



Numerical Protection Relay

MELPRO™-D Series

HMI SOFTWARE

MODEL

PC-DISW

INSTRUCTION MANUAL

Request

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1. Function

1.1. Function Table

Menu	Submenu		Function	Print
System	Online	Connection	Connect the relay with PC (※1)	
		Disconnection	Disconnect the relay with PC	
	Select Station No. & Relay		Display station No./device No./relay type/remark/alarm/trip list Select relay to operate	○
	Access log		Display date/time/user ID/operation list (Max. 200 events) (※2)	○
	Print		Print screen	
	Logout		End the HMI software	
Relay Status	Measurement 1		Display real-time value/maximum value Setup Display/Non-display property	○
	Measurement 2		Display real-time value/maximum value Setup display/non-display property Scroll display	○
	Operate LED		Display the status of relay front LED Reset operate LED or reset contacts	○
	Alarm		Display the monitoring information Delete monitoring data	○
	DI		Display DI input information Setup DI item name property	○
Setting	Setting	Setting value: Display present setting value data of relay or selected setting value data (From relay or file) Change setting value: Change of relay setting value or setting file <ul style="list-style-type: none"> • Relay setting display/change • Contact arrangement display/change • Operation indicator LED hold display/change • CT/VT ratio display/change • Waveform data save setup display/change (※3) 	○	
Operation	Operation	Select DO contact and let it operate forcedly		
Fault Record	Fault Record	Display the record of past 5 phenomena (※4) <ul style="list-style-type: none"> • Operation time • Operation element • Operation value • Waveform download 	○	
Option	PC Configuration	Communication	Set communication port and connection PC style	○
		Folder	Set folder for saving user information & setting file	○
		Auto Logout	Set automatic logout information	○
	Set Station No. & Relay Type		Set station No./device No./relay type/remark	○
	Security	Change User Password	Change user password (logged in user only)	
		User Registration	Add/delete user by administrator (※5)	○
		Function Option	Set level of each function	○
		Change Relay Password	Change relay password (※6)	○
Relay Password Enable/Disable		Set relay password valid or invalid	○	
Set Relay Time		Set the connecting relay time with PC (※7)	○	
Help	Help	Display the operation description, etc.	○	

Explanation

- ※1 No login password is required for each connection type.
- ※2 Access log is stored in PC, not in relay.
- ※3 Waveform data function is as follows:
 - (1) Trigger : Trip
 - (2) Phenomena number of Record : Past 5 phenomena
 - (3) Accuracy : 12 points/cycle
 - (4) Accumulation number : 224 cycles/channel (e.g.: A,B,C, zero-phase)
 - (5) Accumulation number setting : Set accumulation data cycles begging trip point (10-224 cycles)
 e.g. :If accumulation number after trip is set to 112 cycles,
 then accumulation number before trip becomes 112 cycles.
 (All of cycle = 224 cycles).
 - (6) Download data saved type : COMTRADE type file
- ※4 Past 5 phenomena are stored in relay as follows:
 - (1) Operation element: Trip element
 - (2) Operation value : All electric input at the time of trip
 - (3) Operation time : Year, month, date, hour, minute and second
 - (4) Waveform data : Refer to ※3
- ※5 Functional class for access level of PC operation
 Users are classified into 4 levels and are given access right according to the level.

Level	Level name	Operation limit
1	Monitor	Display of Measurement, records, etc.
2	Operate	Forced operation, LED reset, memory clear
3	Protection	Setting value change
4	Master	Password management

Each high level has the access right of any lower level.
- ※6 Password function of relay panel operation
 At the time of shipment, the relay password is set as default. The password can be changed under condition of PC login status using this function.
- ※7 Time setup accuracy is 1 second

1.2. User Level and Function Correspondence

Menu	Submenu		Function	User level (Default)	
System	Online	Connection	Communication connection	1	
		Disconnection	Communication disconnection	1	
	Select Station No. & Relay		All functions	1	
	Access log		All functions	1	
	Print		All functions	1	
	Logout		All functions	1	
Relay Status	Measurement 1		Real-time value/maximum value display	1	
			Property setup	1	
	Measurement 2		Real-time value/maximum value display, Up/Down button	1	
			Property setup	1	
			Maximum value reset	2	
	Operate LED		LED display	1	
			LED display reset	2	
	Alarm		Alarm status display	1	
			Alarm data reset	2	
	DI		DI status display	1	
Property setup			1		
Setting	Setting		Setting value display	1	
			Setting value change	3	
Operation	Operation		All functions	2	
Fault Record	Fault Record		Record display, waveform download	1	
			Record reset	2	
Option	PC Configuration	Communication	All functions	1	
		Folder	All functions	1	
		Auto Logout	All functions	1	
	Set Station No. & Relay Type		All functions	4	
	Security	Change User Password		All functions	1
		User registration		All functions	4
		Function Option		All functions	4
		Change Relay Password		All functions	4
	Relay password Enable/Disable		All functions	4	
Set Relay Time		All functions	3		

2. PC Operating Environment

Recommended operation environment of this HMI software is as follows:

■OS

Windows XP(English), 7(English)

■CPU

Pentium 300MHz or higher

■Display

Resolution: 800×600dpi or higher

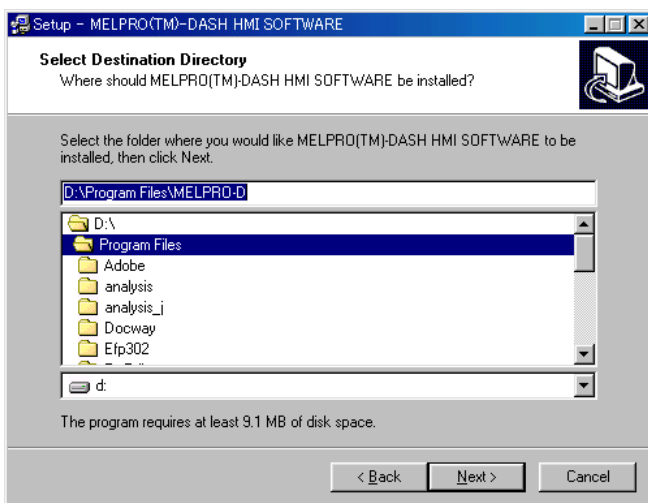
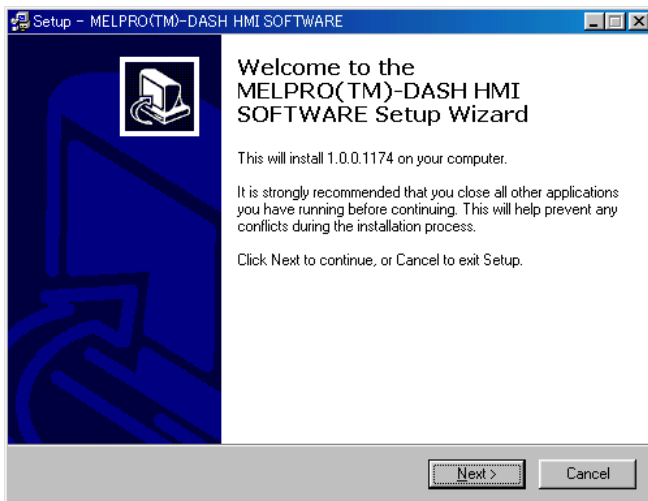
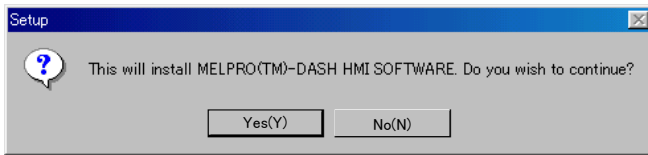
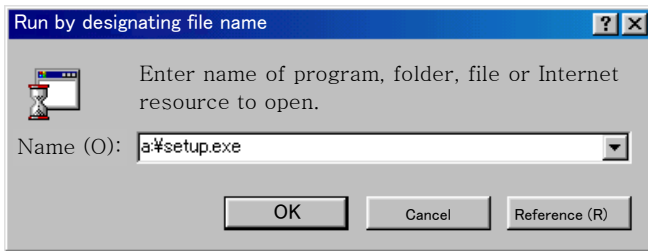
■Required memory

128MB or higher

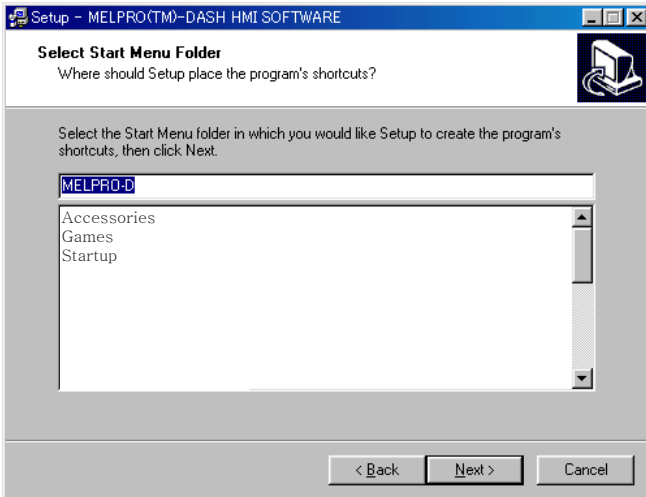
■HDD

300MB or higher

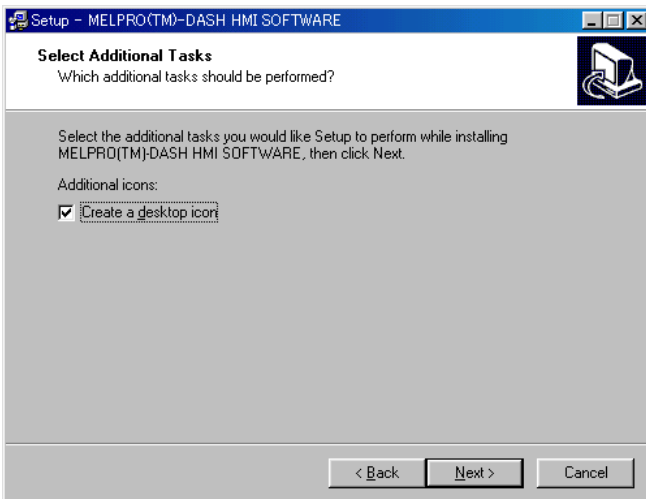
3. Installation



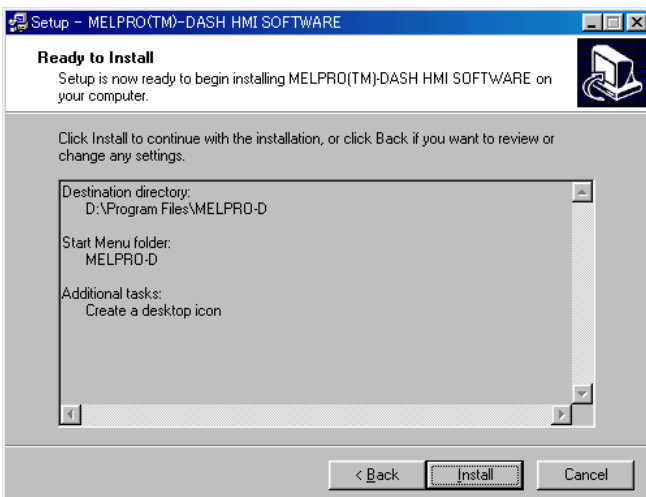
1. Turn on the PC and start Windows.
2. Insert the HMI software Disk 1 in FDD, and select 「Start」 — 「Run by designating file name」 . Enter A: ¥ Setup.exe and click “OK”.
3. Click “Yes (Y)”.
4. Click “Next” to continue or “Cancel” to Exit Setup.
5. Select the folder where you would like MELPRO^(TM)-DASH HMI SOFTWARE be installed? If installed, click “Next”.



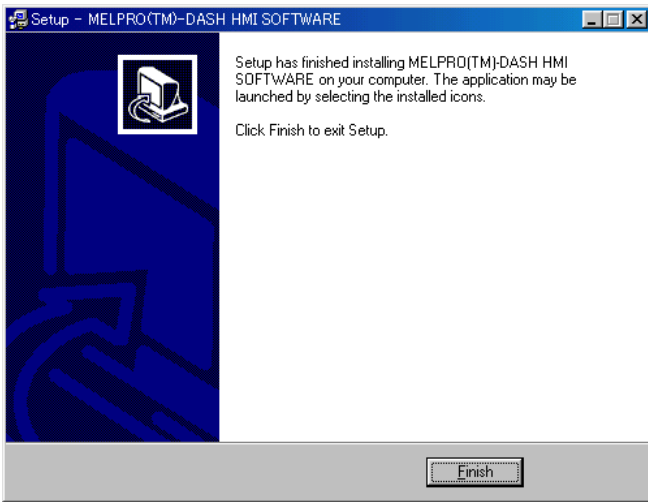
6. Select the Start Menu folder in which you would like Setup to create the program's shortcuts, then, click "Next".



7. Select the additional tasks you would like Setup to perform while installing MELPRO^(TM)-DASH HMI SOFTWARE, then click "Next"

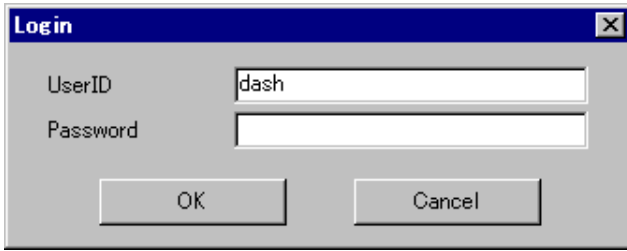


8. Identify current setup status. If the setting is right, click "Install". Otherwise, click "Back" to change setting.



9. Setup finished.
Click "Finish" to end setup.

4. Login



1. Select 「Start」 — 「Program」 — 「Melpro-d」 .
2. Enter user ID and password.
(For the first login, use the default user ID.)
Enter “dash” for User ID and let Password blank,
then, click “OK”.
Note) “dash” is the default user ID.

If you want to setup your own user ID and password, please refer to 8.7.3.

3. Main menu screen is shown if you have entered the correct user ID and password.
At this time, the HMI software has logged in
but the relay has not connected with PC.

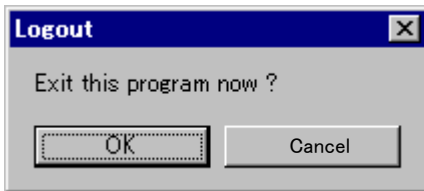
<Note>

This message will be shown if you have entered an incorrect user ID or password.

5. Logout



1. Select 「System」 - 「Logout」 .

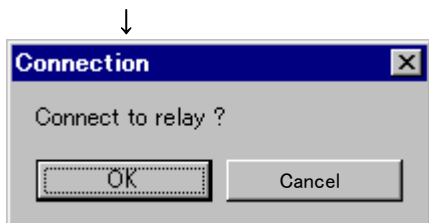


2. Click "OK" to exit this program.

6. Connection



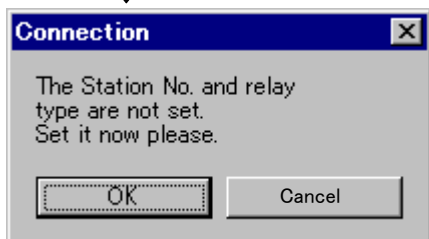
1. Click the button of "ONLINE/OFFLINE".



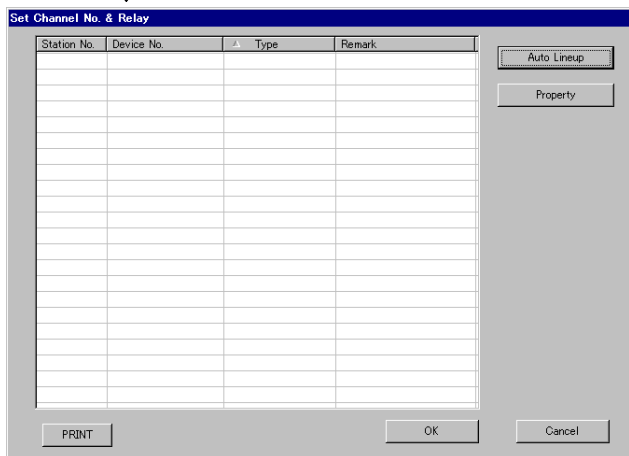
2. Click the "OK" button to connect PC with relay.



