



NETWORK / MODBUS GATEWAYS HC-A(8/16/64)MB / HC-A64NET



English

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Whilst every effort is made to ensure that all specifications are correct, printing errors are beyond Hitachi's control; Hitachi cannot be held responsible for these errors.

Dansk

Specifikationer i denne vejledning kan ændres uden varsel, for at Hitachi kan bringe de nyeste innovationer ud til kunderne.

På trods af alle anstrengelser for at sikre at alle specifikationer er korrekte, har Hitachi ikke kontrol over trykfejl, og Hitachi kan ikke holdes ansvarlig herfor.



! CAUTION

This product shall not be mixed with general house waste at the end of its life and it shall be retired according to the appropriated local or national regulations in a environmentally correct way.

Due to the refrigerant, oil and other components contained in Air Conditioner, its dismantling must be done by a professional installer according to the applicable regulations. Contact to the corresponding authorities for more information.

! ADVARSEL!

At produktet ikke må smides ud sammen med almindeligt husholdningsaffald, men skal bortskaffes i overensstemmelse med de gældende lokale eller nationale regler på en miljømæssig korrekt måde.

Da klimaanlægget indeholder kølemiddel, olie samt andre komponenter, skal afmontering foretages af en fagmand i overensstemmelse med de gældende bestemmelser.

Kontakt de pågældende myndigheder for at få yderligere oplysninger.



DANGER – Hazards or unsafe practices which COULD result in severe personal injuries or death.

FARE – Farer eller farlig brug, som KAN resultere i alvorlig personskade eller dødsfald.



CAUTION – Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.

FORSIGTIG – Farer eller farlig brug, som KAN resultere i mindre skade på personer, produkt eller ejendom.



NOTE – The text following this symbol contains information or instructions that may be of use or that require a more thorough explanation.

BEMÆRK – Den tekst, der følger efter dette symbol, indeholder oplysninger eller anvisninger, der kan være til nytte, eller som kræver en mere grundig forklaring.

INDEX

- 1 PRODUCT GUIDE
- 2 NEW PRODUCT GENERAL DATA
- 3 INSTALLATION
- 4 ELECTRICAL WIRING
- 5 OPERATION
- 6 NET CONFIGURATION KIT

INDEKS

- 1 PRODUKTVEJLEDNING
- 2 GENERELLE DATA OM DET NYE PRODUKT
- 3 MONTERING
- 4 ELEKTRISK LEDNINGSFØRING
- 5 DRIFT
- 6 NETKONFIGURATIONSSÆT

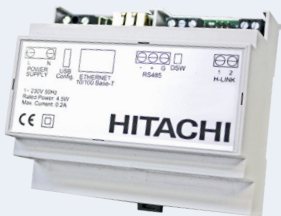
EN	English	Original version
DA	Dansk	Oversat version

1 PRODUCT GUIDE

1.1 CLASSIFICATION OF THE UNITS

Interface Controller Control		Dash separation		H-LINK II Compatible		Maxim Number of Controllable Units (8/16/64)		MB: Modbus gateway		NET: Gateway for CSNET Manager	
HC	-	A	X	X							

1.2 MODELS

DESCRIPTION

HC-A8MB
HC-A16MB
HC-A64MB
HC-A64NET

1.3 ACCESSORY LIST

DESCRIPTION

Net configuration kit

2 NEW PRODUCT GENERAL DATA

2.3.1 Hardware specifications

Item	Specifications
Power supply	1~ 230 V $\pm$ 10% 50 Hz
Consumption	4.5W (maximum)
Outer dimensions	Width: 106 mm, Depth: 90 mm, Height: 58 mm
Weight	165 g
Assembling conditions	Indoors (installation inside an enclosure with restricted access by a tool)
Ambient temperature	0~60 °C
Humidity	20~85% (Without condensation)

2.3.2 Communication

◆ RS485

Item	Specifications
Type	Modbus RTU for HC-A(8/16/64)MB Not available for HC-A64NET
Connector	Serial Port RS485 (3 screw terminals)
Communication line	Shielded twisted pair cable, with third wire (for the common), with polarity.
Communication system	Half-duplex, multipoint serial connection
Communication method	Non parity or odd/even parity selection. Data length: 8 bits – 1 stop bit
Baud rate transmission	19200/9600 Baud
Length	Max. 1200 m according EIA-485

◆ Ethernet

Item	Specifications
Type	Modbus TCP for HC-A(8/16/64)MB TCP/IP communication for HC-A64NET
Connector	Ethernet (RJ45)
Communication line	Two twisted pair cable CAT5 or better (T-568A/T-568B)
Communication system	Full-duplex
Length	Max. 100 m according IEEE 802.3

◆ H-LINK

Item	Specifications
Communication with	HC-A(16/64)MB: SET FREE, UTOPIA, CENTRIFUGAL and HEATING systems HC-A8MB and HC-A64NET: SET FREE, UTOPIA and CENTRIFUGAL systems
Communication line	Twisted pair shielded cable, non-polarity
Communication system	Half-duplex
Communication method	Asynchronous
Speed of transmission	9600 Bauds
Length of wiring	1000 m maximum (total length of H-LINK I/O bus)
Maximum number of gateways	1 Gateway (HC-A(8/16/64)MB) / H-LINK SYSTEM
Maximum number of IU	HC-A64MB → up to 64 * Indoor Units
	HC-A16MB → up to 16 * Indoor Units
	HC-A8MB → up to 8 * Indoor Units
	HC-A64NET → up to 64* Indoor Units

3 INSTALLATION

3.1 SAFETY SUMMARY

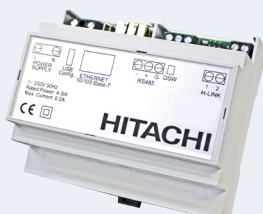
DANGER

- Read carefully this manual before performing the installation work.
- Do not install this device in places accessible to the general public. Install it in electrical enclosures, which are only accessible by the usage of a tool and also provide protection to eventual electromagnetic disturbances.
- Do not connect power supply before the device installation is correctly done. Always disconnect power supply from the device before any maintenance or servicing action.

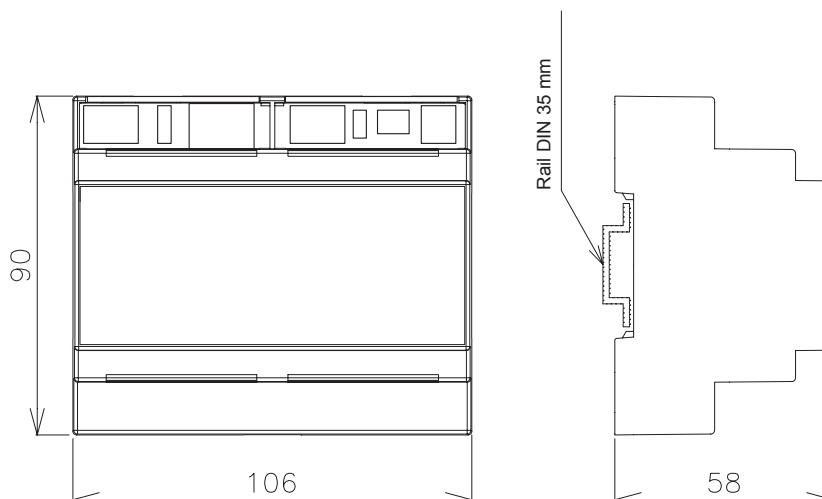
CAUTION

- This appliance must be used only by adult and capable people, having received the technical information or instructions to handle properly and safely this appliance.
- This is a Class A product. In a domestic environment this product may cause radio interferences in which case the user may be required to take adequate measures.
- Children should be supervised to ensure that they do not play with the appliance.
- Check to ensure that the field supplied electrical components (mains power switches, circuit breakers, wires, connectors and wire terminals) have been properly selected according to the electrical data indicated on this document and they comply with national and local codes. If it is necessary, contact with your local authority in regards to standards, rules, regulations, etc.
- Do not install Network / Modbus gateways in places:
 - where any vapor, oil or other dispersed liquids could affect the device.
 - where accumulation, generation or leaks of inflammable gases has been detected.
 - near to any heat sources or electromagnetic noise sources.
 - that they are near to the sea, in saline, acid or alkaline surroundings.

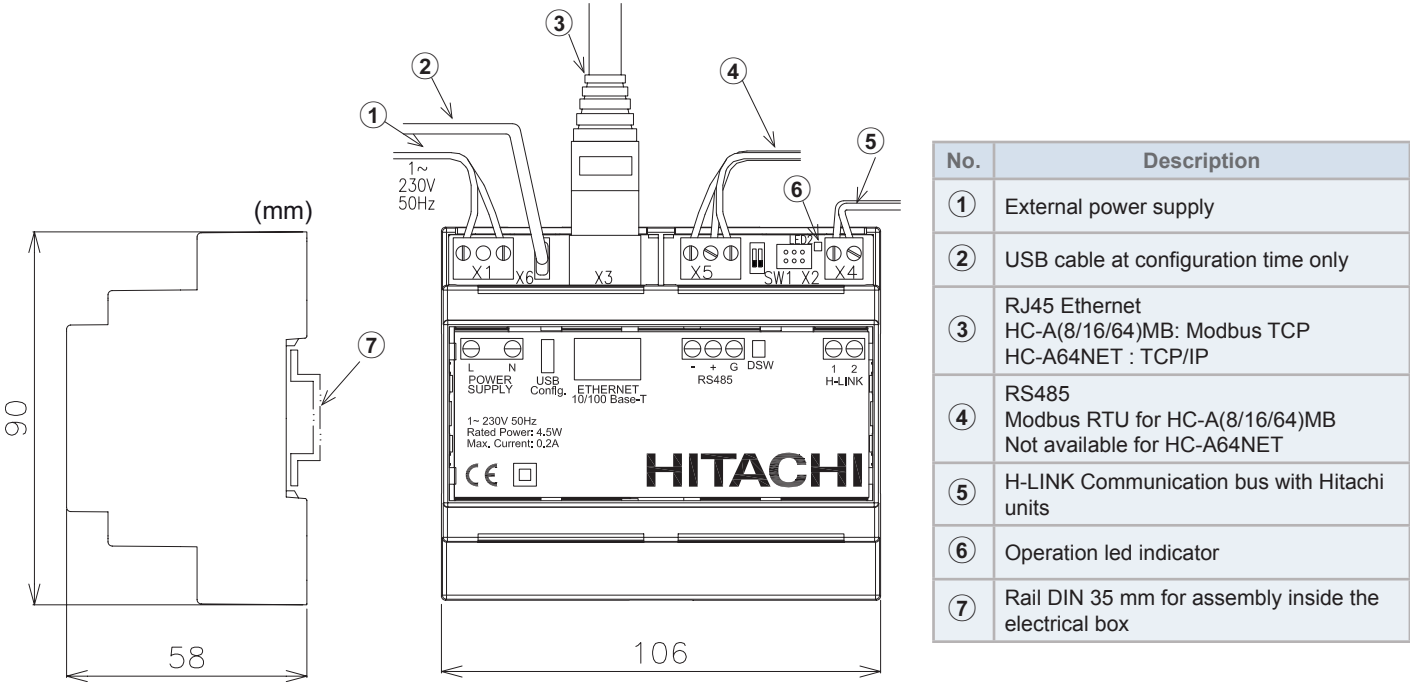
3.2 FACTORY-SUPPLIED COMPONENTS

Gateway device		Instruction manual		USB Pen Drive Memory	
1x		1x		1x	

3.3 DIMENSIONAL DATA

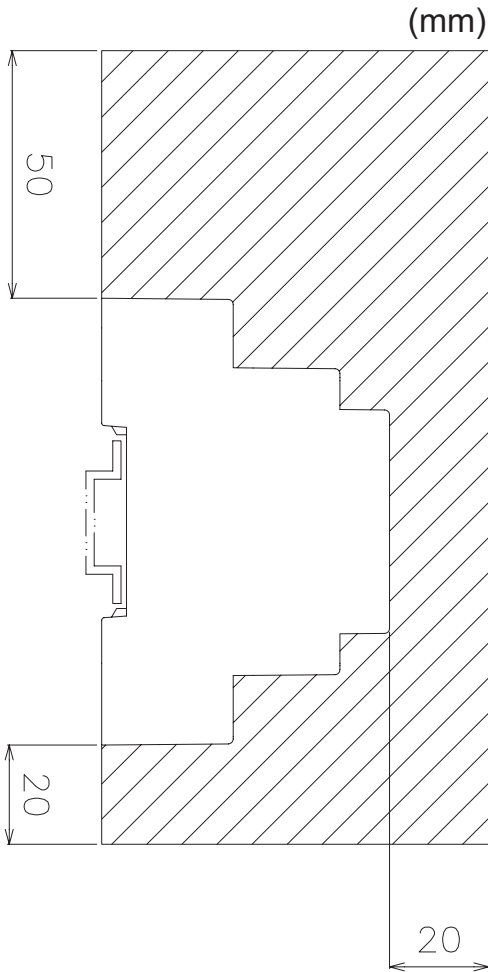


3.4 DESCRIPTION OF THE PARTS



3.5 INSTALLATION SPACE

Keep free the grey area for the correct operation of the device.



