HYBRID SYSTEM Maintenance Tool DAIKIN Hybrid-Win Operation Manual

model	Model Identification Code		
EcoRich	EHU14-L04, EHU25-L04, EHU25-L07, EHU25-M07		
EcoRich R	EHU15R-M07, EHU30R-M07, EHU40R-M07		
Super Unit for Industrial Machinery	SUT**S15*07(except -V/-D), SUT**S15*10, SUT**S30*07(except -V/-D),		
industrial Machinery	SUT**S80*07, SUT**D80*21, SUT**D11021, SUT**S4007, SUT**S30*10		
	SUT**S15*16, SUT**D40*16, SUT**S30*16, SUT**S60*07		
	SUT**D60*21(except SUT10D60L21-20-F-N0257)		
	Note: -P is excepted from the Ver1.*.*		
Super Unit for Molding Machine	SUT00S3018, SUT00S5021(except SUT00S5021-10),		
Wording Watchine	SUT00S8018(except SUT00S8018-10), SUT00S8021 SUT00D12818, SUT00T12818,		
	SUT00S13018 SUT00S13021,SUT00S15018, SUT00S20018		
	Note: The Ver1.*.* is not supported for MFG3*3*		
Oilcon 8 series	AKZ148、AKZ328、AKZ438、AKZ568、AKZ908,AKZJ188、AKZJ358、AKZJ458、		
	AKZJ568、AKZJ908		
	AKZC358、AKZG358、AKZG568、AKZG908		
	AKZW148、AKZW328、AKZW438、AKZW568		
Oilcon 9 series	AKZ149, AKZ329, AKZ439, AKZ569, AKZ909		
	AKJ189、AKJ359、AKJ459、AKJ569、AKJ909		
	AKC359、AKC569		
	AKW149, AKW329, AKW439, AKW189, AKW359, AKW459		

" * " is number, " L " or blank.

[Object model]

IMPORTANT There are some models which is not applied this software because of special design. Please contact with Daikin contact points, when you have special design models.

DAIKIN INDUSTRIES, LTD. Oil Hydraulics Division

PIM00446

Introduction

Thank you for selecting the SUPER UNIT/Oil Con series DAIKIN Hybrid Systems.

This operation manual describes how to operate DAIKIN Hybrid-Win. Before using this software, be sure to read through this manual carefully to ensure proper use of the system.

General Precautions

- Improper operation or handling of this product causes an accident, reduced service life or performance deterioration of the equipment.
- The contents of this manual are subject to model change for the purpose of specifications or improvement of users' convenience.
- Keep this manual carefully in a place where users can refer to it whenever required.
- The figures given in this manual may be different from the conditions of the actual product because of product improvement.

Copyright and Trademark

- (1) Daikin Industries possesses the copylight of this software.
- (2) Duplicate, extract or rent without approval by Daikin are prohibited by government law.
- (3) Specification and contents would be modified without notification.
- (4) Daikin would exempt from any responsibilities after use of this software, even if above (3) condition would be occurred.
- "Windows XP" is tradmark of Microsoft in US.
- "Excel" is tradmark of Microsoft.
- This manual doesn't mention "TM" inside.

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Chapter 1. Precautions before use

1.1 Description of this guide

Thank you very much for purchasing our hybrid system.

"Hybrid system maintenance tool DAIKIN Hybrid-Win" (hereinafter, Hybrid-Win) can be connected to the hybrid system, such as EcoRich, Super Unit and Oilcon, by serial communication. It is a kind of software which can set the parameters, display and save the graph of pressure and flow rate, display and save the alarm history. This manual is for those people who want to use the Hybrid-Win software. Before operating, please read this manual

carefully, and correctly operate it.

Please refer to other manuals for the hybrid hydraulic unit.

In this manual, safety instructions are classified into two categories: "DANGER" and "CAUTION".

A DANGER	Improper handling regardless of this indication causes an urgently hazardous condition that may result in death or serious injury.
▲ CAUTION	Improper handling regardless of this indication causes a potentially hazardous condition that may result in medium or slight injury, or property damage.

Even an item indicated as "A CAUTION" may result in a serious accident depending on the situation. All instructions given in this manual include important information. Be sure to observe all of them.

In addition, "Important" is not included in "danger" or "caution". It is a measure for protection of users. "Note" indicates some matters should be known.

<Escape Clauses>

- DAIKIN shall not be responsible for any damage attributable to a fire, earthquake, third party's action and other accidents, as well as customer's intention, misuse or use under abnormal conditions.
- DAIKIN shall not be responsible for any damage incidental to use of this product or impossibility to use this product (loss of business profit, discontinuation of business).
- DAIKIN shall not be responsible for any accident or damage attributable to negligence in observing the instructions given in the operation manual or delivery specifications.
- DAIKIN shall not be responsible for any damage attributable to malfunction caused by combinations of this unit and external equipment.

1.2 Operating environment

1.2.1 Preparation

The followings are required in order to use the "Hybrid-Win".

Preparation		Details	
Computer	In order to operate the Hybrid-Win, please prepare the computer (hereinafter PC) satisfing the following conditions.		
	Hybrid-WinVersion	PC Specifications	Environment
	Ver 1.*.*	OS	Windows XP
		Hard disk space	50MB or more
		Recommended CPU	Pentium 500MHz or more
		Installed memory	256MB or more
		Screen resolution	1024×768 or more
		Display color	High Color (16 bit) or more
		Application	Microsoft Excel*
	Ver 2.*.*	OS	Windows 7
		Hard disk space	50MB or more
		Recommended CPU	Pentium 500MHz or more
		Installed memory	256MB or more
		Screen resolution	1024×768 or more
		Display color	High Color (16 bit) or more
		Application	Microsoft Excel*
	Excel.	n displaying the waveform g	
Hybrid-Win	Please download "DAIKIN Hybrid-Win" from "Daikin hydraulic user support services" in our website (http://www.daikinpmc.com).		
Optional	The ptional communication cable is required in accordance with the target unit.		
communication cable	Please refer to the "2.4.1 Preparation" for more information.		
USB - Serial converter	This is necessary if there is	1	
	Please refer to the "2.4.1 P	reparation" for more inform	ation.

1.2.2 Windows account

- When installing Be sure to install with Administrator privilege.
- Start-up and operation

It can be started and operated only when the account is Administrator or Power User. It can not work even if the User or Guest account is logged in.

1.2.3 Supporting unit

It supports the unit in the table below.

model	Model Identification Code
EcoRich	EHU14-L04, EHU25-L04, EHU25-L07, EHU25-M07
EcoRich R	EHU15R-M07, EHU30R-M07, EHU40R-M07
Super Unit for Industrial Machinery	SUT**S15*07(except -V/-D), SUT**S15*10, SUT**S30*07(except -V/-D),
mousurar wachinery	SUT**S80*07, SUT**D80*21, SUT**D11021, SUT**S4007, SUT**S30*10
	SUT**S15*16, SUT**D40*16, SUT**S30*16, SUT**S60*07
	SUT**D60*21(except SUT10D60L21-20-F-N0257)
	Note: -P is excepted from the Ver1.*.*
Super Unit for	SUT00S3018, SUT00S5021(except SUT00S5021-10),

Molding Machine	SUT00S8018(except SUT00S8018-10), SUT00S8021, SUT00D12818, SUT00T12818, SUT00S13018, SUT00S13021, SUT00S15018, SUT00S20018
	Note: The Ver1.*.* is not supported for MFG3*3*
Oilcon 8 series	AKZ148、AKZ328、AKZ438、AKZ568、AKZ908,AKZJ188、AKZJ358、AKZJ458、
	AKZJ568, AKZJ908
	AKZC358、AKZG358、AKZG568、AKZG908
	AKZW148、AKZW328、AKZW438、AKZW568
Oilcon 9 series	AKZ149, AKZ329, AKZ439, AKZ569, AKZ909
	AKJ189, AKJ359, AKJ459, AKJ569, AKJ909
	AKC359、AKC569
	AKW149、AKW329、AKW439、AKW189、AKW359、AKW459
" $*$ " is number, " L " or	blank.

Important Even the model of the unit is in the above table, there are some models that cannot be supported (because of non-standard management number). Please contact us in that case.

1.2.4 Wiring notes

DANGER
Please do not approach or touch the rotating part.
When touching the internal controller, please observe the following steps to prevent electric shock.
i) Please turn off the main power of the hydraulic unit.
(Turn OFF the power breaker in the circuit that provides power.)
Please apply a tag such as "Operation Prohibition (under working)" to the power circuit breaker.
ii) Remove the controller cover after 5 minutes passing.
A high-capacity capacitor is used in the controller, and it works in a state of being charged. So there is a
risk of electric shock. Be sure to wait 5 minutes (The time required to discharge in the capacitor) before removing the controller cover.
iii) Please clean the cover to protect the controller against foreign matters. Before removing the cover, please make sure that the ambient environment is no problem (oil mist, dust does not enter into the controller). If the foreign matter is mixed in, there is risk of damage and injury.
iv) The cover does not close completely, when the communication cable is connected. If tighten the screw of
the cover, there is a possibility that the communication cable cannot be connected. Please select the
tightening place of the screw so as not to break the cable, and please adjust the screw tightening amount. In order to protect the controller against iron scrap, oil mist, dust and so on, please use tape to deal with the
opening place. f the foreign matter is mixed in, there is risk of damage and injury.

Chapter 1 Precautions before use

<Memo>

Chapter 2. Overview Introduction and Preparation

2.1 Function

"Hybrid system maintenance tool DAIKIN Hybrid-Win" can be connected to the hybrid system, such as EcoRich, Super Unit and Oilcon, by serial communication. It is a kind of software which can set the parameters, display and save the graph of pressure and flow rate, display and save the alarm history.

2.2 Communication specification

Item	Specifications		
Interface	Conforms to R	S-232C	
		EcoRich	9600 bps
Transmission data format	Transmission speed	Super Unit EcoRich R Oilcon	19200 bps
	Start bit		1bit
	Data bit length		8bit
	Parity bit		None
	Stop bit		1 bit
	Parity check		None
Transmission distance	RS-232C within 15m (19200[bps])		

Communication specification is shown in the table below.

• super unit with the communication function

If you want to use the communication function of the super unit, on the unit side you need to set communication settings so as to match the "Hybrid-Win". Please note the setting values of parameters shown in the table below. And set the communication parameters of the unit according to the table below, then turn on the power again.

		Setting	Setting
No.	Description	value	Meaning
C00	Transmission speed	192	19200 bps
C01	Data bit length	8	8 bit
C02	Stop bit	1	1 bit
C03	Parity bit	n	None

Important	After using Hybrid-Win, please change the parameter value in the above table back to its
Important	original value, and turn on the power again.

2.3 Installation

Please download "DAIKIN Hybrid-Win" from "Daikin hydraulic user support services" in our website (<u>http://www.daikinpmc.com</u>).

2.3.1 Version upgrade

When upgrading the DAIKIN Hybrid-Win, you must uninstall the old version firstly, then install the new version. Please refer to the "2.3.3 uninstall" for uninstall procedure.

2.3.2 Installation

The installing procedures of Hybrid-Win (Ver 1.*.*) and Hybrid-Win (Ver 2.*.*) are different. The followings are installing procedures for each version.

The installing procedure of Hybrid-Win (Ver 1.*.*) Please install the DAIKIN Hybrid-Win (Ver 1.*.*) to your PC and follow the steps below.

1) Close the running application

If there are running applications in your PC, please close them.

2) Setup

Unzip "HybridWin_V ***. EXE (*** is a three-digit number) " that you downloaded, then double-click the "setup.exe".



Please prepare a PC with Windows XP for DAIKIN Hybrid-Win. Please make sure the account of Windows XP is Administrator during installing.

In order to install the DAIKIN Hybrid-Win, at least 50MB hard disk space is required.

3) Display of the confirmation message

2	Welcome to the Hybrid-Win	for Windows installation program.
		ate shared files if they are in use. you close any applications you ma
etore pro e running		you close any applications you me

Start the setup program, a confirmation dialog box will appear. Please check the contents then click the [OK] button.

If you want to stop, please click on the [Exit Setup] button.

4) Confirmation of the installation directory

Begin the installation by clicking the b Click this button i destination direct	below.
Directory: C:\Program Files\HybridWin\	Change Directory

Dialog box shown left is displayed.

When you start the installation, please click the button (A).

The directory for installation is "C:\ Program Files $\$ Hybrid-Win $\$. And it doesn't matter.

If you want to install to another directory, please click the Directory Change button.

If you want to stop, please click on the [Exit Setup] button.

inter or select a destination directory.	
ath:	
C:\Program Files\HybridWin\	
)irectories:	
	ОК
Intel PerfLogs	
Program Files	Cancel
Windows	
Drives:	

5) Program group selection

add items to the group shown in the Program Group box. nter a new group name or select one from the Existing t.
Program Group: HybridWin
Existing Groups:
Administrative Tools HybridWin
Maintenance Startup

6) Installation start

Hybrid-Win f	or Windows Setup	×
Destination File: C:\Windows\Syst	tem32\R232T485.ocx	
	12%	
	Cancel	

7) The End of Installation

ybrid-Win for Windows Setup	
Hybrid-Win for Windows Setup wa	s completed successfully.
	ОК

If you click the Change Directory button, the dialog box shown at left will be displayed.

