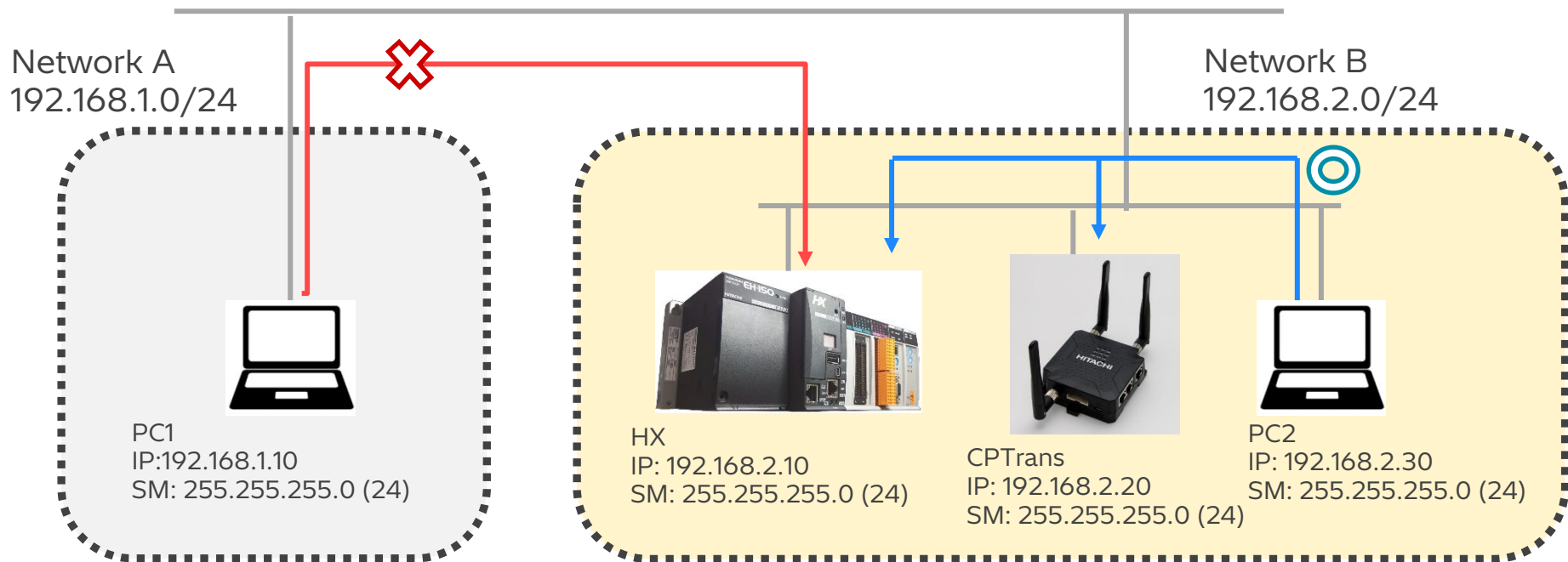


1. PC Network Setting



HITACHI

In order to connect HX & CPTrans via LAN cable, user need to set up PC as same network.
要通过LAN线缆连接HXCPU或CPTrans，需将PC配置在同一网络上。



1. PC Network Setting



HITACHI

Whether same group or not can be checked by (IP address) AND (Subnet Mask)
是否处于同一网络，可通过IP地址与子网掩码的逻辑积（按位与）来确认。



PC1
IP: 192.168.1.10
SM: 255.255.255.0 (24)

$(192) \text{ AND } (255) = 192$
 $(168) \text{ AND } (255) = 168$
 $(1) \text{ AND } (255) = 1$
 $(10) \text{ AND } (0) = 0$

Network
192.168.1.0



CPTTrans
IP: 192.168.2.20
SM: 255.255.255.0 (24)

$(192) \text{ AND } (255) = 192$
 $(168) \text{ AND } (255) = 168$
 $(2) \text{ AND } (255) = 2$
 $(20) \text{ AND } (0) = 0$

Network
192.168.2.0



PC2
IP: 192.168.2.30
SM: 255.255.255.0 (24)

$(192) \text{ AND } (255) = 192$
 $(168) \text{ AND } (255) = 168$
 $(2) \text{ AND } (255) = 2$
 $(30) \text{ AND } (0) = 0$

Network
192.168.2.0

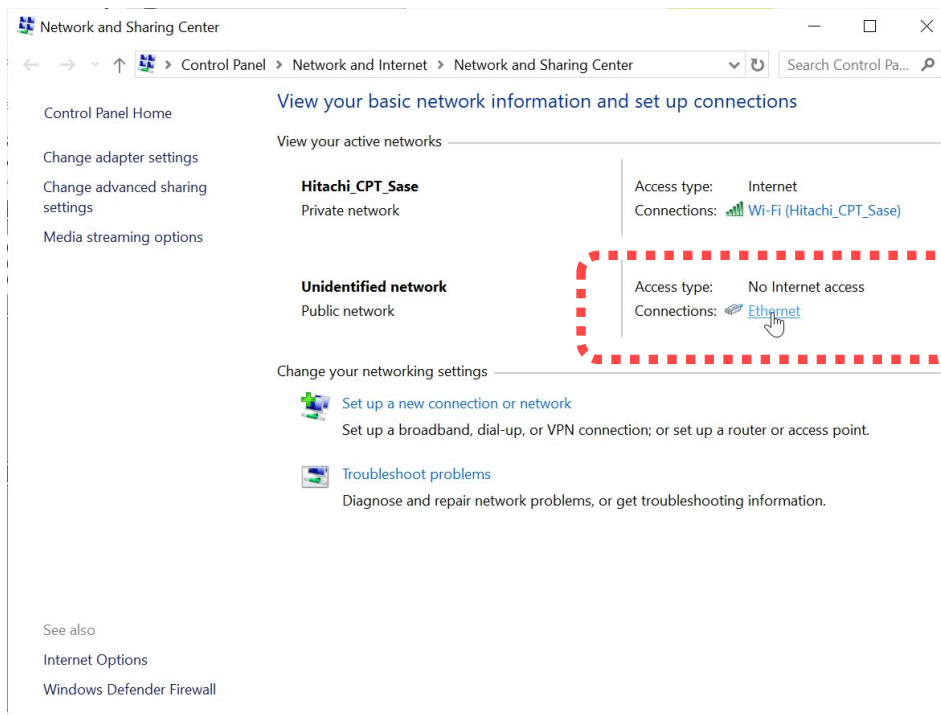


1. PC Network Setting



HITACHI

IP address and Subnet mask setting on PC can be done from Network and Sharing Center.
PC的IP地址・子网掩码设置可在Windows系统的“网络和共享中心”中更改。

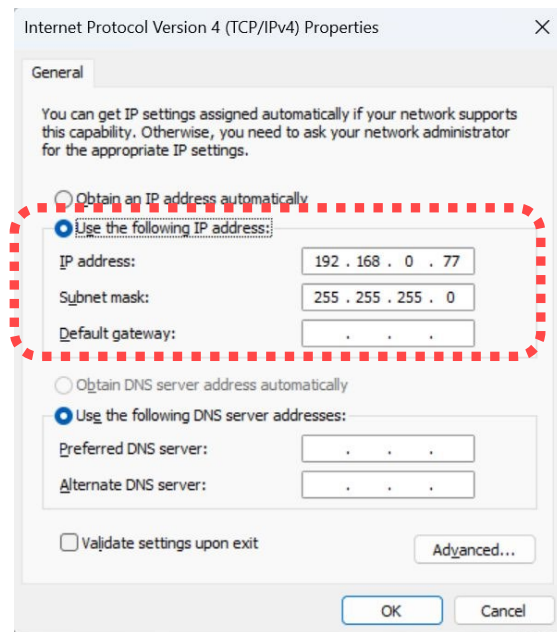
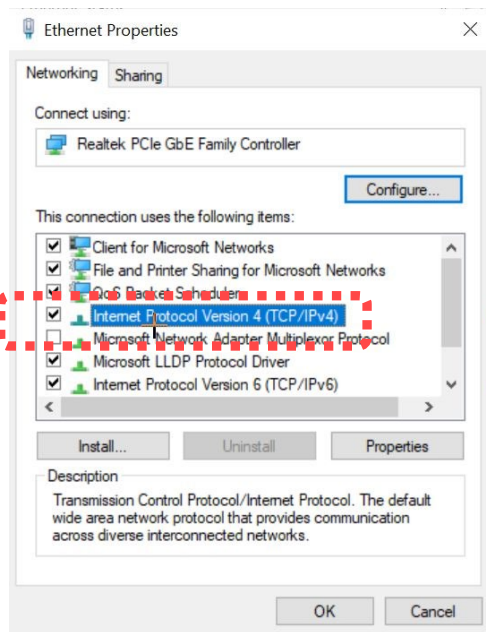
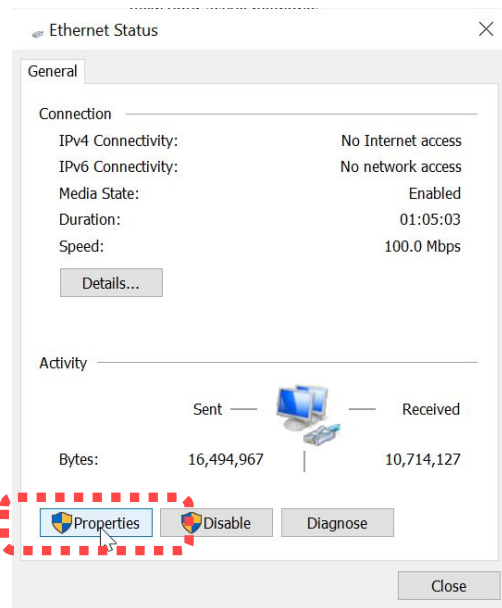