3.6 INSTALLATION PROCEDURE

DANGER

- **Do not install this device in places accessible to the general public. Install it in enclosures or other places which are accessible only by the usage of a tool.**
- **Do not connect power supply before the device installation is correctly done. Always disconnect power supply from the device before any maintenance or servicing action**

CAUTION

- Check to ensure that the field supplied electrical components (mains power switches, circuit breakers, wires, connectors and wire terminals) have been properly selected according to the electrical data indicated on this document and they comply with national and local codes
- Any unit that is not connected or is not under power when turning on Network / Modbus gateways, will not be recognized and will have to be configured later.
 - Before power supply and turning on the Network / Modbus gateways, you must ensure that:
 - ◆ 1. All circuits to be connected are correctly applied.
 - ◆ 2. All H-Link connections have been set up.
 - ◆ 3. Modbus connection has been properly done.
- The signals' cables should be as short as possible. Keep a distance of more than 150 mm from other power cables. Do not wire them together (although they may intersect). If they must necessarily be installed together, take the following measures to avoid noise disturbances:
 - For communications, use shielded wire which is earthed at one side.

3.7 NETWORK CONFIGURATION

It is supplied a computer software tool, Net configuration Tool, inside the USB stick memory for an easy and friendly configuration.

3.7.1 Computer requirements.

It is required to use a personal computer with Microsoft Windows 7 or higher, a free USB port and Java.

3.7.2 Parameters under configuration:

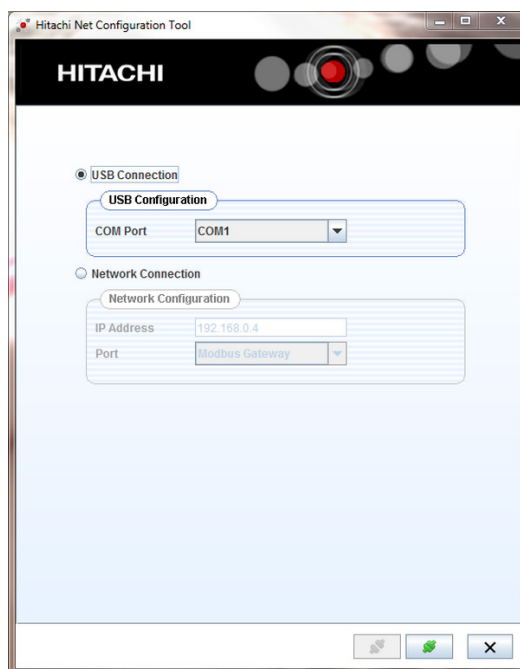
- Parity: Odd/Even/Disabled
- Communication speed: 9600/19200 Bps
- Modbus address
- Modbus TCP IP

3.7.3 Configuration procedure

◆ Configuration through USB port

This method is required when the device IP is unknown.

- 1 Connect the network device to a computer by a USB cable (field supplied or available with the Net Configuration Kit)
- 2 Select the communication port of the computer.
- 3 Press the  button at screen



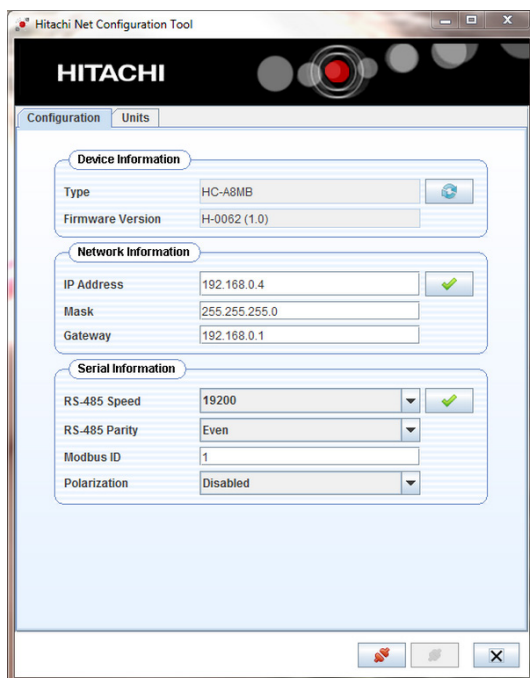
◆ Configuration through Ethernet port

- 1 Connect the Network device to a computer by a ethernet cable (field supplied or available with either the Net Configuration Kit or the CSNET MANAGER)
- 2 Input the following parameters:
 - IP Address: 192.168.0.4
 - Port: Modbus Gateway/ HC-A64NET
- 3 Press the  button at screen

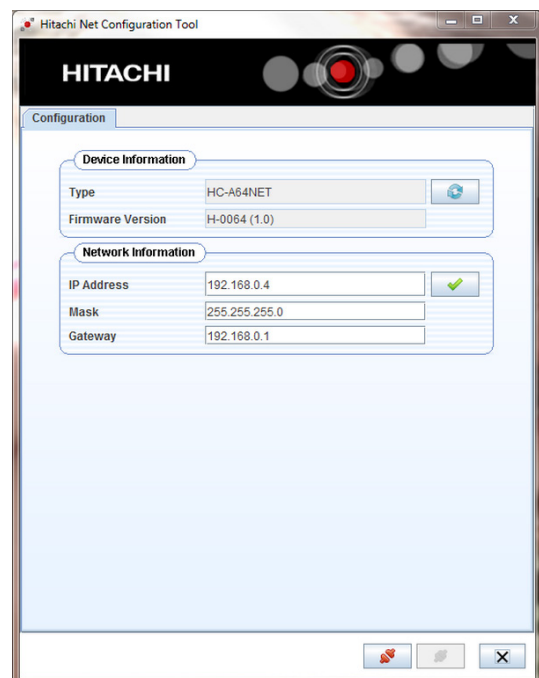


◆ Configuration of device and communication

HC-A(8/16/64)MB



HC-A64NET



“Device information”

Check that the network device is correctly displayed at the “Device information” table. Press refresh button if necessary.

“Network information”

When the network device is integrated to the LAN / Modbus net by Ethernet, configure the following parameters:

- IP Address: Allow to modify the IP of the Network device port (“192.168.0.4” by default).
- Mask: Ask to your IT technician for the proper value (“255.255.255.0” by default).
- Gateway: LAN gateway address (“192.168.0.1” by default).

“Serial Information”

When the network device is integrated to the Modbus net by serial port RS485, configure the following parameters:

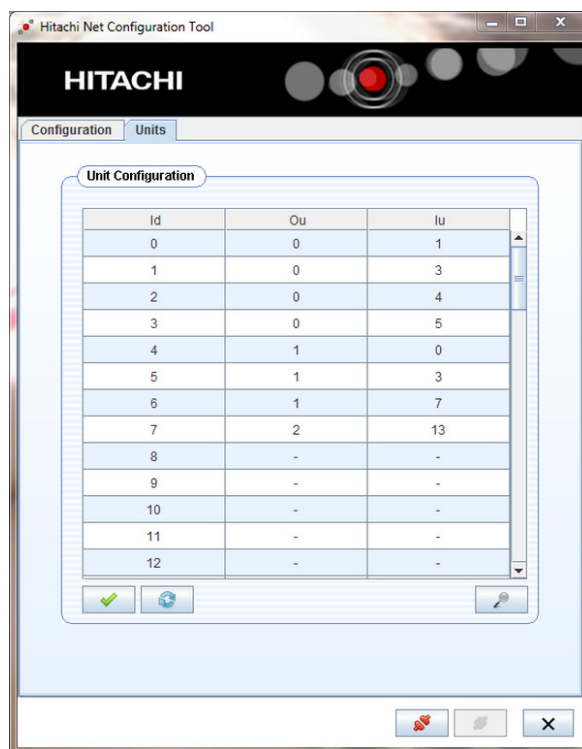
- RS485: 9600 / 19200 Bps (“19200” Bps by default)
- RS485: None / Odd / Even parity (“Even” by default)
- Modbus Id: 1~128 (“1” by default)
- Polarization: Communication polarization (“Disabled” by default)

NOTE

This part is not available for the HC-A64NET

“Units Id Configuration”

- Automatic address can be done by pushing 
- Manual address configuration can be done by the assignation of each Id to a specific H-LINK addresses
 - Outdoor unit address (Ou) and Indoor unit address (Iu)



- Confirm the configuration by pressing 
- Refresh button shall be pressed when modify the units connected to the net 

NOTE

This part is not available for the HC-A64NET

4 ELECTRICAL WIRING

Name	Connection	Cable specification
X1	Power supply (1)	Use 0.75 mm ² wires which are not lighter than the polychloroprene sheathed flexible cord (code designation 60245 IEC 57)
X3	Ethernet (1)	Category 5 or higher LAN cables PC connection: Use a crossed cable (1 cable set available in Net configuration Kit) for direct connection. LAN connection: Use a direct cable (field-supplied) for connection to a commercial distributor (Hub).
X4	H-LINK (1)	Twisted pair shielded cable 0.75 mm ² . Shield must be grounded in one side only.
X5	RS485 (1)	3 cores cable harness 0.75 mm ² grounded in one side only. Use different colour for each cable.
X6	USB (1)	USB Mini-B plug cable (1 cable set available in Net configuration Kit)

NOTE

(1) These cables must be field supplied.

4.1 DSW CONFIGURATION

Name	Function	Factory setting	Description
SW1	Configuration		SW1-1: Modbus end resistance (*). SW1-2: Not used (keep always "ON")

NOTE

(*)No applicable to HC-A64NET.

5 OPERATION

5.1 COMPATIBILITY

These devices are not compatible with any of the following Hitachi controllers:

- Centralised remote controls
- Building air conditioning controls(*)
- Other Hitachi BMS Gateways (LONWORKS, BACNET, KNX, FIDELIO)
- Other Hitachi MODBUS Gateways
- Other units of the same model

NOTE

(*)HC-A64NET is compatible with CSNET Manager.