Please specify the installation directory. Then please click the [OK] button.

If you want to stop, please click on the [Cancel] button.

Dialog for program group selection is displayed. Choose the "Hybrid-Win" displayed in advance.

Please click the Continue button.

If you want to change it, enter the new group name, or select from the list of existing groups.

If you want to stop, please click on the [Cancel] button.

The dialog box shown on the left will be displayed, when the setup of DAIKIN Hybrid-Win starts.

If you want to stop, please click on the [Cancel] button.

If the installation is completed, the dialog box shown on the left will appear.

Click the [OK] button to return to the Windows screen.

■ The installing procedure of Hybrid-Win (Ver 2.*.*) Please install the DAIKIN Hybrid-Win (Ver 2.*.*) to your PC and follow the steps below.

1) Close the running application

If there are running applications in your PC, please close them.

2) Setup

Unzip "HybridWin_V 2**. EXE (*** is a three-digit number) " that you downloaded, then double-click the "setup.exe".

Important	• Please prepare a PC with Windows XP for DAIKIN Hybrid-Win. Please make sure the account of Windows XP is Administrator during installing.
_	• In order to install the DAIKIN Hybrid-Win, at least 50MB hard disk space is required.

3) Installation of the application environment

The following application environment is necessary for Hybrid-Win.

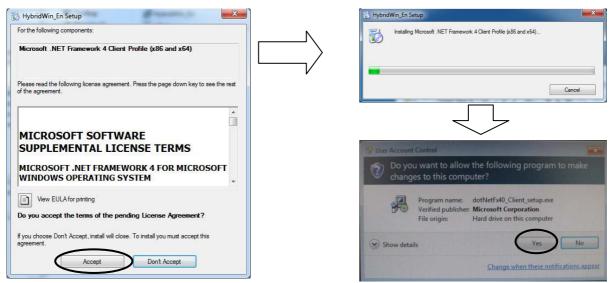
•MICROSOFT .NET FRAMEWORK 4

·MICROSOFT .NET FRAMEWORK 4 CLIENT PROFILE

•RELATED LANGUAGE PACK

If the above environment is not installed in the PC, the following installation is required. If the PC is connected to Internet, please install the application environment based on the following procedure.

(If the application environment has already been installed in the PC, the following dialog box will not be shown. Please go to step 4 "Display of the confirmation message")



*If the PC is not possible to access to Internet, please download the installer of the above enveronment from the homepage of MICROSOFT by other PC which is able to access to Internet. Then install it in the PC which is to be used.

HybridWin_En		
Welcome to the Hy	bridWin_En Setup	Wizard 🌄
The installer will guide you throu	igh the steps required to install H	lybridWin_En on your computer.
Unauthorized duplication or dist	ram is protected by copyright lay ribution of this program, or any p prosecuted to the maximum exte	ortion of it, may result in severe civil

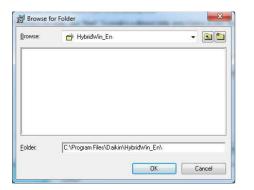
4) Display of the confirmation message

Start the setup program, the confirmation dialog box will be shown. Check the message, and click the "Next" button to continue.

Click the "Cancel" button to stop.

5) Confirmation of the installation directory

HybridWin_En	
Select Installation Folder	
The installer will install HybridWin_En to the following folder.	
To install in this folder, click "Next". To install to a different folder	, enter it below or click "Browse".
<u>F</u> older:	
C:\Program Files\Daikin\HybridWin_En\	Browse
	Disk Cost
Install HybridWin_En for yourself, or for anyone who uses this © Everyone © Just me	computer:
Cancel	<back next=""></back>



6) Selection of the program group

HybridWin_En	
Confirm Installation	
The installer is ready to install HybridWin_En on your co	mputer.
Click "Next" to start the installation.	
Cancel	<back next=""></back>
Caro	

The dialog box shown left will be displayed. When you want to start the installation, please click the "Next" button.

The directory for installation is "C: $\ Program$ Files $\ Daikin \ HybridWin_En \". And it doesn't matter.$

If you want to install to another directory, please click the "Browse..." button.

If you want to stop, please click on the [Cancel] button.

If you click the "Browse..." button, the dialog box shown at left will be displayed.

Please specify the installation directory. Then please click the [OK] button.

If you want to stop, please click on the [Cancel] button.

Dialog for program group selection is displayed. Choose the "Hybrid-Win" displayed in advance.

Please click the Continue button.

If you want to change it, enter the new group name, or select from the list of existing groups.

If you want to stop, please click on the [Cancel] button.

7) Start of installation

HybridWin_En	
Installing HybridWin_En	
HybridWin_En is being installed.	
Please wait	

8) End of installation

HybridWin_En	lete		
HybridWin_En has been succ	essfully installed.		
Click "Close" to exit.			
Please use Windows Update	to check for any critical upda	ates to the .NET Frame	ework.
	Cancel	< Back	Close
	Cancer	S D BCK	Close

2.3.3 Uninstallation

Important

Please make sure the account of Windows XP is Administrator during uninstalling.

Please uninstall following the steps below.

- 1) Click the "Start" in Windows taskbar to open the Start menu.
- 2) Open the Control Panel folder by clicking the "Control Panel".
- 3) If you click on the "Add or Remove Programs", the following screen will appear. Please select the "Hybrid-Win for Windows" and remove it.

The dialog box shown on the left will be displayed, when the setup of DAIKIN Hybrid-Win starts.

If you want to stop, please click on the [Cancel] button.

If the installation is completed, the dialog box shown on the left will appear.

Click the [Close] button to return to the Windows screen.

フログラムの1			
101			4
プログラムの 変更と削除(出)	918	0.20MD	
1		1.83MB	
ສຸມສຸມທ	サイズ	1,468.00MB	
プログラムの 追加(N)	サイズ	0.36MB	
-	サイズ	1.44MB	
	サイズ	3.50MB	
Windows コンボーネントの 追加と削除(A)	📮 Hybrid-Win for Windows मृत्र	<u>1.48MB</u>	
20月11日1日の市(西)	使用頻度		
	最終使用日	210/00/22	
プログラムの アクセスと 既定の設定(2)	このプログラムを変更したり、コンピュータから削除したりするには、「変更と削除」をクリックしてくたさい	変更と削除	
	<u></u>	10.23MB	
	サイズ	152.00MB	
	サイズ	3.20MB	
	サイズ	30.94MB	

■Hybrid-Win (Ver 1.*.*)

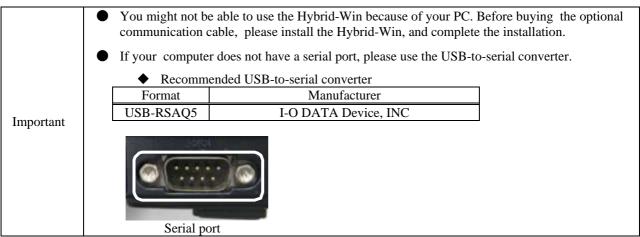
■Hybrid-Win (Ver 2.*.*)

Control Panel Home View installed updates	Uninstall or change a pro To uninstall a program, select it	12.111	click Uninstall,	Change, or Repi	air.
off	Organize 🔹 Uninstall Change	e Repair			10 • (
	Name	Publisher	Installed On	Size	Version
	Microsoft .NET Framework 4 E Microsoft .NET Framework 4 C Microsoft OneDrive Intel® Management Engine C Microsoft Visual C++ 2010 x86	Intel Corporation Microsoft Corpora Microsoft Corpora Microsoft Corpora Intel Corporation Microsoft Corpora	6/1/2014 6/1/2014 6/1/2014 6/2/2014 6/1/2014 6/1/2014	74.2 MB 51.9 MB 38.8 MB 26.7 MB 20.4 MB 11.1 MB	10.18.10.34 4.0.30319 4.0.30319 17.0.4023.1 9.5.15.1730 10.0.40219
	HybridWin_En	Daikin	6/2/2014	3.94 MB	1.0.0
	Realtek High Definition Audio Realtek Ethernet Controller Dri Realtek Ethernet Controller Dri Realtek Ethernet Controller Dri Intel® Kapid Storage Technolo Intel® Kapid Storage Technolo		6/1/2014 6/1/2014 6/1/2014 6/2/2014		6.0.1.7071 7.67.1226.2 12.8.0.1016 15.0.4631.1

2.4 Preparation of optional communication cable

2.4.1 Preparation

Optional communication cable fitted to the unit is required for using Hybrid-Win.



Please prepare an optional communication cable for the communication between PC to unit. You can buy it from where you purchase the unit.

Optional communication cable

Product name	Model code	
RS232C communication cable	1.5m	PM-CM01-15
RS232C communication cable	3m	PM-CM01-30
Communication cable 1.5m		PM-CM02-15
(3-core solder finished) 3m		PM-CM02-30
Monitor harness for Super unit	PM-CM03	
Monitor harness for Eco Rich	PM-CM04	
Monitor harness for Oilcon		PM-CM05

• Correspondence table for optional communication cable and target model

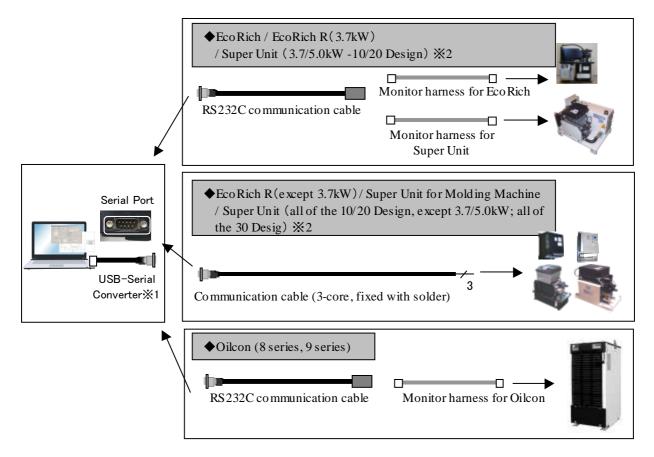
		Type code for opti	ional communication cable			
	RS232C	Communication cable		Monitor harness		
Target model	communication cable (PM-CM01-15 / PM-CM01-30)	(3-core solder finished) (PM-CM02-15 / PM-CM02-30)	Super unit (PM-CM03)	Eco Rich (PM-CM04)	Oilcon (PM-CM05)	
[Eco Rich]						
EHU14-L04						
EHU25-L04	0	_	—	\bigcirc	—	
EHU25-L07						
EHU25-M07						
[Eco Rich R]						
EHU15R-M07	_	0	—	—	—	
EHU30R-M07						
EHU40R-M07	0	—	0		—	
[Super Unit for						
Industrial Machinery]						
SUT**S15*07						
SUT**S15*10		\bigcirc	_		_	
SUT**S30*07		\bigcirc				
SUT**S80*07						
SUT**D80*21						
SUT**D11021						
SUT**S4007-10(20)						
SUT**S30*10-10(20)						
SUT**S15*16-10(20)						
SUT**D40*16-10(20)	0	—	0	—	—	
SUT**S30*16-10(20)						
SUT**S60*07-10(20)						
SUT**D60*21-10(20)						
SUT**S4007-30						
SUT**S30*10-30						
SUT**S15*16-30 SUT**D40*16-30		\bigcirc				
SUT**D40*16-30 SUT**S30*16-30	—	0	_	_		
SUT**S60*07-30						
SUT**D60*21-30						
SU1***D00**21-30		l				

		Type code for opti	onal communicat	tion cable		
	RS232C	Communication cable	Monitor harness			
Target model			Super unit (PM-CM03)	Eco Rich (PM-CM04)	Oilcon (PM-CM05)	
[Super Unit for						
Molding Machine]						
SUT00S3018			_			
SUT00S5021	_			_		
SUT00S8018						
SUT00S8021		0			_	
SUT00D12818						
SUT00T12818						
SUT00S13018						
SUT00S13021						
SUT00S15018						
SUT00S20018						
[Oilcon]						
AKZ**8						
AKZJ**8						
AKZC**8						
AKZG**8	0	—	_	_	0	
AKZW**8	_				_	
AKZ**9						
AKJ**9						
AKC**9						
AKW**9						

Please refer to the "1.2.3 supporting unit" for models not supported.

2.4.2 Connection diagram

The optional communication cable is required for communication between the PC and unit. Please refer to "2.4.1 Preparation" for more information.



*1: If your computer does not have a serial port, please use the USB-to-serial converter.

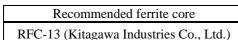
*2: Please refer the "Correspondence table for optional communication cable and target model" for more information.

2.4.3 Noise countermeasures

Attaching a Ferrite Core

If it is used in a place where the influence of noise is increased significantly, such as the following conditions, please implement noise control measures, such as mounting the ferrite core.