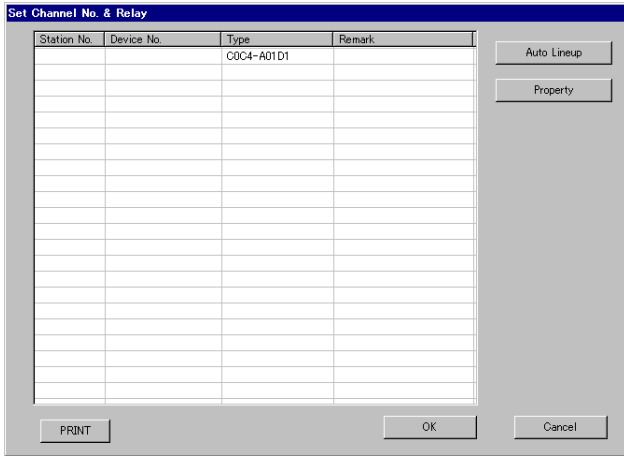
<Note>
The left message is shown if connection has failed.



3. Click "OK" to set Station No. and Relay type.



4. Click the button of "Auto Lineup". It will automatically recognize the relay.



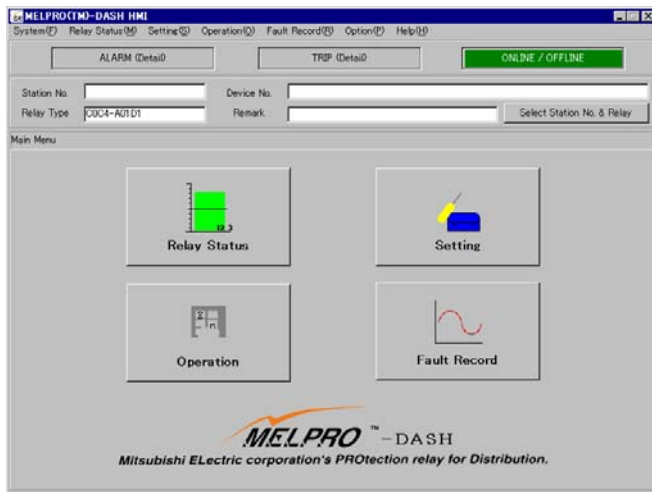
5. The connected relay information is read out and displayed automatically.

If the information is right, click “OK” please.

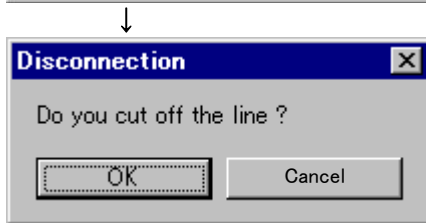


6. If the connection is done successfully, the button of “ONLINE/OFFLINE” will flickers in green, and the relay type will be displayed.

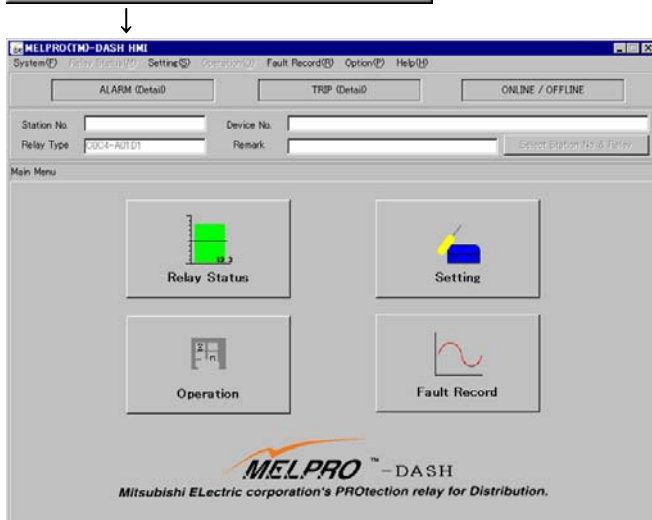
7. Disconnection



1. Click the button of "ONLINE/OFFLINE".



2. Click the "OK" button.

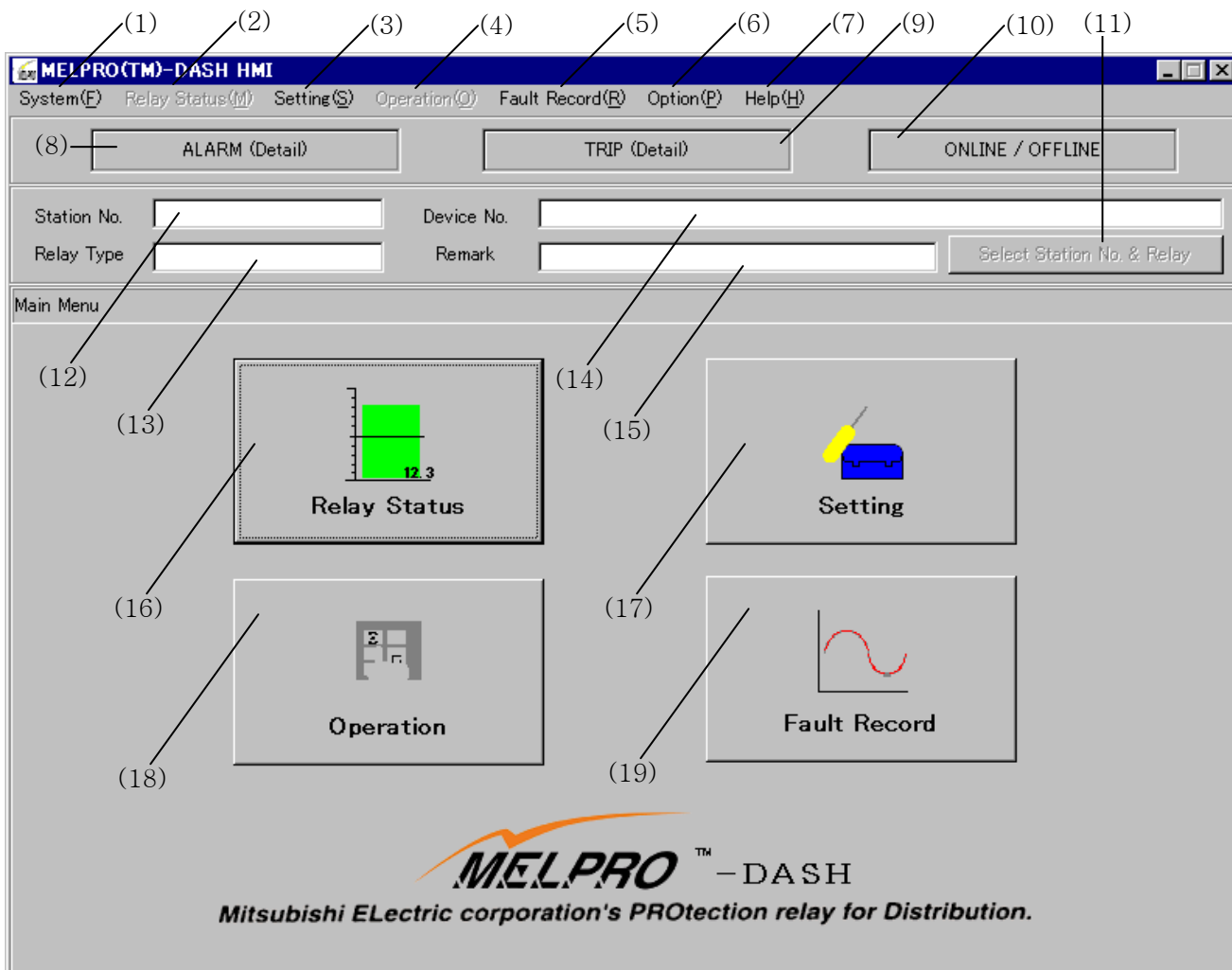


3. The "ONLINE/OFFLINE" button turns off.

8. Interface Operation

8.1 Main Menu

The following is a screen after login.



- (1) System
Connection, Disconnection, Logout, Print can be carried out.
- (2) Relay Status
Real-time value, LED information, Alarm information can be displayed.
- (3) Setting
The setting value can be displayed or changed.
- (4) Operation
The forced operation of relay contacts can be carried out.
- (5) Fault Record
Display the operated records.
- (6) Option
Set the PC information and security information and so on.
- (7) Help
Provide an online manual of this HMI software.
- (8) ALARM(Detail)
The monitoring information of relay connected with PC can be displayed.

- (9) TRIP(Detail)
The operating status of relay connected with PC can be displayed.
- (10) ONLINE/OFFLINE
Indicate the connecting status of PC with relay or connect/disconnect PC with relay.
- (11) Select Station No. & Relay
Select the Station number and type of the connecting relay.
- (12) Station No.
Display the station number of connecting relay.
- (13) Relay Type
Display the type of connecting relay.
- (14) Device No.
Display the number of connecting device.
- (15) Remark
Display the remark of relay.
- (16) Relay Status
Identical to (2)
- (17) Setting
Identical to (3)
- (18) Operation
Identical to (4)
- (19) Fault Record
Identical to (5)

8.2. System

8.2.1. Online Connection

Refer to section 6.

8.2.2. Online Disconnection

Refer to section 7.

8.2.3. Select Station No. & Relay

The screenshot shows a window titled "Select Station No. & Relay". Inside, there is a table with the following data:

Station No.	Device No.	Type	Remark
		C0C4-A01D1	

To the right of the table is a grid of buttons. The first row contains "Alarm(Detail)" and "Trip(Detail)". The subsequent 17 rows each contain two "Alarm(Detail)" buttons.

At the bottom of the window are three buttons: "PRINT", "OK", and "Cancel".

The same screen will be displayed like above if press the button of 「ALARM(Detail)」 , 「TRIP(Detail)」 or 「Select Station No. & Relay」 .

■ ALARM(Detail)

- If monitor abnormality (ALARM) is detected by relays, the 「ALARM (Detail)」 buttons of the corresponding relays will flicker red.
- Click the flickering button to open a screen for detail alarm information.

■ TRIP(Detail)

- If a trip is detected, 「TRIP (Detail)」 button of the corresponding relay will flicker red.
- Click the flickering button to open a screen for detail operating LED information.

8.2.4. Access Log

Operation of this software can be logged as the following items shown below.

Date	Time	UserID	Content	StationNo.	Type

8.2.5. Print

Each screen can be print out as a list form.

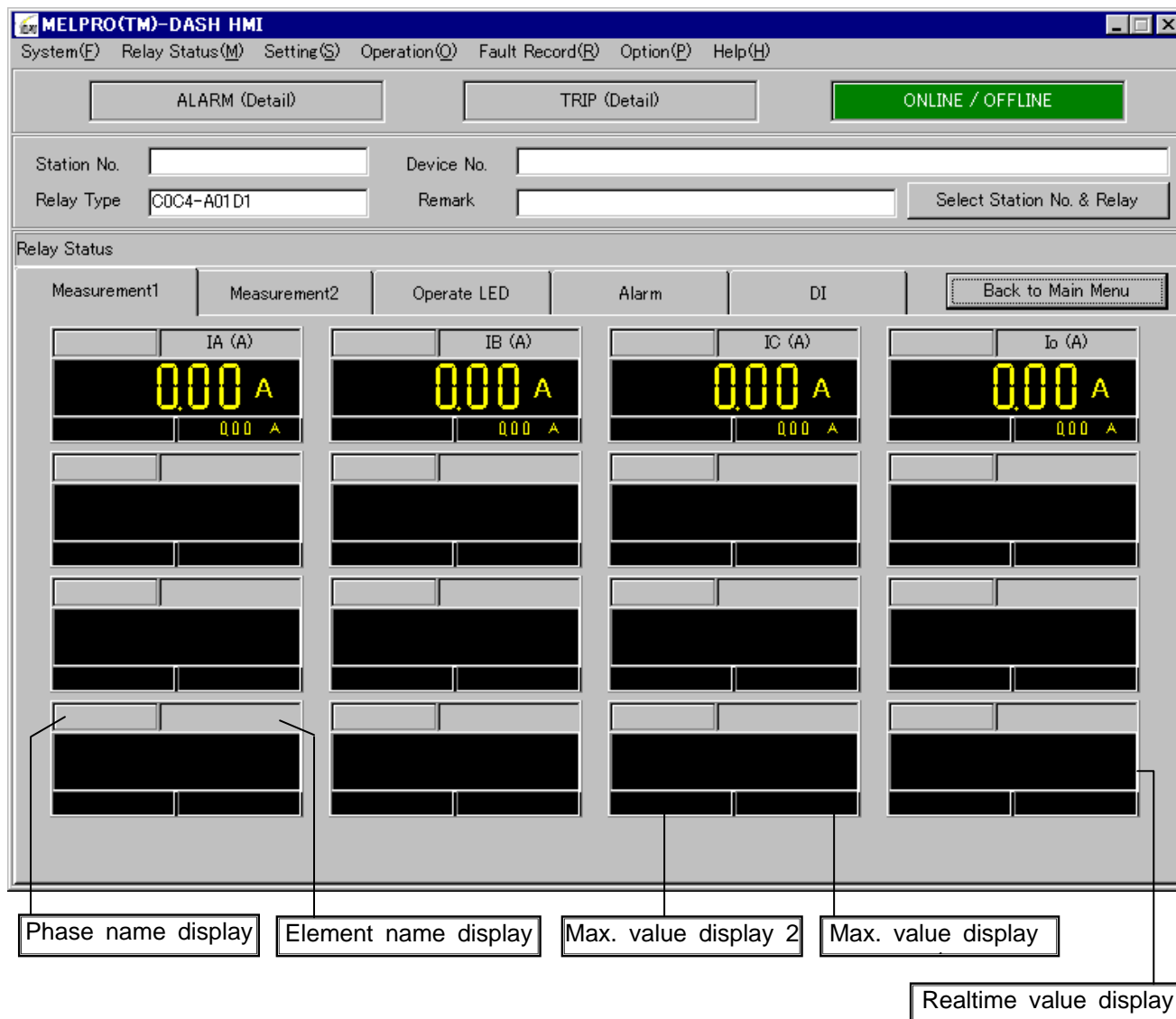
8.2.6. Logout

Refer to section 5.

8.3. Relay Status

8.3.1. Measurement 1

Measurement 1 displays all real-time elements of relay in digital format.

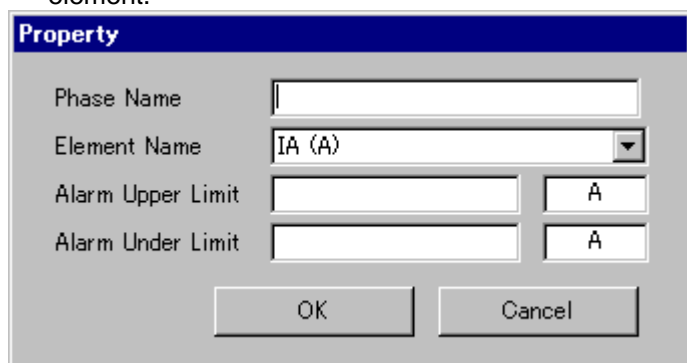


(1) Startup

Select 「Relay status」 — 「Measurement 1」 from menu bar or click “Relay Status” button to startup.

(2) Property of each element

Click “Phase name” display column or “Element name” display column to open property screen of each element.



■Phase name

Enter a phase name and click "OK", and then the entered phase name can be displayed.

■Element name

Select it only when you want to change default name.

■Alarm upper limit/under limit

If real-time value is outside this range, the element display column flickers red.

Beware of input value unit. The unit cannot be changed.