5.2 INDOOR UNITS

5.2.1 Available data for HC-A(8/16/64)MB

Offset (1)	Description	Values	Read/Write
0	Exist	0: No exist 1: Exist	Read
1	System address	0~63	Read
2	Unit address		
3	On/Off setting order	0: Stop 1: Run	Read/Write
4	Mode setting order	0: Cool 1: Dry 2: Fan 3: Heat 4: Auto	Read/Write
5	Fan setting order	0: Low 1: Medium 2: High 3: High2 4: Auto	Read/Write
6	Setting temperature	°C (set according to the unit working range)	Read/Write
7	Louver setting	0 ~ 7 (7 is Auto)	Read/Write
8	Central setting (3)	Bit 0: On/Off (always can be stopped) Bit 1: Mode Bit 2: Setting Temp Bit 3: Fan Bit 4: Louver	Read/Write
9	On/Off status	0: Off 1: On	Read
10	Mode status	0: Cool 1: Dry 2: Fan 3: Heat 4: Auto	Read
11	Fan status	0: Low 1: Medium 2: High 3: High2 4: Auto	Read
12	Setting temperature status	°C (set according to the unit working range)	Read
13	Louver status	0 ~ 7 (7 is Auto)	Read
14	(Not used)	(Not used)	(Not used)
15	Inlet temperature reading (2)	-63°C ~ 63°C	Read
16	Outlet temperature reading (2)	-63°C ~ 63°C	Read
17	Gas pipe temperature reading (2)	-63°C ~ 63°C	Read
18	Liquid pipe temperature reading (2)	-63°C ~ 63°C	Read
19	Alarm code	Alarm unit from 7-segment	Read
20	Compressor stop cause	(Read unit service manual)	Read
21	Indoor unit expansion valve opening	0~100	Read

Offset (1)	Description	Values	Read/Write
22	Unit operation condition	0: OFF 1: Thermo OFF 2: Thermo ON 3: Alarm	Read
23	(Not used)	(Not used)	(Not used)
24	Ambient temperature (2)	-63°C ~ 63°C	Read
25	Remote control switch temperature (only when available in the unit) (2)	-63°C ~ 63°C	Read
26	Remote control switch configuration	b0: 0 Master/1 Slave b1: 0 with RCS/1 Without RCS	Read/Write
27	Remote control switch group	0: No group 1~255	Read/Write
28~30	(Not used)	(Not used)	(Not used)
31	Remote sensor temperature (2)	-63°C ~ 63°C	Read

NOTE

- (1) Register address is calculated as: "N + (Address * 32) + Offset" where:
- N: Data table position is 2000, position 20000 is also available to maintain compatibility with old Modbus gateway.
- Address: Indoor unit address as configured by configuration software.
- (2) These numbers refer to signed 16-bit value using 2-complement format for negative values
- (3) Bit 0 (ON/OFF) and Bit 4 (Louver) selectable only when all centrals are actived.
- In order to full lock setting from RCS (Central shown in RCS) set this register to 31.

5.2.2 Available Data for HC-A(16/64)MB

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
0	Exist	0: No exist	Read	O	O	
		1: Exist				
1	System address	H-LINK 1: 0~15	Read	O	O	
2	Unit address	H-LINK 2: 0~63		O	O	
3	Type	0: Indoor Unit	Read	O	O	
4	On/Off setting order	0: Stop	Read/Write	O	O	
		1: Run				
5	Mode setting order	0: Cool	Read/Write	O	O	
		1: Dry				
		2: Fan				
		3: Heat				
		4: Auto				
6	Fan setting order	0: Low	Read/Write	O	O	
		1: Medium				
		2: High				
		3: High2				
		4: Auto				
7	Setting temperature	°C (set according to the unit working range)	Read/Write	O	O	
8	Temperature setting with 0.5°C intervals	°C x 10 (19.5°C read as 195)	Read/Write	O		
9	Heating temperature setting for AUTO Cool/Heat	°C	Read/Write	O		
10	Heating Temperature setting for AUTO Cool/heat with 0.5°C intervals	°C x 10 (19.5°C read as 195)	Read/Write	O		
11	Cooling Temperature setting for AUTO Cool/heat	°C	Read/Write	O		
12	Cooling Temperature setting for AUTO Cool/heat with 0.5°C intervals	°C x 10 (19.5°C read as 195)	Read/Write	O		
13	Louver setting	0 ~ 7 (7 is Auto)	Read/Write	O		
14	Central setting (2)	Bit 0: On/Off (always can be stopped)	Read/Write	O	O	
		Bit 1: Mode				
		Bit 2: Setting Temp				
		Bit 3: Fan				
		Bit4: Louver				
15	On/Off status	0: Off	Read	O	O	
		1: On				
16	Mode status	0: Cool	Read	O	O	
		1: Dry				
		2: Fan				
		3: Heat				
		4: Auto				
17	Fan status	0: Low	Read	O	O	
		1: Medium				
		2: High				
		3: High2				
		4: Auto				
18	Setting temperature status	°C (set according to the unit working range)	Read	O	O	

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
19	Temperature setting with 0.5°C intervals status	°C x10 (19.5°C read as 195)	Read	O		
20	Heating temperature setting for AUTO Cool/Heat status	°C	Read	O		
21	Heating Temperature setting for AUTO Cool/heat with 0.5°C intervals status	°C x 10 (19.5°C read as 195)	Read	O		
22	Cooling Temperature setting for AUTO Cool/heat status	°C	Read	O		
23	Cooling Temperature setting for AUTO Cool/heat with 0.5°C intervals status	°C x 10 (19.5°C read as 195)	Read	O		
24	Louver status	0 ~ 7 (7 is Auto)	Read	O		
25	Air inlet temperature reading	-63°C ~ 63°C	Read	O		
26	Air outlet temperature reading	-63°C ~ 63°C	Read	O		
27	Gas pipe temperature reading	-63°C ~ 63°C	Read	O		
28	Liquid pipe temperature reading	-63°C ~ 63°C	Read	O		
29	Alarm code	Alarm unit from 7-segment	Read	O	O(1)	
30	Compressor stop cause	(Read unit service manual)	Read	O		
31	Indoor unit expansion valve opening	0~100	Read	O		
32	Unit operation condition	0: OFF	Read	O	O	
		1: Thermo OFF				
		2: Thermo ON				
		3: Alarm				
33	Remote temperature sensor (THM4) value	-63°C ~ 63°C	Read	O		
34	Remote control switch temperature (only when available in the unit)	-63°C ~ 63°C	Read	O	O	
35	Remote control switch configuration	b0: 0 Master/1Slave b1: 0 with RCS/1 Without RCS	Read/Write	O		
36	Remote control switch group	0: No group 1~255	Read/Write	O		
37	CN3 Configuration status	b0: Input 1 open/close	Read	O		
		b1: Input 2 open/close				
		b2: Enabled/Disabled (Indicates if the unit has CN3 enabled with any function)				
38~49	Reserved					
50	Control Unit Run/Stop	0: Stop	Read/Write			O
		1: Run				
51	Control Unit Mode	0: Cool	Read/Write			O
		1: Heat				
52	Control Circuit 1 Run/Stop	0: Stop	Read/Write			O
		1: Run				
53	Control Heat. OTC Zone 1	0: No	Read/Write			O
		1: Points				
		2: Gradient				
		3: Fix				
54	Control Cool. OTC 1	0: No	Read/Write			O
		1: Points				
		2: Fix				

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
55	Control Circuit 1: Water heating Fix Setting Temp	0~80	Read/Write			O
56	Control Circuit 1: Water cooling Fix Setting Temp	0~80	Read/Write			O
57	Control Circuit 1: Eco mode	0: ECO	Read/Write			O
		1: Comfort				
58	Control Circuit 1: Heat ECO Offset Temperature	1~10	Read/Write			O
59	Control Circuit 1: Cool ECO Offset Temperature	1~10	Read/Write			O
60	Control Circuit 1: External MBS/KNX Thermostat Available	0: Not Available	Read/Write			O
		1: Available				
61	Control Zone 1: Thermostat Setting	0~65535	Read/Write			O
62	Control Zone 1: Room Ambient Temperature	-32667~32667	Read/Write			O
63	Control Circuit 2 Run/Stop	0: Stop	Read/Write			O
		1: Run				
64	Control Heat. OTC Zone 2	0: No	Read/Write			O
		1: Points				
		2: Gradient				
		3: Fix				
65	Control Cool. OTC Zone 2	0: No	Read/Write			O
		1: Points				
		2: Fix				
66	Control Circuit 2: Water heating Fix Setting Temp	0~80	Read/Write			O
67	Control Circuit 2: Water cooling Fix Setting Temp	0~80	Read/Write			O
68	Control Circuit 2: Eco mode	0: ECO	Read/Write			O
		1: Comfort				
69	Control Circuit 2: Heat ECO Offset Temperature	1~10	Read/Write			O
70	Control Circuit 2: Cool ECO Offset Temperature	1~10	Read/Write			O
71	Control Circuit 2: External MBS/KNX Thermostat Available	0: Not Available	Read/Write			O
		1: Available				
72	Control Zone 2: Thermostat Setting	0~65535	Read/Write			O
73	Control Zone 2: Room Ambient Temperature	-32667~32667	Read/Write			O
74	Control DHWT Run/Stop	0: Stop	Read/Write			O
		1: Run				
75	Control DHWT Setting Temperature	0~80	Read/Write			O
76	Control DHW Boost	0: No request	Read/Write			O
		1: Request				
77	Reserved					
78	Control DHW Demand Mode	0: Standard	Read/Write			O
		1: High demand				
79	Control Swimming Pool Run/Stop	0: Stop	Read/Write			O
		1: Run				
80	Control Swimming Pool Setting Temperature	0~80	Read/Write			O
81	Control AntiLegionella Run/Stop	0: Stop	Read/Write			O
		1: Run				

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
82	Control AntiLegionella Setting Tem- perature	0~80	Read/Write			O
83	Control Block menu	0: No	Read/Write			O
		1: Block (user cannot access the menu)				
84	Control Yutaki Forced OFF	0: Normal Operation	Read/Write			O
		1: Forced OFF				
85	Space Heating Heater Forced OFF	0: Normal Operation	Read/Write			O
		1: Heater Forced OFF				
86	Control Communication Alarm bit	0: No	Read/Write			O
		1: Alarm				
87~99	Reserved					
100	Status Unit Run/Stop	0: Stop	Read			O
		1: Run				
101	Status Mode	B0: 0: Cool / 1: Heat	Read			O
		B1: 0: Normal / 1: Auto				
102	Status Circuit 1 Run/Stop	0: Stop	Read			O
		1: Run				
103	Status Heat. OTC 1	0: No	Read			O
		1: Points				
		2: Gradient				
		3: Fix				
104	Status Cool. OTC 1	0: No	Read			O
		1: Points				
		2: Fix				
105	Status Circuit 1: Water heating Fix Setting Temp	0~80	Read			O
106	Status Circuit 1: Water cooling Fix Setting Temp	0~80	Read			O
107	Status Circuit 1: Eco mode	0: ECO	Read			O
		1: Comfort				
108	Status Circuit 1: Heat ECO Offset Temperature	1~10	Read			O
109	Status Circuit 1: Cool ECO Offset Temperature	1~10	Read			O
110	Status Circuit 1: Thermostat Setting Temperature	50~350 (5,0~35,0)	Read			O
111	Status Circuit 1: Thermostat Room Temperature	0~1000 (0,0~100,0)	Read			O
112	Status Circuit 1: Wireless Setting Temperature	50~350 (5,0~35,0)	Read			O
113	Status Circuit 1: Wireless Room Tem- perature	0~1000 (0,0~100,0)	Read			O
114	Status Circuit 2 Run/Stop	0: Stop	Read			O
		1: Run				
115	Status Heating OTC 2	0: No	Read			O
		1: Points				
		2: Gradient				
		3: Fix				
116	Status Cooling OTC 2	0: No	Read			O
		1: Points				
		2: Fix				

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
117	Status Circuit 2: Water heating Fix Setting Temp	0~80	Read			O
118	Status Circuit 2: Water cooling Fix Setting Temp	0~80	Read			O
119	Status Circuit 2: Eco mode	0: ECO	Read			O
		1: Comfort				
120	Status Circuit 1: Heat ECO Offset Temperature	1~10	Read			O
121	Status Circuit 1: Cool ECO Offset Temperature	1~10	Read			O
122	Status Zone 2: Thermostat Setting	50~350 (5,0~35,0)	Read			O
123	Status Zone 2: Ambient Temperature	0~1000 (0,0~100,0)	Read			O
124	Status Circuit 2: Wireless Setting Temperature	50~350 (5,0~35,0)	Read			O
125	Status Circuit 2: Wireless Room temperature	0~1000 (0,0~100,0)	Read			O
126	Status DHWT Run/Stop	0: Stop	Read			O
		1: Run				
127	Status DHWT Setting Temperature	0~80	Read			O
128	Status DHW Boost	0: Disable	Read			O
		1: Enable				
129	Reserved					
130	Status DHW Demand Mode	0: Standard	Read			O
		1: High demand				
131	Status DHW Temperature	-80~100	Read			O
132	Status Swim.Pool Run/Stop	0: Stop	Read			O
		1: Run				
133	Status Swim. Pool Setting Temperature	0~80	Read			O
134	Status Swim. Pool Temperature	-80~100	Read			O
135	Status AntiLeg. Run/Stop	0: Stop	Read			O
		1: Run				
136	Status AntiLeg.Setting Temperature	0~80	Read			O
137	Status block menu	0: No	Read			O
		1: Block				
138	Status Communication Alarm bit	0: No	Read			O
		1: Alarm				
139	LCD Central Mode	0: Local	Read			O
		1: Air (Not available for Yutampo)				
		2:Water (Not available for Yutampo)				
		3: Full				