- A place where noise may occur due to static electricity.
- A place where a strong magnetic field and electric field is generated.
- A place near the electric field.
- Please attach the ferrite core to the RS232C communication cable or communication cable (3-core solder finished) (hereinafter, communication cable) on the PC side.
- Please wind the communication cable to the ferrite core two turns.





2.5 Connection of communication cable

1) Please turn OFF the supply power of the unit.

Please turn OFF the supply power of the unit for safety.

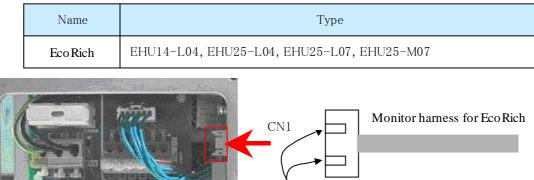
2) Please connect the communication cable.

Depending on different object model, please connect the communication cable to the unit as follows.

DANGER						
Please do not approach or touch the rotating part.						
• When touching the internal controller, please observe the following steps to prevent electric shock.						
i) Please turn off the main power of the hydraulic unit.						
(Turn OFF the power breaker in the circuit that provides power.)						
Please apply a tag such as "Operation Prohibition (under working)" to the power circuit breaker.						
ii) Remove the controller cover after 5 minutes passing.						
A high-capacity capacitor is used in the controller, and it works in a state of being charged. So there is a						
risk of electric shock. Be sure to wait 5 minutes (The time required to discharge in the capacitor) before removing the controller cover.						
iii) Please clean the cover to protect the controller against foreign matters. Before removing the cover, please						
make sure that the ambient environment is no problem (oil mist, dust does not enter into the controller). If						
the foreign matter is mixed in, there is risk of damage and injury.						
iv) The cover does not close completely, when the communication cable is connected. If tighten the screw of						
the cover, there is a possibility that the communication cable cannot be connected. Please select the						
tightening place of the screw so as not to break the cable, and please adjust the screw tightening amount. I	n					

tightening place of the screw so as not to break the cable, and please adjust the screw tightening amount. In oreder to protect the controller against iron scrap, oil mist, dust and so on, please use tape to deal with the opening place. f the foreign matter is mixed in, there is risk of damage and injury.

(1)EcoRich



Please connect to CN1, and make sure the direction of 2 guides is correct.

Optional communication cables are necessary (RS232C communication cable, Monitor harness for EcoRich).

* Loosen and remove 4 small screws that are attached to the contorller cover (1.0 N \cdot m tightening torque).

* After communication, remove the communication cable and attach the cover back to its original place by using these screws.

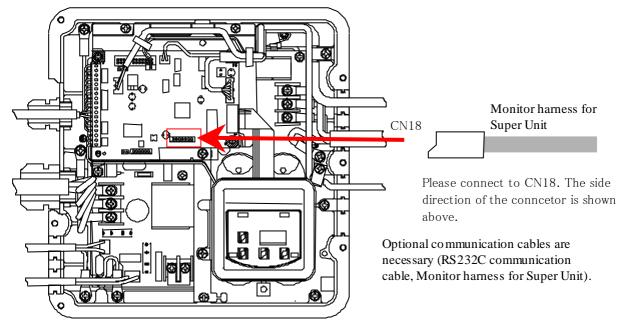
②EcoRich R(except 3.7kW)-10/20 Design / Super Unit for Industrial Machinery (except 3.7/5kW)-10/20 Design

Name		Туре			
EcoRich R		EHU15R-M07-10(20), EHU30R-M07-10(20)			
Super Unit for	Pump & Motor Type	SUT00S1507-10(20)(except -V/-D),SUT00S1510-10 SUT00S3007-10(20)(except -V/-D), SUT00S8007-10(20), SUT00D8021-10(20)			,
Industrial Machinery	Unit Type	SUT03S15L07-10(20)(except-V/-D), SUT03S15L SUT03S30L07-10(20)(except-V/-D), SUT10S80L SUT10D80L21-10(20), SUT16D80L21-10(20)		, SUT10S80L07-10(20)	
				3 4 5 6	7 8 9 10 9 9 10 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 10 9 10
		6	10 20	RxD DGND	Terminal (RS-232C)
		Optional communication cables are necessary (Communication cable (3-core, fixed with sol			
 Loosen the screw w Check the unsheath 	vith a screwdriver. ed length of the cable, a	nd insert it a	ll the way	Unsheathe	ed length of the cable: 6 m

- Check the unsheathed length of the cable, and insert it all the way into the terminal so that the conductors will not become loose.
 Tighten the screw with a screwdriver.
- ④ Pull the cable lightly to make sure that it is securely connected.
- * 2.2/3.8kW: Loosen 2 cross-headed screws (M4, Tightening torque: 0.6 N·m) to remove the controller cover.
- * 7kW: Loosen 4 cross-headed screws (M4, Tightening torque: 1.0 N·m) to remove the controller cover.
- * After finishing the communication work, please remove the communication cable and restore the cover by the screws.

③EcoRich R(3.7kW)-10/20 Design Super Unit for Industrial Machinery (3.7/5kW)-10/20 Design

Name		Туре
EcoRich R		EHU40R-M07-10(20)
Super Unit for Industrial	Pump & Motor Type	SUT00S1516-10(20), SUT00S3010-10(20), SUT00S3016-10(20),SUT00S4007-10(20), SUT00D4016-10(20), SUT00S6007-10(20), SUT00D6021-10(20)
Machinery	Unit Type	SUT03S15L16-10(20),SUT03S30L10-10(20), SUT03S30L16-10(20), SUT06D40L16-10(20), SUT10D40L16-10(20), SUT06S60L07-10(20), SUT06D60L21-10(20), SUT10D60L21-10(20) (except SUT10D60L21-20-F-N0257)



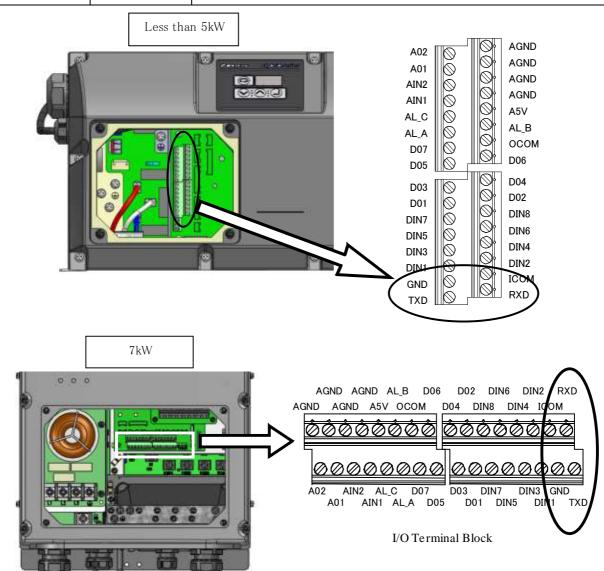
* Loosen 6 cross-headed screws (M5, Tightening torque: 0.9 N·m) to remove the controller cover.

* After finishing the communication work, please remove the communication cable and restore the cover by the screws.

(4) EcoRich R - 30 Design

Super Unit for Industrial Machinery - 30 Design

Na	me	Туре
EcoRich R		EHU15R-M07-30, EHU30R-M07-30
Super Unit for	Pump &	SUT00S1507-30 (except -V/-D), SUT00S1510-30,
Industrial	Motor type	SUT00S3007-30 (except-V/-D), SUT00S1516-30,
Machinery		SUT00S3010-30, SUT00S3016-30, SUT00S4007-30, SUT00D4016-30,
		SUT00S6007-30, SUT00D6021-30, SUT00S8007-30, SUT00D8021-30,
	Unit type	SUT03S1507-30(except -V/-D), SUT03S1510-30,
		SUT03S3007-30(except -V/-D),SUT16D8021-30,
		SUT03S1516-30,SUT03S3010-30, SUT03S3016-30, SUT06D4016-30,
		SUT10D4016-30, SUT06S6007-30, SUT06D6021-30,
		SUT10D6021-30(except SUT10D6021-20-F-N0257),
		SUT10S8007-30, SUT10D8021-30



I/O Terminal Block		
Function	Remarks	
TxD	Serial Communication Terminal	
RxD		Optional communication cables are necessary (Communication cable (3-core, fixed with solder)
DGND	(RS-232C)	

	Loosen the screw with a screwdriver.	Unsheathed length of the cable: 6 mm
2 (Check the unsheathed length of the cable, and insert it all the way	
i	into the terminal so that the conductors will not become loose.	
3 7	Tighten the screw with a screwdriver.	
(4) I	Pull the cable lightly to make sure that it is securely connected.	$ \clubsuit$

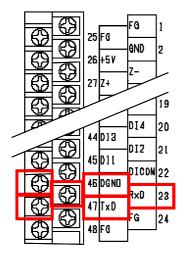
* Loosen 4 cross-headed screws (M4, Tightening torque: $1.0 \text{ N} \cdot \text{m}$) to remove the controller cover.

* After finishing the communication work, please remove the communication cable and restore the cover by the screws.

(5)Super Unit for Molding Machine / Super Unit for Industrial Machinery

Name Super Unit for Molding Machine Super Unit for Industrial Machinery Pump & Motor Type		Туре		
		SUT00S3018, SUT00S5021 (except SUT00S5021-10), SUT00S8018 (except SUT00S8018-10), SUT00S8021, SUT00D12818, SUT00T12818, SUT00S13018, SUT00S13021, SUT00S15018, SUT00S20018		
		SUT00D11021		

I/O Terminal Block

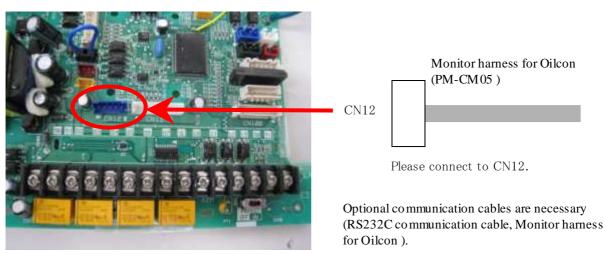


I/O Terminal Block						
No.	Function	Remarks				
47	TxD	Serial				
23	RxD	Communication Terminal				
46	DGND	(RS-232C)				

Optional communication cables are necessary (Communication cable (3-core, fixed with solder))

6 Oilcon (8 Series)

Name	Туре
Oilcon	AKZ148、AKZ328、AKZ438、AKZ568、AKZ908, AKZJ188、AKZJ358、AKZJ458、AKZJ568、AKZJ908 AKZC358、AKZG358、AKZG568、AKZG908 AKZW148、AKZW328、AKZW438、AKZW568

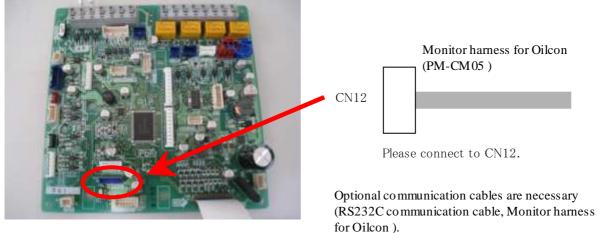


* Remove the screws which is mounted on top plate, and then remove the top plate.

* After finishing the communication work, please remove the communication cable and restore the top plate by the screws.

⑦Oilcon (9 Series)

Name	Туре
Oilcon	AKZ149、AKZ329、AKZ439、AKZ569、AKZ909 AKJ189、AKJ359、AKJ459、AKJ569、AKJ909 AKC359、AKC569 AKW149、AKW329、AKW439、AKW189、AKW359、AKW459



* Remove the screws which is mounted on top plate, and then remove the top plate.

* After finishing the communication work, please remove the communication cable and restore the top plate by the screws.

3) Please turn ON the power supply for the unit.

A CAUTION

• Please firstly make sure the surroundings is safe, then turn ON the power supply.

2.6 Start-up and shutdown of DAIKIN Hybrid-Win

2.6.1 Starting DAIKIN Hybrid-Win

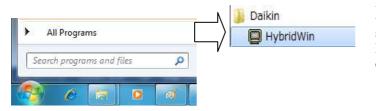
Please start up DAIKIN Hybrid-Win

1) Start from the Windows Start menu

■Hybrid-Win (Ver 1.*.*)



■Hybrid-Win (Ver 2.*.*)



Please click the [Start] button or press Ctrl key + ESC key to open the Windows menu, then start it from [All Programs]. Please proceed according to the following order: [HybridWin] \rightarrow [HybridWin].

Please click the [Start] button or press Ctrl key + ESC key to open the Windows menu, then start it from [All Programs]. Please proceed according to the following order: [Daikin] \rightarrow [HybridWin].

Memo

If the USB-to-serial converter is adopted, please start the Hybrid-Win when the converter is connected to the PC.

Hyl	brid-Win	Version : 2.0.0
		DAIKIN INDUSTRIES,LTI
arameter	Wave Form Measurement EcoRich/Super Unit	Alarm history
Parameter transfer	Simple Trigg measurement measure	
Edit File	Oilcon	
	Data measurement	
communication port	setting Passwo	rd

2) Exit from the main screen

The main screen is displayed.