<E.g.> For 2000A : 2000

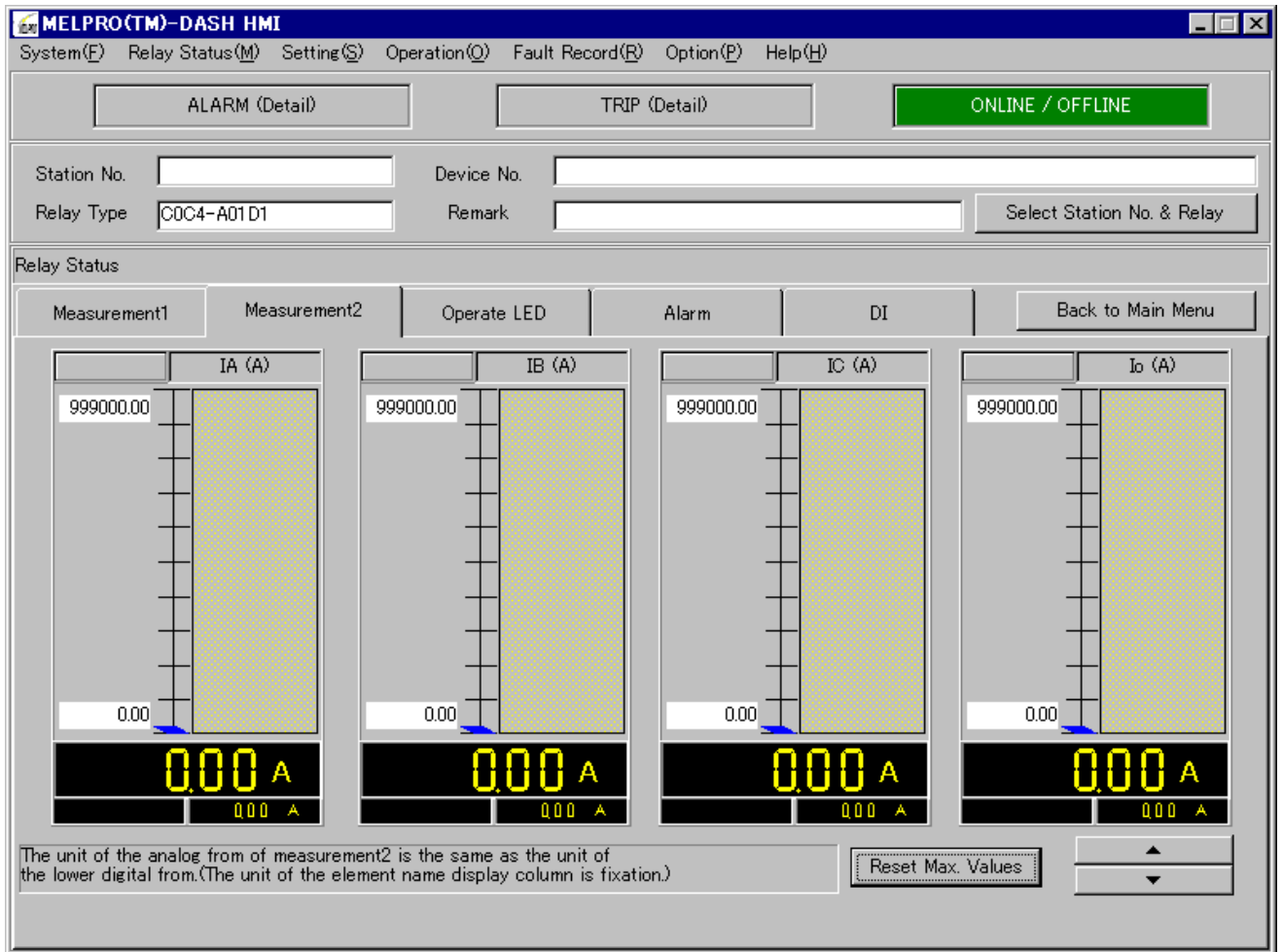
(3) Max. value display

"-" (Negative) maximum value of active and reactive power is displayed in Max. value display 2.

NOTE) About 1f/2f (2f content) measurement of COC4-A03D1 type, when there is no current input, it is displayed as "100%."

8.3.2. Measurement 2

Measurement 2 displays each line of Measurement 1 at digital + analog format.



(1) Startup

Select 「Relay status」 — 「Measurement 2」 from menu bar or click “Relay Status” — “Measurement 2” button to startup.

(2) Property of each element

Click “Phase name” display column or “Element name” display column to open property screen of each element.

The 'Property' dialog box contains the following fields and options:

- Phase Name: Text input field.
- Element Name: Dropdown menu showing 'IA (A)'.
- Max. Indication Value: Text input field with '999000'.
- Min. Indication Value: Text input field with '0'.
- Alarm Upper Limit: Text input field with 'A'.
- Alarm Under Limit: Text input field with 'A'.
- Bar Graph: Radio button (selected).
- Pointer Graph: Radio button.
- OK and Cancel buttons at the bottom.

■Phase name

Enter phase name and click “OK”, and then the entered phase name can be displayed.

■Element name

Select it only when you want to change default name.

■Max./Min. indication value

Set the display range of real-time value.

■Alarm upper limit/under limit

If real-time value is outside this range, the element display column flickers red.

Beware of input value unit. The unit cannot be changed.

<E.g.> For 2000A : 2000

■Bar/Pointer graph

Select or change the display format.

(3) Reset Max. values

Click the button of “Reset Max. values” to popup following screen.

Click “OK” to reset maximum value.

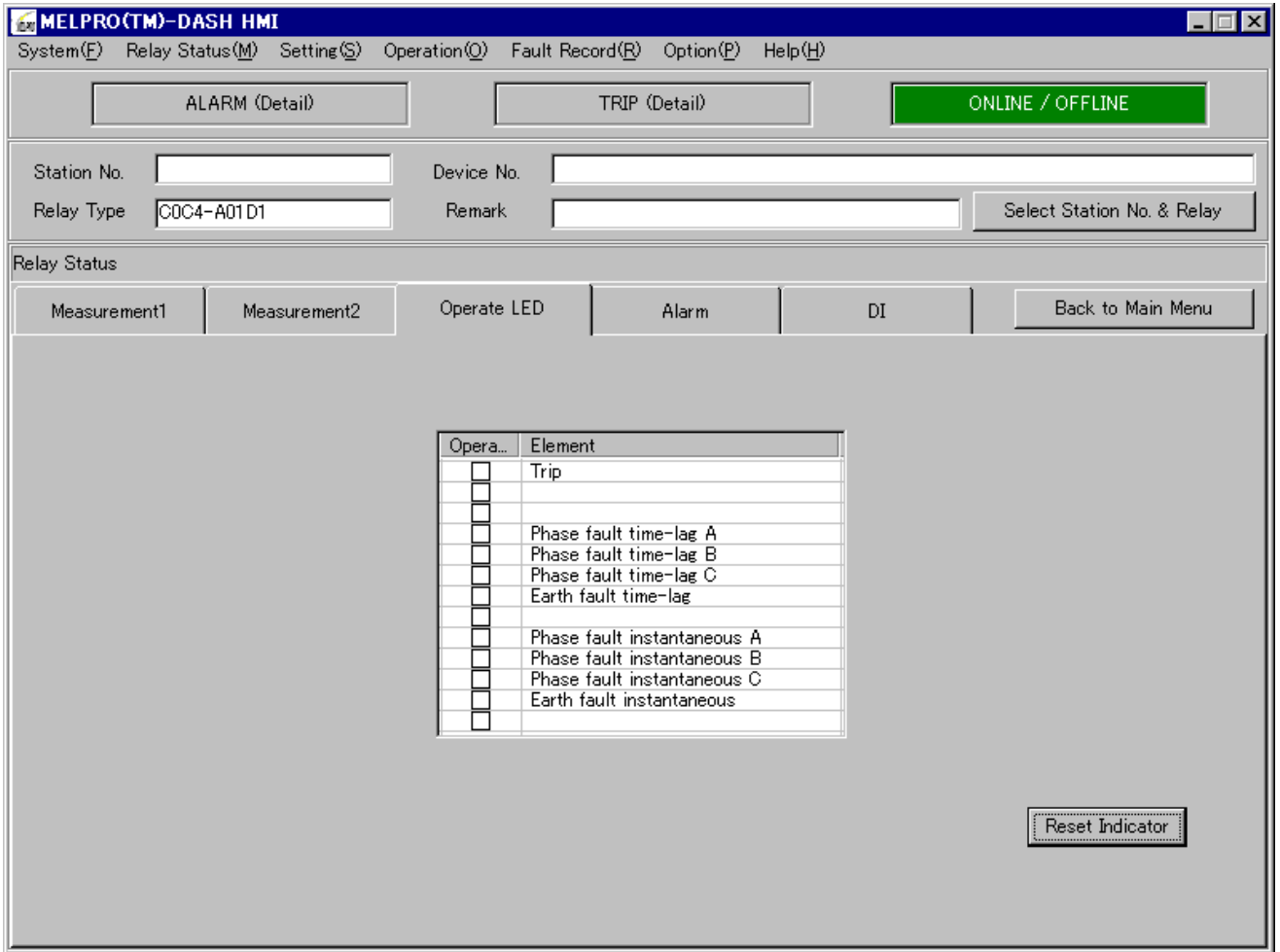
At this time, all input data stored in the relay are deleted.

The 'Reset Max. Values' dialog box contains the following elements:

- Title bar: 'Reset Max. Values' with a close button (X).
- Text: 'Reset all recorded max. values ?'
- Buttons: 'OK' and 'Cancel'.

8.3.3. Operate LED

Operate LED can be indicated as same as the indicator LED on the relay front panel.



(1) Startup

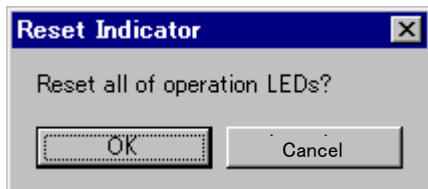
Select 「Relay status」 — 「Operate LED」 from menu bar or click “Relay Status” — ”Operate LED” button to startup.

(2) Reset Indicator

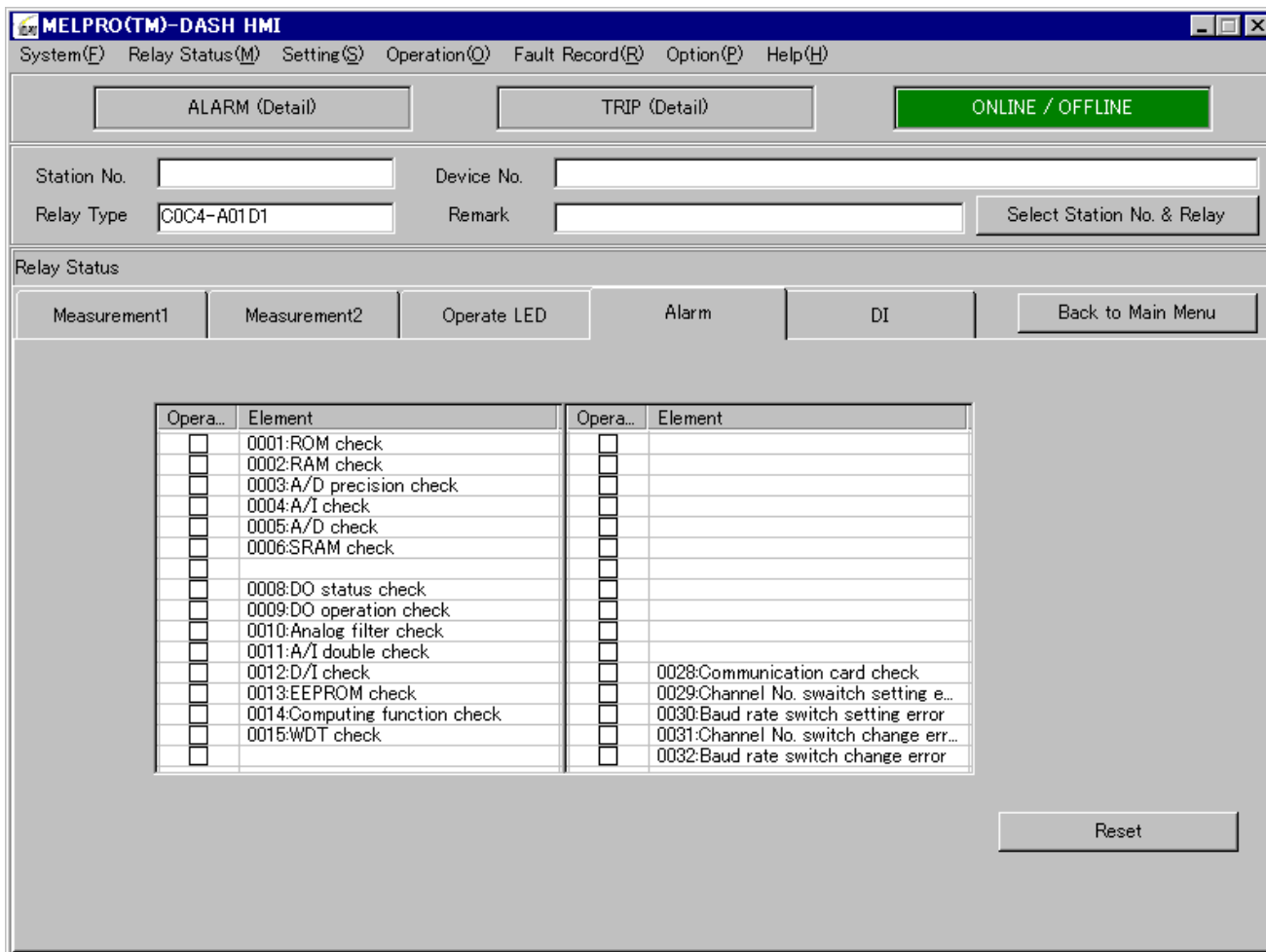
Click the button of “Reset Indicator” to popup following screen.

Click “OK” to reset operate LED.

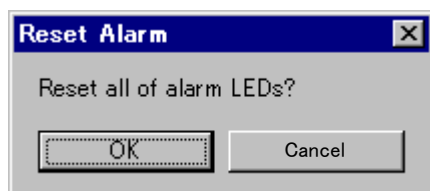
At this time, all operate LEDs located the relay front panel will be turned off.