1. PC Network Setting



HITACHI

Select Properties => TCP/IPv4 => And set fixed LAN IP address for its setting.
点击Ethernet的“属性”按钮，双击TCP/IPv4即可设置固定LAN IP。



1. PC Network Setting



Open Command Prompt in Windows and input ipconfig to check current setting.
打开Windows系统的命令提示符，执行ipconfig即可确认当前状态。

```
Command Prompt
Microsoft Windows [Version 10.0.22631.4602]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Dell>ipconfig
```



```
Ethernet adapter Ethernet:

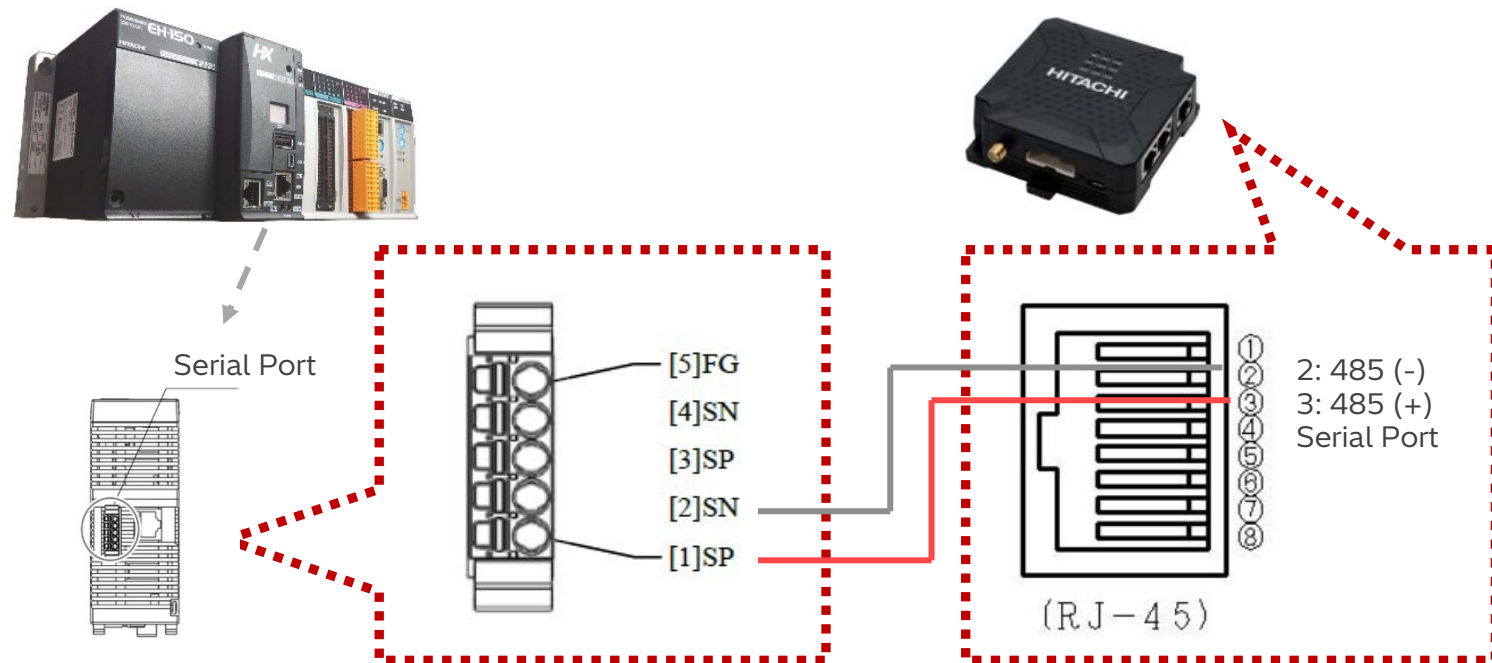
    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::46a6:7ae1:d168:89fc%15
    IPv4 Address. . . . . : 192.168.0.77
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :
```

2. CPTrans Serial Connection



HITACHI

CPTrans Serial connection will be connected as RJ45 cable (LAN cable).
CPTrans的串行通信端口通过RJ45连接 (使用LAN线缆)

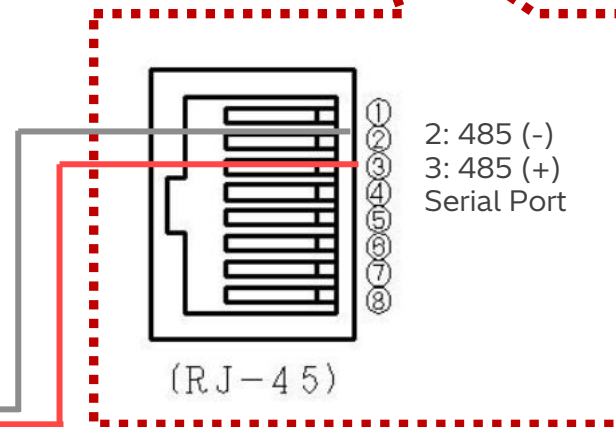
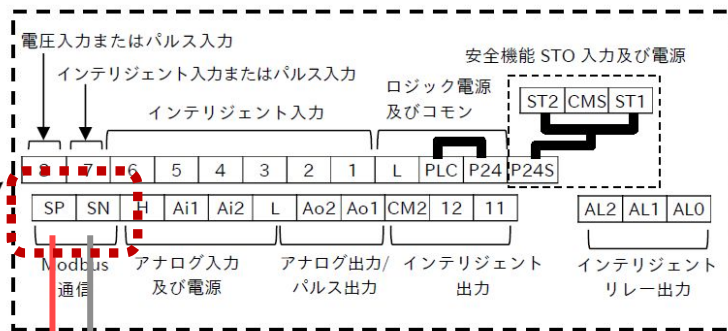
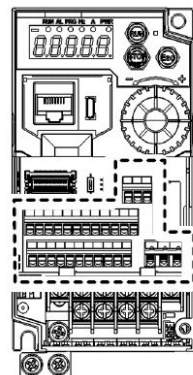


2. CPTrans Serial Connection



HITACHI

CPTrans Serial connection will be connected as RJ45 cable (LAN cable).
CPTransの串行通信端口通过RJ45连接 (使用LAN线缆)



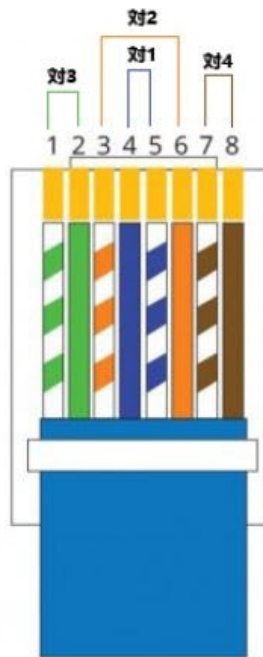
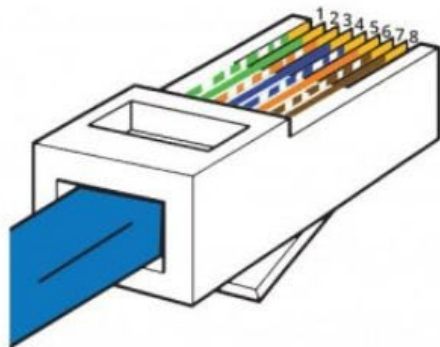
2. CPTrans Serial Connection