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
140	System Configuration	b0: Zone 1 Heating Available	Read			O
		b1: Zone 2 Heating Available				
		b2: Zone 1 Cooling Available				
		b3: Zone 2 Cooling Available				
		b4: DHWT Available				
		b5: SWP Available				
		b6: Room thermostat available Zone 1				
		b7: Room thermostat available Zone 2				
		b8: Wireless Setting C1				
		b9: Wireless Setting C2				
		b10: Wireless Room Temperature C1				
		b11: Wireless Room Temperature C2				
		b12: Slave Unit				
141	Operation State	0: OFF	Read			O
		1: Cool Demand –OFF				
		2: Cool Thermo-OFF				
		3: Cool Thermo-ON				
		4: Heat Demand-OFF				
		5: Heat Thermo-OFF				
		6: Heat Thermo-ON				
		7: DHW-OFF				
		8: DHW-ON				
		9: SWP-OFF				
		10: SWP-ON				
		11: Alarm				
142	Outdoor Ambient T°	-80~100	Read			O
	(Outdoor ambient temperature)					
143	Water Inlet T°	-80~100	Read			O
	(Water Inlet unit temperature)					
144	Water outlet T°	-80~100	Read			O
	(Water outlet unit temperature)					
145	H-Link Communication State	0: No alarm	Read			O
		1: There is no communication with RCS or Yutaki unit during more than 180 seconds				
		2: Data initialization				
146	Software PCB		Read			O
147	Software LCD		Read			O
148	Unit Capacity		Read			O
149	Unit Power Consumption		Read			O
150	Water Outler HP (TwoHP)	0~100 Only for Yutaki S & S Combi	Read			O
151	Ta1av: Outdoor Unit Ambient Average Temperature	-80~100	Read			O

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
152	Ta2: Second Ambient Temperature (inst)	-80~100	Read			O
153	Ta2av: Second Ambient Temperature (avg)	-80~100				O
154	O2: Water outlet Temp 2 (Two2)	-80~100	Read			O
155	O3: Water outlet Temp 3 (Two3)	-80~100	Read			O
156	Tg: Gas Temperature (THMg)	-80~100	Read			O
157	Tl: Liquid Temperature (THMl)	-80~100	Read			O
158	EVI: Indoor expansion valve opening	0~100	Read			O
159	CD: Capacity Data		Read			O
160	Mixing Valve Opening	0~100	Read			O
161	Defrosting	0: No defrosting	Read			O
		1: Defrosting				
162	Unit Model	0: Yutaki S	Read			O
		1: Yutaki SC				
		2: Yutaki S80				
		3: Yutaki M				
		4: Yutaki SC Lite (New)				
		5: Yutampo (New)				
		6: YCC (New)				
163	Th: Water Temp Setting (Ttwo)	-80~100	Read			O
164	Water Flow	Water Flow [0.1m3/h]	Read			O
165	Pump Speed	0~100	Read			O
166	System status 2	Bit 0: Defrost	Read			O
		Bit 1: Solar				
		Bit 2: Water Pump 1				
		Bit 3: Water Pump 2				
		Bit 4: Water Pump 3				
		Bit 5: Compressor ON				
		Bit 6: Boiler ON				
		Bit 7: DHW Heater				
		Bit 8: Space Heater				
		Bit 9: Smart function input enabled				
		Bit10: Forced OFF				
		Bit11: DHW recirculation Pump State				
		Bit12: Solar Pump Output State				
167	Alarm number	0: Alarm	Read			O
		XXX: Alarm number				
168	R134a Discharge Temperature		Read			O
169	R134a Suction temperature		Read			O
170	R134a Discharge Pressure		Read			O
171	R134a Suction pressure		Read			O
172	R134a Compressor frequency		Read			O
173	R134a Indoor Expansion valve opening		Read			O
174	R134a Compressor current value		Read			O
175	R134a Retry Code		Read			O
176	R134 Te SH		Read			O
177	R134 Secondary Current		Read			O

Offset	Description	Values	Read/Write	Availability		
				VRF	RAC	ATW
178	R134 Stop Code		Read			O
179~ 189	Reserved					
190	YCC - Enabled Units	0~8	Read			O
191	YCC - Working Units	0~8	Read			O
192	YCC - Required Units	0~8	Read			O

NOTE

- Register address is calculated as: $5000 + (\text{Modbus_Id} * 200) + \text{offset}$
- Modbus_Id as configured by configuration software
- For VRF / Package units, only the relevant data are available (heating units registers will not give any value). The situation is the same for heating units (registers related to air/air units will not give any value).
- Availability:
 - PAC: VRF and package units.
 - RAC: Domestic units connected to the H-link via PSC-6RAD or SPX-RAMHLK
 - ATW: Air to water units.
- (1) Take into account only if it is different from zero.
- (2) Bit 0 (ON/OFF) and Bit 4 (Louver) selectable only when all centrals are activated.
- In order to full lock setting from RCS (Central shown in RCS) set this register to 31

5.3 OUTDOOR UNITS

Some state registers about outdoor unit have been added. Using these registers it is now possible to know the status of the refrigerant cycle. Some control registers have also been added.

Offset	Description	Values	Read/Write
0	Outdoor Air Temperature	-63°C ~ 63°C	Read
1	Compressor Discharge Temperature	0 ~ 200 °C	Read
2	Heating Evaporating Temperature		Read
3	Number of operating Compressor		Read
4	Discharge Pressure	0.0 ~ 5.0 MPa (0.1 MPa)	Read
5	Suction Pressure	-0.2 ~ 2.0MPa (0.1 MPa or 0.01MPa depending unit)	Read
6	Total Current	0 ~ 255 A	Read
7	Total Real Frequency	0 ~ 255 Hz	Read
8	EVO1	0 ~ 100 %	Read
9	EVO2 / Hot Bypass	0 ~ 100 %	Read
10	EVB	0 ~ 100 %	Read
11	Outdoor Unit Option Enabled	0: Disable	Read/Write
		1: Enable (it's possible to use the following options, also if the value of register 16 "Power Level Set" is 1)	
12	Noise Control Enabled	0: Disable	Read/Write
		1: Enable (it's possible to send the noise level)	
13	Noise Control Level Set	0~9 (See the service manual of Outdoor unit, function db)	Read/Write
14	Power Control Enabled	0: Disable	Read/Write
		1: Enable (it's possible to send the power level)	
15	Power Level	0~100%	Read/Write
16	Power Level Set	0~100%	Read
17	Power Level Current Value	0~100%	Read

Offset	Description	Values	Read/Write
18	Power Control Possible	0: Not possible	Read
		1: Possible	

NOTE

- Register address is calculated as: $5000 + (\text{Modbus_Id} \times 200) + \text{offset}$
- Modbus_Id as configured by configuration software

5.4 OPTIONAL FUNCTIONS

Some optional functions of the indoor units have been added so that they can be managed from the BMS.

Offset	Description	Values	Read/Write
0	b1 (Heating temperature compensation)	0~4	Read/Write
1	b2 (Circulation function at heating Thermo-OFF)	0~1	Read/Write
2	b4 (Change of filter cleaning period)	0~4	Read/Write
3	c5 (Static pressure selection)	0~2	Read/Write
4	c8 (Control by the temperature sensor of the remote control switch)	0~2	Read/Write
5	Cb (Selection of forced stoppage logic)	0~1	Read/Write
6	Cd (Stop of indoor unit fan during cooling Thermo-OFF conditions)	0~1	Read/Write
7	CE (Stop of indoor unit fan during heating Thermo-OFF conditions)	0~1	Read/Write
8	d1 (Management of indoor unit operation after a power supply cut off -option 1)	0~1	Read/Write
9	d3 (Management of indoor unit operation after a power supply cut off -option 2)	0~1	Read/Write
10	d4 (RPI(M) Prevention of low air outlet temperature in cooling mode)	0~1	Read/Write
11	d5 (Prevention of low air outlet temperature in heating mode)	0~1	Read/Write
12	E1 (KPI: Ventilation mode / Econofresh cooling mode)	0~2	Read/Write
13	E2 (KPI: Increase of air supply volume / Econofresh enthalpy Sensor)	0~1	Read/Write
14	E4 (KPI: Pre-cooling / preheating period / Econofresh: CO2 sensor)	0~2	Read/Write
15	E8 (Control for stop of the indoor unit fan during heating Thermo-OFF conditions (with remote sensor THM-R2AE connected to the THM4 connector in the indoor unit PCB))	0~1	Read/Write
16	E9 (Intermittent fan operation in heating stop)	0~1	Read/Write
17	Eb (Indoor unit fan control during cooling Thermo-OFF conditions)	0~2	Read/Write
18	EE (Control in "Automatic" indoor fan speed mode)	0~1	Read/Write
19	EF (Control in "Automatic" indoor fan speed mode (supporting High H))	0~1	Read/Write
20	H4 (KPI: Operation modes for the ventilation unit with energy recovery)	0~1	Read/Write
21	K5 (Detection level of the motion sensor kit)	0~2	Read/Write
22	K6 (Selection of allowed operation modes when the control sensor of the indoor unit is set by C8 function)	0~3	Read/Write

NOTE

- Register address is calculated as: $40000 + (\text{Modbus_Id} \times 100) + \text{offset}$
- Modbus_Id as configured by configuration software

5.5 ALARM CODE LIST

Refer to Service Manual for the alarm explanation and repair procedure in case of Indoor Unit or Outdoor Unit alarm.

5.6 TROUBLESHOOTING

ALARM CODE	DESCRIPTION	COUNTERMEASURE
LED2 is flickering	Abnormal operation	Shut down the device power supply and restore it after 5 s. If LED2 is still flickering contact to the Hitachi customer service

6 NET CONFIGURATION KIT

This accessory provides all the necessary cables for Hitachi installers when commissioning a Modbus installation.

Components List:

USB cable		Ethernet crossed cable		USB Pen drive Memory	
1x		1x		1x	

The USB Pen Drive Memory includes a software tool for Modbus communication check when commissioning.

The USB cable is only required when configuring the device (network parameters)

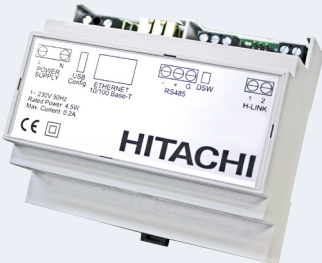
The Ethernet cable is provided for a quick connection with a laptop for the Modbus communication check.