8.3.4. Alarm
Indicate all of monitoring information.



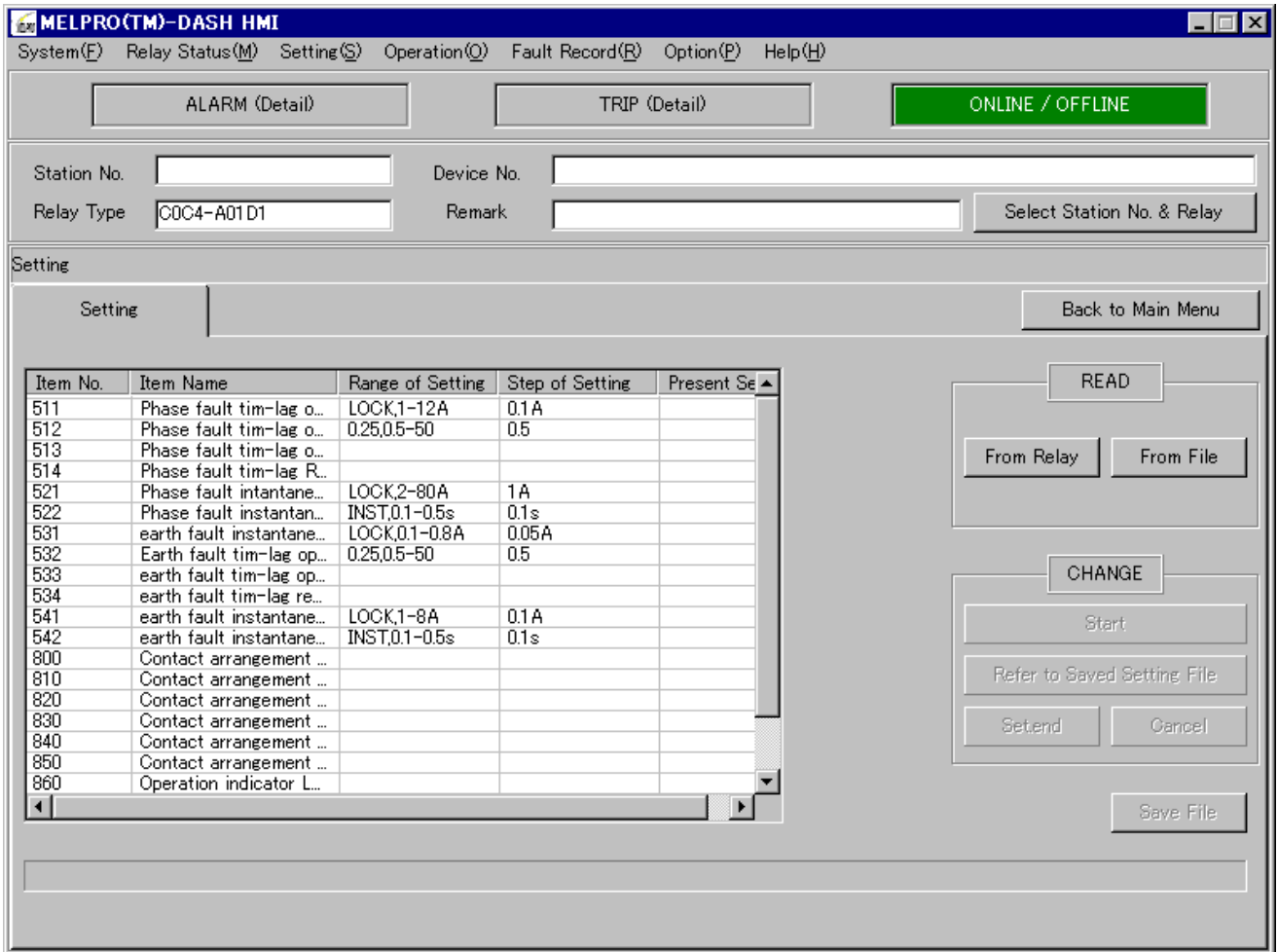
- (1) Startup
Select 「Relay status」 — 「Alarm」 from menu bar or click “Relay Status” — ”Alarm” button to startup.
- (2) Reset Indicator
Click the button of “Reset” to popup following window.
Click “OK” to reset monitoring information.
At this time, all alarm data stored in the relay are deleted.



- (※) With this operation, only monitoring data reset is possible, and monitoring output logout of relay hardware is impossible. Also, when the relay hardware is in monitoring abnormal status, the monitoring data reset is impossible.
Refer to manual of relay for details.

8.4. Setting

Display or change the setting values of relay connected with PC.

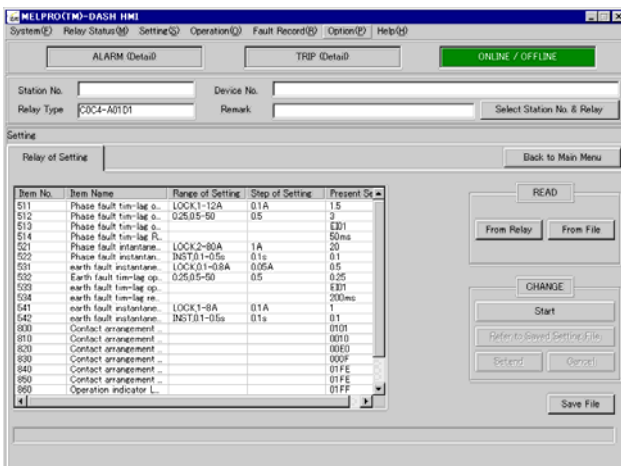


(1) Startup

Select 「Setting」 — 「Setting」 from menu bar or click “Setting” button to startup.

8.4.1. Setting display

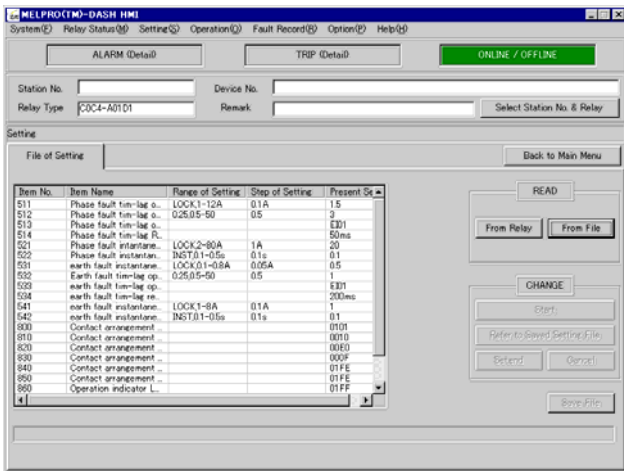
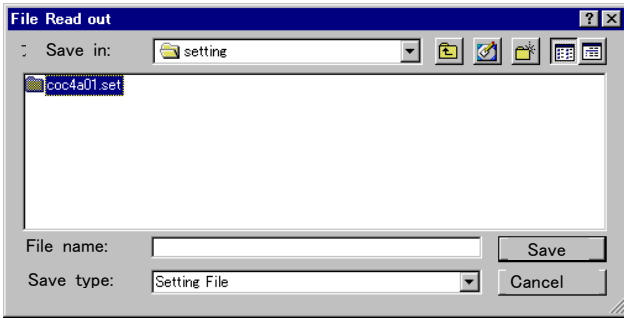
(1) At case of the setting values are read out from relay



1. Click the button of “From Relay”.

The present relay setting values will be displayed in the present setting column. The tab will be displayed as “Relay setting”.

(2) At the case of the setting values are read out from a file

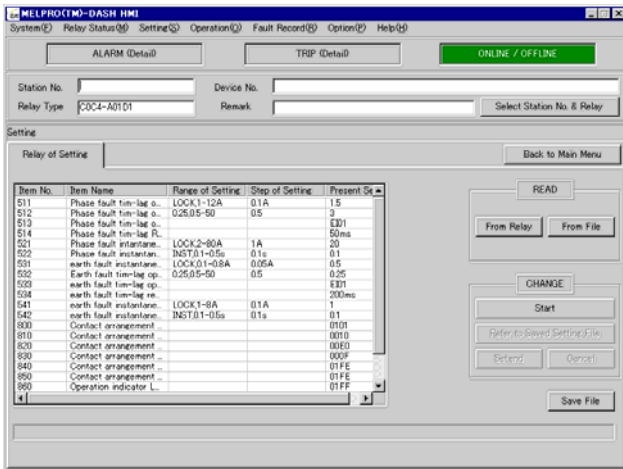


1. Click the button of "From File".
A window for file select will be popup. Select a setting file and click "Open".

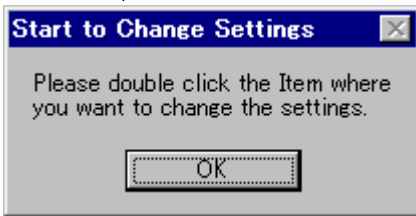
2. Setting values are displayed in the present setting column.

The tab is displayed as "File setting".
But for the setting values which are read from a log file, the setting values cannot be changed.

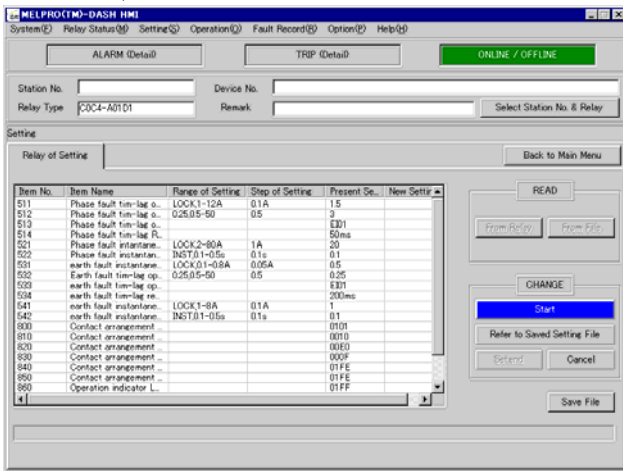
8.4.2. Change Settings



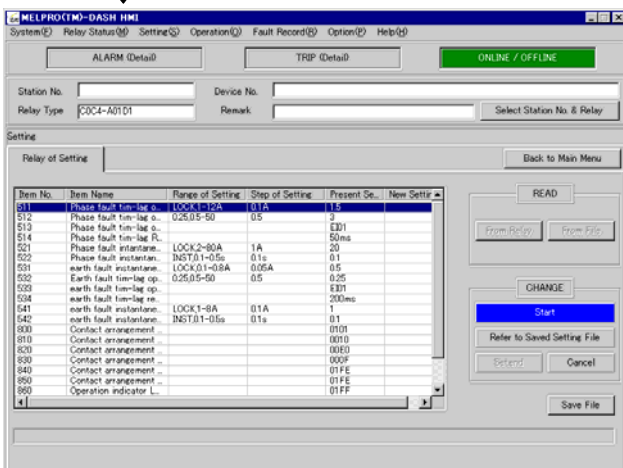
1. First to read out setting values with the button "From Relay".
Change is possible only when the "Start" button is in activated.
Then click the "Start" button.



2. Click "OK" please.



3. If "Start" button flickers, it means that the setting mode is in available.



4. Double-click the item column that you want to change the setting value.
Or click "Refer to Saved Setting File" and select a setting file.

At this time,

If new value is the same as old value, it can not be displayed as new setting value in "New Settings" column.

Fig. 1

Ind./Change

Item No.

Item Name

Range of Setting

Step of Setting

Present Settings

New Settings

The new setting data will be programmed in to the PC. But this operation does not change the relay present setting values yet.
 (If you want to change the relay present setting values, it is necessary to press the "Set.end" button after pressing the button "Set".)

5. CT/VT ratio for item No. 5XX, 6XX and 9XX is displayed in Fig. 1.

Select new value from "New Settings" column with pull-down button, and click "Write in".

Setting value, which is being run by the relay, is not changed yet at this time.
 (If you want to change it, click "Set.end" please.)

Fig. 2

Contact Arrangement

Element Name	X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	XA	XB	XC	X14
Contact hold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ase fault time-lag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ase fault time-lag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ase fault time-lag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
arth fault time-lag	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h fault instantane	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h fault instantane	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h fault instantane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The new setting data will be programmed into the PC. But this operation does not change the relay present setting values yet.(If you want to change the relay present setting values, it is necessary to press the "Set.end" button after pressing the button "Write in".)

Double-click the "Contact Arrangement" of item No. 8XX.

The ordinate represents elements mounted on the relay, and the abscissa represents contacts mounted in the relay.

Elements allotted in each contact flickers red. Click "", which is put out, to allot other elements to the contact.

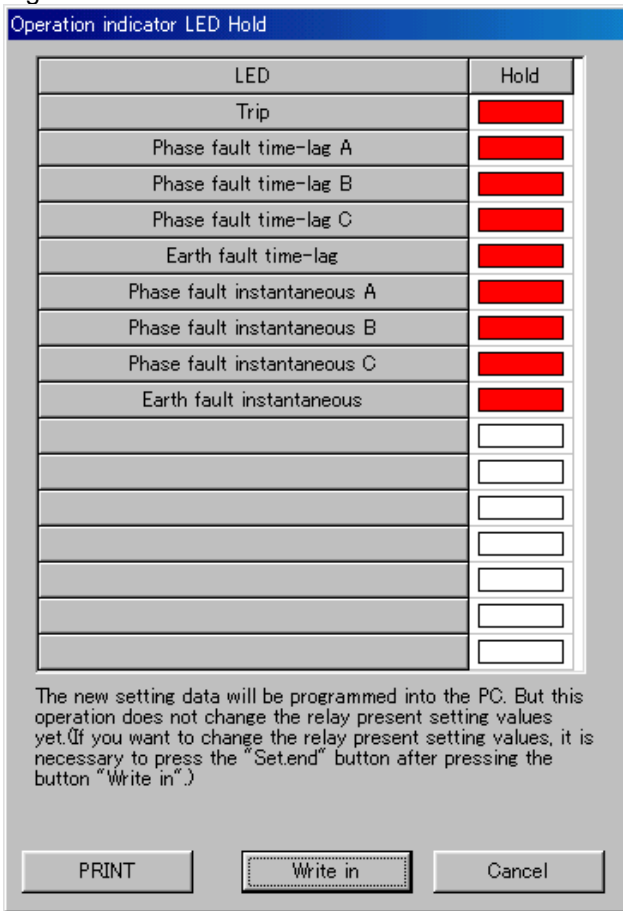
If you click it, it flickers red.

If there is an element not allotted at the contact, click the part that flickers red.

Click "Write in" if all setup is completed.

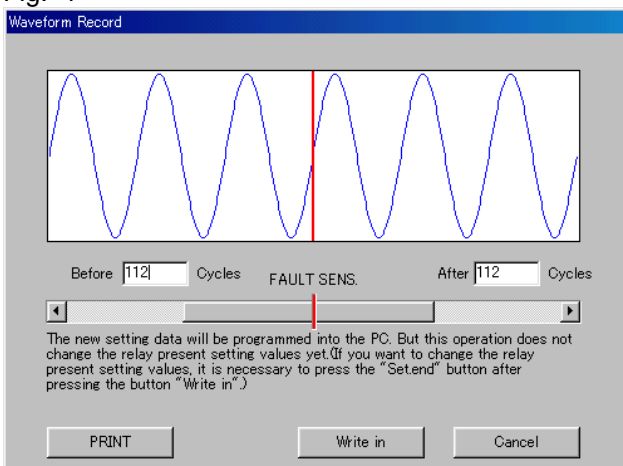
Setting value, which is being run by the relay, is not changed yet at this time.
 (If you want to change it, click "Set.end" please.)

Fig. 3



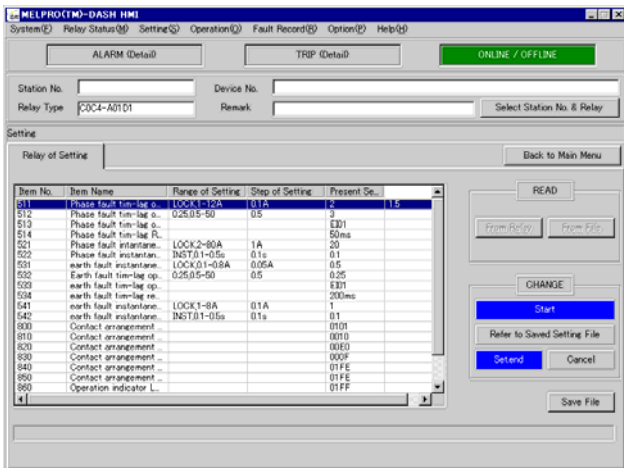
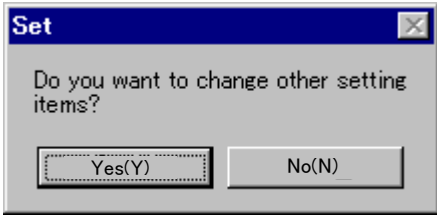
Double-click "Operate LED" of Item No. 8XX. LED mounted on the relay is displayed and red flickering is maintained. Click "☐", which is put out, to maintain. Then, it flickers red. Click red flickering part for automatic reset. Click "Write in" if all setup is completed. Setting value, which is being run by the relay, is not changed yet at this time. (If you want to change it, click "Set.end" please)

Fig. 4



Double-click "Waveform Record". When fault is detected by relay, instantaneous waveform data is recorded. Up to 224 cycles of instantaneous waveform data can be recorded. Set cycle number for recording. Drag scroll bar or click arrows on either side. Click "Download" if all setup is completed. Setting value, which is being run by the relay, is not changed yet at this time. (If you want to change it, click "Set.end" please)

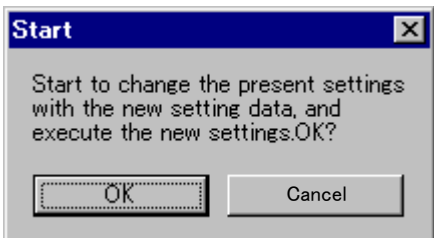




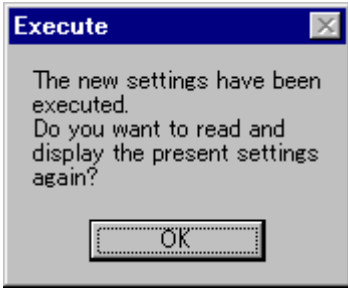
6. Click "Yes(Y)" to select other setting items. And repeat above procedure. If there is no item to change, click "No (N)".