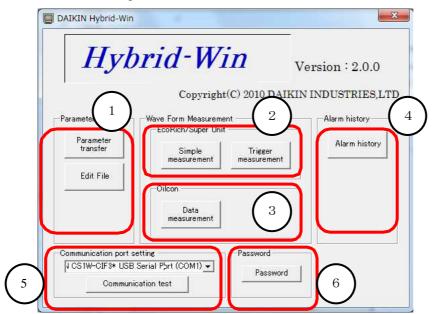
Please click the circle portion showen in this picture [×] (Close) to exit.

Chapter 2 Overview Introduction and Preparation

<Memo>

Chapter 3. Main screen

Select each function such as install parameter, indication of waveform or alarm history, etc, on this main screen. And also select communication port.



No.	Sort	Name	Function
1	Parameter	Parameter transfer	The parameter from the unit is red and installed.
			And it is saved at a file.
		File edit	You can confirm and edit the parameter saved in the file
			without connecting with the unit.
2	Measurement	Simplicity	You can easily measure waveform of pressure and flowing
	(EcoRich / Super		rate, etc.
	unit)	Trigger	You can measure waveform of pressure and flowing rate,
			etc., when you set the trigger.
3	Measurement	Data	Monitoring each data, such as machine body temp. or outlet
	(Oilcon)	measurement	temp. etc., is available. And can be recorded those data as
			file.
4	Alarm history	Alarm history	The alarm history of the unit is displayed.
5	Communication	Communication	The communication port can be selected. The COM port that
	port setting	port setting	can be used is displayed.
		Communication	You can do the communication test and confirm the
		test	communication with the unit.
6	Password	Password	The password is input. Usually, it is not necessary to use it.

3.1 Setup of Communication Port



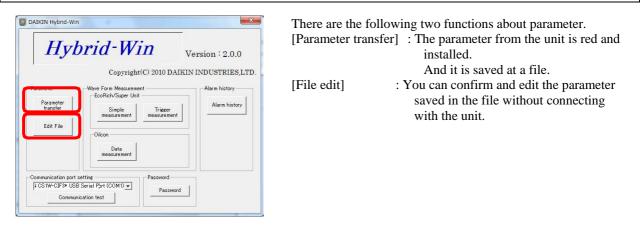
The communication port can be selected. The COM port that can be used is displayed. Communication test is also available with Communication test key, which can be check proper wiring or port.

Memo
• When USB-Serial converter is used, start up this software with connectiong the converter.

Chapter 3 Precautions before use

Chapter 4. Parameter

4.1 Description of Parameters

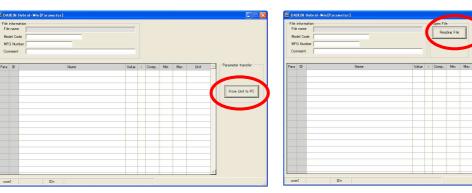


Memo After connection, following 2 functions are ready to use. Other functions can be used after operated followingw functions.

- [Parameter transfer] function : Parameter transfer [To PC from unit]
- [File edit] function : Open[Read]

[Parameter transfer] function

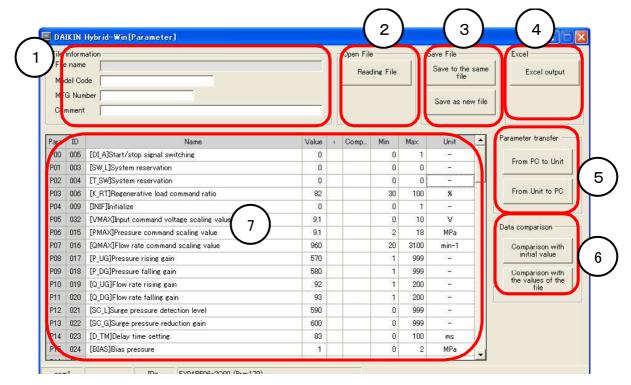
[File edit] function



4.2 Parameter screen

4.2.1 The name and work of each part of a parameter screen

After you push [Parameter transfer] and [File edit] button on a main screen, the next screen will be displayed .



No.	Sort	Name	Function
1	File information	File name	The name of the file that reads the parameter and the name of the saved file are displayed.
		Form sign	Input parameter information.
		MFG number	Input information is displayed by reading the saved
		Comment	parameter file.
2	Open	Read	The parameter file is red and the value is displayed.
3	Save	Save	It preserves the value displayed now in the file operated last time.
		Save as	The value displayed now is preserved in the file naming the file name.
4	Excel	Excel output	The value displayed now is output to Excel.
5	Parameter	To unit from PC	The displayed value is written in the unit.
	transfer	To PC from unit	The setting of the parameter of the unit value is red and displayed.
6	Data comparison	File	The values preserved in the file and the value displayed now are compared.
7	Parameter	_	It is area that displays parameter.
	display area		Refer to the following for details.

IMPORTANTThe file which can be red by [Read] is the file saved by [Save] or [Save as].
The data outputted to Excel by [Excel output] is only for an output. It cannot read.

Memo In the [File edit] function, [Parameter transfer] button and [Data comparison] button are not shown.

Parameter display area It is area that displays para

noter Refer to the following for details

File inf File n Mode MFG Comm	name I Coo Num	de			Open File Read	e Tile		Save File Save to the sa file Save as new	
ara 2	ID	Name	Value		Comp	Min	Max	Unit	Parameter transfer —
200 C	005	[DI A]Start/stop signal switching	0	÷.,		0	1	-	
201 C	003	[SW_L]System reservation	0	-		0	0	-	From PC to Unit
PO2 C	004	[T_SW]System reservation Hybrid=WinAlert me				T 947		-	
PO3 C	006	[K BT]Begenerative load command ra		. Please confirm the power supply of the				%	From Unit to PC
P04 C	009	TRUTT TA ALCONT	o response from the unit. Fi e connection of the commun			power suppl	y of the	177	
205 C	332	[VMAX]Input command voltage scalir						٧	2.0
	15	[PMAX]Pressure command scaling va							Data comparison
А		[QMAX]Flow rate command scaling v B		1	ЕЙ	F	G	ΥнУ	Comparison with
$\hat{}$	h	[P_UG]Pressure rising gain	Ň			\checkmark	Ľ	ヘ"ノ	initial value
P09 C	018	[P_DG]Pressure falling gain	580			1	999	-	Comparison with
P10 C	019	[Q_UG]Flow rate rising gain	92			1	200	822	the values of the file
911 C	020	[Q_DG]Flow rate falling gain	93			1	200	() 	
°12 (021	[SC_L]Surge pressure detection level	590			0	999	377	
213 C	322	[SC_G]Surge pressure reduction gain	600			0	999	222	
P14 C	023	[D_TM]Delay time setting	83			0	100	ms	
915 C	324	[BIAS]Bias pressure				0	2	MPa	

(A) The parameter number and data number of a parameter are displayed.

(B) The name of a parameter is displayed.

^(C) The value of a parameter is displayed.

(D) The results of check are shown below.

Display	Content
0	This sign is shown when the value is not matched.
•	This sign is shown when the file is empty as alarm. Ans also show when the software version isn't same between unit and file.
\checkmark	This sign is shown when the value is changed, but not transfer to unit.
8	This sign is shown when the parameter is exceeded from min. or max. value. And also shown when the software version isn't same between unit and file.

(E) The parameter value of target for checking is displayed.

(F) The minimum value of parameter is displayed.

(G) The maximum value of parameter is displayed.

 (\widehat{H}) The unit of parameter is displayed.

4.3 Read out parameter from units

A parameter is red from a unit in the following procedures.

1) Click [To PC from unit] button



Click [To PC from unit] button.

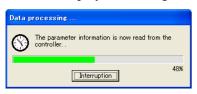
2) Check of a dialog box



Cofirmation dialog is shown. Click [OK] to proceed.

If you want to stop, click [Cancel] button.

3) The display of a dialog box during transmission.



During data transfer, this dialog is shown.

4) The display of the red parameter

File Mod MFI	nforma name lel Coc à Num nment	de		Open Fil	e ding File		Save File Save to the sa file Save as new t	Excel output
'ara	ID	Name	Value	Comp	Min	Max	Unit	Parameter transfer
200	005	[DI_A]Start/stop signal switching	0		0	1	14	
201	003	[SW_L]System reservation	Hybrid-WinConfirmation message				0 -	From PC to Unit
P02	004	[T_SW]System reservation	nyana wineyannyinanian	meresalge		0	12	
903	006	[K_RT]Regenerative load command ratio	(i) The operation is su	s successfully terminated.		d 100	*	From Unit to PC
904	009	[INIF]Initialize					877	5
905	032	[VMAX]Input command voltage scaling valu	OK			10	V	
906	015	[PMAX]Pressure command scaling value	humaniti	t			MPa	Data comparison
207	016	[QMAX]Flow rate command scaling value	960		20	3100	min-1	Comparison with
P08	017	[P_UG]Pressure rising gain	570		1	999		initial value
909	018	[P_DG]Pressure falling gain	580		1	999		Comparison with
P10	019	[Q_UG]Flow rate rising gain	92		1	200	82	the values of the file
711	020	[Q_DG]Flow rate falling gain	93		1	200		
12	021	[SC_L]Surge pressure detection level	590		0	999	1070	
13	022	[SC_G]Surge pressure reduction gain	600		0	999	812	
714	023	[D_TM]Delay time setting	83		0	100	ms	
15	024	[BIAS]Bias pressure		0	2	MPa		

Parameters red out from unit are displayed in the colum said [Value]. Cofirmation dialog is shown. Click [OK].

5) In case of error of transmission



When transmission is not completed normally, the dialog box of the left figure is displayed. Click [OK] button.

4.4 Change of Parameter

1) Selection of the parameter to change

Click a parameter to change from a table. The dialog box which inputs the value of a parameter is displayed.

2) Input parameter setup value to change

File	inform name del Co				Open File Reading File		Save File Save to the file		Excel Excel output
	G Nun mment		Data input window Name Settings of monit	oring subject to is	tue a temperature warning	1.	Save as n	ew file	
ara	ID	Name	Setting value 🗵	_	Setting Cancel	-	Unit	-	Parameter transfer
200	005	[DI_A]Start/stop signal switching	Parameter information		D 10 Input unit 1		-		1
01	003	[SW_L]System reservation	Number n10	ID 10				From PC to Un	
02	004	[T_SW]System reservation	Min 0	Max 990				_	From Unit to P
03	006	[K_RT]Regenerative load command ratio	Details Settings of mor	itoring subject to			%		
04	009	[INIF]Initialize	warning 1.			1	v		
P05	032	[VMAX]Input command voltage scaling value				. 0			
206	015	[PMAX]Pressure command scaling value					MPa		Data comparison —
P07	016	[QMAX]Flow rate command scaling value		960	20	3100	min-1		Comparison with
P08	017	[P_UG]Pressure rising gain		570		999	84		initial value
P09	018	[P_DG]Pressure falling gain		58 🗸	1 1	999	100		Comparison with
P10	019	[Q_UG]Flow rate rising gain				200	8 <u>1</u> 2		the values of th
211	020	[Q_DG]Flow rate falling gain			1	200			
P12	021	[SC_L]Surge pressure detection level		590	0	999	3 7 7		
P13	022	[SC_G]Surge pressure reduction gain		600	0	999	22		
P14	023	[D_TM]Delay time setting		83	0	100	ms		
P15	024	[BIAS]Bias pressure		1	0	2	MPa		

Input required parameter value in the box [Setup value] and click [Setting] button to confirm.

After input the value, ✓ mark is shown in the colume [i]. (Refer to left figure)

When you want to stop, click [Cancel] button.

3) Procedure after alarm dialog shown



If the input value is out of the range, alarm dialog such as left figure is shown. The input range is also shown for reference.

If you click [OK] button, it will return to parameter input screen.

	Setup parameter values were not transferred with above procedure. Need to transfer procedure
IMPORTANT	to install those parameters.
	Please refer to Subject NO.2.5 Transfer setup parameter into unit.

Memo

- The display of the maximum or minimum parameter value may be different according to the MFG No. of the EcoRich. In this case, the warning will be shown when transfering frome PC to Unit. Please input the correct value, and transfer again.
- If the pump of the unit is 2-joined-gear pump, even "P40:Pump runing selection" is "1:High pressure low capacity", it is not possible to set the pressure of the low pressure side to 0. Please set the parameter by panell of the unit.
- Even "Pressure unit change" is set to "1: PSI Display", the displayed pressure unit of Hybrid-Win is also MPa.

4.5 Transfer setup parameter into units

Parameter is transmitted to unit in the following procedures.

1) Selection of [From PC to Unit]

From PC to Unit
From Unit to PC

Click [From PC to Unit] button.

2) The check of a dialog box

The following check dialog boxs are displayed.

The para Is it all i	ameter is written in th ight?	e controller.

The check dialog box is displayed. If you want to transfer, click [OK] button.

If you want to stop, click [Cancel] button.

For the molding machine, a dialog box below may be displayed.