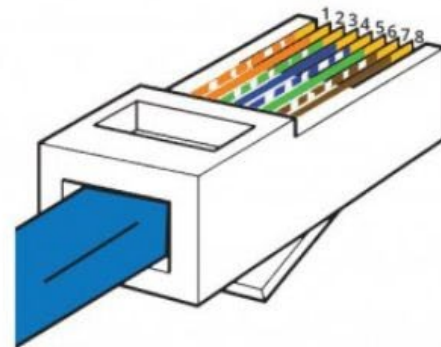
HITACHI

LAN cable has two types of pinout kindly check cable back and confirm which pinout is applied.
LAN线缆主要有以下两种引脚排列，请确认线缆背面后正确连接。

**RJ45 Pinout
T-568A**



**RJ45 Pinout
T-568B**



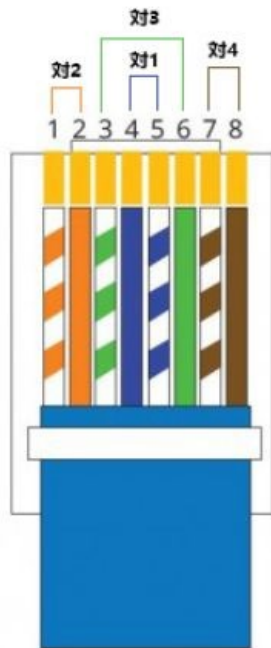
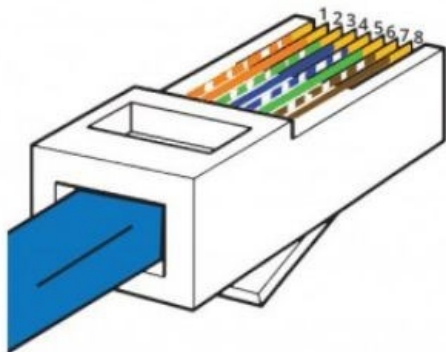
2. CPTrans Serial Connection



HITACHI

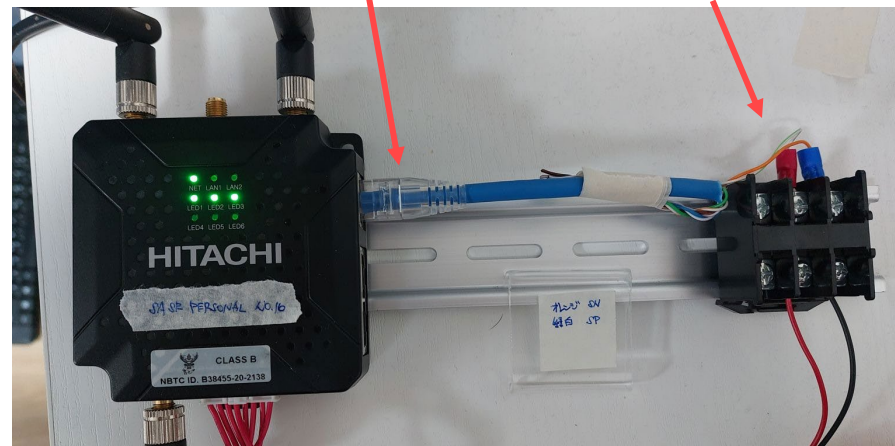
If pinout is following to T-568B, then Orange will be 485(-) and Green/White will be 485(+)
以下列举一个连接示例。T-568B的情况下，请将橙色线接485(-)，将绿白混线接485(+)。

RJ45 Pinout T-568B



RJ45 socket in

Split and connect
Orange to Black (-)
Gr/Wh to Red (+)



3. WJC1 Inverter



HITACHI

Following is manual copy of WJC1 inverter register/coil area details linked for this time.
 以下显示本次试验所使用的WJC1变频器的寄存器・线圈说明部分。

Coil No.	Name	R/W	Setting
0015h	Operation status	R	1: Forward or Reverse / 0: Stop or 0Hz output (Linked to [dA-03])
0016h	Rotation direction	R	1: Reverse / 0: Forward (Linked to [dA-03])
0017h	Inverter ready	R	1: Ready / 0: Not ready
0018h	(Reserved)		
0019h	Intelligent output terminal [11]	R	1: ON / 0: OFF
001Ah	Intelligent output terminal [12]	R	1: ON / 0: OFF
001Bh	(Reserved)		
001Ch	(Reserved)		
001Eh	(Reserved)		
001Fh	Intelligent relay output terminal [AL]	R	1: ON / 0: OFF

Code	Name	Data range	Changing during running	Modbus communication			Page
				Register No.	Data range	Resolution	
dA-01	Output frequency monitor	0.00 to 590.00 (Hz)	○	2711h	0 to 59000	0.01	10-1-1
dA-02	Output current monitor	0.00 to 655.35 (A)	—	2712h	0 to 65535	0.01	10-1-3
dA-03	Rotation direction monitor	o: Stop d: 0Hz output F: Forward r: Reverse	—	2713h	0 to 3	—	10-1-3
dA-04	Frequency reference monitor (after calculation) (signed)	-590.00 to 590.00 (Hz)	—	2714h 2715h	-59000 to 59000	0.01	10-1-1
dA-06	Output frequency scale conversion monitor	0.00 to 59000.00	○	2716h 2717h	-59000 to 59000	0.01	10-1-1
dA-08	Detect speed monitor	-590.00 to 590.00 (Hz)	—	2718h 2719h	-59000 to 59000	0.01	10-1-4
dA-12	Output frequency monitor (signed)	-590.00 to 590.00 (Hz)	—	271Ch 271Dh	-59000 to 59000	0.01	10-1-2
dA-14	Frequency upper limit monitor	0.00 to 590.00 (Hz)	—	271Eh	0 to 59000	0.01	9-4-1
dA-15	Torque reference monitor (after calculation)	-1000.0 to 1000.0 (%)	—	271Fh	-10000 to 10000	0.1	10-1-5
dA-16	Torque limit monitor	0.0 to 500.0 (%)	—	2720h	0 to 5000	0.1	9-6-9 10-1-5
dA-17	Output torque monitor	-1000.0 to 1000.0 (%)	—	2721h	-10000 to 10000	0.1	10-1-5
dA-18	Output voltage monitor (RMS)	0.0 to 800.0 (V)	—	2722h	0 to 8000	0.1	10-1-6

4. Contact APP GUI



HITACHI

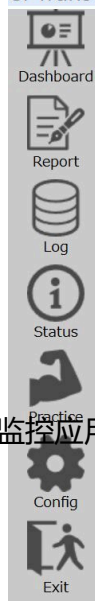
Contact APP GUI are explained as per below. For details, kindly refer to application manuals.
以下说明接点监控应用的GUI。更详细内容请参阅另册的应用手册。

Dashboard will be shown in the screen if this area is click.
点击该处，将切换至仪表板画面。

Operation log of every scan details can be checked.
点击后，可确认通信的扫描结果。

For demo purpose when no device is actually connected.
用于未连接设备时的演示设置，停止接点监控应用并恢复原状态。