7. Click "OK" please.

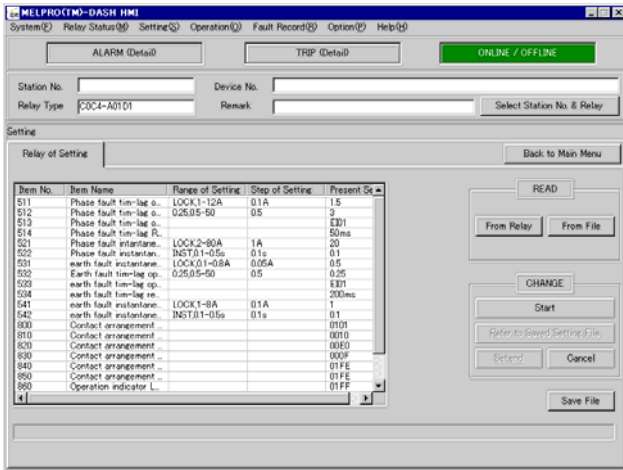
8. "Set.end" button flickers blue.



9. Click "OK" to change setting value, which is being run by the relay. And otherwise click "Cancel".

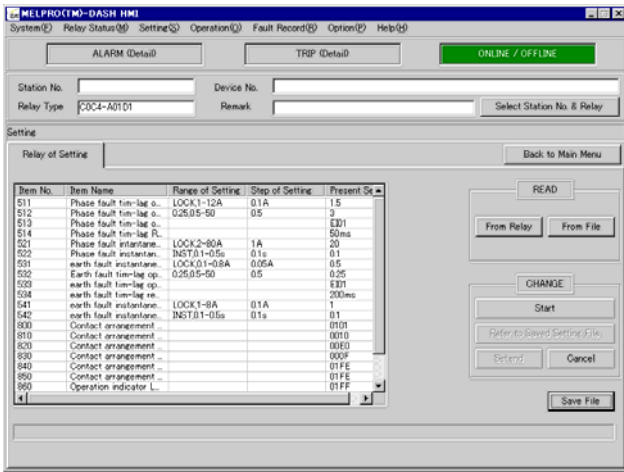


10. Click “OK” please.



11. End setting value change.

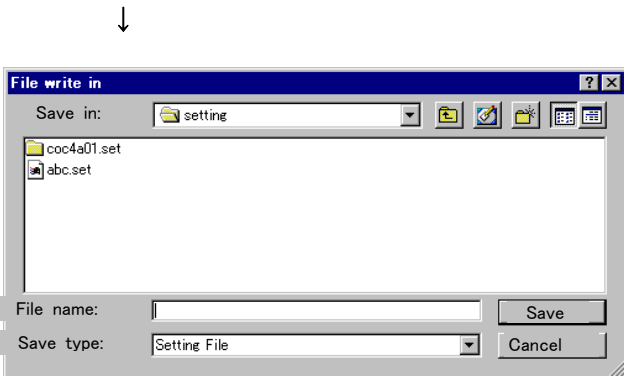
8.4.3. Save File



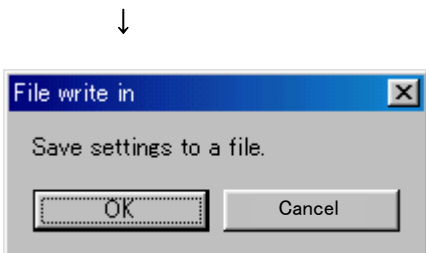
1. Click the button of “Save File”.



2. Click “OK” to save a file.



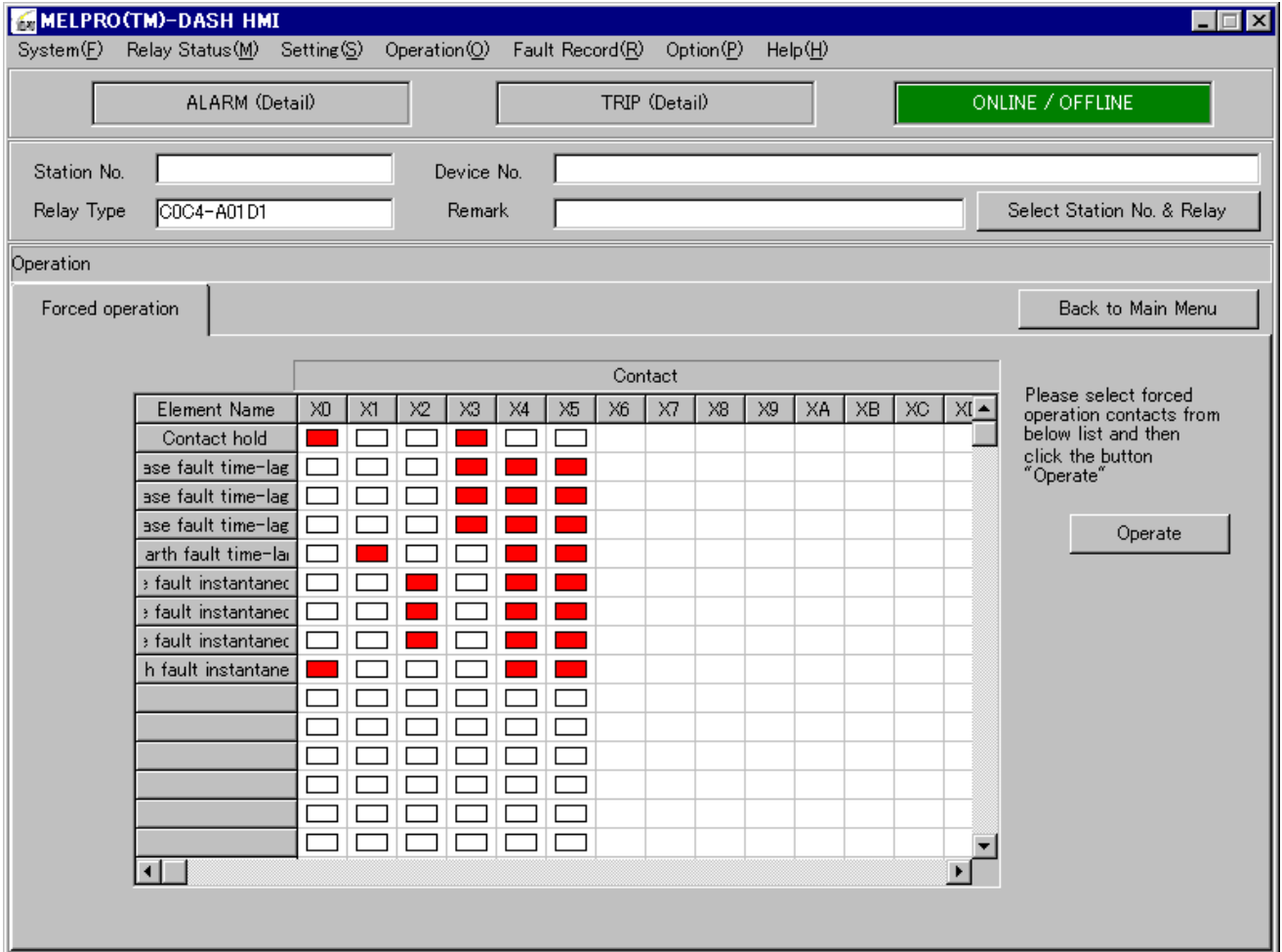
3. Enter a file name and click “Save (S)”.



4. Click “OK” please.

8.5. Operation

Display both contacts mounted on the relay and elements allotted to the contacts, and can render the contacts to operate forcibly.



(1) Startup

Select 「Operation」 - 「Operation」 from menu bar or click “Operation” button.

(2) About list

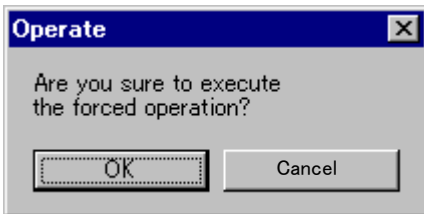
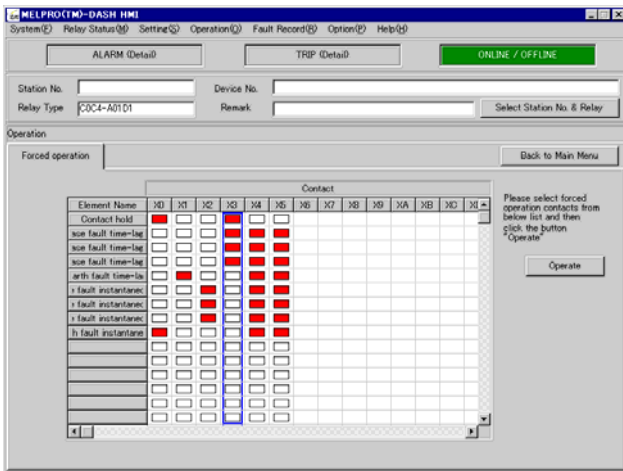
Ordinate : Contacts mounted on the relay

Abscissa : Element names allotted to the contacts

When a relay element is under operating, the corresponding contact is displayed red.

This setup is set at the time of shipping. However, it can be changed by programmable contact operation.

8.5.1. Forced Operation



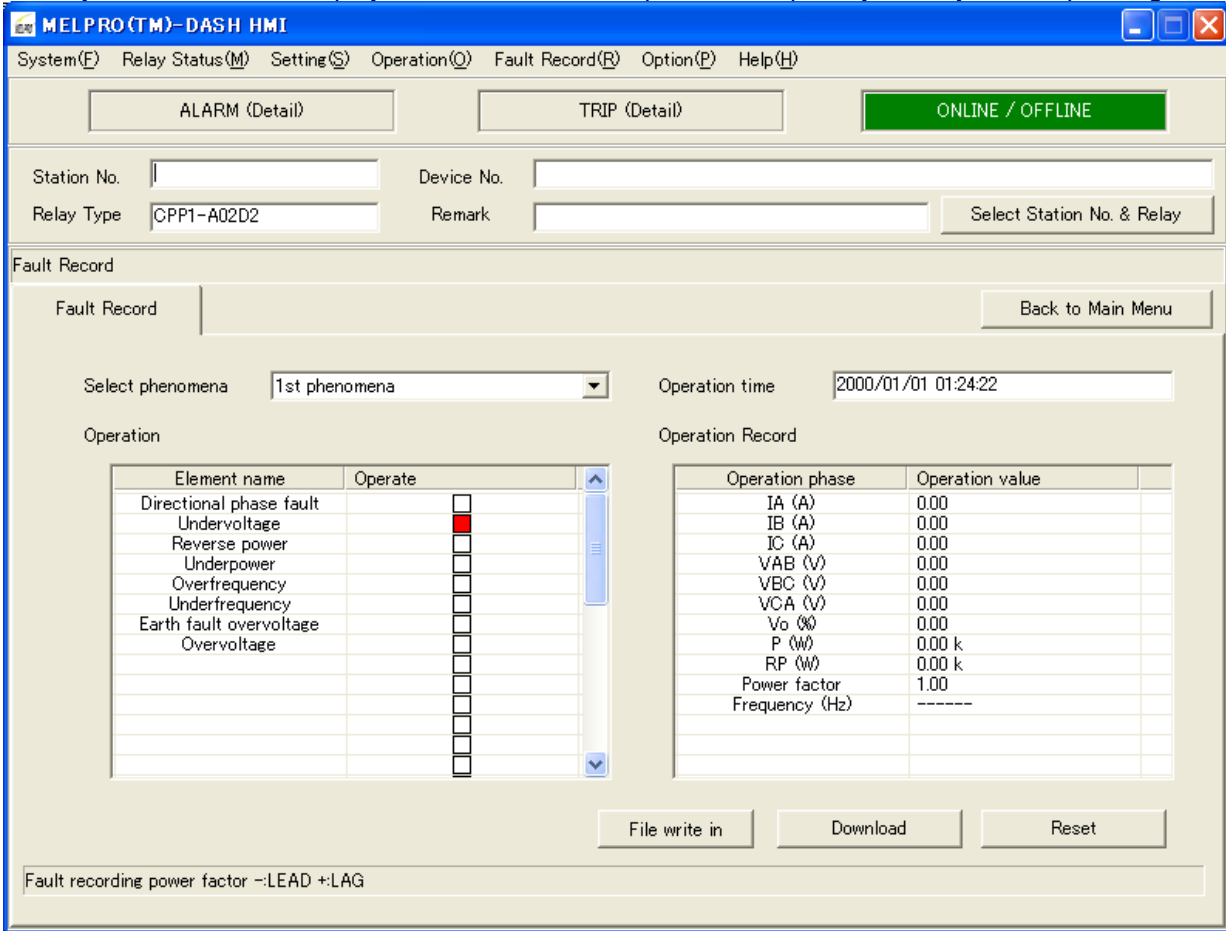
1. Select contacts for forced operation.
Click contact names (X0~Xd).
Multiple selection is available by holding "Ctrl" key.

If contacts for forced operation are decided, click "Operate" please.

2. Click "OK" to execute forced operation of the contacts which are selected.
Contact output time is about 1 second.

8.6. Fault Record

System fault record displays time, element and input electric quantity of relay under operating.



(1) Startup

Select 「Fault Record」 - 「Fault Record」 from menu bar or click “Fault Record” button.

After selecting [fault record], select which do you read the data from Relay side or PC side.



■Relay

Fault record data will be read out from the relay and indicated on the PC screen.

(NOTE) The following message shows that there is no former fault record.