1 PRODUKTVEJLEDNING

1.1 KLASSIFIKATIONER AF ENHEDER

Kontrol af grænseflade til styreenhed					
HC	Mellemrum	H-LINK II kompatibel		Maksimalt antal styrbare enheder (8/16/64)	
				MB: Modbus gateway	NET: Gateway til CSNET Manager
HC	-	A	X	X	

1.2 MODELLER

BESKRIVELSE

HC-A8MB
HC-A16MB
HC-A64MB
HC-A64NET

1.3 LISTE MED TILBEHØRS

BESKRIVELSE

Netkonfigurationssæt

2 GENERELLE DATA OM DET NYE PRODUKT

2.3.1 Hardwarespecifikationer

Element	Specifikationer
Strømforsyning	1~ 230 V $\pm$ 10% 50 Hz
Forbrug	4,5 w (maks.)
Ydre mål	Bredde: 106 mm, dybde: 90 mm, højde: 58 mm
Vægt	165 g
Monteringsforhold	Indendørs (montering i et aflukke med begrænset adgang vha. værktøj)
Omgivelsestemperatur	0~60 °C
Fugtighed	20~85% (uden kondensdannelse)

2.3.2 Kommunikation

◆ RS485

Element	Specifikationer
Type	Modbus RTU til HC-A(8/16/64)MB Ikke disponibel til HC-A64NET
Stik	Seriell udgang RS485 (3 skrueklemmer)
Kommunikationslinje	Afskærmet parsnoet kabel, med tredje ledning (til den fælles), med polaritet.
Kommunikationssystem	Halv duplex. multipunkt seriel forbindelse
Kommunikationsmetode	Ikke-paritet eller ulige/lige paritetsvalg. Datalængde: 8 bit - 1 stop bit
Baudhastighed	19200/9600 Baud
Længde	Maks. 1200 m i henhold til EIA-485

◆ Ethernet

Element	Specifikationer
Type	Modbus TCP til HC-A(8/16/64)MB TCP/IP kommunikation til HC-A64NET
Stik	Ethernet (RJ45)
Kommunikationslinje	To parsnoet kabel CAT5 eller bedre (T-568A/T-568B)
Kommunikationssystem	Fuld-duplex
Længde	Maks. 100 m i henhold til IEEE 802.3

◆ H-LINK

Element	Specifikationer
Kommunikation med	HC-A(16/64)MB: SET FREE, UTOPIA, CENTRIFUGAL og HEATING-systemer HC-A8MB og HC-A64NET: INDSTIL GRATIS, UTOPIA og CENTRIFUGAL-systemer
Kommunikationslinje	Afskærmet parsnoet kabel, ikke polær
Kommunikationssystem	Halv duplex
Kommunikationsmetode	Asynkron
Transmissionshastighed	9600 baud
Ledningslængde	Maks. 1000 m (samlet længde på HLINK I/O-skinne)
Maksimalt antal gateways	1 Gateway (HC-A(8/16/64)MB)/H-LINK SYSTEM
Maksimalt antal IU	HC-A64MB → op til 64 * indendørsenheder
	HC-A16MB → op til 16 * indendørsenheder
	HC-A8MB → op til 8 * indendørsenheder
	HC-A64NET → op til 64* indendørsenheder

3 MONTERING

3.1 OVERSICHT OVER SIKKERHED

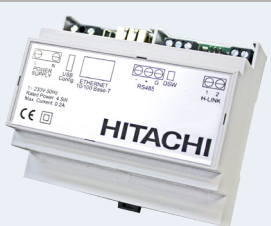
FARE

- Læs denne vejledning grundigt før udførelse af monteringsarbejdet.
- Denne anordning må ikke monteres på steder, som er offentligt tilgængelige. Monter den i stedet inden i et el-skab, som kun kan åbnes ved hjælp af et stykke værktøj, og som beskytter imod eventuelle elektromagnetiske forstyrrelser.
- Tilslut ikke strømforsyning, før installationen af enheden er udført korrekt. Afbryd altid strømforsyningen til enheden, inden al vedligeholdelsesarbejde og servicering.
- Børn bør holdes under opsyn, så de ikke leger med apparatet.
- Kontrollér, at de elektriske komponenter, der leveres på stedet, (hovedkontakter, kredsløbsafbrydere, ledninger, forbindelsesstik, og ledningsklemmer) er valgt ud fra de angivne elektriske data, der er angivet i dette dokument, samt at de overholder nationale og lokale regler. Om nødvendigt, skal du kontakte de lokale myndigheder vedrørende standarder, regler, bestemmelser osv.
- Monter ikke Network / Modbus gateways de følgende steder:
 - hvor der er damp, olie eller spildte væsker, som kan påvirke enheden.
 - hvor der er konstateret akkumulering, dannelse eller lækager af brandbare gasser.
 - i nærheden af varmekilder eller elektromagnetiske støjkluder.
 - der ligger i nærheden af havet, i saltholdige, sure eller basiske omgivelser.

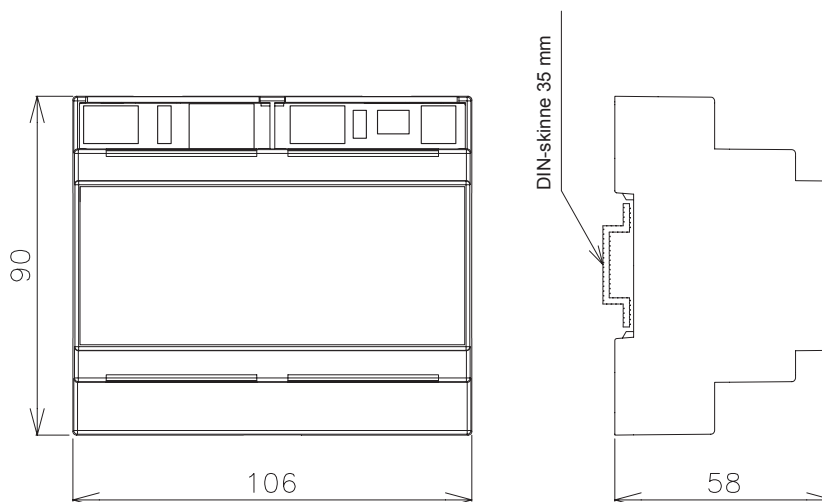
FORSIGTIG!

- Dette apparat må kun bruges af voksne og kompetente personer, der har modtaget den tekniske information eller instruktioner i korrekt og sikker håndtering af dette apparat.
- Dette er et Klasse A-produkt. I en privatbolig kan dette produkt forårsage radiointerferens, hvilket kan kræve, at brugeren træffer passende foranstaltninger.

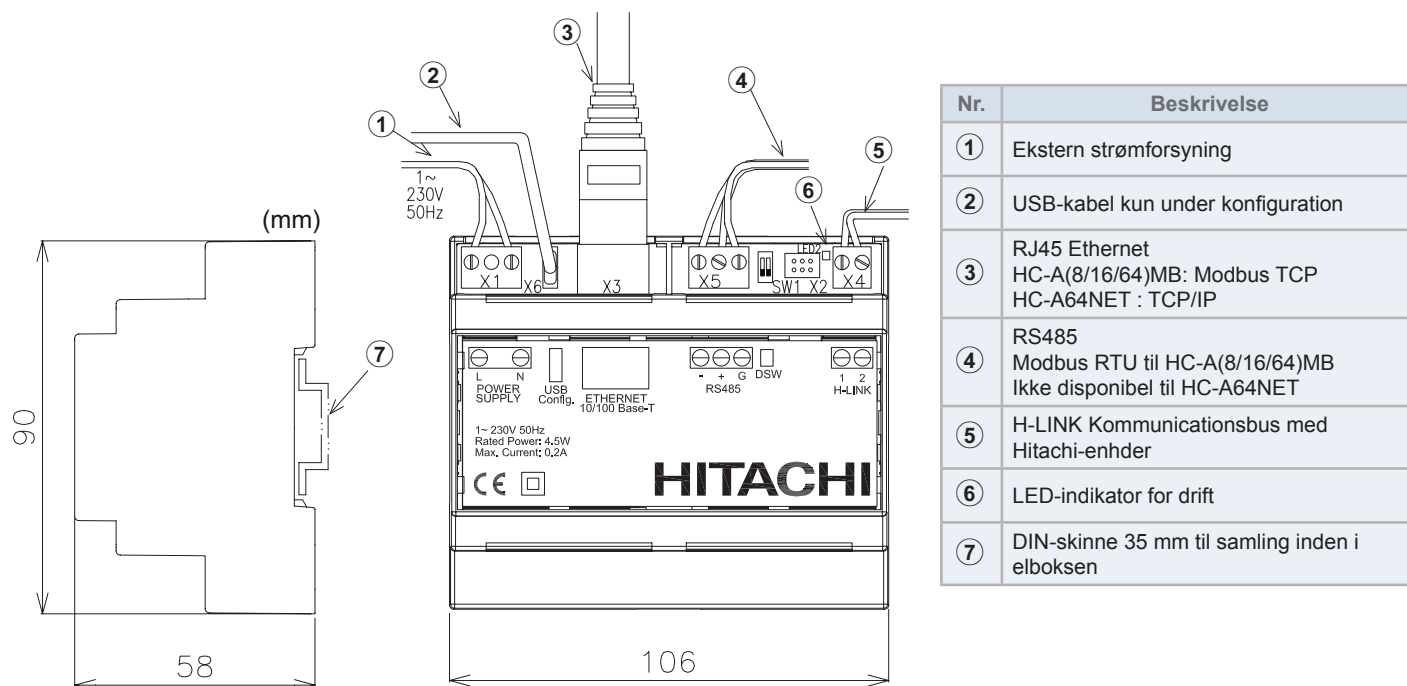
3.2 KOMPONENTER LEVERET FRA FABRIKKEN

Gateway-enhed		Brugsanvisning		USB-stik	
1x		1x		1x	

3.3 MÅL

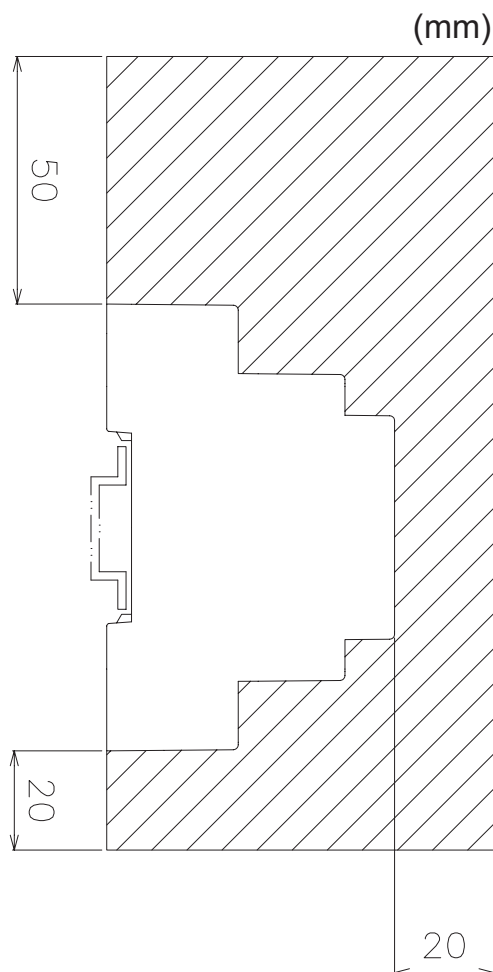


3.4 BESKRIVELSE AF DELENE



3.5 MONTERINGSAFSTAND

Hold det grå område frit for at sikre, at enheden fungerer korrekt.



3.6 FREMGANGSMÅDE FOR MONTERING

FARE

- **Monér ikke denne enhed på steder, hvor den er offentligt tilgængeligt. Monér den i et aflukke eller andre steder, som kun kan tilgås ved hjælp af et stykke værktøj.**
- **Tilslut ikke strømforsyning, før installationen af enheden er udført korrekt. Afbryd altid strømforsyningen til enheden, inden al vedligeholdelsesarbejde og servicering.**

FORSIGTIG!

- **Kontrollér, at de elektriske komponenter, der leveres på stedet, (hoved-kontakter, kredsløbsafbrydere, ledninger, forbindelsessstik, og ledning-sklemmer) er valgt ud fra de angivne elektriske data, der er angivet i dette dokument, samt at de overholder nationale og lokale regler.**
- Alle enheder, der ikke er tilsluttet eller ikke har strømtilførsel, når Network / Modbus slås til, vil ikke blive registreret og skal konfigureres senere.
 - Inden strømforsyningen tilsluttes og der tændes for Network / Modbus gateways, skal du sikre dig, at:
 - ◆ 1. Alle de nødvendige kredsløb er tilsluttet korrekt.
 - ◆ 2. Alle H-Link-forbindelser er blevet etableret.
 - ◆ 3. Tilslutning af Modbus er udført korrekt.
- Signalkablerne bør være så korte som muligt. Hold en afstand på over 150 mm fra andre strømkabler. Installér dem ikke sideløbende (omend de kan krydse hinanden). Hvis de nødvendigvis må installeres sideløbende, skal følgende forholdsregler tages for at undgå forstyrrende støj:
 - Til kommunikation anvendes et afskærmet kabel, der er forbundet til jord i den ene side.