CPTans



Contact monitoring application

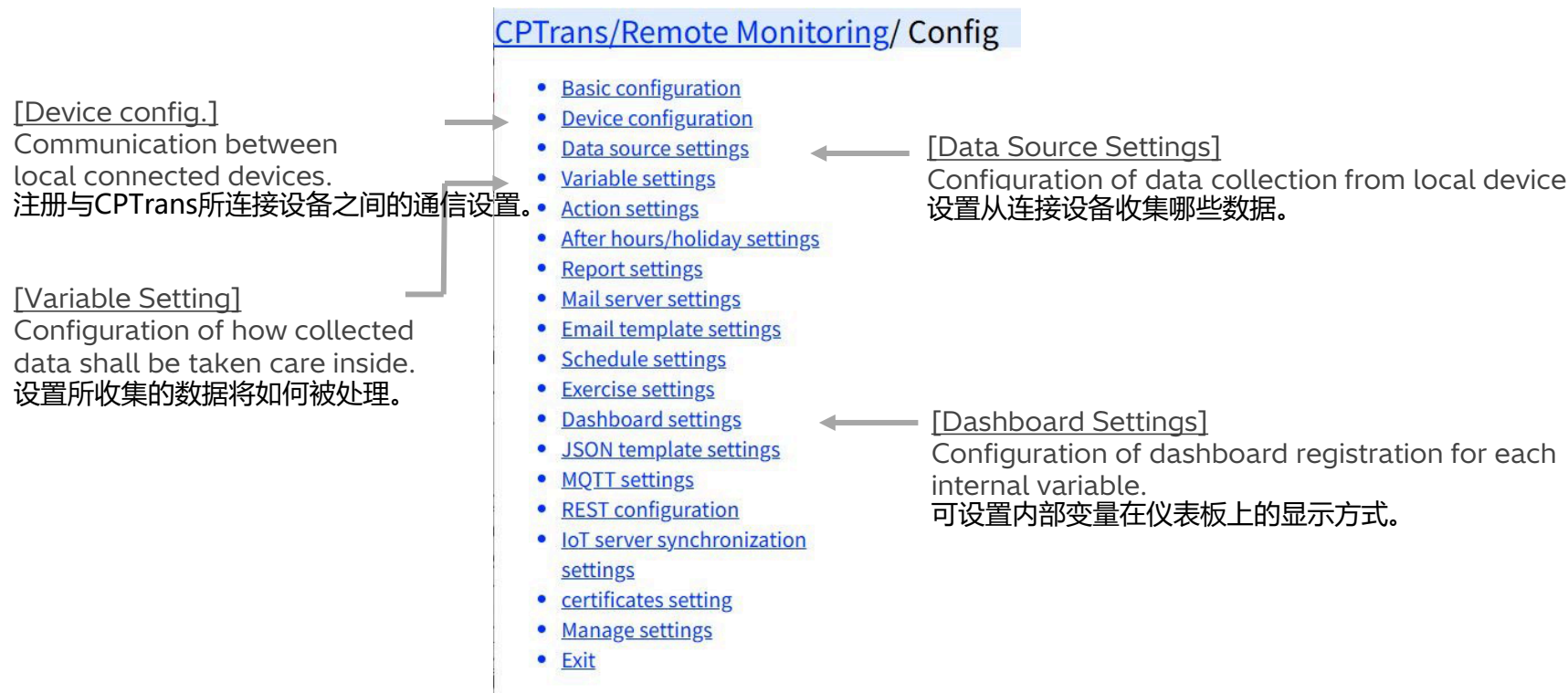
Daily report (collect result per each hour) and Monthly report (collect result per each day) can be download.
可从此处下载按1小时汇总的日报，以及按1天汇总的月报。

Enable to check latest status of this application details.
可从此处确认应用的最新运行状态。

For setting Modbus query details and other application features (such as dashboard setting, logging details etc).
Modbus通信设置及其他接点监控应用的主要功能设置均可从此处进行（如仪表板显示、日志收集对象等）。



Contact APP GUI are explained as per below. For details, kindly refer to application manuals.
以下说明接点监控应用的GUI。更详细内容请参阅另册的应用手册。



5. Device Configuration



HITACHI

Details of Device configuration.
设备配置的详细内容如下。



Remote Monitoring

Device configuration

Modbus-TCP device setting

Modbus-TCP device
▷ ↑ ↓ × MICRO-EHVP_01
Add element

Modbus-RTU settings

▼ Modbus-RTU	
Modbus-RTU operation method	Master mode: This device accesses other Modbus devices. This is the most common usage
baud	9600
parity	none
stop bit	1
Modbus-RTU device	
▷ ↑ ↓ × WJC1_01	...
▷ ↑ ↓ × HT20_01	...
Add element	

If slave device is connected via Modbus-TCP, add element from Modbus-TCP device. If slave device is connected via Modbus-RTU, then add element from Modbus-RTU device.

若从设备通过Modbus-TCP连接, 请从Modbus-TCP设备中选择Add Element。

若从设备通过Modbus-RTU连接,
请从Modbus-RTU设备中选择Add Element。

5. Device Configuration



HITACHI

Details of Device configuration.
设备配置的详细内容如下。



Remote Monitoring

Device configuration

Modbus-TCP device setting

Modbus-TCP device
▷ ↑ ↓ × MICRO-EHVP_01
Add element

For Modbus-RTU, need to set baudrate, parity, stop bit for communication establishment. Select same setting with slave device.

使用Modbus-RTU时，需要设置波特率·通信校验位·停止位。
请将这些设置与所要连接的所有Modbus-RTU设备保持一致。

Modbus-RTU settings

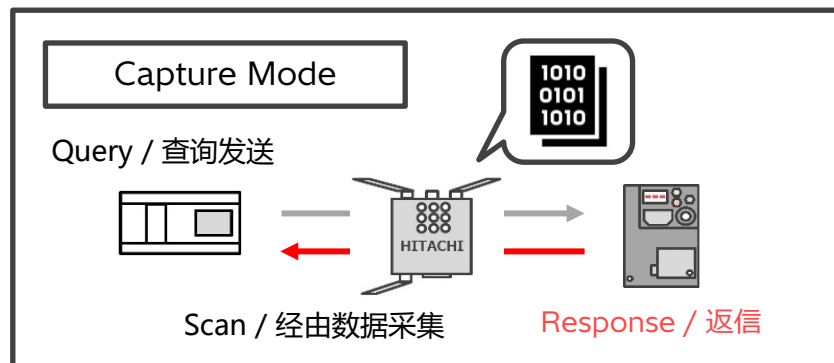
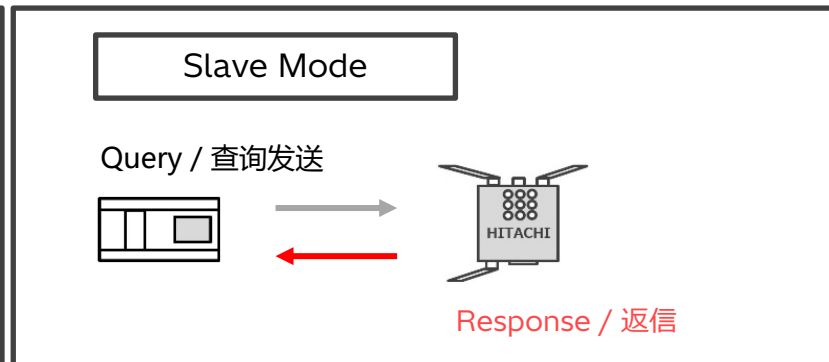
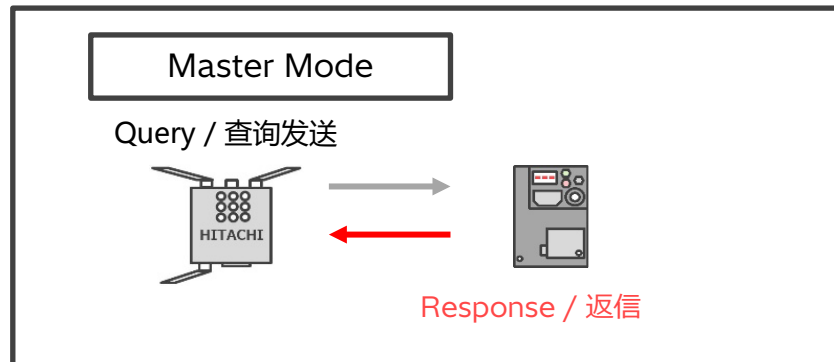
Modbus-RTU	
Modbus-RTU operation method	Master mode: This device accesses other Modbus devices. This is the most common usage
baud	9600
parity	none
stop bit	1
Modbus-RTU device	...
▷ ↑ ↓ × WJC1_01	...
▷ ↑ ↓ × HT20_01	...
Add element	

5. Device Configuration



HITACHI

Modbus-RTU operation mode can be selectable from following three settings.
Modbus-RTU的动作模式可从以下3种中选择。



This session is operated with Master Mode. For other mode operation, kindly refer other Advance lectures.

本示例学习主站模式下的设置方法。
关于其他模式的运用方法，请参阅另行提供的培训课程资料。

5. Device Configuration

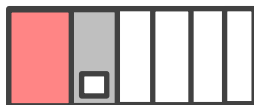
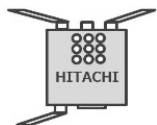


HITACHI

Remote monitoring APP supports connection with MC Protocol to scan Mitsubishi PLC devices.
远程监控应用也支持可从三菱PLC获取数据的MC协议。



Remote Monitoring



Connection established as UDP/IP.
For setting example with supporting device, kindly refer to other lecture.