Hybrid-WinConfirmation message		
Do you want to write the ini	tial parameter setting from	the factory?
	Yes	No

There are parameters that was adjusted at the factory for correcting hardware variations in the molding machine. Please select writing to these parameters or holding the current values.

Yes: writing to these parameters that was adjusted at the factoryNo: holding the current values

Parameters that was adjusted at the factory for molding machine					
Parameter No.	Symbol	Parameter name			
P07	QMAX	Flow rate command scaling value			
H15	Q_EV	Volumetric efficiency correction			
H21	PI_Z	PI Zero			
H22	PI_G	PI Gain			
H23	QI_Z	QI Zero			
H24	QI_G	QI Gain			
H25	PO_Z	PO Zero			
H26	PO_G	PO Gain			
H27	QO_Z	QO Zero			
H28	QO_G	QO Gain			
H30	PS_G	Pressure sensor gain			

3) The display of a dialog box during transmission.



During transmission, this dialog is shown.

4) The display of the dialog box at the time of a normal end

Hybr id-	Winconfirmation message	×
(į)	It ended normally.	
	ОК	

If transmission is completed normally, the dialog box of the left figure will be displayed. If you click [OK] button, it will return to a parameter setup screen.

5) If an error display comes out

Hybr id-	WinAlert message 🛛 🔀
1	There was no response from the unit. Please confirm the power supply of the unit and the connection of the communication line.

When transmission is not completed normally, the dialog box of the left figure is displayed. Click [OK] button. Please refer to "9.1.2 can not communicate" for more information.

	 Right after transmission of parameter, those parameters will be reflected immidiately. Those changes would be effected pressure, rotation speed or operation of pump. Please be sure to operation condition of the unit before transmission. If some error would be occurred, the transmission would not be completed. To re-set the parameter to original, need to re-start the unit. Please make sure the complition of
IMPORTANT	 transmission before the operation of unit. When the indication panel on the unit is shown [Setting], there is possibility that parameter transmission would not be done. Please make sure the indication as [Normal] before using this software. It is not possible to transfer the parameter file that saved in super unit 20 or 10 design to the 30 design. The reverse is too.
	 It is not possible to transfer the parameter file that saved in EcoRich R 20 or 10 design to the 30 design. The reverse is too. For oil cooling unit, if parameter transmission would face alarm, the unit would show [UH] alarm after re-start the unit. Please transfer the parameter completely and re-start the
	unit again.

4.6 Preservation of a parameter

Ediging parameter can be saved in the file with following procedure.

4.6.1 Input of file information

Form sign AKZ328
MFG Number 8500007
Comment for daikin

When save the file, model NO., MFG No. or comment can be input in this box. These informations will be shown in the next time and make it easier to confirm correct file.

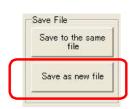
4.6.2 Save



Click [Save to the same file] button. The parameter currently edited is overwritten at the existing file.

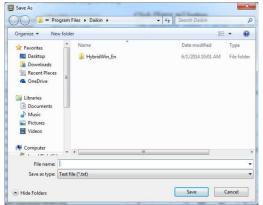
4.6.3 Save as

1) Selection of [Save as new file]



Click [Save as new file] button. The paremeter edited is saved with new file name.

2) Input file name



To save with new file name, left figure box is shown. Input new file name in [File name (N)], and click [Save] button.

If you want to stop, click [Cancel] button.

4.7 Read out setup parameter from file

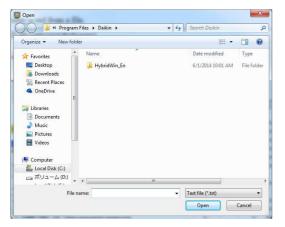
Parameter is red from a file.

1) Read



Click [Reading File] button.

2) Selection of a file



Select a file and click [Open (O)] button.

If you want to stop, click [Cancel] button.

3) The display of a parameter

File information File name Model Code MFG Number Comment			Open File Reading File			Save File Save to the same file Save as new file		Excel	
Para	ID	Name	Value	i Comp	Min	Max	Unit	-	Parameter transfer
P00	005	[DI_A]Start/stop signal switching	0		0	1	-		
P01	003	[SW_L]System reservation	0		0	0	-		From PC to Unit
P02	004	[T_SW]System reservation	0		0	0	1975		
P03	006	[K_RT]Regenerative load command ratio	82		30	100	ж		From Unit to PC
PO4	009	[INIF]Initialize	0		0	1	1277/		
P05	032	[VMAX]Input command voltage scaling value	9.1		0	10	V		2.0
P06	015	[PMAX]Pressure command scaling value	9.1		2	18	MPa		Data comparison
P07	016	[QMAX]Flow rate command scaling value	960		20	3100	min-1		Comparison with
P08	017	[P_UG]Pressure rising gain	570		1	999			initial value
P09	018	[P_DG]Pressure falling gain	580		1	999			Comparison with
P10	019	[Q_UG]Flow rate rising gain	92		1	200	1020		the values of the file
P11	020	[Q_DG]Flow rate falling gain	93		1	200			
P12	021	[SC_L]Surge pressure detection level	590		0	999	1077		
P13	022	[SC_G]Surge pressure reduction gain	600		0	999	22		
P14	023	[D_TM]Delay time setting	83		0	100	ms		
	5 024 [BIAS]Bias pressure		1		0	2	MPa		

Indicated parameter in the file in the colume of [Value].

4) The display of file information

– File information – File name	C:\para.txt
Form sign	AKZ328
MFG Number	8500007
Comment	for daikin

Indicated data information as left figure.

Chapter 4 Parameter

<Memo>

Chapter 5. Waveform measurement screen (EcoRich / Super Unit)

5.1 Kind of Waveform measurement screen (EcoRich / Super Unit)



- Mesurements for EcoRich / Super Unit are follows.
- [Simple measurement] : Start and stop the measurement manually. The sampling time can be set from 10ms.

[Trigger measurement] : Set the conditions to start measuring, and the measurement will start automatically when it comes to the condition. The sampling time can be set from 1ms. It is possible to measure more fine waveform data than the [Simple measurement]

5.2 Starting and End

After clicking [Simple measurement] button or [Trigger measurement] button as above [5.1 Kind of Waveform measurement screen (EcoRich / Super Unit), waveform measurement screen will appear. To end mesurement, click [End] button and rerurn to main screen.

Simple measurement		
NKIN Hybrid-Win[Measure EcoRich/SuperUn	it]	
Measurement time Sampling interval 1 meec Measurement data Data1 0 0 Data2 0 Data3 0 Data4 0	Save file format	Save file (csv format) Folder File name Messurement Messurement condition Communication Communication Start End End
Trigger measurement		
Trigger measurement IKIN Hybrid-Win [Measure EcoRich/SuperUn Measurement time Measurement time Measurement data Data1 Data2 Data3 Data4 Da	1) Save file format Crow, Criev, Crievel	Save file (csv format) Folder File name Measurement Measurement Communication Communication Stort End End

5.3 Waveform measurement screen (EcoRich / Super Unit)

5.3.1 The name and work of each part of waveform measurement screen (EcoRich / Super Unit)

Mea	mer 1 mpling interval surement time	1 ± msec ₢	e tile format csv Excel 2	Save file (csv format) Folder File name
Measurer Data1 Data2 Data3 Data4	ment data 00mo data 00mo data 00mo data 00mo data		3	Measurement Condition 6 Communication Communication Start Measurement start End
Trigger ci Data1	ondition setting Available data ┌── 00:no data	Trigger level	Edge type Change edge	
Data2 Data3	O0:no data O0:no data	1 <u>±</u> - 1 <u>±</u> -	Change edge Change edge	Trieger Cr Or C AND
Data4	☐ 00:no data	1 -	Change edge	

- 1. Setting the sampling time. Measurement time will be displayed.
- 2. Selecting the file format for saving the measurement results.
- 3. Selecting the measuring data.
- 4. When the saved file format is the csv format, set the file saving address and the file name.
- 5. Setting the trigger conditions. If it is in simple measurement, it will not appear.
- 6. Starting / stopping of communication and measurement. Measurement status is displayed.
- 7. Screen is ended

Memo According mesurement condition, operatable button is limited.

5.4 Data Collection Settings

5.4.1 Setup of Sampling Period

-Measurement time	
Sampling interval	1 : m sec
Measurement time	0h0m0s255ms

Set the sampling time period for data measurement. Setting value is different based on measurement mode as follows.

[Simple measurement] :10~9999ms [Trigger measurement] :1~9999ms

5.4.2 Saving file format

Save file format
⊙ csv
C Excel

There are two types of file format can be selected to save the measured data. csv : data is saved in csv format.

Please choose this type, if there is no Excel in your PC, or it is desired to reduce the file size, or it is desired to measure for a long time.

Excel : data and waveform graph are shown in Excel.

Please choose this type, if you want to see the graph of waveform.

5.4.3 Selection of measuring data

)ata1	01:Pressure monitor] O MPa	
)ata2	03:Rotation speed	0 min-1	Flow select
)ata3	04:PQ number	0 -	Flow select
ata4	06:Pressure command] 0 MPa	Output Signal select

Choose the data to be measured from the portion of the circle in the left figure.

In the following cases, please select / release by pressing the displayed button.

(1) "Flow Rate Selection" button is displayed Please select / release the flow rate by this "Flow rate selection" button. At this time, you can not do trigger setting of flow rate.

(2)"Output Signal Selection" button is displayed Please set it when you want to trigger a digital output signal. Select / release the output signal by this "Output Signal Selection" button. The trigger level can not be changed.

Memo

"Flow Rate Selection Button " and "Output Signal Selection Button" show / hide automatically, depending on the target unit.

■Measuring data list

It is possible to measure data up to four kinds. For each model, the measuring data in the table below can be selected.

Data No.	Display name	Unit	Description
0	No data	—	Select it, if you do not want to use the selected data number.
1	Current pressure	MPa	The current pressure is displayed.
2	Current flow rate	L/min	The current flow rate is displayed. According to the model, select / release the flow rate by "Flow rate selection" button.
3	Current rotational speed	min ⁻¹	The current rotational speed of motor is displayed.
4	PQ selection number	-	Show the PQ selection number that is selected by a digital input signal.
5	Control mode	-	Show the internal control state.
6	Command pressure	MPa	Show the command pressure after pressurizing or depressurizing.
7	Command rotation speed	min ⁻¹	Show the rotation speed after acceleration or deceleration.
8	Current command ratio	%	Show the ratio of the current value to the maximum output current.
9	U-phase current value	Apeak	Show the U-phase current value.
10	V-phase current value	Apeak	Show the V-phase current value.
11	W-phase current value	Apeak	Show the W-phase current value.

• Super Unit / EcoRich R

Data No.	Display name	Unit	Description
12	Main circuit DC voltage	V	Show the main circuit DC voltage.
13	Regenerative load ratio	%	Show the load ratio of regenerative load to the rated capacity of regenerative resistor.
14	Actual motor current value	Arms	Show the actual motor current value.
15	Motor load ratio	%	Show the ratio of the motor current to the rated current.
16	Fin temperature	°C	Show the temperature of the heat radiating fins.
17	Motor temperature	°C	Show the motor temperature.
18	Digital output signal	-	 Set this data, when you want to trigger a digital output signal. Select / release the digital output signal by "Digital output signal " button. Set the following digital output signal ON → OFF, trigger will be automatically set. Super Unit 3.7/5.0kW equivalent: contact output * Excluding Super Unit 3.7/5.0kW equivalent: Digital output 2 *
			The contents of the output signal can be selected by the parameter. Please refer to the instruction manual for more information.
19	2 pumps switching	-	In the case of 2 pumps system, large-capacity-pump and small- capacity-pump autonomously switch for confluence and single mode. Show the current switching state of the pump. •0: Single pump (Single) •1: Double pump (Confluence)

* Please refer to "2.5 Connecting the communication cable" for the equivalent of EcoRich and Super Unit 3.7/5.0kW.

Memo	
The measuring data which can be selected is different for different model.	