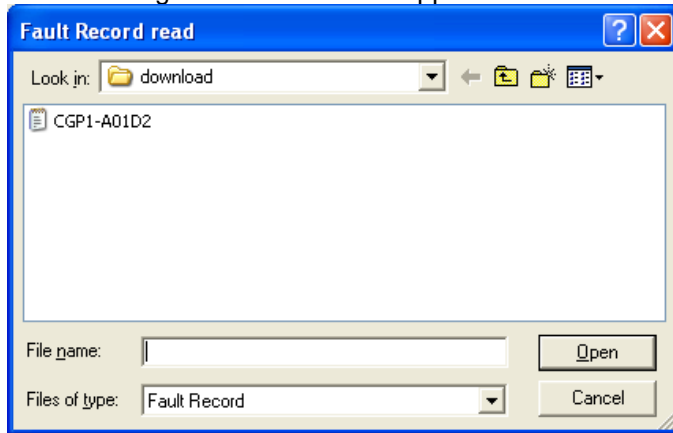


Click 「OK」, the fault record window will popup. But, operation time, operation element and operation

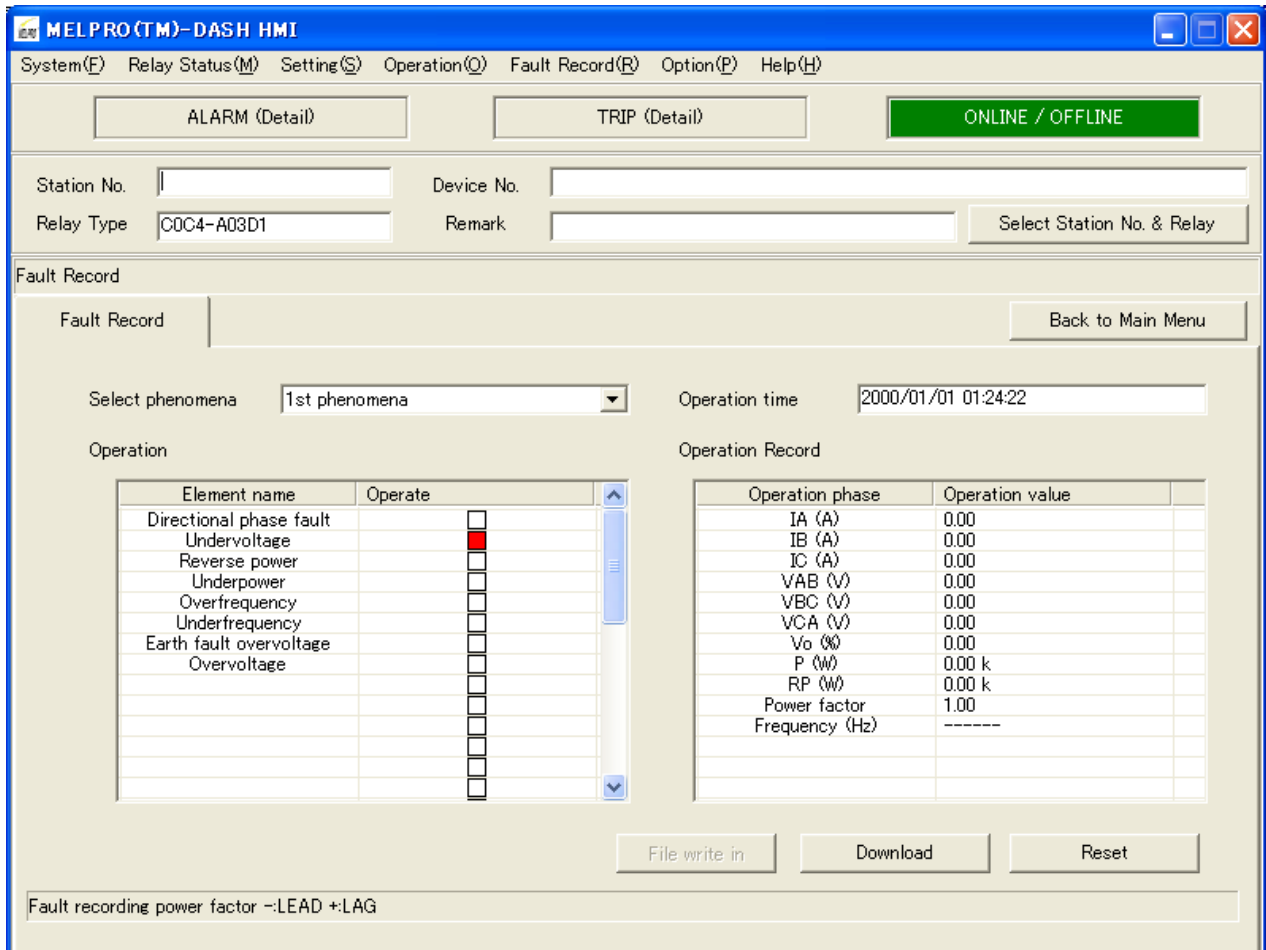
record remain blank.

■ File

The following indication will be appeared.



After selection of stored data file, select [down load] button.

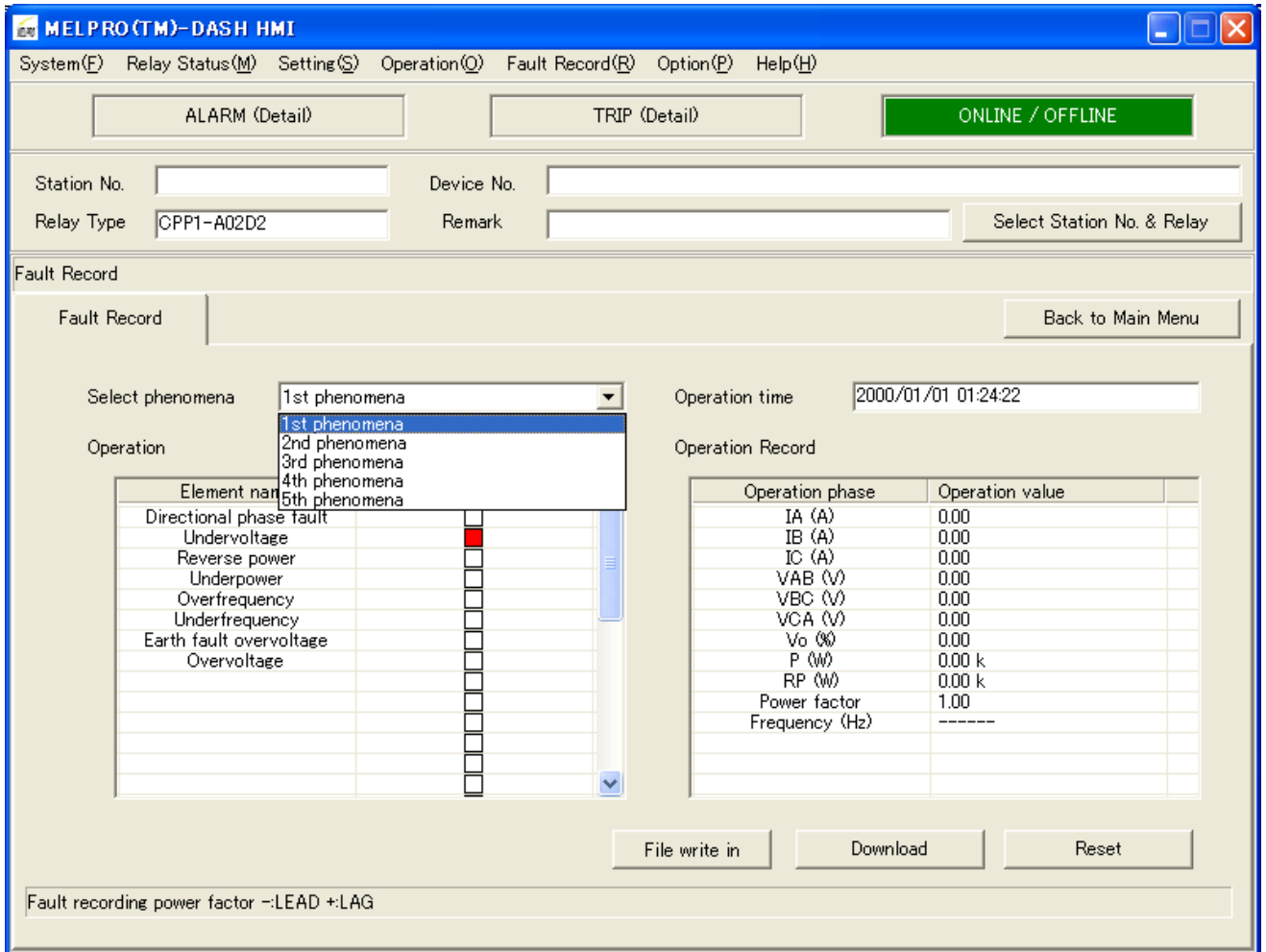


In case of the data reading out from file in PC, operation of 「Fault Record read」 will be ignored and data can not be overwritten.

(2) Browse record

1st phenomena (the newest operation record) will be displayed at first when open the window of "Fault Record".

The other phenomena (2nd~5th phenomena) also can be selected from the column of the "Select phenomena" with pull-down button.

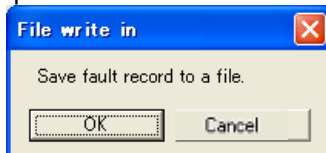


Operation time : Operation time is displayed in year, month, day, hour, minute and second.

Operation element : Operation element flickers red when the relay operated.

Operation record : Displays input quantity of electricity when the relay operated.

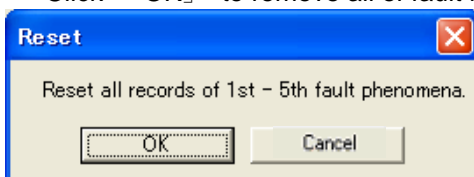
It is possible to save the data indicated on the screen of PC by the selection of "File write in".



Please decide the file name after selecting "OK".

(3) Reset fault record

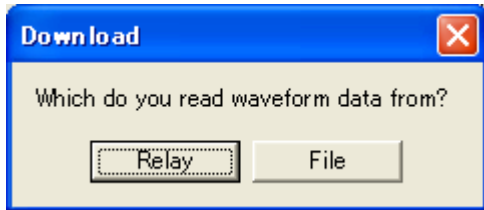
Click 「OK」 to remove all of fault records (1st ~ 5th phenomena).



(4) Download

Instantaneous waveform data are recorded in the relay while it operated. The recorded waveform can be downloaded and displayed.

The following window will popup when click "Download" button.



Relay : Read stored waveform data from relay.

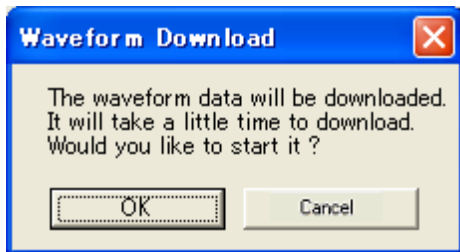
File : Read saved waveform data from a file.

If there is no fault record stored in relay, you cannot click the button of "Relay".

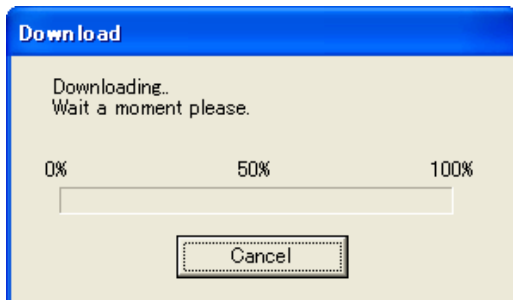
■Relay

It will take a little time to download the waveform data from the relay.

If you want to download, please select OK button.



After select OK button, the following screen will be appeared and continued up to 100%

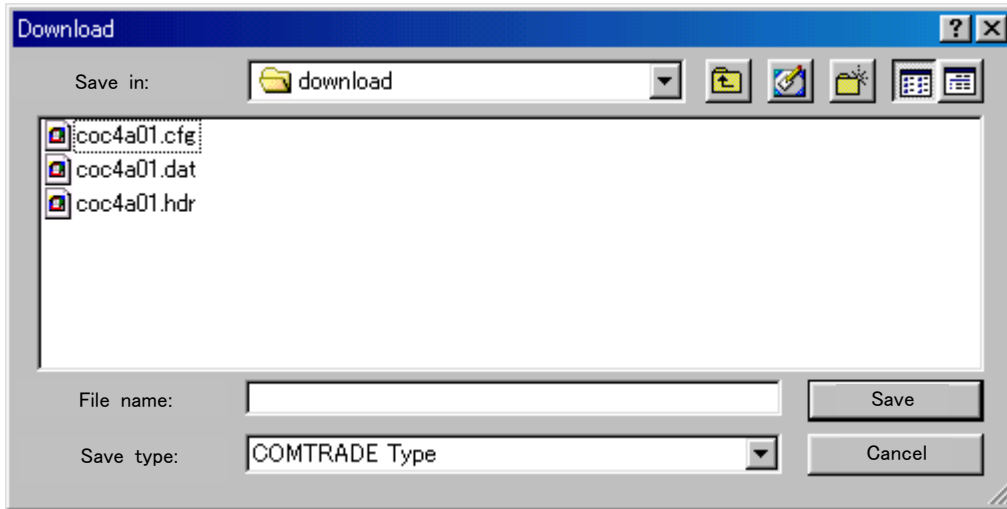


NOTE) In case of no fault record or waveform data, the following messages will be indicated after download starting,



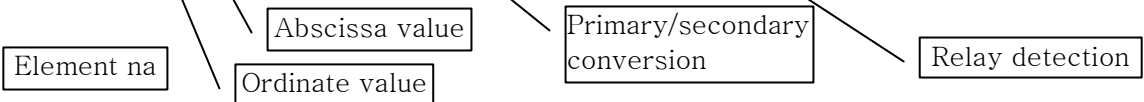
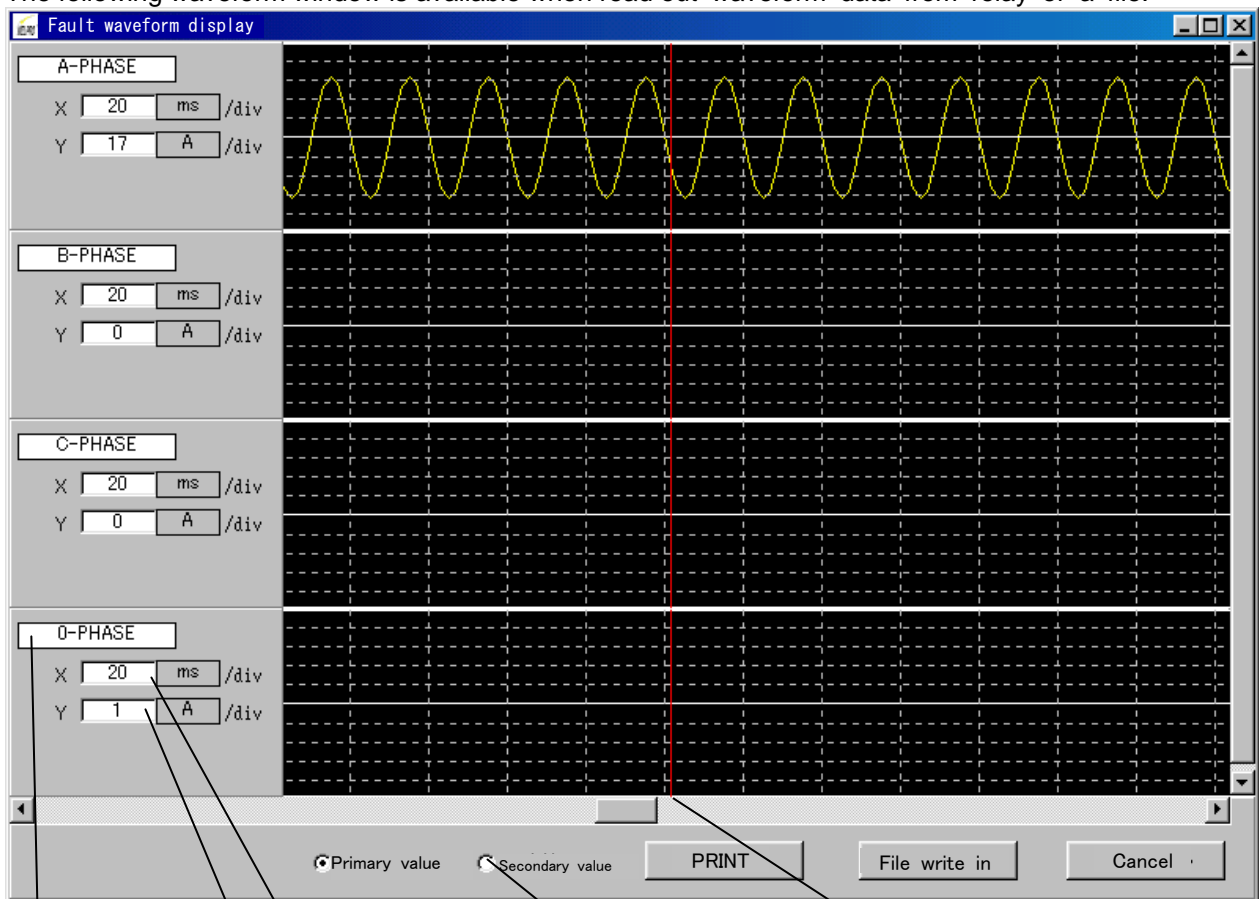
NOTE) Please carry out waveform download before changing a setting value when downloading a waveform, the above-mentioned message is displayed and waveform download cannot be performed, when a setting value is changed.

■File



The file type can be “.cfg”, “.dat” or “.hdr”, to select each type is the same.

The following waveform window is available when read out waveform data from relay or a file.

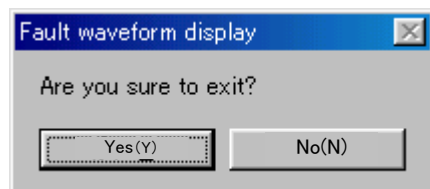


- The ordinate value is 1/5 of 1.5 times of each element maximum value.
- The abscissa/ordinate values can be changed at random.
- Press “Enter” key of the keyboard and enter values to change.

■ Primary/secondary ratio is converted to value set by the relay.

■ 「Save file」 can be selected only when instantaneous waveform data was read from relay.