MC协议通过UDP/IP方式访问。有关连接示例，请参阅另行提供的培训课程资料。

MC protocol compatible device		...
New equipment		
Host ID	host_1	...
IP address	0.0.0.0	...
UDP port	5000	...
Maximum number of registers that can be obtained in one access	64	...
Model type	Other	...
Protocol version	3E protocol	...
Network number	Hexadecimal(0x) 0	...
PC number	Hexadecimal(0x) ff	...
Request destination module I/O number	Hexadecimal(0x) 3ff	...
Request destination module station number	Hexadecimal(0x) 0	...
Failure limit. If communication fails for this number of times, it will be considered a communication failure.	3	...
Actions when communication fails	Do nothing	...
		Go to action settings
Add element		

6. Data Source Setting



HITACHI

Select “Data Source Setting” to configure which register/coil address to collect from each slave.
选择“数据源设置”，设置从各从设备获取哪些寄存器·线圈信息。



Remote Monitoring

- [Basic configuration](#)
- [Device configuration](#)
- [Data source settings](#)
- [Variable settings](#)
- [Action settings](#)
- [After hours/holiday settings](#)
- [Report settings](#)
- [Mail server settings](#)
- [Email template settings](#)
- [Schedule settings](#)
- [Exercise settings](#)
- [Dashboard settings](#)
- [JSON template settings](#)
- [MQTT settings](#)
- [REST configuration](#)
- [IoT server synchronization settings](#)
- [certificates setting](#)
- [Manage settings](#)
- [Exit](#)

Data source settings

Digital (contact) data source settings

↓ Contact data source settings ...

Add element

Analog data source configuration

↓ Analog data source configuration ...

Add element

SAVE

If collect coil information (Digital contact information), select Add element from Contact data source setting. If collect register information (Analogue data source information), select Add element from Analogue data source configuration.

收集线圈信息（数字接点）时，请选择Contact Data source setting；收集寄存器信息（模拟数值）时，请选择Analogue data source configuration，并按需选择所需数量。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Contact data source settings		...
UNIT02_01		...
ID	WJC1_01_RUN	...
Type	Modbus	...
Host	HOST02_WJC1(WJC1_01)	...
Function	coil	...
register number	Hexadecimal(0x) 15	...
Make this source controllable. If false, no writing will be performed.	☐	...
Inverted. Normally 0=OFF/1=ON, but if checked, 0=ON/1=OFF.	☐	...
Enable noise protection	☒	...
Minimum value of OFF pulse. OFF pulses shorter than this time are ignored	1 seconds	...
Minimum value of ON pulse. ON pulses shorter than this time are ignored	1 seconds	...

ID will be used for variable setting.

User can set any ID name which make it easy to identify.

ID用于在后继的变量设置中指示所要针对的数据。
通过指定任意ID，可轻松完成数据的分类设置。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Contact data source settings		...
UNIT02_01		...
ID	WJC1_01_RUN	...
Type	Modbus	...
Host	HOST02_WJC1(WJC1_01)	...
Function	coil	...
register number	Hexadecimal(0x) 15	
Make this source controllable. If false, no writing will be performed.	☐	
Inverted. Normally 0=OFF/1=ON, but if checked, 0=ON/1=OFF.	☐	
Enable noise protection	☒	
Minimum value of OFF pulse. OFF pulses shorter than this time are ignored	1 seconds	...
Minimum value of ON pulse. ON pulses shorter than this time are ignored	1 seconds	...

Host is to target which device to collect data.
If several devices are connected to CPTrans, by selecting this ID, enable to identify which device shall be the target.

Host信息用于指示所要针对的是哪个从设备。
当存在多个从设备时，可从设备配置中所设置的一览中任意选择对象。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Contact data source settings		...
UNIT02_01		...
ID	WJC1_01_RUN	
Type	Modbus	
Host	HOST02_WJC1(WJC1_01)	
Function	coil	
register number	Hexadecimal(0x) 15	
Make this source controllable. If false, no writing will be performed.	☐	
Inverted. Normally 0=OFF/1=ON, but if checked, 0=ON/1=OFF.	☐	
Enable noise protection	☒	
Minimum value of OFF pulse. OFF pulses shorter than this time are ignored	1 seconds	
Minimum value of ON pulse. ON pulses shorter than this time are ignored	1 seconds	

Function is to identify which Modbus function code to use for this source setting. In case of contact data, user may select coil (Function code 0x01 for Modbus) or may select discrete coil (Function code 0x02 for Modbus).

Function栏用于通过Modbus功能码规定将目标区域作为何种信息源处理。选择Coil时，以Function code 0x01获取保持线圈信息；选择Discrete Coil时，以Function code 0x02获取输出线圈信息。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Contact data source settings		...
UNIT02_01		...
ID	WJC1_01_RUN	
Type	Modbus	
Host	HOST02_WJC1(WJC1_01)	
Function	coil	
register number	Hexadecimal(0x) 15	
Make this source controllable. If false, no writing will be performed.	☐	
Inverted. Normally 0=OFF/1=ON, but if checked, 0=ON/1=OFF.	☐	
Enable noise protection	☒	
Minimum value of OFF pulse. OFF pulses shorter than this time are ignored	1 seconds	
Minimum value of ON pulse. ON pulses shorter than this time are ignored	1 seconds	

User will set which register number / coil number to get data. If Hexadecimal is selected, it will refer as Hex data. If Decimal is selected, it will refer as Dec data. For example, Hex 0x15 is Dec 0h21.

可设置从哪个寄存器·线圈编号获取数据。此外，指定编号时可在16进制与10进制间选择：选择Hexadecimal时按16进制、选择Decimal时按10进制判断表记。例如此表记为16进制的0x15，相当于10进制的0h21。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Contact data source settings		...
UNIT02_01		...
ID	WJC1_01_RUN	
Type	Modbus	
Host	HOST02_WJC1(WJC1_01)	
Function	coil	
register number	Hexadecimal(0x) 15	
Make this source controllable. If false, no writing will be performed.	☐	
Inverted. Normally 0=OFF/1=ON, but if checked, 0=ON/1=OFF.	☐	
Enable noise protection	☒	
Minimum value of OFF pulse. OFF pulses shorter than this time are ignored	1 seconds	
Minimum value of ON pulse. ON pulses shorter than this time are ignored	1 seconds	

User can set noise protection (Hysteresis) when target variable may chatter and may create unnecessary changes. For example, this setting will change ON/OFF result only when captured signal continuously remain the same for 1second or longer.

当目标获取数据的状态发生抖动、并以不期望的高频反复跳变时，可在内部设置滞环（迟滞）。例如，此设置为：仅当同一状态持续1秒以上，才切换ON/OFF判定。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Analog data source configuration		...
UNIT02_05		
ID	WJC1_01_HZ	...
Type	Modbus	...
Host	HOST02_WJC1(WJC1_01)	...
Function	holding register	...
register number	Hexadecimal(0x) 2711	
data type	unsigned	
data length	1	

Analogue data also has ID setting which shall be used in Variable settings.

模拟数据同样存在ID设置。

通过设置ID，可在应用内部规定后继变量设置所针对的是哪个数据。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Analog data source configuration		...
UNIT02_05		
ID	WJC1_01_HZ	...
Type	Modbus	...
Host	HOST02 WJC1(WJC1 01)	...
Function	holding register	...
register number	Hexadecimal(0x) 2711	
data type	unsigned	
data length	1	

For analogue value (Register), also can set function code following to Modbus protocol rule. If holding register is set, Function code 0x03 (Read holding register) will be defined in this action. If input register is set, Function code 0x04 (Read input register) will be defined in this action.

与线圈相同，寄存器也通过设置功能码，便可依据Modbus通信规约与目标之间进行数据交换。保持寄存器对应功能码0x03，输入寄存器对应功能码0x04。

6. Data Source Setting



HITACHI

Details of “Data Source Setting” is explained as per below.

“数据源设置” 的详细设置请参照以下内容。



Remote Monitoring

Analog data source configuration	
UNIT02_05	
ID	WJC1_01_HZ
Type	Modbus
Host	HOST02_WJC1(WJC1_01)
Function	holding register
register number	Hexadecimal(0x) 2711
data type	unsigned
data length	1

Data type will identify how collected data shall be taken care.