3.7 NETVÆRKS KONFIGURATION

Der medfølger et computersoftwareværktøj, netkonfigurationsværktøj, på USB-stikket, som sikrer nem og brugervenlig konfiguration.

3.7.1 Krav til computer

Der skal bruges en pc med Microsoft Windows 7 eller højere, en ledig USB-port og Java.

3.7.2 Parametre under konfiguration:

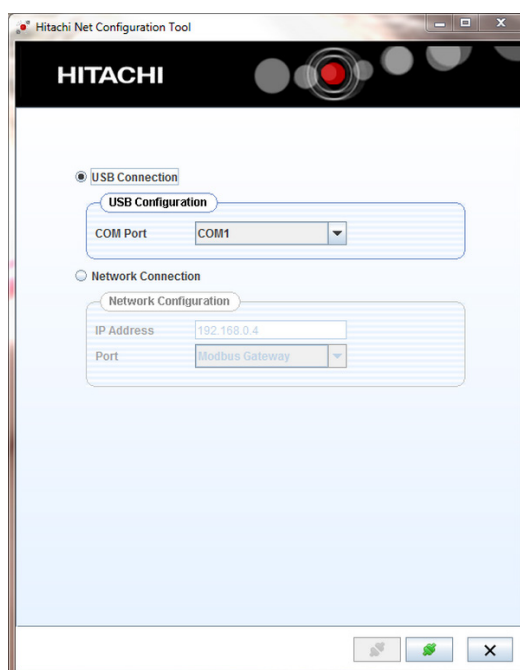
- Paritet: Ulige/lige/deaktiveret
- Kommunikations hastighed: 9600/19200 Bps
- Modbus-adresse
- Modbus TCP IP

3.7.3 Fremgangsmåde for konfiguration

◆ Konfiguration via USB-port

Denne metode skal anvendes, når enhedens IP er ukendt.

- 1 Slut netværkskablet til en computer via et USB-kabel (felt leveret eller tilgængelige med i netkonfigurationssættet)
- 2 Vælg computerens kommunikationsport.
- 3 Tryk på -knappen på skærmen.



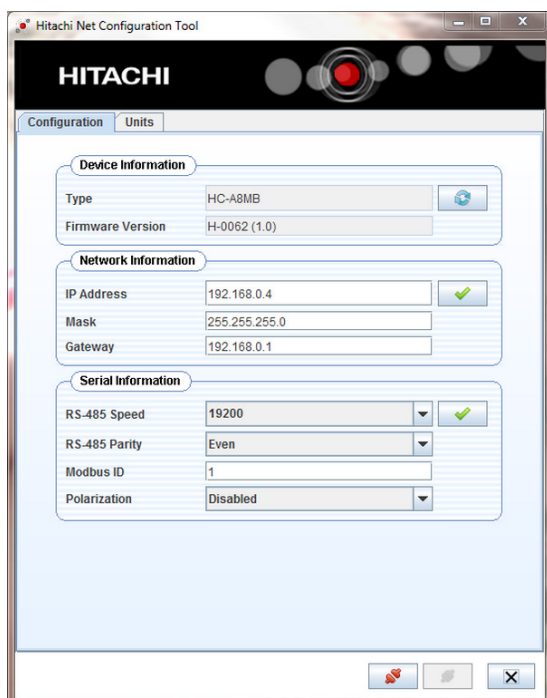
◆ Konfiguration via Ethernet-port

- 1 Slut netværksskabet til en computer via et Ethernet-kabel (felt leveret eller tilgængelige med i netkonfigurationssættet eller med i CSNET MANAGER).
- 2 Indtast følgende parametre:
 - IP-adresse: 192.168.0.4
 - Port: Modbus Gateway/ HC-A64NET
- 3 Tryk på -knappen på skærmen.



◆ Konfiguration af enheden og kommunikation

HC-A(8/16/64)MB



HC-A64NET



“Enhedsinformation”

Kontrollér, at netværksskabet vises korrekt i “Enhedsinformation”-oversigten. Tryk på opdater-knappen om nødvendigt.

“Netværksinformation”

Når netværksenheten er blevet integreret i LAN/Modbus-nettet via Ethernet, skal følgende parametre konfigureres:

- IP-adresse: Tillad ændring af IP til enhedsport til netværket (“192.168.0.4” som standard).
- Maske: Bed din IT-tekniker om en behørig værdi (“255.255.255.0” som standard).
- Gateway: LAN gateway-adresse (“192.168.0.1” som standard)

“Serial information”

Når netværksenheten er blevet integreret i Modbus-nettet via den serielle port RS485, skal følgende parametre konfigureres:

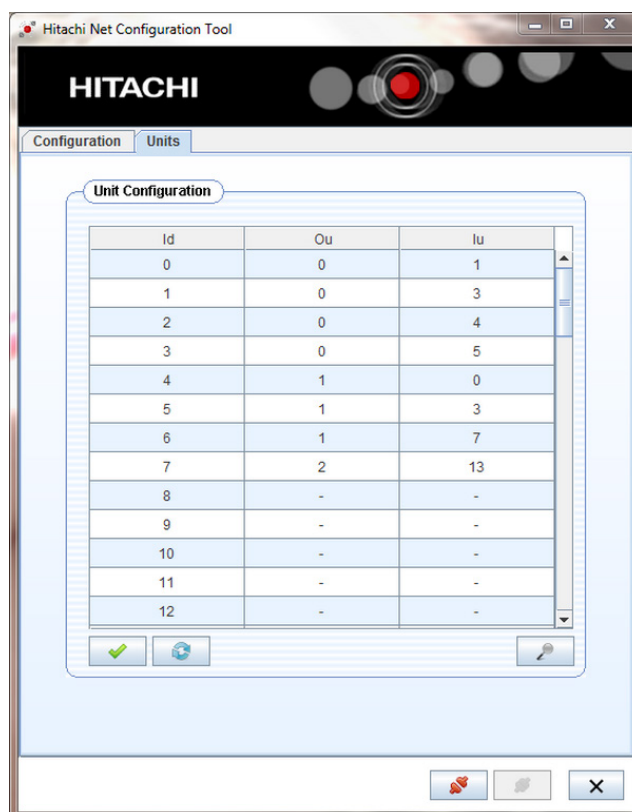
- RS485: 9600 / 19200 Bps (“19200” Bps som standard)
- RS485: Ingen / Ulige / lige paritet (“lige” som standard)
- Modbus-id: 1~128 (“1” som standard)
- Polarisation: Polarisation for kommunikation (“deaktiveret” som standard)

BEMÆRK

Denne del er ikke tilgængelig for HC-A64NET.

“Konfiguration af enhedernes id”

- Automatisk adresse kan foretages ved at trykke på 
- Manuel konfiguration af adresse kan foretages ved at tildele hver id til en specifik H-LINK-adresse.
 - Adresse for udendørsenhed (Ou) og adresse for indendørsenhed (lu)



- Bekræft konfigurationen ved at trykke på 
- Tryk på opdater-knappen under ændring af enheder, som er forbundet til nettet 

BEMÆRK

Denne del er ikke tilgængelig for HC-A64NET.

4 ELEKTRISK LEDNINGSFØRING

Navn	Forbindelse	Kabelspecifikationer
X1	Strømforsyning (1)	Brug 0,75 mm ² ledninger af mindst samme tykkelse som det fleksible polychloropren-isolerede kabel (kodebetegnelse 60245 IEC 57).
X3	Ethernet (1)	LAN-kabler af kategori 5 eller højere Pc-tilslutning: Brug et krydsede kabel (1 kabelsæt findes i netkonfigurationssættet) for at opnå direkte tilslutning. LAN-forbindelse: Brug et direkte kabel (medfølger) for at oprette en forbindelse til en kommerciel fordeler (hub)
X4	H-LINK (1)	Parsnoet afskærmet kabel 0,75 mm ² . Afskærmningen skal kun være jordet i den ene side.
X5	RS485 (1)	3-ledet kabel ledningsnet 0,75 mm ² jordet i den ene side. Brug forskellige farver til de forskellige ledninger.
X6	USB (1)	USB Mini-B stik (1 kabelsæt findes i netkonfigurationssættet)

BEMÆRK

(1) Disse kabler medfølger ikke.

4.1 DSW KONFIGURATION

Navn	Funktion	Fabriksindstilling	Beskrivelse
SW1	Indstilling		SW1-1: Modbus slutmodstand (*). SW1-2: Ikke i brug (skal altid stå på "ON")

BEMÆRK

(*) Ikke til HC-A64NET.

5 DRIFT

5.1 KOMPATIBILITET

Disse apparater er ikke kompatible med nogen af de følgende Hitachi styreenheder:

- Centraliseret fjernbetjening
- Aircondition styringer til bygninger (*)
- Andre Hitachi BMS Gateways (LONWORKS, BACNET, KNX, FIDELIO)
- Andre Hitachi MODBUS Gateways
- Andre enheder af samme model

BEMÆRK

(*) HC-A64NET er kompatibel med CSNET Manager.

5.2 INDRE ENHEDER

5.2.1 Tilgængelige data for HC-A(8/16/64)MB

Offset (1)	Navn	Beskrivelse	Værdier	Læs/Skriv
0	EXIST	Eksisterer	0: Eksisterer ikke 1: Eksisterer	Læs
1	SYSTEM_ADDRESS	Systemadresse	0~63	Læs
2	UNIT_ADDRESS	Enhedsadresse		
3	SET_ONOFF	On-/Off-indstillingens rækkefølge	0: Stop 1: On	Læs/Skriv
4	SET_MODE	Funktions-indstillingens rækkefølge	0: Afkøling 1: Tørring 2: Ventilator 3: Varme 4: Auto	Læs/Skriv
5	SET_FAN	Ventilator-indstillingens rækkefølge	0: Lav 1: Mellem 2: Høj 3: High2 4: Auto	Læs/Skriv
6	SET_TSET	Indsstillings-temperatur	°C (Indstilles ifølge arbejdsområdet for enheden)	Læs/Skriv
7	SET_LOUVER	Indstilling af spjæld	0 ~ 7 (7 er Auto.)	Læs/Skriv
8	SET_CENTRAL	Indstilling af centralenhed (3)	Bit 0: On/Off (kan altid stoppes) Bit 1: Tilstand Bit 2: Temperaturind Bit 3: Ventilator Bit 4: Spjæld	Læs/Skriv
9	READ_ONOFF	On-/Off-status	0: Off 1: On	Læs
10	READ_MODE	Tilstand status	0: Afkøling 1: Tørring 2: Ventilator 3: Varme 4: Auto	Læs
11	READ_FAN	Ventilator status	0: Lav 1: Mellem 2: Høj 3: High2 4: Auto	Læs
12	READ_TSET	Indsstillings-temperatur status	°C (Indstilles ifølge arbejdsområdet for enheden)	Læs
13	READ_LOUVER	Spjæld status	0 ~ 7 (7 er Auto)	Læs
14	(Ikke anvendt)	(Ikke anvendt)	(Ikke anvendt)	(Ikke anvendt)
15	TIN	Aflæsning af luftindtags-temperatur (2)	-63°C ~ 63°C	Læs
16	TOUT	Aflæsning af udladnings-temperatur (2)	-63°C ~ 63°C	Læs
17	TGAS	Aflæsning af gasrørs-temperatur (2)	-63°C ~ 63°C	Læs
18	TLIQUID	Aflæsning af væskerørs-temperatur (2)	-63°C ~ 63°C	Læs
19	ERROR_CODE	Alarmkode	Alarmenhed fra 7-delt	Læs

Offset (1)	Navn	Beskrivelse	Værdier	Læs/Skriv
20	STOP_CAUSE	Årsag til kompressorstop	(Læs service-vejledningen)	Læs
21	VALVE_OPEN	Indendørsenhed ekspansionsventilåbning	0~100	(Ikke anvendt)
22	OPER_CONDITION	Enhedens driftstilstand	0: OFF 1: Thermo OFF 2: Thermo ON 3: Alarm	Læs
23	(Ikke anvendt)	(Ikke anvendt)	(Ikke anvendt)	(Ikke anvendt)
24	AMBIENT TEMPERATURE	Omgivelsestemperatur (2)	-63°C ~ 63°C	Læs
25	RCS_TEM	Fjernbetjening temperatur (kun tilgængelig i enheden) (2)	-63°C ~ 63°C	Læs
26	RCS_CONFIG	Fjernbetjening switch-konfiguration	b0: 0 Hovedenhed / 1 Slaveenhed b1: 0 med fjernbetjening/ 1 uden fjernbetjening	Læs/Skriv
27	RCS_GROUP	Fjernbetjening skifte gruppe	0: Ingen gruppe 1~255	Læs/Skriv
28~30	(Ikke anvendt)	(Ikke anvendt)	(Ikke anvendt)	(Ikke anvendt)
31	REM_TEM	Fjernsensor temperatur (2)	-63°C ~ 63°C	Læs

**BEMÆRK**

- (1) Registreret adresse udregnes: "N + (adresse * 32) + Offset" hvor:
- N: Position i datatabel er 2000, position 20000 er også tilgængelig for at bevare kompatibilitet med gammel Modbus gateway.
- Adresse: Indendørsenheden adresse konfigureres af konfigurationssoftware.
- (2) Disse tal henviser til signeret 16-bit værdi med 2-supplementsformat for negative værdier
- (3) Bit 0 (til/fra) og Bit4 (spjæld) kan kun vælges, når alle centraler er aktiverede.
- For at konfigurere fuldstændig blokering af fjernbetjeningen (central vises på fjernbetjening) skal dette register indstilles på 31.