■ If click 「Cancel」, the following window will popup.

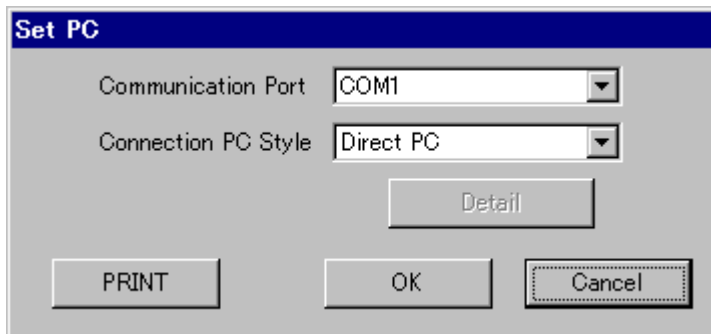


8.7. Option

8.7.1. PC Configuration

8.7.1.1. Communication

PC connector port is set up. Also, the PC connecting type with relay is set up here.



(1) Startup

Select 「Option」 — 「PC Configuration」 — 「Communication」 from menu bar.

(2) Communication Port

Select from COM1~COM8.

(3) Connection PC Style

Direct PC: Directly communicate by connecting with connector located relay front panel.

8.7.1.2. Folder

Set up folders to save each data read from the relay.

(1) Startup

Select 「Option」 — 「PC Configuration」 — 「Folder」 from menu bar.

(2) Folders

Default folders are as follows.

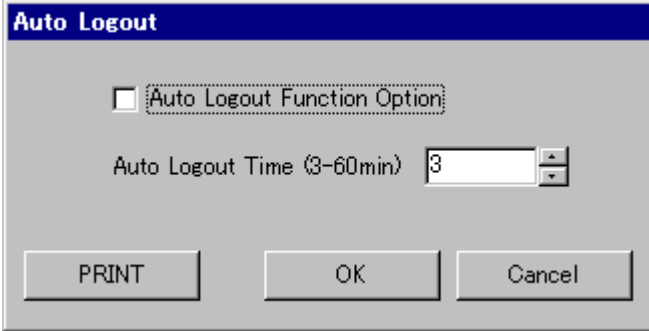
Relay Setting Info. : C:\Users\Public\Documents\MELPRO-D\setting

Waveform download Info : C:\Users\Public\Documents\MELPRO-D\download

If you want to change the folder name, please click "Browse" and set folder as you like.

8.7.1.3. Auto Logout

This is a function that the HMI software can log out automatically when the HMI window was laid aside over logout time.



The dialog box titled "Auto Logout" contains a checkbox labeled "Auto Logout Function Option" which is currently unchecked. Below it is a text field "Auto Logout Time (3-60min)" with the value "3" and a spin control. At the bottom are three buttons: "PRINT", "OK", and "Cancel".

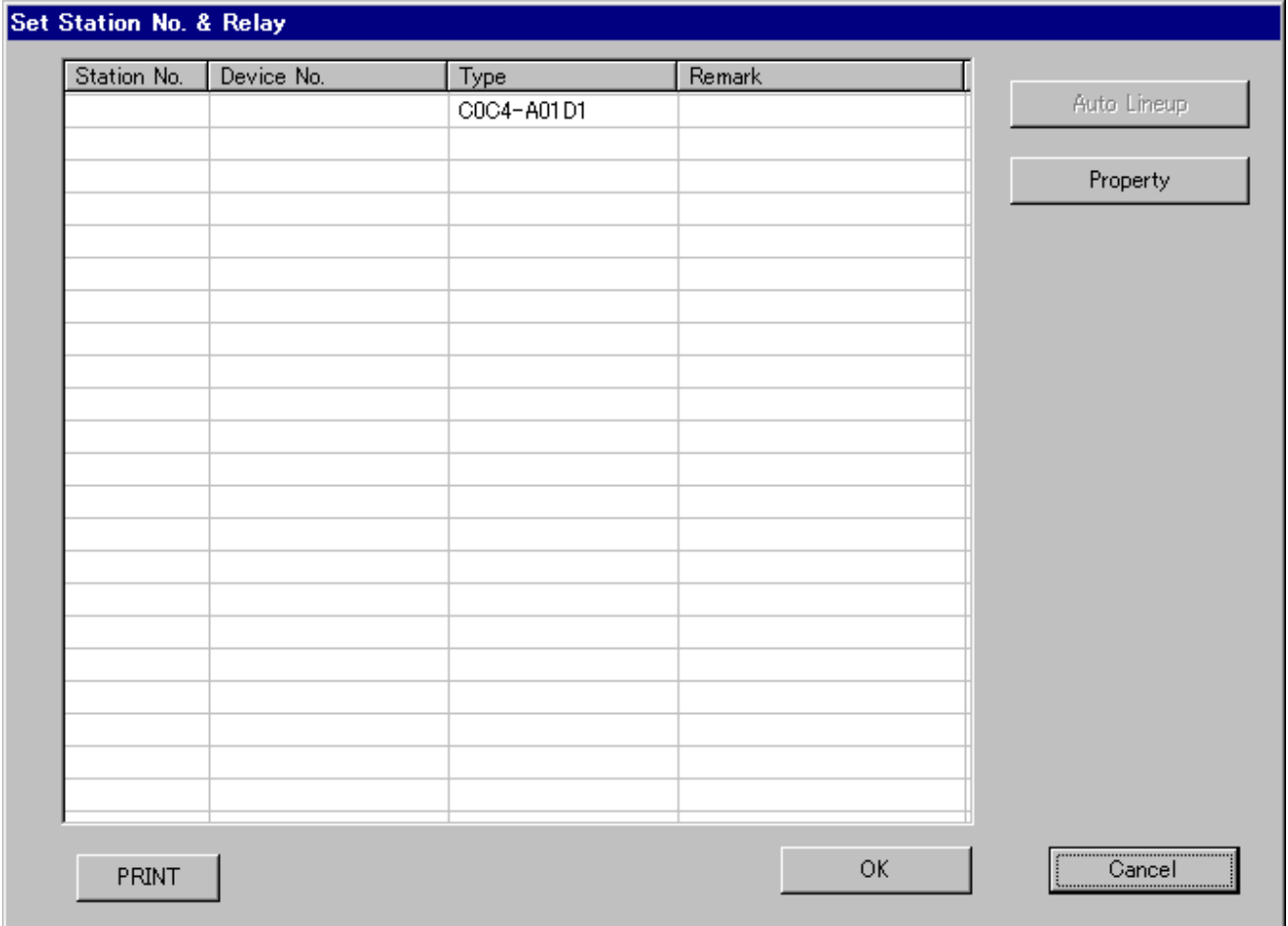
But if the function of auto logout is not in active condition, it cannot log out even though the auto logout time had been set.

(1) Startup

Select 「Option」 - 「PC Configuration」 - 「Auto Logout」 from menu bar.

8.7.2. Set Station No. & Relay Type

Display the type of relay which has been connected with PC.



The dialog box titled "Set Station No. & Relay" features a table with four columns: "Station No.", "Device No.", "Type", and "Remark". The first row of the table contains the value "C0C4-A01D1" under the "Type" column. To the right of the table are buttons for "Auto Lineup" and "Property". At the bottom are "PRINT", "OK", and "Cancel" buttons.

Station No.	Device No.	Type	Remark
		C0C4-A01D1	

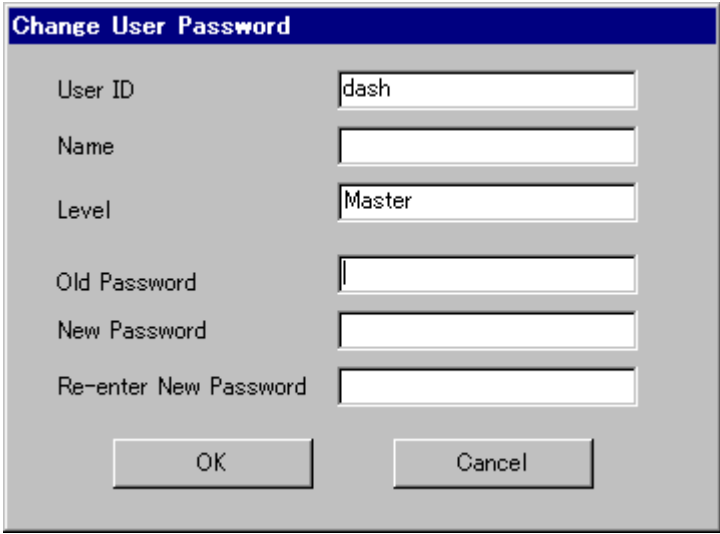
(1) Startup

Select 「Option」 - 「Set Station No. & Relay Type」 from menu bar.

8.7.3. Security

8.7.3.1. Change User Password

It is available to change the user password when the user login.



The dialog box titled "Change User Password" has a blue header bar. It contains six input fields: "User ID" (with "dash" entered), "Name", "Level" (with "Master" entered), "Old Password", "New Password", and "Re-enter New Password". At the bottom, there are two buttons: "OK" and "Cancel".

(1) Startup

Select 「Option」 - 「Security」 - 「Change User Password」 from menu bar.

(2) Change password

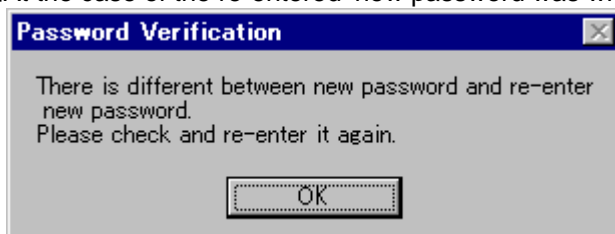
- ① Enter pervious password in "Old password".
- ② Enter new password in "New password" (alphanumeric within 8 characters).
- ③ Re-enter new password in "Re-enter New Password".
- ④ Click "OK".

If there is an error, the following message is displayed.

■At the case of the old password was wrong

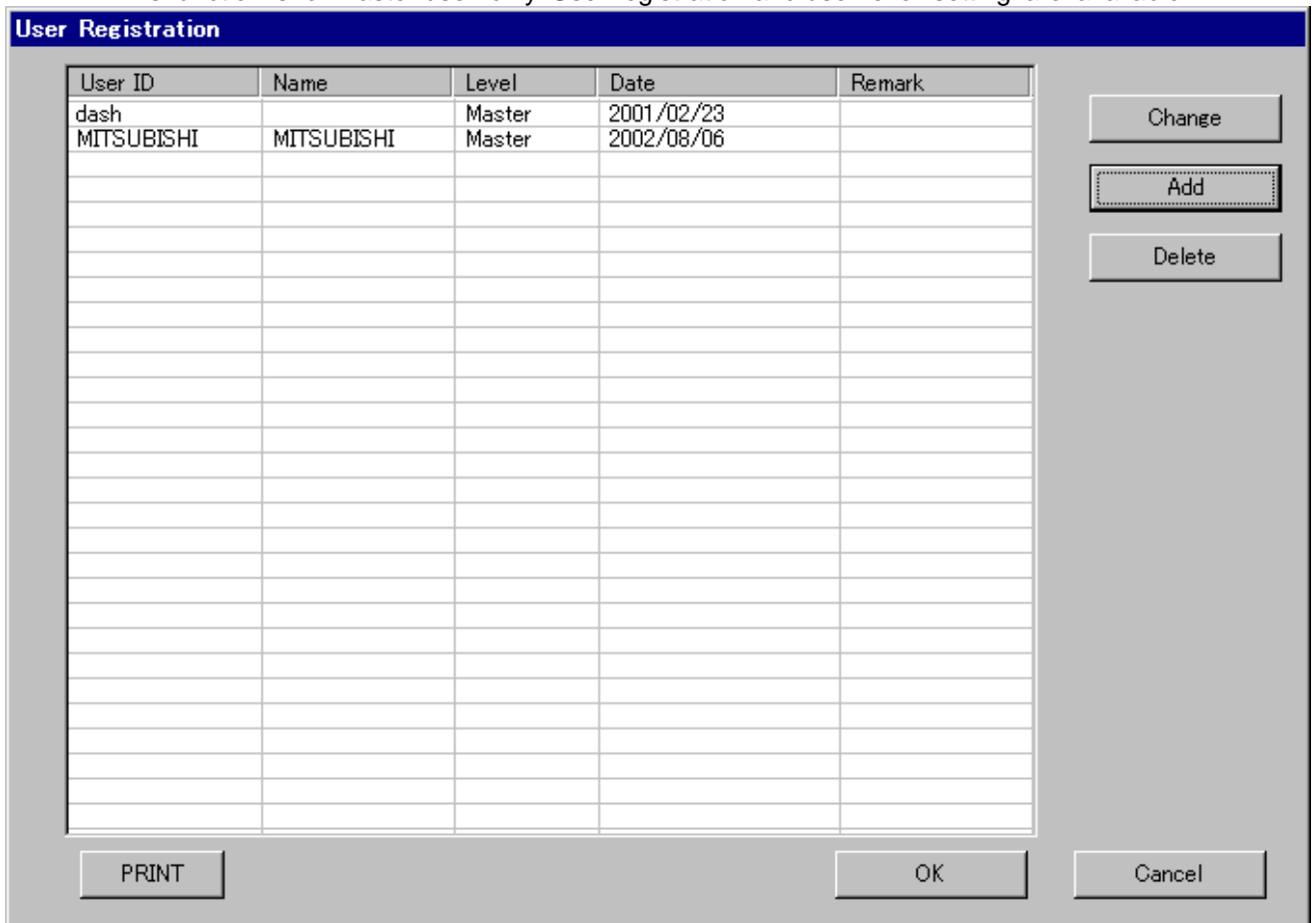


■At the case of the re-entered new password was wrong



8.7.3.2. User Registration

This function is for master user only. User registration and user level setting are available.



The 'User Registration' window features a table with the following columns: User ID, Name, Level, Date, and Remark. Two users are listed: 'dash' (Master, 2001/02/23) and 'MITSUBISHI' (Master, 2002/08/06). The window includes 'Change', 'Add', and 'Delete' buttons on the right, and 'PRINT', 'OK', and 'Cancel' buttons at the bottom.

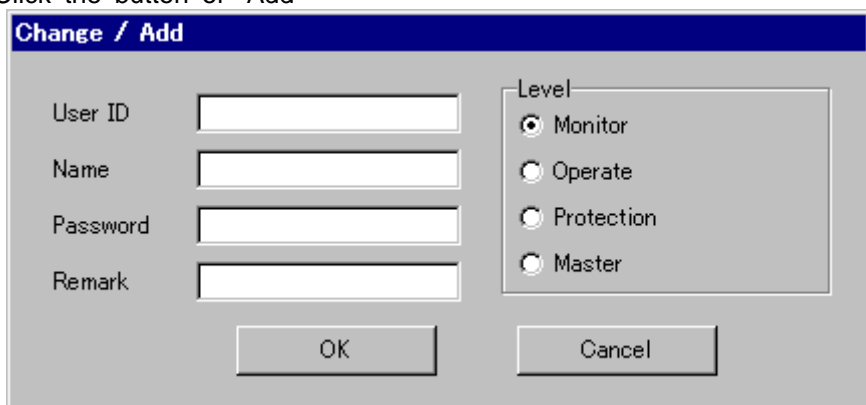
User ID	Name	Level	Date	Remark
dash		Master	2001/02/23	
MITSUBISHI	MITSUBISHI	Master	2002/08/06	

(1) Startup

Select 「Option」 - 「Security」 - 「User registration」 from menu bar.

(2) Add

Click the button of “Add”



The 'Change / Add' dialog box contains input fields for 'User ID', 'Name', 'Password', and 'Remark'. A 'Level' section has radio buttons for 'Monitor' (selected), 'Operate', 'Protection', and 'Master'. 'OK' and 'Cancel' buttons are at the bottom.

Enter each item, select user level and click “OK”.
About the user level, please refer to section 1.2.

- User ID : Alphanumeric within 10 characters
- Name : Any character
- Password : Alphanumeric within 8 characters
- Remark : Any character

- (3) Change
Select row to change from the list, and click “Change”.