Unsigned data = Handle as Word data (0 .. 65535 for 1Word length)

Signed data = Handle as Integer data (-32768 .. 32767 for 1Word length)

BCD = Handle as BCD (Ex: 4660 → 1234 as 0001_0010_0011_0100)

Float = Handle as 4Byte Floating value (2Word length required)

Data type 用于规定所获取数值的处理方式。

无符号数据 = 若为1字长数据，则作为0..65535的简单数值接收。

有符号数据 = 若为1字长数据，则最高位为符号位，取值范围为-32768..32767。

BCD = 以二进制编码的十进制处理，每4位数据按1位十进制数显示并读取。

Float = 固定以2字长、作为单精度浮点数读取。

7. Variable Settings



HITACHI

Select “Variable Setting” to assign collected data with internal variable to be used in Contact APP.
选择“变量设置”，设置将所获取的数据对应到接点监控应用内部变量中的方式。



Remote Monitoring

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- [Device configuration](#)
- [Data source settings](#)
- [Variable settings](#)
- [Action settings](#)
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Variable settings

Variable settings

Add element

SAVE

7. Variable Settings



HITACHI

Select “Variable Setting” to assign collected data with internal variable to be used in Contact APP.
选择“变量设置”，设置将所获取的数据对应到接点监控应用内部变量中的方式。

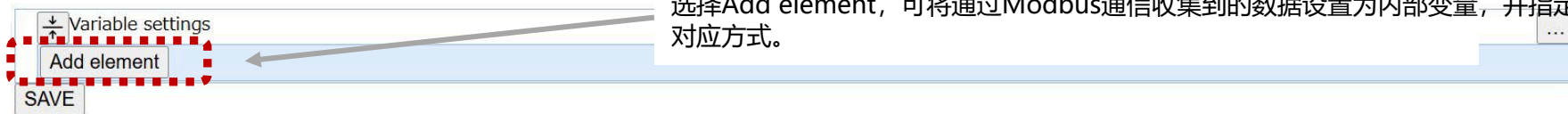


Remote Monitoring

Variable settings

Select Add element to link Modbus collected data to be handled as internal variable for Contact APP.

选择Add element，可将通过Modbus通信收集到的数据设置为内部变量，并指定其对应方式。



7. Variable Settings



HITACHI

Select “Variable Setting” to assign collected data with internal variable to be used in Contact APP.
选择“变量设置”，设置将所获取的数据对应到接点监控应用内部变量中的方式。



Remote Monitoring

Variable settings	
OPERATION	
ID	varUNIT02_RUN
Type (text)	
Comment (text)	
Source type	Digital (contact), specify source ID
Digital (contact) source	WJC1_01_RUN(UNIT02_01)
Digital (contact) preprocessing	Using instantaneous values
Display when ON	
Text	RUN
Importance	2
Display color	Green (safety)
Action when ON	Do nothing
Action that triggers the continuation of ON time. If ON is maintained for the [Initial continuation time], an action occurs, and then the action occurs continuously at the cycle of the [Action interval].	
	Do nothing

ID is name to be used for Dashboard setting and other further settings. User can set any name as long as it does not overlap with other setting.

ID是用于在仪表板设置及其他设置中指定指向哪个内部变量的临时名称。用户可自由设置任意名称，只要不与其他内部变量重名即可。

continuation time], an action occurs, and then the action occurs continuously at the cycle of the [Action interval].	Go to action settings
Overwrite with another value when data acquisition fails	☒
Value to assume when data acquisition fails	OFF

7. Variable Settings



HITACHI

Select “Variable Setting” to assign collected data with internal variable to be used in Contact APP.
选择“变量设置”，设置将所获取的数据对应到接点监控应用内部变量中的方式。



Remote Monitoring

Variable settings	
OPERATION	
ID	varUNIT02_RUN
Type (text)	
Comment (text)	
Source type	Digital (contact), specify source ID
Digital (contact) source	varUNIT02_RUN
Digital (contact) preprocessing	Using instantaneous values
Display when ON	
Text	RUN
Importance	2
Display color	Green (safety)
Action when ON	Do nothing
Go to action settings	
Action that triggers the continuation of ON time. If ON is maintained for the [Initial continuation time], an action occurs, and then the action occurs continuously at the cycle of the [Action interval].	
Do nothing	
Go to action settings	

Source type is to set how this internal variable shall be taken care inside of Contact APP. If Digital source ID is selected, then target ID variable shall be taken care as Boolean data inside of Contact APP. If Analogue course ID is selected, then target ID variable shall be taken care as Real value data which shall be defined in this setting.

Source type 用于决定从所读取的数据中选择何种类型的数据。
选择Digital source时，将从作为源数据读取的数据中，以数字数据（按ON、OFF之一处理的数据）为对象出现选项。
选择Analogue source时，将从作为源数据读取的数据中，以模拟数据（按数值处理的数据）为对象出现选项。

7. Variable Settings



HITACHI

Select “Variable Setting” to assign collected data with internal variable to be used in Contact APP.
选择“变量设置”，设置将所获取的数据对应到接点监控应用内部变量中的方式。



Remote Monitoring

Variable settings	
OPERATION	
ID	varUNIT02_RUN
Type (text)	
Comment (text)	
Source type	Digital (contact), specify source ID
Digital (contact) source	WJC1_01_RUN(UNIT02_01)
Digital (contact) preprocessing	Using instantaneous values
Display when ON	
Text	RUN
Importance	2
Display color	Green (safety)
Action when ON	Do nothing
Action that triggers the continuation of ON time. If ON is maintained for the [Initial continuation time], an action occurs, and then the action occurs continuously at the cycle of the [Action interval].	
	Do nothing

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occurs continuously at the cycle of the [Action interval].
Overwrite with another value when data acquisition fails
Value to assume when data acquisition fails

Source setting shall be destination of which Modbus data to link with this internal variable. For this case, “varUNIT02_RUN” variable shall be connected with Modbus data source which defined as WJC1_01_RUN.

Source setting 用于定义此内部变量与哪个Modbus数据相绑定。

在本例中，内部变量 “varUNIT02_RUN” 将与通过Modbus通信读取的WJC1_01_RUN的结果相绑定。

7. Variable Settings



HITACHI

Select “Variable Setting” to assign collected data with internal variable to be used in Contact APP.
选择“变量设置”，设置将所获取的数据对应到接点监控应用内部变量中的方式。



Remote Monitoring

Variable settings	
OPERATION	
ID	varUNIT02_RUN
Type (text)	
Comment (text)	
Source type	Digital (contact), specify source ID
Digital (contact) source	WJC1_01_RUN(UNIT02_01)
Digital (contact) preprocessing	Using instantaneous values
Display when ON	
Text	RUN
Importance	2
Display color	Green (safety)
Action when ON	Do nothing
Action that triggers the continuation of ON time. If ON is maintained for the [Initial continuation time], an action occurs, and then the action occurs continuously at the cycle of the [Action interval].	
	Do nothing

Display when OFF	
Text	STOP
Importance	0
Display color	Gray
Action when OFF	Do nothing
Action that triggers the continuation of OFF time. If OFF is maintained for the [Initial continuation time], an action occurs, and then the action occurs continuously at the cycle of the [Action interval].	
	Do nothing
Overwrite with another value when data acquisition fails	☒
Value to assume when data acquisition fails	OFF

Each variable can individually set condition to be shown when variable is in certain condition. For example, this case is requesting Remote monitoring APP to handle as RUN if variable “varUNIT02_RUN” is ON, and handle as STOP if same variable is OFF.

可针对各变量分别定义取何值时如何被处理。例如本例中，定义varUNIT02_RUN为ON时按RUN处理，反之OFF时按STOP处理。

7. Variable Settings



HITACHI

Select “Variable Setting” to assign collected data with internal variable to be used in Contact APP.
选择“变量设置”，设置将所获取的数据对应到接点监控应用内部变量中的方式。



Remote Monitoring

Output Frequency		...
ID	Hz	...
Type (text)	Real 0.01Hz	...
Comment (text)	Show output speed	...
Source type	Specify analog value, source ID	...
Analog source	WJC1_01_Hz(Output_Hz)	...
Analog preprocessing	Using instantaneous values	...
Magnification	0.01	...
Units (text)	Hz	...
Display accuracy (number of digits)	2	...
How to count display accuracy (number of digits)	Specify by the number of digits after the decimal point (%.f format)	...
Analog value rank setting		...