• Super Unit for Molding Machine

Data No.	Display name	Unit	Description
0	No data	_	Select it, if you do not want to use the selected data number.
1	Current pressure	MPa	The current pressure is displayed.
2	Current flow rate	L/min	The current flow rate is displayed. According to the model, select / release the flow rate by "Flow rate selection" button.
3	Current rotational speed	min ⁻¹	The current rotational speed of motor is displayed.
4	Control mode	-	Show the internal control state.
5	Command pressure	MPa	Show the command pressure after pressurizing or depressurizing.
6	Command rotation speed	min ⁻¹	Show the rotation speed after acceleration or deceleration.
7	Command pressure (Voltage)	V	Show the input voltage of the command pressure.
8	Command rotation speed (Voltage)	V	Show the input voltage of the rotation speed.
9	Current pressure (Voltage)	V	Show the voltage of the pressure monitor.
10	Current rotational speed (Voltage)	V	Show the voltage of the flow rate monitor.
11	Current command ratio	%	Show the ratio of the current value to the maximum

PIM00446

Data No.	Display name	Unit	Description
			output current.
12	U-phase current value	Apeak	Show the U-phase current value.
13	V-phase current value	Apeak	Show the V-phase current value.
14	W-phase current value	Apeak	Show the W-phase current value.
15	Main circuit DC voltage	V	Show the main circuit DC voltage.
16	Regenerative load ratio	%	Show the load ratio of regenerative load to the rated capacity of regenerative resistor.
17	Actual motor current value	Arms	Show the actual motor current value.
18	Motor current ratio	%	Show the ratio of the motor current to the rated current.
19	Fin temperature	°C	Show the temperature of the heat radiating fins.
20	Motor temperature	°C	Show the motor temperature.
21	Motor load ratio	%	Show the motor load ratio. A rated load state of the motor is 100%. Over 110%, it will stop and the alarm will come out.
22	Controller load ratio	%	Show the controller load ratio. A rated load state of the controller is 100%. Over 120%, it will stop and the alarm will come out.
23	Pressure load ratio	%	Show the pressure load ratio. Over 144%, it will stop and the alarm will come out. For these models which "E28 Over a rated short period of time" cannot be detected, "0"will be displayed.
24	Horsepower load ratio	%	Show the horsepower load ratio. Over 144%, it will stop and the alarm will come out. For these models which "E28 Over a rated short period of time" cannot be detected, "0" will be displayed.

♦ EcoRich

Data No.	Display name	Unit	Description
0	No data	—	Select it, if you do not want to use the selected data number.
1	Current pressure	MPa	The current pressure is displayed.
2	Current flow rate	L/min	The current flow rate is displayed. According to the model, select / release the flow rate by "Flow rate selection" button.
3	Current rotational speed	min ⁻¹	The current rotational speed of motor is displayed.
4	Command pressure	MPa	Show the command pressure after pressurizing or depressurizing.
5	Command rotation speed	min ⁻¹	Show the rotation speed after acceleration or deceleration.
6	Fin thermo temperature	deg.	The temperature of fin thermo is displayed.
7	Motor thermo temperature	deg	The temperature of motor thermo is displayed.

5.4.4 Storage of the measured data

When csv is selected to save file format, please set the file to save the measured data before starting measuring.

1) Folder



Selection of folder is shown with click [Refer] button. Select required folder.

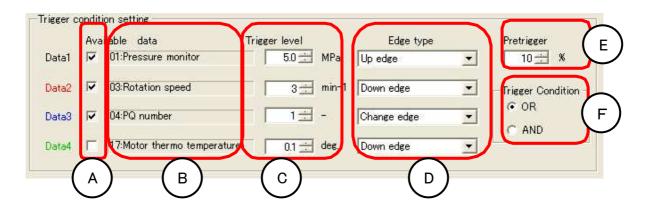
2) File name input

Save file (csv format)	
Folder	C¥	Refer
File name	test1	

Input file name

5.4.5 Setting Trigger Conditions

Set the trigger condition to start the measuring. When the trigger condition is satisfied, the measurement will start automatically. Condition setting is as follows.



Symbol]	Display	Content
А	Enable		Decide whether select this measuring data as a trigger condition.
В	Measuring data		Show the measuring data.
С	Trigger level		Set a value as a condition which satisfies the trigger.
D	Edge Type	Changing edge	 When the value changes around the trigger level, such as bottom → above, or above → bottom, the trigger condition is satisfied. When the value changes from the trigger level bottom to above, the trigger condition is satisfied. When the value changes from the trigger level above to bottom, the
E	Falling edge Pre-trigger		when the value changes from the trigger level above to bottom, the trigger condition is satisfied.Before the trigger condition is satisfied, from how long ago the

Symbol		Display	Content
			waveform should be measured. Set the ratio [%] to the measurement time. The setting range is 0-50%.
F	Triggering condition	Or	When any of the trigger conditions is satisfied, the measurement will start.
Г		And	When all the trigger conditions are satisfied. the measurement will start.

5.5 Start and Stop of Measurement

5.5.1 Start and stop of communication

Meas	surement Measurement stop				
1000000	nmunication Communication start stop	m	Measuremer start	nt Measurem	en
easuren Data1	ent data	5.5	MPa	-11) 	
		5.5 9.8			
Data1	01:Pressure monitor		MPa		

Start communication with [Communication Start] button. Stop measurement with [Communication Stop] button.

When you start the communication, the current value of the selected data will be displayed in the square part in the left figure.

5.5.2 Start and stop of measurement

Measurement V	leasurement stop		
Communication	Communication	Measurement	Measurement
start	stop	start	stop

Start measurement with [Mesurement Start] button. Stop measurement with [Mesurement Stop] button. When the communication is started, it can be operated.

When the measurement is started, the status is displayed on the square part on the left. (For details, see the table below)

■measuring state

Display	Content
Waiting for measurement start	This is the state before the measurement start.
Waiting for trigger measurement	It is displayed during [Trigger measurement]. It is a state that waiting for the satisfaction of the trigger condition after pressing the measurement start button.
During measurement	It is a state in which the measurement is undergoing.
Receiving data	It is a state in which data is being received from the unit.
During file output	It is a state in which the data is output to a file.
Measurement completion	It is a state in which the measurement is completed.

5.6 Trigger measurement procedure

Memo
If the connection error occurs, it is possible that the value cannot be received and discontinuous value is displayed.

5.6.1 Trigger measurement (csv format)

1) Measurement start

Communication Communication Measurement start stop

2) Save File

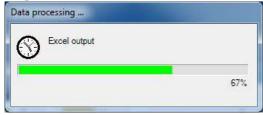
J W UK	• Desktop •	Hybrid Win P	icture	+ + ₂	Search Hybrid Win P	iciure	4
Organize 👻 Nev	v folder				8	•	8
Favorites Desktop Cownloads Recent Places CneDrive	Name	e	No items	match you	Date modified Ir search.	Туре	
Libraries Documents Music Fictures Videos							
Computer			m				
File name: Save as type:							- 87 - 19

5.6.2 Trigger measurement (Excel format)

1) Measurement start

1easurement Mea	asurement stop		
Communication start	Communication stop	Measurement start	Measurement stop
10000			
Measurement			

2)Graph



Start measurement with [Mesurement Start] button.

[Waiting for trigger measurement] is displayed.

If the trigger measurement condition is satisfied, " During measurement" will be displayed.

After receiving the data from the unit, the dialog box shown on the left will appear. The entered file name in "save file (csv format)" is displayed. Please enter a new name for this file in the [File name (N)] box, then click the [(S) Save] button.

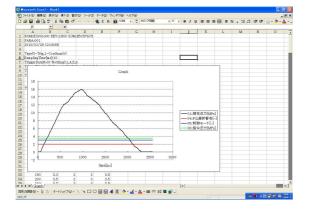
If you want to stop, please click the Cancel button.

Start measurement with [Mesurement Start] button.

[Waiting for trigger measurement] is displayed.

If the trigger measurement condition is satisfied, " During measurement" will be displayed.

After receiving the data from the unit, the dialog box shown on the left appears.



Graph and measured data are displayed in Excel, as shown in the left figure.

5.7 Simple measurement procedure

Memo

- This function cannot be used in EcoRich.
- If an error occurs, in order to continue the measurement, the data that could not be received is ignored. So it is possible that discontinuous value is displayed. Please adopt ferrite to against the noise, and set a longer sampling time in that case.

5.7.1 Simple measurement (csv format)

Please set a file to save the measuring data before starting measurement.

1)Folder

Folder	Refer
e name	
rowse For Folder	×
フォルダを指定してください。	
📃 Desktop	
Desktop	
	E
Libraries	MI.
⊳ 🧊 Libraries ⊳ <u> k</u> dk	E
 b a Libraries b b dk computer 	E
 ▷ Libraries ▷ Libraries ▷ dk ▲ III Computer ▲ Local Disk (C:) 	E
 ▷ ☐ Libraries ▷ ☐ dk ▲ ➡ Computer ▲ Local Disk (C:) ▷ ▲ Intel 	A E

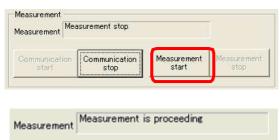
Selection of folder is shown left with click [Refer] button. Select required folder.

Memo Please select folders in local hard disk. If selected in network or USB, it could be probrem to save the data.

2) File name input

Save file (.c.	sv format)	
Folder		Refer
File name		

3) Start measurement

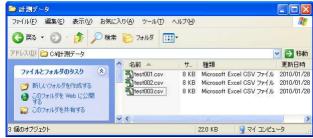


Input file name

Start measurement with [Mesurement Start] button.

Start the data measurement, "During measurement" will be displayed.

4) Save File



5) Completion of measurement



5.7.2 Simple measurement (Excel format)

1) Start measurement

ommunicat start	ion Com	munication stop	Measurement start	Measurement stop
				stop

2)Completion of measurement

By entering file name in "save file (csv format)", the measured data is saved automatically.

When a number of new data is created, a three-digit number is added to the end of file name. For example "Test003.csv".

File will be created to "999" at most. If the file of "999" is saved, the measurement will be completed automatically.

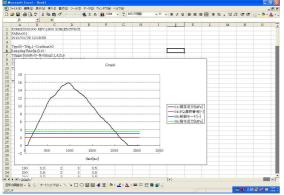
Complete the measurement by pressing the Measure Stop button.

Start measurement with [Mesurement Start] button.

Start the data measurement, "During measurement" will be displayed.

leasurement	Measurement is proce	eding	
Communicatio	n Communication	Measurement	Measurement
start		start	stop

3)Graph



Complete the measurement by pressing the Measure Stop button.

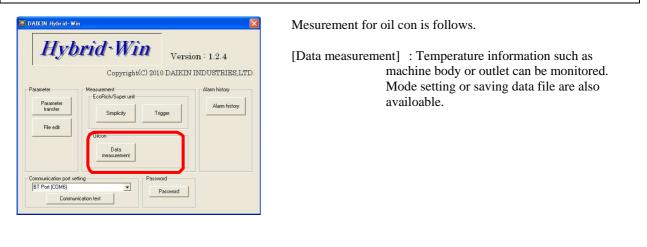
As shown in the left figure, graph and measured data are displayed in Excel.

Chapter 5 Waveform measurement screen (EcoRich / Super Unit)

<Memo>

Chapter 6. Waveform measurement screen(Oilcon)

6.1 Kind of Waveform measurement screen (Oilcon)



This function is available for 8 and 9 series.

Memo

6.2 Starting and End

After click [Data masurement] button as above ⁶.1 Kind of Waveform measurement screen (Oilcon) J, following dialog is shown. To end mesurement, click [End] button as follows and rerurn to main screen. ■ Version 1.1.0 - 1.2.2

Operation mode	Operation mode setting		
Mode	Mode	*	
arget temp. Absolute	s:) Target temp. 5		
State		Setting	
Saving file name			
ile name	Folder	Refer	
Sampling interval Measureme	nt		

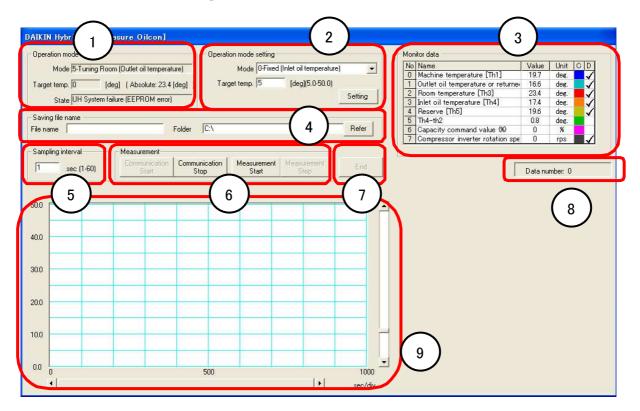
■ After Version 1.2.3

peration mode		Operati	ion mode setting			Monitor				
Mode 5-Tuning F	oom (Outlet oil temperat	urel	Mode 0-Fixed	(Inlet oil temperature		No Na		Value		C
							chine temperature [Th1]	19.7	deg.	
arget temp. 0	[deg] (Absolute: 23.4	[deg]) larg	pet temp. 5	(deg)(5.0-50.0)		1 04	tlet oil temperature or returne		dee.	
State UH System	n failure (EEPROM error)				Setting		om temperature [Th3]	23.4	deg.	_
Store last as stan						3 PB	et oil temperature [Th4] serve [Th5]	17.4	deg. deg.	
aving file name						5 Th	A_th2	0.8	deg.	
e name		Folder C:\			Refer		pacity command value (%)	0.0	. N	
riance p		, and a fact					mpressor inverter rotation spe		rps	
mpling interval				_						-
iniping interval		Communication	Measurement		1					
sec (1-60)	Eommunication Start	Stop	Start	Measurement Step	End		Γ	Data nu	mber 0	
	-									
8 C										
.0					<u> </u>					
					_					
0										
0										
0										
0										
0										
0										
0										
0										
0										
0						4				
						ł				
		500			1000					

Memo
[End] button can be used in the mesurement stop condition only.