User ID	Name	Level	Date	Remark
dash		Master	2001/02/23	
MITSUBISHI	MITSUBISHI	Master	2002/08/06	

↓

User ID	<input type="text" value="MITSUBISHI"/>
Name	<input type="text" value="MITSUBISHI"/>
Password	<input type="text" value="*****"/>
Remark	<input type="text"/>
Level	<input type="radio"/> Monitor <input type="radio"/> Operate <input type="radio"/> Protection <input checked="" type="radio"/> Master
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Enter each item, select user level and click “OK”.

- (4) Delete
Select row to delete from the list, and click “Delete”.

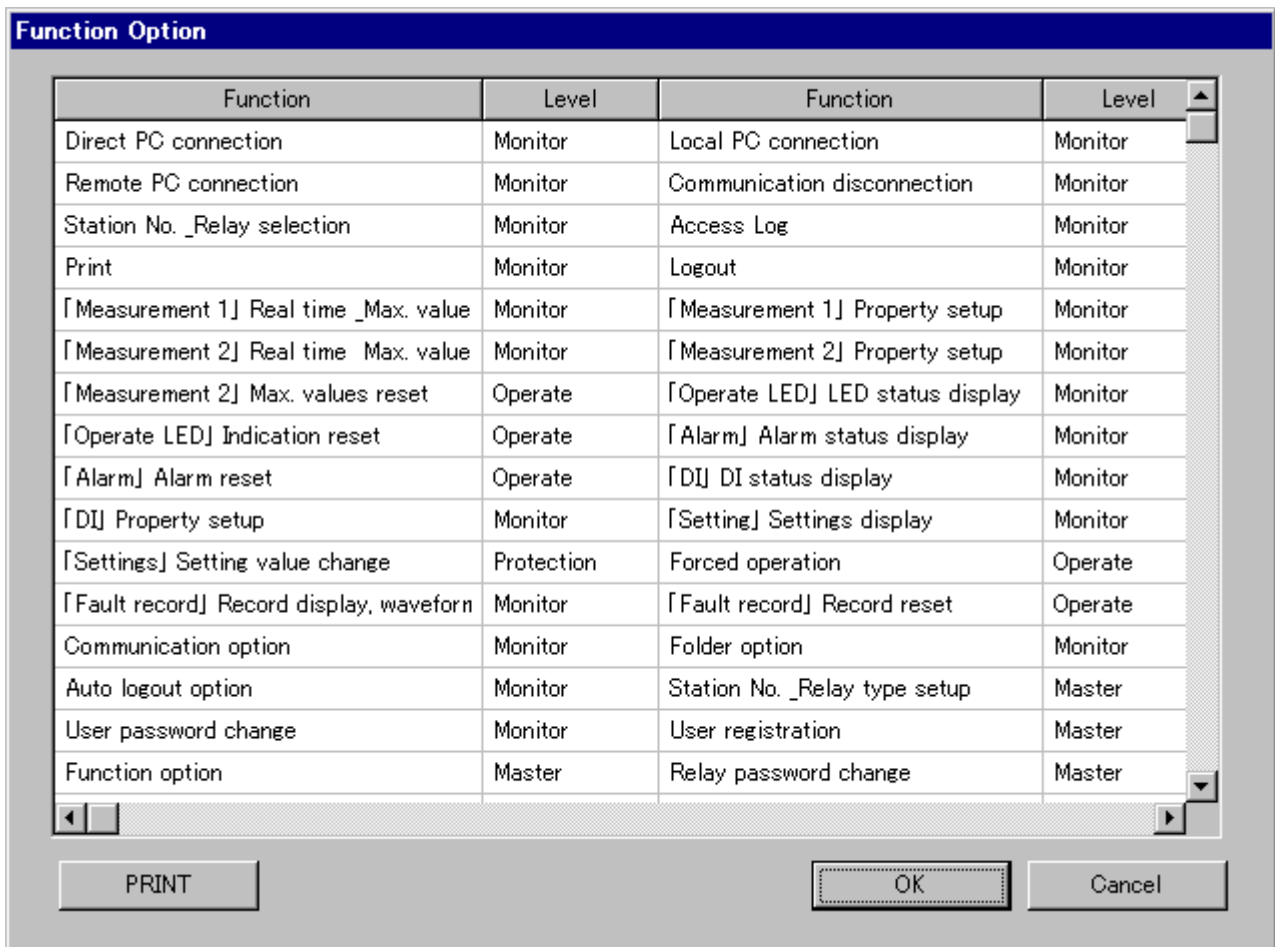
[Warning]

Considering of the security, you had better to delete the user of “DASH” from default.
In this case, it is necessary to register a new Master user to instead of “DASH” user, in advance.
Otherwise, the Master setting will become impossible and necessary to re-install the HMI software.

8.7.3.3. Function Option

Sets up the operation range of each user level.

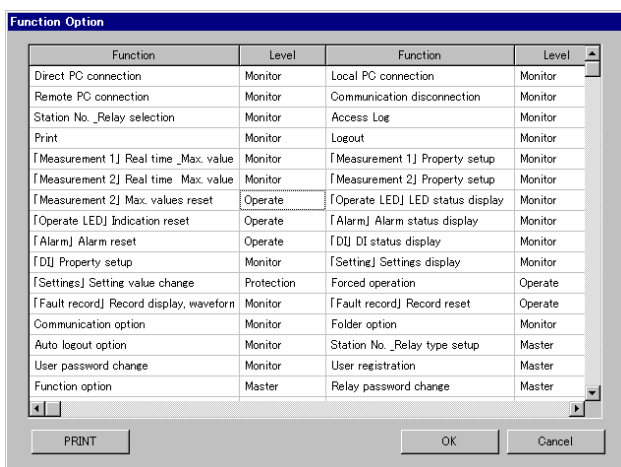
The default is shown in section 1.2.



(1) Startup

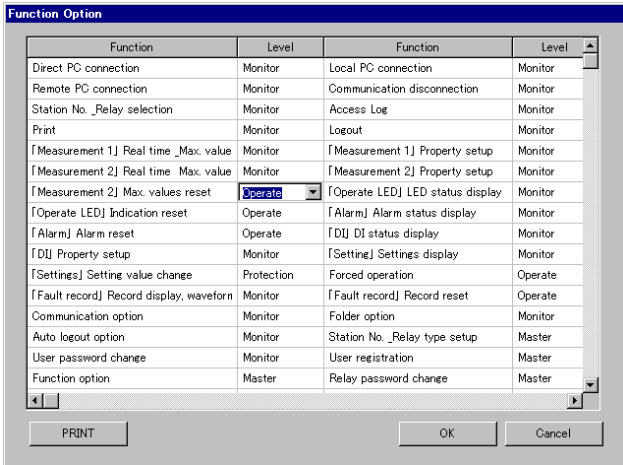
Select 「Option」 — 「Security」 — 「Function Option」 from menu bar.

(2) Change

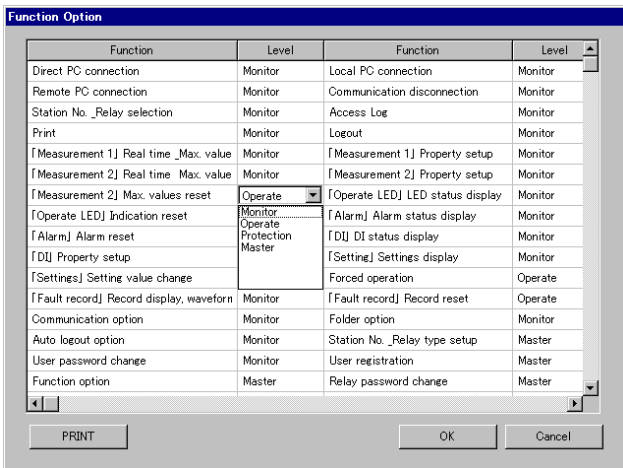


1. Click level content where you want to change.

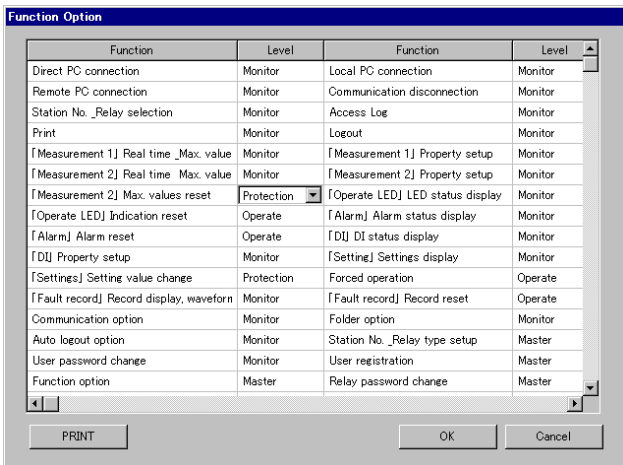




2. Click at the same place once again.



3. Then, a pull-down menu appears.

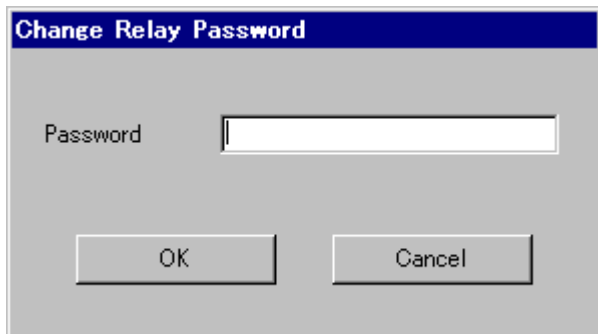


4. Select a level and click "OK".

8.7.3.4. Change Relay Password

This is a function that to change the relay password which is set "1234" at the time of shipment. A new password can be set up forcedly with this function.

The relay password will become valid if the "Relay Password Enable/Disable Option" is checked.



(1) Startup

Select 「Option」 - 「Password」 - 「Change Relay Password」 from menu bar.

[Caution]

The password should be a 4-digit alphanumeric (0~9 and A~F be available only).

The default password is "1234".

8.7.3.5. Relay Password Enable/Disable Option

Set the relay password valid or invalid when carrying out setting change with front panel of relay. If the relay password is valid, it is necessary to enter the password when carrying out setting change with front panel of relay.



(1) Startup

Select 「Option」 - 「Security」 - 「Relay Password Enable/Disable Option」 from menu bar.

[Caution]

Password Enable: Once press "Setting" button of relay front panel, the password input mode responds first.

Password Disable: Once press "Setting" button of relay front panel, the setting mode responds.

The relay password is set "Disable" in default like the above window.

8.7.4. Set Relay Time

This is a function that the time of relay can be set with PC. But the relay time will erase once the relay control power source is be turned OFF. When the relay power source turned ON, the relay time starts from 2000/01/01 00:00:00.

(1) Manual

The screenshot shows the 'Set Relay Time' dialog box. At the top, it says 'Please select one model below to set relay time based on system time.' Below this, there are two text boxes: 'Internal time' and 'System Time', both containing '2008/08/04 18:51:42'. There are three radio button options: 'Manual' (which is selected), 'Auto 1', and 'Auto 2'. Under 'Auto 1', there is a 'Setting Date' dropdown menu set to 'Daily' and a 'Setting Time' field with two spinners set to '00'. Under 'Auto 2', there is a 'Setting Interval' field with two spinners set to '00'. At the bottom, there are three buttons: 'PRINT', 'OK', and 'Cancel'.

1. Select "Manual" and click "OK".
The present time of PC is written into relay.

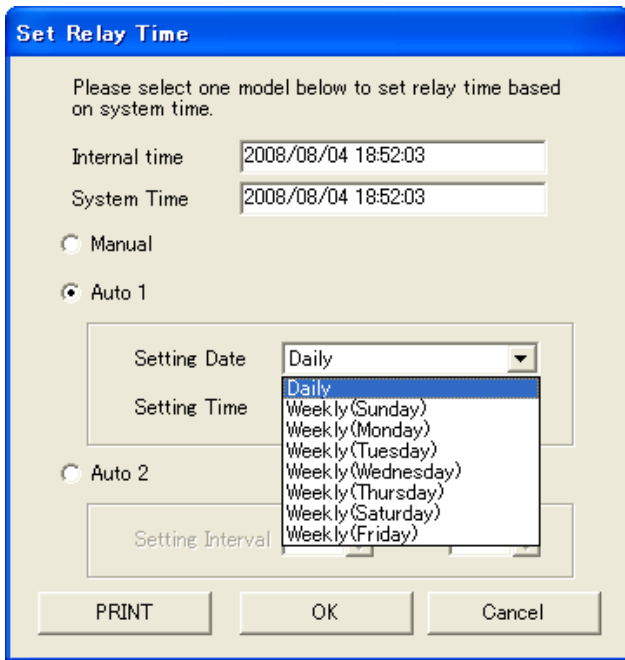
Internal time : The time counted in the relay is displayed.
System time : The time of PC is displayed.

(2) Auto 1

The screenshot shows the 'Set Relay Time' dialog box. At the top, it says 'Please select one model below to set relay time based on system time.' Below this, there are two text boxes: 'Internal time' and 'System Time', both containing '2008/08/04 18:51:21'. There are three radio button options: 'Manual', 'Auto 1' (which is selected), and 'Auto 2'. Under 'Auto 1', there is a 'Setting Date' dropdown menu set to 'Daily' and a 'Setting Time' field with two spinners set to '00'. Under 'Auto 2', there is a 'Setting Interval' field with two spinners set to '00'. At the bottom, there are three buttons: 'PRINT', 'OK', and 'Cancel'.

1. Select Auto 1.

↓



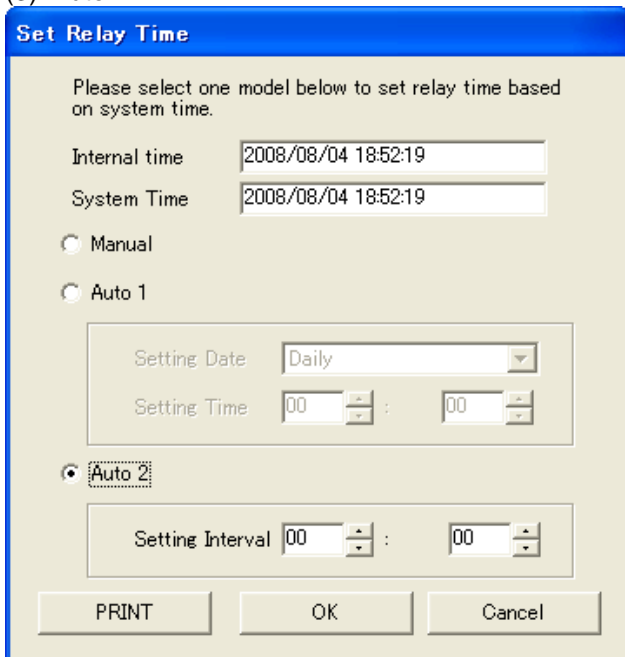
2. Set a adjustment period and adjustment time and then click "OK".

<e.g.> Setting Date : Weekly (Wednesday)
Setting Time : 00:00

This setting means that the PC time will be written into relay at 00:00 on Wednesday every week if the relay is still online.

Note: After 12 hours pass, the first time correction is executed after setting it. The time correction is executed at the set time at the following.

(3) Auto 2



1. Select "Auto 2" and set "Setting Interval" and then click "OK".

<e.g.> Setting Interval : 12:00

This setting means that the PC time will be written into relay at interval 12 hours if the relay is still online.

9. Error Message

- (1) 「There is no waveform data. Refer to Help for details.」

This message is shown in the following cases:

- The relay has never operated.
- The relay power source has been turned off after operated.

- (2) 「Communication error occurred. Do you want to do again? If the error continuously occurs, refer to the “Help” please.」

This message is shown in the following cases:

- The cable is not connected between PC and relay or the cable has problem.
- The cable is connected normally, but the relay power source is in OFF.

Do according to the following processing in case of that error is shown repeatedly.

1. Exit the HMI software.
2. Check if the cable is properly connected.
3. Check if there is disconnection of the cable.
4. Check if the relay power is turned ON.
5. Restart the HMI software.

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