5.2.2 Tilgængelige data for HC-A(16/64)MB

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
0	Eksisterer	0: No exist	Læs	O	O	
		1: Exist				
1	Systemadresse	H-LINK 1: 0~15	Læs	O	O	
2	Enhedsadresse	H-LINK 2: 0~63		O	O	
3	Type	0: Indoor Unit	Læs	O	O	
4	On-/Off-indstillingens rækkefølge	0: Stop	Læs/Skriv	O	O	
		1: Run				
5	Funktionsindstillingens rækkefølge	0: Cool	Læs/Skriv	O	O	
		1: Dry				
		2: Fan				
		3: Heat				
		4: Auto				
6	Ventilatorindstillingens rækkefølge	0: Low	Læs/Skriv	O	O	
		1: Medium				
		2: High				
		3: High2				
		4: Auto				
7	Indstillingstemperatur	°C (set according to the unit working range)	Læs/Skriv	O	O	
8	Temperature setting with 0.5°C intervals	°C x 10 (19.5°C read as 195)	Læs/Skriv	O		
9	Heating temperature setting for AUTO Cool/Heat	°C	Læs/Skriv	O		
10	Heating Temperature setting for AUTO Cool/heat with 0.5°C intervals	°C x 10 (19.5°C read as 195)	Læs/Skriv	O		
11	Cooling Temperature setting for AUTO Cool/heat	°C	Læs/Skriv	O		
12	Cooling Temperature setting for AUTO Cool/heat with 0.5°C intervals	°C x 10 (19.5°C read as 195)	Læs/Skriv	O		
13	Indstilling af spjæld	0 ~ 7 (7 is Auto)	Læs/Skriv	O		
14	Central setting (2)	Bit 0: On/Off (always can be stopped)	Læs/Skriv	O	O	
		Bit 1: Mode				
		Bit 2: Setting Temp				
		Bit 3: Fan				
		Bit4: Louver				
15	On-/Off-status	0: Off	Læs	O	O	
		1: On				
16	Tilstand status	0: Cool	Læs	O	O	
		1: Dry				
		2: Fan				
		3: Heat				
		4: Auto				

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
17	Ventilator status	0: Low	Læs	O	O	
		1: Medium				
		2: High				
		3: High2				
		4: Auto				
18	Setting temperature status	°C (set according to the unit working range)	Læs	O	O	
19	Temperature setting with 0.5°C intervals status	°C x10 (19.5°C read as 195)	Læs	O		
20	Heating temperature setting for AUTO Cool/Heat status	°C	Læs	O		
21	Heating Temperature setting for AUTO Cool/heat with 0.5°C intervals status	°C x 10 (19.5°C read as 195)	Læs	O		
22	Cooling Temperature setting for AUTO Cool/heat status	°C	Læs	O		
23	Cooling Temperature setting for AUTO Cool/heat with 0.5°C intervals status	°C x 10 (19.5°C read as 195)	Læs	O		
24	Spjæld status	0 ~ 7 (7 is Auto)	Læs	O		
25	Air inlet temperature reading	-63°C ~ 63°C	Læs	O		
26	Air outlet temperature reading	-63°C ~ 63°C	Læs	O		
27	Gas pipe temperature reading	-63°C ~ 63°C	Læs	O		
28	Liquid pipe temperature reading	-63°C ~ 63°C	Læs	O		
29	Alarmkode	Alarmerhed fra 7-delt	Læs	O	O(1)	
30	Årsag til kompressorstop	(Læs servicevejledningen)	Læs	O		
31	Indendørsenhed ekspansionsventilåbning	0~100	Læs	O		
32	Enhedens driftstilstand	0: OFF	Læs	O	O	
		1: Thermo OFF				
		2: Thermo ON				
		3: Alarm				
33	Remote temperature sensor (THM4) value	-63°C ~ 63°C	Læs	O		
34	Remote control switch temperature (only when available in the unit)	-63°C ~ 63°C	Læs	O	O	
35	Remote control switch configuration	b0: 0 Master/1Slave	Læs/Skriv	O		
		b1: 0 wih RCS/1 Without RCS				
36	Fjernbetjeningsgruppe	0: No group	Læs/Skriv	O		
		1~255				
37	CN3 Configuration status	b0: Input 1 open/close	Læs	O		
		b1: Input 2 open/close				
		b2: Enabled/Disabled				
		(Indicates if the unit has CN3 enabled with any function)				
38~49	Reserveret					

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
50	Run/stop-kontrolenhed	0: Stop	Læs/Skriv			O
		1: Run				
51	Styreenheds driftsmåde	0: Cool	Læs/Skriv			O
		1: Heat				
52	Styrekreds 1 Run/stop	0: Stop	Læs/Skriv			O
		1: Run				
53	Control Heat. OTC Zone 1	0: No	Læs/Skriv			O
		1: Points				
		2: Gradient				
		3: Fix				
54	Control Cool. OTC 1	0: No	Læs/Skriv			O
		1: Points				
		2: Fix				
55	Control Circuit 1: Water heating Fix Setting Temp	0~80	Læs/Skriv			O
56	Control Circuit 1: Water cooling Fix Setting Temp	0~80	Læs/Skriv			O
57	Styrekreds 1: ECO driftsmåde	0: ECO	Læs/Skriv			O
		1: Comfort				
58	Styrekreds 1: Varme ECO afvigelsestemperatur	1~10	Læs/Skriv			O
59	Control Circuit 1: Cool ECO Offset Temperature	1~10	Læs/Skriv			O
60	Control Circuit 1: External MBS/KNX Thermostat Available	0: Not Available	Læs/Skriv			O
		1: Available				
61	Control Zone 1: Thermostat Setting	0~65535	Læs/Skriv			O
62	Control Zone 1: Room Ambient Temperature	-32667~32667	Læs/Skriv			O
63	Control Circuit 2 Run/Stop	0: Stop	Læs/Skriv			O
		1: Run				
64	Control Heat. OTC Zone 2	0: No	Læs/Skriv			O
		1: Points				
		2: Gradient				
		3: Fix				
65	Control Cool. OTC Zone 2	0: No	Læs/Skriv			O
		1: Points				
		2: Fix				
66	Control Circuit 2: Water heating Fix Setting Temp	0~80	Læs/Skriv			O
67	Control Circuit 2: Water cooling Fix Setting Temp	0~80	Læs/Skriv			O
68	Control Circuit 2: Eco mode	0: ECO	Læs/Skriv			O
		1: Comfort				
69	Control Circuit 2: Heat ECO Offset Temperature	1~10	Læs/Skriv			O

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
70	Control Circuit 2: Cool ECO Offset Temperature	1~10	Læs/Skriv			O
71	Control Circuit 2: External MBS/KNX Thermostat Available	0: Not Available	Læs/Skriv			O
		1: Available				
72	Control Zone 2: Thermostat Setting	0~65535	Læs/Skriv			O
73	Control Zone 2: Room Ambient Temperature	-32667~32667	Læs/Skriv			O
74	Kontrol af DHW-beholders run/stop	0: Stop	Læs/Skriv			O
		1: Run				
75	Kontrol af DHW-beholders indstillingstemperatur	0~80	Læs/Skriv			O
76	Styring af DHW turbo	0: No request	Læs/Skriv			O
		1: Request				
77	Reserveret					
78	Styring af driftsmåden DHW efterspørgsel	0: Standard	Læs/Skriv			O
		1: High demand				
79	Kontrol af svømmebassin run/stop	0: Stop	Læs/Skriv			O
		1: Run				
80	Kontrol af svømmebassin indstillingstemperatur	0~80	Læs/Skriv			O
81	Kontrol anti-legionærsyge run/stop	0: Stop	Læs/Skriv			O
		1: Run				
82	Kontrol anti-legionærsyge indstillingstemperatur	0~80	Læs/Skriv			O
83	Kontrol blokering/deblokering af menu	0: No	Læs/Skriv			O
		1: Block (user cannot access the menu)				
84	Control Yutaki Forced OFF	0: Normal Operation	Læs/Skriv			O
		1: Forced OFF				
85	Space Heating Heater Forced OFF	0: Normal Operation	Læs/Skriv			O
		1: Heater Forced OFF				
86	Kontrol af fejl/alarm	0: No	Læs/Skriv			O
		1: Alarm				
87~99	Reserveret					
100	Status enhed run/stop	0: Stop	Læs			O
		1: Run				
101	Status Mode	B0: 0: Cool / 1: Heat	Læs			O
		B1: 0: Normal / 1: Auto				
102	Status kredsløb 1 run/stop	0: Stop	Læs			O
		1: Run				
103	Status Heat. OTC 1	0: No	Læs			O
		1: Points				
		2: Gradient				
		3: Fix				

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
104	Status Cool. OTC 1	0: No	Læs			O
		1: Points				
		2: Fix				
105	Status Circuit 1: Water heating Fix Setting Temp	0~80	Læs			O
106	Status Circuit 1: Water cooling Fix Setting Temp	0~80	Læs			O
107	Status kredsløb 1: ECO driftsmåde	0: ECO	Læs			O
		1: Comfort				
108	Status kredsløb 1: Varme ECO afvigelsestemperatur	1~10	Læs			O
109	Status Circuit 1: Cool ECO Offset Temperature	1~10	Læs			O
110	Status kredsløb 1: Termostat indstillingstemperatur	50~350 (5,0~35,0)	Læs			O
111	Status kredsløb 1: Termostat rumtemperatur	0~1000 (0,0~100,0)	Læs			O
112	Status kredsløb 1: Trådløs indstillingstemperatur	50~350 (5,0~35,0)	Læs			O
113	Status kredsløb 1: Trådløs rumtemperatur	0~1000 (0,0~100,0)	Læs			O
114	Status Circuit 2 Run/Stop	0: Stop	Læs			O
		1: Run				
115	Status tilstand OTC 2 opvarmning	0: No	Læs			O
		1: Points				
		2: Gradient				
		3: Fix				
116	Status tilstand OTC 2 køling	0: No	Læs			O
		1: Points				
		2: Fix				
117	Status Circuit 2: Water heating Fix Setting Temp	0~80	Læs			O
118	Status Circuit 2: Water cooling Fix Setting Temp	0~80	Læs			O
119	Status Circuit 2: Eco mode	0: ECO	Læs			O
		1: Comfort				
120	Status kredsløb 1: Varme ECO afvigelsestemperatur	1~10	Læs			O
121	Status Circuit 1: Cool ECO Offset Temperature	1~10	Læs			O
122	Status Zone 2: Thermostat Setting	50~350 (5,0~35,0)	Læs			O
123	Status Zone 2: Ambient Temperature	0~1000 (0,0~100,0)	Læs			O
124	Status Circuit 2: Wireless Setting Temperature	50~350 (5,0~35,0)	Læs			O
125	Status Circuit 2: Wireless Room temperature	0~1000 (0,0~100,0)	Læs			O