6.3 Waveform measurement screen (Oilcon)

6.3.1 The name and work of each part of waveform measurement screen



- 1. Operation mode of unit, target temperature and operational status are displayed.
- 2. Operation mode and target temperature can be set up.
- 3. Monitor data is displayed.
- 4. The preservation folder of internal data and a file name are chosen and displayed.
- 5. The sampling interval that measures internal data is chosen.
- 6. Communicative start/stop, and a start/stop of internal data measurement are performed.
- 7. Screen is ended.
- 8. The number of measurement data is displayed.
- 9. Waveform is indicated after starting measurement.

Memo
According mesurement condition, operatable button is limited.

6.4 Start and Stop of Measurement

6.4.1 Communicative Start and Stop

Со	mmunication Start Stop	and the second second second	rement art	Measuremen Stop		
1on	itor data					
No	Name	Value	Unit	CD		
0	Machine temperature [Th1]	19.7	deg.			
1	Outlet oil temperature or returne	16.6	deg.	\checkmark		
2	Room temperature [Th3]	23.4	deg.			
3	Inlet oil temperature [Th4]	17.4	deg.	\checkmark		
4	Reserve [Th5]	19.6	deg.	\checkmark		
5	Th4-th2	0.8	deg.			
6	Capacity command value (%)	0	%			
7	Compressor inverter rotation sp	0	rps	_/		

Operate start and stop with [Communication Start] and [Communication Stop] button. After starging communication, current value are shown in the colume of [Value].

Click in the colume [D] and select and unselect each data to show in the waveform. Each value is represent the color in [C] colume.

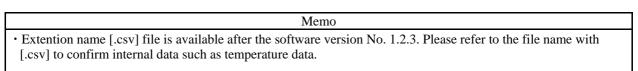
6.5 Data Measurement

Working condition such as temperature data can be recorded as file.

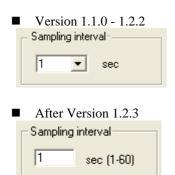
During recording data, bin file and csv file are made and can see csv file.

"bin file" is for our internal use which included confidential information with which we can identify suitable support for customers.

(bin file is not indicated because of confidential information.)



6.5.1 Setup of Sampling Period



Setup sampling period with this box.

Setting value is different based on software version as follows.

- Version 1.1.0~1.2.2 : 1~10sec (Selection)
- Version 1.2.3 or after : $1 \sim 60$ sec (Set by each 1sec at random)

6.5.2 Data Measurement

The file which saves measurement data is set up. Set up before data measurement.

1)Folder

Saving file name File name	Folder C:V	Refer	Selection of folder is shown with click [Refer] button. Select required folder.
	he folder.		

Memo
• Please select folders in local hard disk. If selected in network or USB, it could be probrem to save the data.

2) File name input

			Lou .	
ile name	wave1	Folder	1C:N	Refer

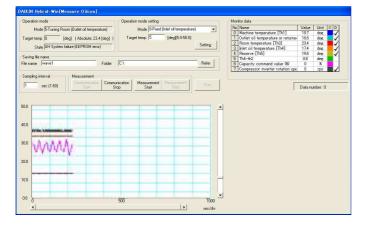
3) The start of measurement

easurement	0008 00 00 08 18	10/20	
Communication	Communication	Measurement	Measurement
Start	Stop	Start	Stop

Start measurement with [Mesurement Start] button.

Input file name

4) The display of a graph



Accoridng above subject No. 6.4.1, those data can be shown as waveform as left figure.

The screen will be scrolled automatically after exceeding measurement capacity up to 10,000sec. After over the limit, indication is stopped, but the recording of data will be continued.

5) Save of a file

🕽 計測データ				
ファイル(E) 編集(E) 表示(V)	お気に入り(<u>A</u>) ツール(T)	ヘルプ(出)	1
🔇 戻る • 🕑	• 🗊 .	🔎 検索 🌔 フォルダ 🚺	- 7	ドレス(<u>D</u>)
名前	サイズ	更新日時		
Jdata003.csv	6 KB	2011/02/10 17:48		
data002.csv	6 KB	2011/02/10 17:48		
🛐 data001.csv	6 KB	2011/02/10 17:48		
🖣 data003.bin	6 KB	2011/02/10 17:48		
🖗 data002.bin	6 KB	2011/02/10 17:48		
🖣 data001.bin	6 KB	2011/02/10 17:48		

Save data of [.csv] file

No	Measurement data	Unit	8 Series	9 Series
1	Machine temperature [Th1]	deg.	S	S
2	Outlet oil temperature or returned oil temperature [Th2]	deg.	S	S
3	Room temperature [Th3]	deg.	S	S
4	Inlet oil temperature [Th4]	deg.	S	S
5	Reserve [Th5]	deg.	S	S
6	Th4-th2	deg.	S	S
7	Capacity command value	%	S	S
8	Compressor inverter rotation speed	rps	S	S
9	Power consumption	kW	-	S
10	Oeration mode	-	S	S
11	Target temp.	deg.	S	S
* "S"	Save, "-":Not save			

Memo

- The record file is completed when the data volume is over the capacity of one file or push the stop button.
- File ". Csv" can be created in version 1.2.3 or later.

5) Completion of measurement



If [Measurement stop] button is pushed, measurement is completed and measurement data is saved to a file.

The measurement data is automatically recorded in saving file with imputted file name.

Measurement data is continuaously recorded and progressed file number automatically. File number is shown as 3 digit number after "data". The capacity of one file is 6400 line and file number will be progressed up to 999. After finished 999 filing, measurement is automatically stopped. Chapter 6 Waveform measurement screen(Oilcon)

<Memo>

Chapter 7. Alarm history

A past alarm history and internal data are displayed and saved.

7.1 Starting and End

Click [Alarm history] button on a main screen. Alarm history screen is displayed. To close Alarm history screen, click X button as below. It returns to a main screen.

\IKIN Hybrid-Win[Alarm]	
	Loading the Alarm History

7.2 Alarm history screen

7.2.1 The name and work of each part of a Alarm history screen



EcoRich / EcoRich R / Super Unit

Arm Contents Order / Alam Contents 1ahead E30 Pressure sensor or 2ahead E15 Main circuit under 3ahead E95 Software matchine 4ahead L50 Power voltage dor 3ahead E55 Software matchine 7ahead E21 Motor cable break Bahead E95 Software matchine	voltage a error vn warnir voltage a error		Item Num Rota Oper Prog Vers Chec	ion sksum meter number	r ship 3,90 shipm 6501 EY0 3200 F542 002-	3EF7		Loading th Histo			n copy output
Sahead L49 Overload warning			Time			9 AM					
10ahead E95 Software matching	error						_				
Cause and measures are display	7			1						1	
No Data		2	2ahead	Sahead	4ahead	5ahead	6ahead	7ahead	8ahead	9ahead	10ahead
1 Alarm number	7	~ <u>/</u>	E15	E95	L50	E15	E95	E21	E95	L49	E95
2 Number of Power-up	Tim		1	1	1	1	1	3	1	5	
3 Rotation Speed	min-1	0	0	0	0	0	0	0	0	0	0
4 Pressure	MPa	5.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
5 Regenerated load rate	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 Current Value	Arms	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7 Current command rate 8 Q-axis current command	% Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9 Q-axis current command 9 Q-axis current	Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9 Uraxis current 10 U phase current	Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 V phase current	Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 Wiphase current	Aneak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 Rotation Speed (after tur	rev	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 Operation time (after tur	hms	0h00m00s	0h00m00s	0h00m00s	0h00m00s	0h00m00s	Oh00m00s	0h00m00s	OhOOmOOs	0h00m00s	0h00m00s
15 Rotation speed (after shi	rev						3.900.000.000				
16 Operation time (after shi	hm	65000h00m		65000h00m	65000h00m	65000h00m	65000h00m	65000h00m		65000h00m	
17 Fin temperature	deg.	71	71	0	71	71	0	71	0	71	0
18 Motor temperature	deg.	0	0	Û	81	81	0	81	0	81	0
19 Phase	deg.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20 Speed command	min-1	0	0	0	0	0	0	0	0	0	0
21 Main circuit voltage	Vdc	0	Ó	Û	Û	0	Û	243	Ó	Ó	0
22 d-axis current	Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23 PQ number	20	0	0	0	4	4	0	0	0	0	0
24 Pump condition	0:H,1:L	0	0	0	1	1	0	0	0	1	0
25 No Data		No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
26 No Data	1.44	No Data		No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

- 1. The alarm code for the past 10 times and an alarm name are displayed.
- 2. Actual data such as pressure or current rate are shown to match with each alarm.
- 3. Times of power on or running time are also indicated.
- 4. Read out alarm history from a unit. In the case of oilcon, the read value is not displayed but is saved at a file.
- 5. Make a copy of Alarm history screen. The copy can be pasted of Excel file with pushing [Ctrl+V] key.
- 6. The read information can be outputted to Excel.

7.2.2 Models and Features

Depending on the connected model, operable functions are shown in the table below.

Model	Read alarm history	Display data	Copy screen	Excel output
EcoRich	•	•	•	•
EcoRich R	•	•	•	•
Super Unit	•	•	•	•
Oilcon	•	_	_	_

7.3 Operation Method (Oilcon)

The alarm data can be filed and send by e-mail to Daikin service. According the file information, we can provide suitable solution such as replacement parts or repair. (The file is not indicated because of confidential information.)

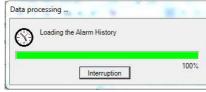
7.3.1 Alarm History reading

As follows, internal data is saved at a file.

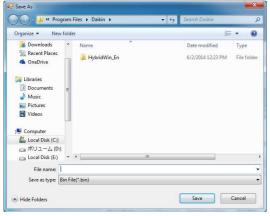
1) Alarm History read

Loading the Alarm History Push [Alarm History reading] button.

2) Data read



3) Save file



The data can be filed with inputted file name.

Internal data is read from a unit.

Memo
This data cannot be openned because of confidential information.

7.4 Operation Method (EcoRich / Super Unit)

When the connected models are EcoRich, EcoRich R, Super Unit, the following alarm history and the information when an alarm occurs can be displayed and saved.

7.4.1 Alarm History Read

1) Alarm History Read

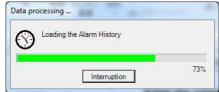


Push [Alarm History reading] button to read the alarm history from Unit.

Read the data from the internal unit.

The read data content is shown in the table below.

2) Data Read



3) Data Display

Jar	m Contents			Curre	nt information :							
0	nder Alam Contents			tem		Info	matico		Loading th	e Alarm		
1.5	head E30 Pressure sensor o	able enni		Ni m	her of Powersu	5			History		Screen copy	
28	head E15 Main circuit under	woltage		Bota	tion speed (after	rahip 3.9	3 900 000 000 rev					
3.	head ESS Software matchin	n entor		Ones	ation time (after	shipm 650	00h00m					
4.	head L50 Power voltage do	en warnie	20	Proc			40001				Event	output
	head E15 Main circuit under		· ·	Veral	90	320	0				LACE	output
61	head E95 Software matchin	a error		Chex	skaum	E54	23EF7				-	1
74	head E21 Motor cable break	r.		Para	meter number	002	-0					
Sahead E95 Software matching error			Date			6/2/2014						
Sahead L49 Overload warning			Time	Time 56:39 AM								
10	head E95 Software matchin	a error		Lances of Longerous			100000					
Uai	use and measures are displa											
du,	Data	Unit	1ahead	2ahead	3ahead	4ahead	Sahead	Sahead	7ahead	Sahead	Sahead	18ahead
1	Alarm number	141	E 80	E15	E\$6	L60	E 16	E95	E21	E\$6	L49	E95
2	Number of Power-up	Time	8	1	1	1	1	1	3	1	5	1
3	Rotation Speed	min-1	0	0	8	0	8	8	0	8	0	0
٤	Pressure	MPa	5.6	8.8	0.0	8.8	0.0	0.0	8.8	0.0	8.8	0.0
б	Regenerated load rate	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Current Value	Arms	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Current command rate		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Q-axis current command	Apeak	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	8.8	0.0
9	Q-axis current	Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	U phase current	Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	V phase current	Apeak	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Wiphase current	Apeak	0.0	8.8	0.0	8.6	0.0	0.0	8.8	0.0	8.8	0.0
13	Rotation Speed (after tur	rev	0	0	8	0	8	8	0	8	0	0
14	Operation time (after tur.,	hms	0h00m00s	0h00m00s	OhDImDOs	th00m00s	0h10m10s	0h00m00s	0h00m00s	0h01m00s	0h00m00s	0h10m10s
15	Rotation speed (after shi	rev					3,910,001,000		3,900,000,000			3,910,001,001
	Operation time (after shi	hn	65000h00m	65000h00m	65000h00m	65000h00m	85000h00m	65000h00m	65000h00m	65000h00m	65000h00m	85000h00m
		dee.	71	71	8	71	71	0	71	8	71	0
17	Fin temperature							0	81	0	81	0
17	Motor temperature	dec.	0	0		81	81					0.0
17	Motor temperature Phase	dee.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17 18 19 20	Motor temperature Phase Speed command	dee. min=1	0.0	0.0 0	0.0	0.0	0.0	0.0 8	0.0	8	0	0
17 18 19 20 21	Motor temperature Phase Speed command Main circuit voltage	dee. min=1 Vdc	0.0 0	0.0 0	0.0	0.0 0	0.0	0.0 0	0.0 0 243	8	0	0
17 18 19 20 21 22	Motor temperature Phase Speed command Main circuit voltage d-axis current	dee. min=1 Vdc Apeak	0.0 0 0	0.0 0 0	0.0 0 0	0.0 0 0 0.0	0.0 0 0	0.0 0 0 0.0	0.0 0 243 0.0	0	0	0 0 0.0
17 18 19 20 21 22 23	Motor temperature Phase Speed command Main circuit voltage d-axis current PO number	dee. min=1 Vdc Apeak	0.0 0 0 0.0 0	0.0 0 0.0 0.0	0.0	0.0 0	0.0	0.0 8 0.0 0.0	0.0 0 243 0.0 0	0 0 0.0	0	0 0 0.0 0
17 18 19 20 21 22 23 24	Motor temperature Phase Speed command Main circuit voltage d-axis current PQ number Pump condition	dee. min=1 Vdc Apeak - 0H,1L	0.0 0 0.0 0.0 0 0 0	0.0 0 0.0 0 0 0	0.0 0 0.0 0.0 0.0 0.0	0.0 0 0.0 4 1	0.0 0 0.0 4 1	0.0 0 0.0 0 0 0	0.0 0 243 0.0 0 0	0 0 0 0 0	0 0 0.0 0 1	0 0 0.0 0 0
17 18 19 20 21 22 23 24 25	Motor temperature Phase Speed command Main circuit voltage d-axis current PO number	dee. min=1 Vdc Apeak	0.0 0 0 0.0 0	0.0 0 0.0 0.0	0.0 0 0	0.0 0 0 0.0	0.0 0 0	0.0 8 0.0 0.0	0.0 0 243 0.0 0	0 0 0.0	0	0 0 0 0 0 0 0 0 0