In case data source is Analogue value, then user can set magnification ratio and its showing unit to clarify in the dashboard screen. For example, this case will enable to show collected value as x0.01Hz. If Modbus data is 3456, then 34.56Hz shall be shown in its internal variable handling.

当数据源为模拟数值时，可设置计算倍率及单位等。

例如以下示例中，若Modbus获取数值为3456，则内部变量将按34.56Hz处理。

8. Dashboard Setting



HITACHI

Select “Dashboard Setting” to design internal variables to be shown in the dashboard.
选择“仪表板设置”，可设置内部变量在仪表板上的显示方式。



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- [Basic configuration](#)
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Dashboard settings

Dashboard settings interface showing a list of dashboard elements. The "Add element" button is highlighted with a red box. A red arrow points from the "Dashboard settings" menu item in the left sidebar to the "Add element" button. Below the "Add element" button is a "SAVE" button.

8. Dashboard Setting



HITACHI

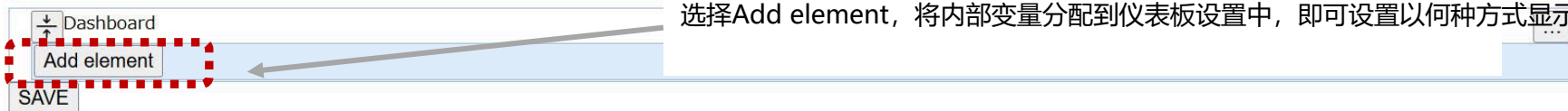
Select “Dashboard Setting” to design internal variables to be shown in the dashboard.
选择“仪表板设置”，可设置内部变量在仪表板上的显示方式。



Remote Monitoring

Dashboard settings

Select Add element to design dashboard by registering internal variable in this setting.



8. Dashboard Setting

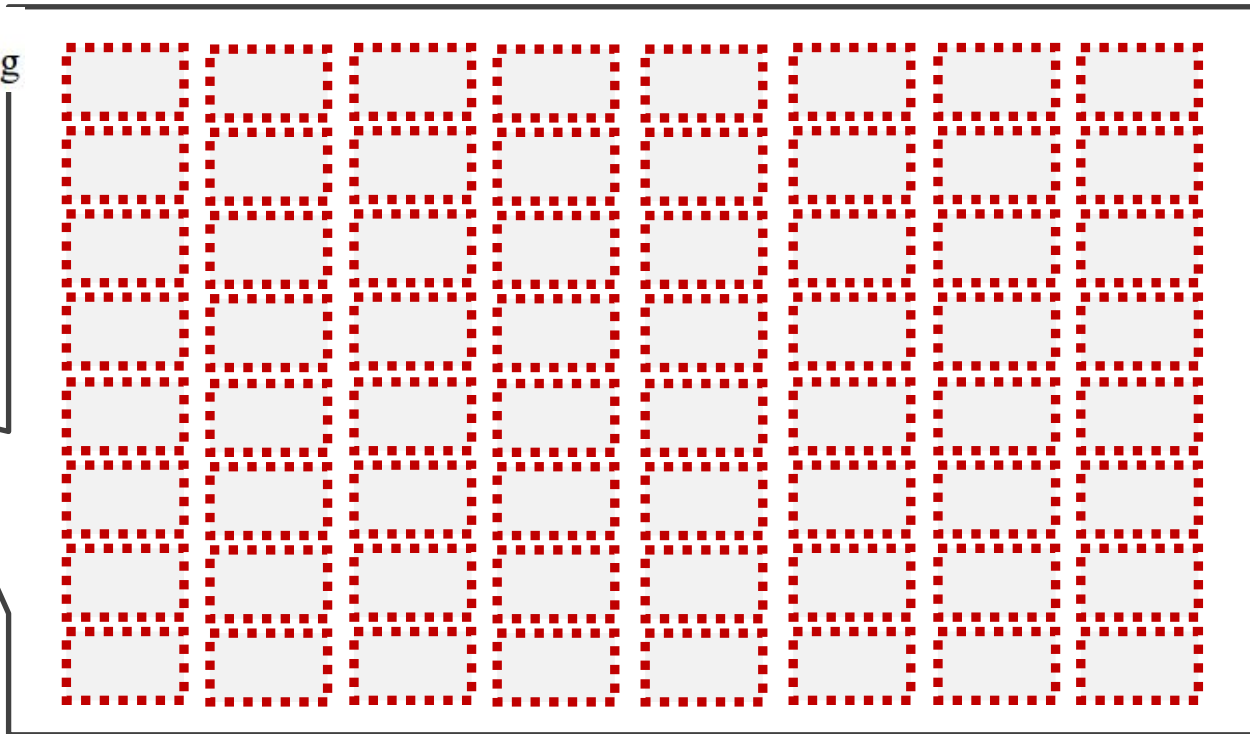
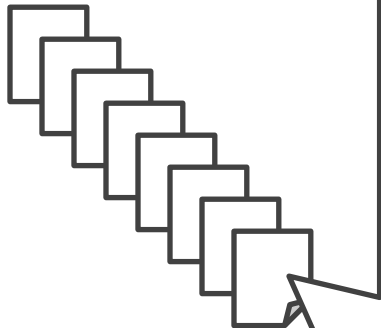


HITACHI

Dashboard is possible to make 8 sheet. Each sheet has 8x8 space to locate each design.
仪表板最多可创建8张，各工作表分配有8x8的显示区域。



Remote Monitoring



8. Dashboard Setting



HITACHI

Following is selectable design which prepared for this dashboard.
仪表板中可选择的设计样式如下所示。



Remote Monitoring



Single stud (2x2)

- Show current value as defined String data or as defined value
直接显示当前数值。若已设置名称，则以显示名图示。

8. Dashboard Setting

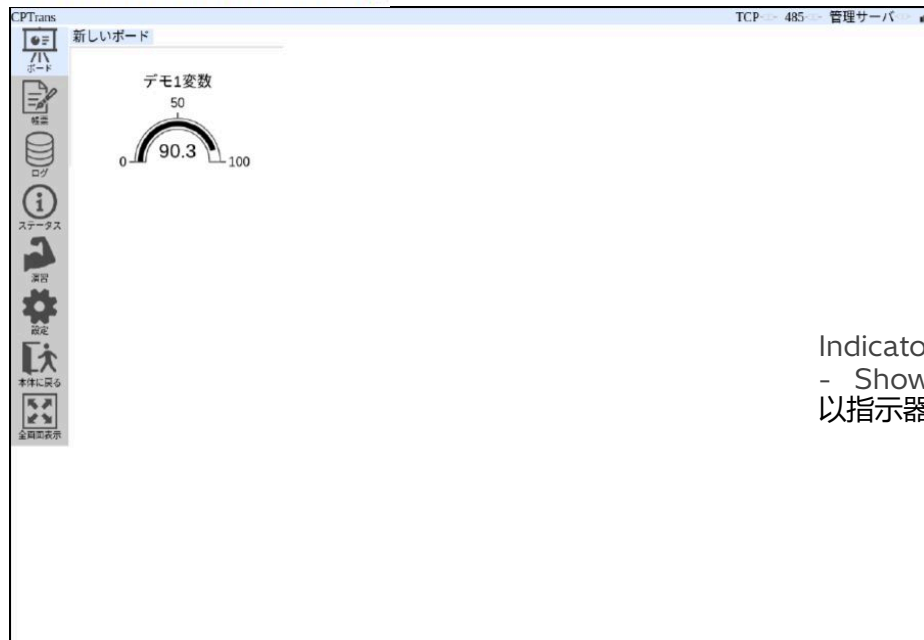


HITACHI

Following is selectable design which prepared for this dashboard.
仪表板中可选择的设计样式如下所示。



Remote Monitoring



Indicator (2x2)