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
126	Status DHW-beholders run/stop	0: Stop	Læs			O
		1: Run				
127	Status DHW-beholders indstillingstemperatur	0~80	Læs			O
128	Status DHW Boost	0: Disable	Læs			O
		1: Enable				
129	Reserveret					
130	Status driftsmåden DHW efterspørgsel	0: Standard	Læs			O
		1: High demand				
131	Status DHW Temperature	-80~100	Læs			O
132	Status svømmebassin run/stop	0: Stop	Læs			O
		1: Run				
133	Status Swim. Pool Setting Temperature	0~80	Læs			O
134	Status Swim. Pool Temperature	-80~100	Læs			O
135	Status AntiLeg. Run/Stop	0: Stop	Læs			O
		1: Run				
136	Status anti-leg. indstillingstemperatur	0~80	Læs			O
137	Status blokering/deblokering af menu	0: No	Læs			O
		1: Block				
138	Status fejl/alarm	0: No	Læs			O
		1: Alarm				
139	LCD central driftsmåde	0: Local	Læs			O
		1: Air (Not available for Yutampo)				
		2:Water (Not available for Yutampo)				
		3: Full				

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
140	System konfiguration	b0: Zone 1 Heating Available	Læs			O
		b1: Zone 2 Heating Available				
		b2: Zone 1 Cooling Available				
		b3: Zone 2 Cooling Available				
		b4: DHWT Available				
		b5: SWP Available				
		b6: Room thermostat available Zone 1				
		b7: Room thermostat available Zone 2				
		b8: Wireless Setting C1				
		b9: Wireless Setting C2				
		b10: Wireless Room Temperature C1				
		b11: Wireless Room Temperature C2				
		b12: Slave Unit				
141	Driftstilstand	0: OFF	Læs			O
		1: Cool Demand –OFF				
		2: Cool Thermo-OFF				
		3: Cool Thermo-ON				
		4: Heat Demand-OFF				
		5: Heat Thermo-OFF				
		6: Heat Thermo-ON				
		7: DHW-OFF				
		8: DHW-ON				
		9: SWP-OFF				
		10: SWP-ON				
		11: Alarm				
142	Udendørs omgivende T° (Outdoor ambient temperature)	-80~100	Læs			O
143	Vandindløb T° (Water Inlet unit temperature)	-80~100	Læs			O
144	Vandudløb T° (Water outlet unit temperature)	-80~100	Læs			O
145	H-Link Communication State	0: No alarm	Læs			O
		1: There is no communication with RCS or Yutaki unit during more than 180 seconds				
		2: Data initialization				
146	Software printkort		Læs			O

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
147	Software LCD		Læs			O
148	Enhedens kapacitet		Læs			O
149	Unit Power Consumption		Læs			O
150	Water Outlet HP (TwoHP)	0~100 kun YUTAKI S & S Combi	Læs			O
151	Ta1av: Outdoor Unit Ambient Average Temperature	-80~100	Læs			O
152	Ta2: Second Ambient Temperature (inst)	-80~100	Læs			O
153	Ta2av: Second Ambient Temperature (avg)	-80~100				O
154	O2: Water outlet Temp 2 (Two2)	-80~100	Læs			O
155	O3: Water outlet Temp 3 (Two3)	-80~100	Læs			O
156	Tg: Gas Temperature (THMg)	-80~100	Læs			O
157	TI: Liquid Temperature (THMI)	-80~100	Læs			O
158	EVI: Indoor expansion valve opening	0~100	Læs			O
159	CD: Capacity Data		Læs			O
160	Mixing Valve Opening	0~100	Læs			O
161	Afrimning	0: No defrosting	Læs			O
		1: Defrosting				
162	Enhedsmodel	0: Yutaki S	Læs			O
		1: Yutaki SC				
		2: Yutaki S80				
		3: Yutaki M				
		4: Yutaki SC Lite (New)				
		5: Yutampo (New)				
		6: YCC (New)				
163	Th: Water Temp Setting (Ttwo)	-80~100	Læs			O
164	Vandgennemstrømning	Water Flow [0.1m3/h]	Læs			O
165	Pump Speed	0~100	Læs			O
166	Systemstatus 2	Bit 0: Defrost	Læs			O
		Bit 1: Solar				
		Bit 2: Water Pump 1				
		Bit 3: Water Pump 2				
		Bit 4: Water Pump 3				
		Bit 5: Compressor ON				
		Bit 6: Boiler ON				
		Bit 7: DHW Heater				
		Bit 8: Space Heater				
		Bit 9: Smart function input enabled				
		Bit10: Forced OFF				
		Bit11: DHW recirculation Pump State				
		Bit12: Solar Pump Output State				

Offset	Beskrivelse	Værdier	Læs/Skriv	Availability		
				VRF	RAC-	ATW
167	Alarmnummer	0: Alarm XXX: Alarm number	Læs			O
168	Udladningstemperatur R134a		Læs			O
169	Sugetemperatur R134a		Læs			O
170	R134a udladningstryk		Læs			O
171	R134a sugetryk		Læs			O
172	Kompressorfrekvens R134a		Læs			O
173	Indendørs ekspansionsventilåbning R134a		Læs			O
174	Kompressor nuværende værdi R134a		Læs			O
175	Genforsøgskode R134a		Læs			O
176	R134 Te SH		Læs			O
177	R134 Secondary Current		Læs			O
178	R134 Stop Code		Læs			O
179~ 189	Reserveret					
190	YCC - Enabled Units	0~8	Læs			O
191	YCC - Working Units	0~8	Læs			O
192	YCC - Required Units	0~8	Læs			O

NOTE

- Register address is calculated as: $5000 + (\text{Modbus_Id} * 200) + \text{offset}$
- Modbus_Id as configured by configuration software
- For VRF / Package units, only the relevant data are available (heating units registers will not give any value). The situation is the same for heating units (registers related to air/air units will not give any value).
- Availability:
 - PAC: VRF and package units.
 - RAC: Domestic units connected to the H-link via PSC-6RAD or SPX-RAMHLK
 - ATW: Air to water units.
- (1) Take into account only if it is different from zero.
- (2) Bit 0 (ON/OFF) and Bit 4 (Louver) selectable only when all centrals are activated.
- In order to full lock setting from RCS (Central shown in RCS) set this register to 31

5.3 UDENDØRSENHEDER

Some state registers about outdoor unit have been added. Using these registers it is now possible to know the status of the refrigerant cycle. Some control registers have also been added.

Offset	Beskrivelse	Værdier	Læs/Skriv
0	Outdoor Air Temperature	-63°C ~ 63°C	Læs
1	Compressor Discharge Temperature	0 ~ 200 °C	Læs
2	Heating Evaporating Temperature		Læs
3	Number of operating Compressor		Læs
4	Udladningstryk	0.0 ~ 5.0 MPa (0.1 MPa)	Læs
5	Sugetryk	-0.2 ~ 2.0MPa (0.1 MPa or 0.01MPa depending unit)	Læs
6	Total Current	0 ~ 255 A	Læs
7	Total Real Frequency	0 ~ 255 Hz	Læs
8	EVO1	0 ~ 100 %	Læs
9	EVO2 / Hot Bypass	0 ~ 100 %	Læs
10	EVb	0 ~ 100 %	Læs
11	Outdoor Unit Option Enabled	0: Disable 1: Enable (it's possible to use the following options, also if the value of register 16 "Power Level Set" is 1)	Læs/Skriv
12	Noise Control Enabled	0: Disable 1: Enable (it's possible to send the noise level)	Læs/Skriv
13	Noise Control Level Set	0~9 (See the service manual of Outdoor unit, function db)	Læs/Skriv
14	Power Control Enabled	0: Disable 1: Enable (it's possible to send the power level)	Læs/Skriv
15	Power Level	0~100%	Læs/Skriv
16	Power Level Set	0~100%	Læs
17	Power Level Current Value	0~100%	Læs
18	Power Control Possible	0: Not possible 1: Possible	Læs

NOTE

- Register address is calculated as: $5000 + (\text{Modbus_Id} * 200) + \text{offset}$
- Modbus_Id as configured by configuration software

5.4 VALGFRIE FUNKTIONER

Some optional functions of the indoor units have been added so that they can be managed from the BMS.

Offset	Beskrivelse	Værdier	Læs/Skriv
0	b1 (Heating temperature compensation)	0~4	Læs/Skriv
1	b2 (Circulation function at heating Thermo-OFF)	0~1	Læs/Skriv
2	b4 (Change of filter cleaning period)	0~4	Læs/Skriv
3	c5 (Static pressure selection)	0~2	Læs/Skriv
4	c8 (Control by the temperature sensor of the remote control switch)	0~2	Læs/Skriv
5	Cb (Selection of forced stoppage logic)	0~1	Læs/Skriv
6	Cd (Stop of indoor unit fan during cooling Thermo-OFF conditions)	0~1	Læs/Skriv
7	CE (Stop of indoor unit fan during heating Thermo-OFF conditions)	0~1	Læs/Skriv
8	d1 (Management of indoor unit operation after a power supply cut off -option 1)	0~1	Læs/Skriv
9	d3 (Management of indoor unit operation after a power supply cut off -option 2)	0~1	Læs/Skriv
10	d4 (RPI(M) Prevention of low air outlet temperature in cooling mode)	0~1	Læs/Skriv
11	d5 (Prevention of low air outlet temperature in heating mode)	0~1	Læs/Skriv
12	E1 (KPI: Ventilation mode / Econofresh cooling mode)	0~2	Læs/Skriv
13	E2 (KPI: Increase of air supply volume / Econofresh enthalpy Sensor)	0~1	Læs/Skriv
14	E4 (KPI: Pre-cooling / preheating period / Econofresh: CO2 sensor)	0~2	Læs/Skriv
15	E8 (Control for stop of the indoor unit fan during heating Thermo-OFF conditions (with remote sensor THM-R2AE connected to the THM4 connector in the indoor unit PCB)	0~1	Læs/Skriv
16	E9 (Intermittent fan operation in heating stop)	0~1	Læs/Skriv
17	Eb (Indoor unit fan control during cooling Thermo-OFF conditions)	0~2	Læs/Skriv
18	EE (Control in "Automatic" indoor fan speed mode)	0~1	Læs/Skriv
19	EF (Control in "Automatic" indoor fan speed mode (supporting High H))	0~1	Læs/Skriv
20	H4 (KPI: Operation modes for the ventilation unit with energy recovery)	0~1	Læs/Skriv
21	K5 (Detection level of the motion sensor kit)	0~2	Læs/Skriv
22	K6 (Selection of allowed operation modes when the control sensor of the indoor unit is set by C8 function)	0~3	Læs/Skriv

NOTE

- Register address is calculated as: $40000 + (\text{Modbus_Id} * 100) + \text{offset}$
- Modbus_Id as configured by configuration software

5.5 LISTE MED ALARMKODER

Adresse 19 angiver alarmkode som vist i indendørsenhed. Se servicevejledningen for forklaring af alarmer og reparationsprocedure i tilfælde af alarm på enten indendørsenhed eller udendørsenhed.

5.6 FEJLFINDING

ALARMKODE	BESKRIVELSE	MODFORANSTALTNINGER
LED2 blinker	Unormal drift	Afbryd strømforsyningen til enheden og gentilslut den efter 5 sek. Hvis LED2 stadig blinker bedes du kontakte Hitachi kundeservice.

6 NETKONFIGURATIONSSÆT

Dette tilbehør indeholder alle de nødvendige kabler til Hitachi installatører under idriftsættelse af en Modbus installation.

Liste over komponenter:

USB-kabel		Krydset ethernetkabel		USB-stik	
1x		1x		1x	

USB-hukommelsesstikket indeholder et softwareværktøj til kontrol af Modbus kommunikation under idriftsættelse.

USB-kablet skal kun bruges mens apparatet konfigureres (netværksparametre)

Ethernet-kablet er til hurtig forbindelse med en bærbar computer ved kontrol af Modbus kommunikation.

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PMML0351A rev.4 - 04/2020

Printed in Spain