2	2 00	ом8	Y25	Y2	7 Y	31	Y33	Y35	Y	37

◆ Terminal block definition of H2U-3232MTQ (same as that of H2U-3232MTP)

					,																					
	=		S/S	0ν	, o	v	X0	X2	X4	X6	x	10 X	(12	(14	X16	X2	0 X	22	X24	X26	X3	80 X	32	(34	X36	•
	L	N	ŀ	•	24V	24V	х	1 2	Х3	X5	X7	X11	X13	X1:	5 X	17	X21	X23	X2	5 X	27	X31	X33	X35)	37
	Υ	۰	Y2	Y3	Y	4	Y5	Y6	сом	5 Y11	Y	13 Y	14	116	OM7	Y2	1 Y	23	Y24	Y26	Y3	80 Y	32	/34	Y36	сомэ
co	MΟ	Y1	СО	M1C	OM2	сом	со	M4 \	Y7	/10 Y	Y12	СОМ	Y15	Y17	7 Y.	20	Y22	сом	8 Y2	5 Y	27	Y31	Y33	Y35	Y	37

◆ Terminal block definition of H2U-4040MR and H2U-4040MT

[≟	S/S	οv	01	v x	0	X2	Х4	X6	X1	0 X	12 X	14 X	16	• 7	X20	X22	X24	x	26	• >	(30	X32	X34	Х3	6 •	x	40 X	42 X	44 >	(46	•
L	N	ŀ	• 2	4V	24V	X1	X	3	X5	X7	X11	X13	X15	X17	•	X2	1 X	23	25	X27	•	Х3	1 X3	3 X	35	X37	•	X41	X43	X45	X47	
Γ	Y0	Y1	Y2	Y	3 Y	5	Y7	Y10	Y12	١.	Y	14 Y	16	• Y	20	Y22	Y24	Y26	ī	. .	•	730	Y32	Y34	Y31	6 6	Y	40 Y	42 Y	44 Y	746	•
СОМ	o co	41 CC	OM2 C	OM3	Y4	Y6	cor	M4 Y	/11 Y	13	COM5	Y15	Y17	соме	Y21	Y2	3 Y	25 Y	27	•	сом	Y3	1 Y3	3 Y	35	Y37	сома	Y41	Y43	Y45	Y47	Т

Terminal block definition of H2U-6464MR and H2U-6464MT

Programming

Description of functions of soft components

Auxiliary Relay (M)		9, 500 points se) (Note 1)	M1023], 524 points	M3071], 2048 points	M8000 to M8255, 256 points (special use)				
State (S)	S0 to S499, 5 (Note 1), S0-S9 (initiali:	•	[S500 to S899], 4 (retentive at power	00 points er-down) (Note 2)	[S900 to S999], 100 points (alarm) (Note 2)				
	T0 to T199, 2 ms; Subprogr T199	00 points,100 am: T192 to	T200 to T245, 46 points 10 ms		[T250 to T255], 6 points,100 ms (Note 3)				
16-bit Up Counter (C)	C0 to C99, 10 (Note 1)	00 points (gen	eral use)	[C100 to C199], 1 (storing), (Note 2)	•				
	32 bit reversit	ole	32 bit high-speed Max.6 points	counting reversib	ole,				
Counter	C200 to C219, 20 points (general use) (Note 1)	l15 points	single-phase unidirectional	[C246 to C250], single-phase bidirectional counting input (Note 2)	[C251 to C255], dual-phase counting input (Note 2)				
register	D0 to D100	[D200 to D511], 312 points (storing) (Note 2)	[D512 to D7999], 7488 points (storing) (Note 3)	[D8000 to D8255], 256 points (special use)	V0 to V7, Z0 to Z7, 16 points (indexing)				
nointer	points (main	128 points		points (timer interrupt	I010 to I060, 6 points (counting interrupt pointers)				
	K (Decimal)	16 bits (-32,7	68 to 32,767)	32 bits (-2,147,48 2,147,483,647)	3,648 to				
Constants	H (HEX)	16 bits (0 to F	FFFH)	32 bits (0 to FFFFFFFH)					
	E (floating point)	_		32 bits (1175 x 10-41 to 3402 x 1035)					

The soft components within [] are the battery backup area.

- Note 1: Non-battery backup area can be changed into battery backup area via parameter setting.
- Note 2: Battery backup area can be changed into non-battery backup area via parameter setting.
- Note 3: Such permanent battery backup area cannot be changed.

Programming requirements

- 1) One PC with Microsoft Windows XP or Windows 7 system
- 2) Inovance AutoShop (version 2.0 or above) for the purpose of writing and downloading user programs
- 3) Inovance USB-mini DIN8 download cable or mouse head download cable for PC with DB9-type RS232 port

Product Warranty Card

Customer	Address:	
information	Company name:	Contact person:
	Postcode:	Tel or Email:
	Product model:	
Product information	Serial No (Attach here):	
	Name of supplier who supp	olied you the unit:
Failure Description		
(eg. Fault code)	Maintenance personnel:	
		1

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	<u></u>	S	s (v	ov	X0	X2	Х4	Xe	5 X1) X	12 X1	4 X	16 X	(20 X	22	K24	X26 X	30)	(32	X34	X36	X40	X42	X44	X46	X50	Х5	2 X54	Х5	6 X6	0 X6	2 X	64 X	66	K70	X72	X74	X76	•
ı	-	N	•	24V	24V	X1	X	3	X5	Х7	X11	X13	X15	X17	X21	X23	X25	X27	X31	X33	X35	5 X3	37 X	41 X	43 X	(45	X47	X51	X53	X55	X57	X61	X63	X65	X67	Х7	'1 X	73 X	(75	X77
	Y0	Y	2 CC	M2	Y5	Y7	Y10	Y12	CON	M4 Y1	5 Y	17 Y2	0 Y	22 Y	'24 Y	26 C	ом6	Y31 Y	33 \	35	Y37	Y40	Y42	Y44	Y46	сом	8 Y51	Y5	3 Y55	Y5	7 Y6	0 Y6	2 Y	64 Y	66 00	OM10	Y71	Y73	Y75	Y77
co	M1	Y1	Y3	Y4	Y6	CON	V 13	11 Y	13	Y14	Y16	сом5	Y21	Y23	Y25	Y27	Y30	Y32	Y34	Y36	CON	17 Y4	11 Y	43 Y	45 Y	47	Y50	Y52	Y54	Y56	сом9	Y61	Y63	Y65	Y67	Y7	0 Y	72 Y	774	Y76