- Show current value on indicated range.
以指示器方式显示当前数值

8. Dashboard Setting

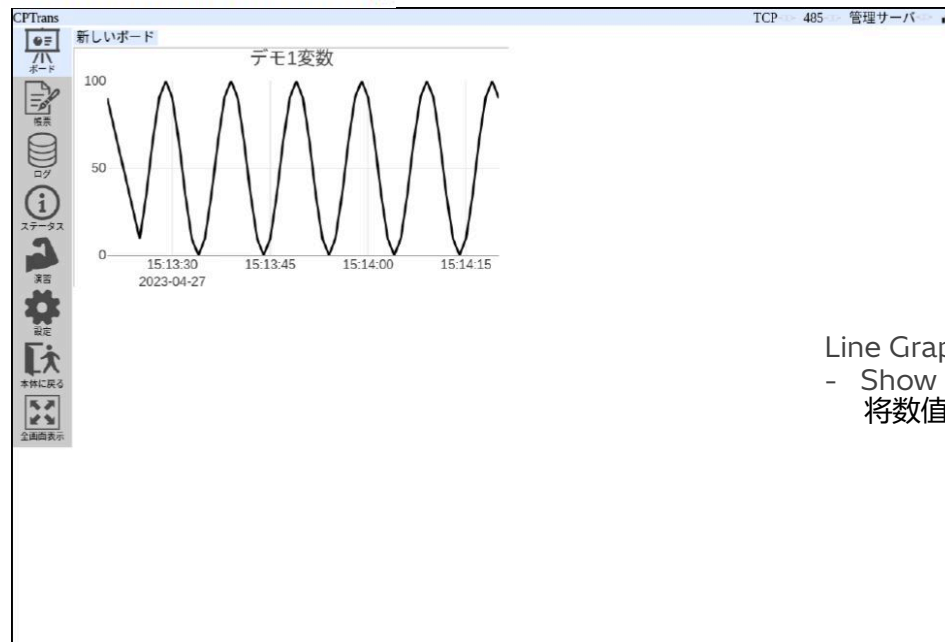


HITACHI

Following is selectable design which prepared for this dashboard.
仪表板中可选择的设计样式如下所示。



Remote Monitoring



Line Graph (4x4)

- Show historical value movement as line graph.
将数值的变化在设定期间内以折线图图示。

8. Dashboard Setting

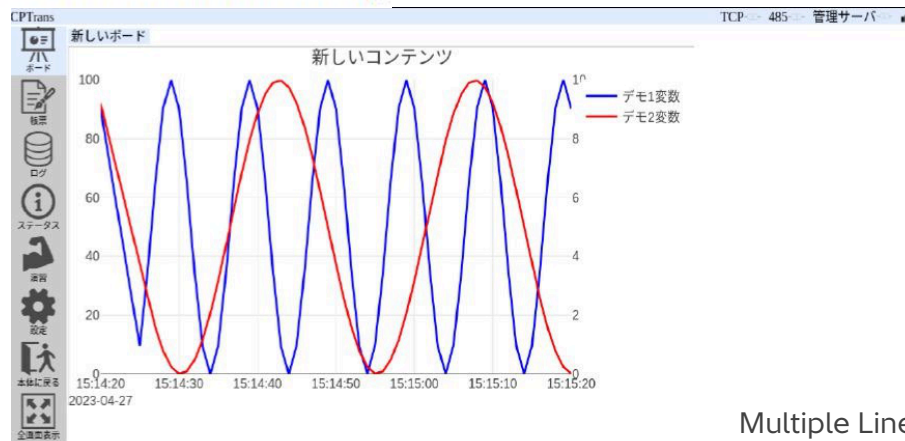


HITACHI

Following is selectable design which prepared for this dashboard.
仪表板中可选择的设计样式如下所示。



Remote Monitoring



Multiple Line Graph (6x6 or 8x8)

- Show historical value movement of multiple variable in one graph.
将多个数值的变化在设定期间内图示于同一折线图上。

8. Dashboard Setting

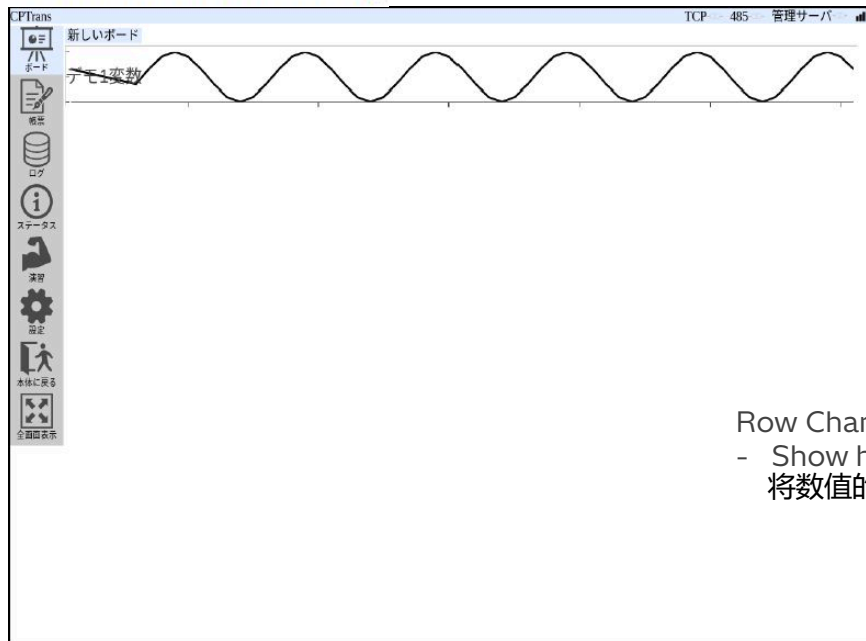


HITACHI

Following is selectable design which prepared for this dashboard.
仪表板中可选择的设计样式如下所示。



Remote Monitoring



Row Chart (8x1)

- Show historical value movement in row chart.
将数值的变化在设定期间内图示于横向长折线图上。

8. Dashboard Setting



HITACHI

Following is selectable design which prepared for this dashboard.
仪表板中可选择的设计样式如下所示。



Remote Monitoring

CPTrans TCP: 485 管理サーバ

新しいボード			
デモ1変数	34.4		重要度:0

メニュー
ボード
編集
ログ
ステータス
実行
設定
本体に戻る
全画面表示

Table (8x1)

- Show multi variables in one table.
将多个变量作为表格汇总图示于一处。

8. Dashboard Setting

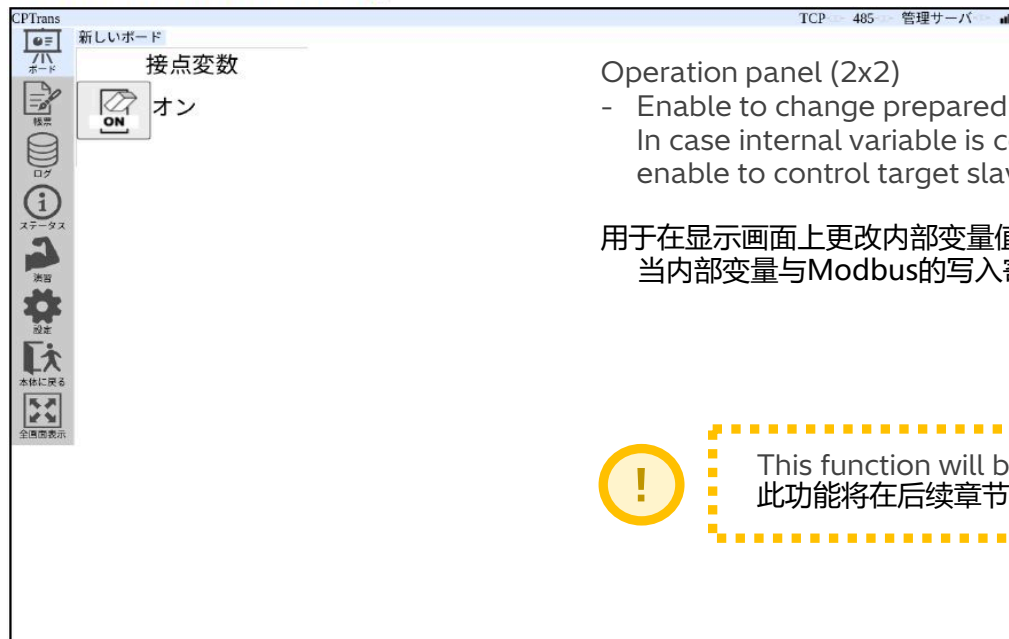


HITACHI

Following is selectable design which prepared for this dashboard.
仪表板中可选择的设计样式如下所示。



Remote Monitoring



Operation panel (2x2)

- Enable to change prepared internal variable from monitoring screen.
In case internal variable is connected with Modbus write data, it will enable to control target slave device from this web dashboard.

用于在显示画面上更改内部变量值的设计样式。

当内部变量与Modbus的写入寄存器・线圈相连时，可从仪表板上操作从设备。



This function will be explained in other lecture chapter.
此功能将在后续章节中详细说明。