The data that read from the unit is displayed as shown on the left.

♦ Alarm Description

Data	Unit	Description
Order of occurrence	-	Show the alarm which occurred many times ago.
		The larger the value is, the older the value is.
Alarm Description	-	Show the name and the alarm code of the occurred alarm.

◆Alarm Information (Super unit, EcoRich R)

Data	Unit	Description
Alarm number	-	Display the alarm number
Power-up times	times	Display power-up times when the alarm occurs.
Rotational speed	min⁻¹	Display the motor speed when the alarm occurs.
Pressure	MPa	Display the pressure when the alarm occurs.
Regenerative load ratio	%	Display the regenerative load ratio when the alarm occurs.
Current value	Arms	Display the current value when the alarm occurs.
Current command rate	%	Display the rate of current value to the maximum current when the alarm occurs.
q-axis command current	Apeak	Display the q-axis command current when the alarm occurs.

Data	Unit	Description
q-axis current	Apeak	Display the q-axis current when the alarm occurs.
U-phase current value	Apeak	Display the U-phase current value when the alarm occurs.
V-phase current value	Apeak	Display the V-phase current value when the alarm occurs.
W-phase current value	Apeak	Display the W-phase current value when the alarm occurs.
Rotational speed (after power-on)	rev	Display the integrated value of the rotational speed from power-on to the alarm occurrence.
Operating time (after power-on)	*h*m*s	Display the operating time from power-on to the alarm occurrence.
Rotational speed (after shipment)	rev	Display the integrated value of the rotational speed from shipment to the alarm occurrence.
Operating time (after shipment)	*h*m	Display the operating time from shipment to the alarm occurrence.
Fin temperature	°C	Display the fin temperature when the alarm occurs.
Motor temperature	°C	Display the motor temperature when the alarm occurs.
Phase	deg.	Display the phase when the alarm occurs. It is displayed since 30 design.
Speed command	min-1	Display the speed command when the alarm occurs. It is displayed since 30 design.
Main circuit voltage	Vdc	Display the main circuit voltage when the alarm occurs. It is displayed since 30 design.
d-axis current	Apeak	Display the d-axis current when the alarm occurs. It is displayed since 30 design.
PQ number	-	Display the PQ number when the alarm occurs. It is displayed since 30 design.
Pump state	0:H, 1:L	Display the pump state when the alarm occurs. 0: Single, 1: Confluence It is displayed since 30 design.

◆Alarm Information (EcoRich)

	,	
Data	Unit	Description
Alarm number	-	Display the alarm number
Power-up times	times	Display power-up times when the alarm occurs.
Rotational speed (after power-on)	rev	Display the integrated value of the rotational speed from power-on to the alarm occurrence.
Operating time (after power-on)	*h*m*s	Display the operating time from power-on to the alarm occurrence.

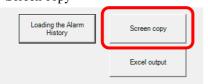
Memo The data that stores the alarm is determined. "No Data" will be displayed in the data, if it stores nothing. According to the alarm type, it is possible that the value cannot be stored. So "0" may be displayed in the data.

♦ Current Information

Display	Description	Unit
Power-up times	Display the current power-up times.	times
Rotational speed (after	Display the integrated value of the rotational speed	rev
shipment)	after shipment.	
Operating time (after	Display the operating time after shipment.	*h*m
shipment)		
Program		-
Version	Display the program information.	
Checksum		
Parameter number		
Date	Show the date when the alarm history is read.	-
Time	Show the time when the alarm history is read.	-

7.4.2 Save Data

Screen copy



Excel output



Press the Screen Copy button to copy the alarm history screen.

Open a software, such as Excel, and press [Ctrl + V]. In this way, the alarm history screen can be pasted.

When press the Excel Output button, the alarm history will be output to Excel as shown below.

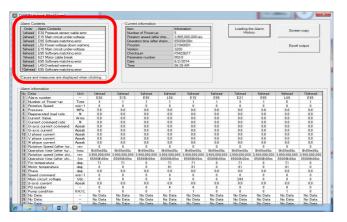
	5-4 N		-9 1	800 交話 表示	DK1 - E	Excel (比用版)					7.0	0 - 8 94>4>
Ô.	Calibri	· 11 · A A = =		副 折り返して全体を表示する	標準		R I	P 🖓	*	Σ.	27 #	
onit 💉	B I	u - ⊞ - <u>∆</u> - <u>∧</u> - ≡ = 3	E 4	三 目 セルを積合して中央組え ・	5 -	% , % %	条件付き テー: 書式・書式	がいとして せんの 【設定・スタイル・	挿入 刑餘	825v	並べ替えと 検索と フィルター・選択・	
107#-F 1		2#21 %		記録した		教徳 5		914	214		NE	
4	× 1.	$\times \checkmark f_x$										
A	B	c	D	E		F	G	н	E	1	к	E
	Order	Alarm Contents		Item		Information						
	1ahead	E30 Pressure sensor cable error		Number of Power-up			5					
	2ahead	E15 Main circuit under-voltage		Rotation speed (after shipme	ent)	3,900,000,000 res	6					
	3ahead	E95 Software matching error		Operation time (after shipme	ent)	65000h00m						
	4ahead	L50 Power voltage down warning		Program		EY040001						
		E15 Main circuit under-voltage		Version		320	D					
	6ahead	E95 Software matching error		Checksum		F5423EF7						
	7ahead	E21 Motor cable break		Parameter number		002-0						
	Sahead	E95 Software matching error		Date		6/2/201	4					
		L49 Overload warning		Time		56:39 AM						
	10ahead	E95 Software matching error										
	No	Data	Unit	lahead		2ahead	3ahead	4ahead	Sahead	Gahead	7ahead	Sahead
		Alarm number		£30		E15	Des	150	615	203	621	695
		Number of Power-up	Time		3		1			1 :		
		Rotation Speed	min-1		0		D				0 0	
		Pressure	MPa		5.6		D				0 0	
		Regenerated load rate	96		0		0				0 0	
		Current Value	Arms		0		0				0 0	
		Current command rate	%		0		D			0 0		
		Q-axis current command	Apeak		0		D				0 0	
		Q-axis current	Apeak		0		0				0 0	
		U phase current	Apeak		0		D				0 0	
		V phase current	Apeak		0		D				0 0	
		W phase current	Apeak		0		0				0 0	
		Rotation Speed (after turning on) Operation time (after turning on)	rev	0h00m00s		0h00m00s	0h00m00s	0h00m00s	0 0h00m00s	0 0h00m00s	0 0h00m00s	0h00m00s
		Rotation speed (after shipment)	hms	0100m005 3.900.00							0 3,900,000,000	
		Operation time (after shipment)	hm	3,900,00 65000h00m		3,900,000,00	65000h00m		65000h00m	65000h00m	65000h00m	65000h00r
		Fin temperature		esoconsom	71	2300010011		0 7			0 71	
		Motor temperature	deg.		0		0	0 8			0 81	
		Phase	deg.		0		D				0 0	
		Phase Speed command	min-1		0		0				0 0	
		Main circuit voltage	Min-1 Vdc		0		0				0 243	
		d-axis current	Apeak		0		0				0 245	
		PQ number	Apeak		0		0				0 0	
	Alar				- 0		2. RT					

As the figure on the left, the alarm history is displayed in Excel.

7.4.3 Troubleshooting

The troubleshooting, such as, the possible causes of the alarm, diagnosis and solution will be displayed, if the following operation is performed.

Please research the cause of the alarm and take measures according to the screen,.



In the Alarm Content as shown left. Click the alarm that you want to view its troubleshooting

Chapter 7 Alarm history

larm/Warning name]			
80 Pressure sensor cable error			
ondition of abnormal fixation]	[No.]	[The expected cause]	[Diagnosis and measure < >
essure sensor error le pump pressure sensor is disconnected short-circuited, or abnormal pressure is tected.	1	Disconnection, short-circuit or contact failure of the pressure sensor harness	Confirm contact of the pro- -Exchange pressure sensor harmess and confirm operation.
	2	Incorrect witing of the pressure sensor harness	Confirm witing, and connect the wiring correctly.
	3	Detection of abnormal pressure	Review the hydraulic circuit.
	4	Fault of the pressure sensor	Exchange the pressure sensors and confirm operation.
	5	Fault of the controller	Exchange controller and confirm operation .

Troubleshooting screen is displayed as shown left. Press the [<] button or [>] button to change the page.

Chapter 8. Other features

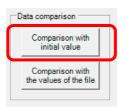
8.1 Check the parameter

It is easy to compare the parameter between units and saved file.

8.1.1 Data comparison [Initial Value]

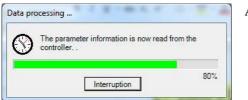
Memo The initial value comparing function is available for these models except EcoRich and Oilcon.

1) Select [Initial Value]



Click the [Initial Value] button.

2) Enter a file name



A dialog box is displayed.

3) Matched

File Mor MF	informa name del Coo G Num mment	le			-Open File Readir	ıg File	s	ave File Save to the file Save as ne		Excel
Para	ID	Name	Hybrid-WinCo	onfirmation mes	sage				×	Parameter transfer
H47	075	[DI_L]Pump confluence signal switch							_	From PC to Unit
H48	076	[L_G2]Load_Gain2								From PC to Unit
H49	077	[M_TI]Constant when motor load do self	(👔 AI	All parameters are correspond to the initial values.						
H50	078	[A_TI]Constant when controller load do								From Unit to PC
H51	079	(L_GB)Load_Gain_BackUp								
H52	087	[CS_T]Single change wait time					-	17.0455		
H53	089	[CD_T]Double change wait time						OK		Data comparison
H54	092	[P_C_]Pump change conditions					-		_	Comparison with
H55	093	[SD_T]Start-up double pump time		0.1	0.1	0	9.99	5		initial value
H56	094	[SP_E]Speed control selection effective		0	0	0	1	24		Comparison with
H57	181	[PU_L]Double pump capacity		0	0	0	200	L/min		the values of the file
H58	182	[PU_H]Single pump capacity		0	0	0	200	L/min		
H59	183	[AM_T]Alarm measurement sampling time		0	0	0	999	ms		
H60	184	[AMD1]Alarm measurement data1		0	0	0	999	12		
H61	185	[AMD2]Alarm measurement data2		0	0	0	999	8		
H62	186	[AMD3]Alam measurement data3		0	0	0	999	1.4		

If the check is completed, and all parameters are matched, the dialog box shown on the left will appear.

The factory default value is displayed before the Comparing Value.

4) Not matched

File Moi MFI	nformi name lel Cor 3 Num nment	Je		Open F	ile sading File		Save File Save to the file Save as n		Excel Excel output
		(×	n			Parameter transfer
Para	ID	Name	Hybrid-WinConfirmation	message		Max	Unit	<u></u>	r arameter transier
H47	075	[DI_L]Pump confluence signal switch				1	57	_	From PC to Unit
H48	076	[L_G2]Load_Gain2	1 data ta a d	is a disagreement		200		_	
H49	077	[M_TI]Constant when motor load do self adjustme		sagreeme	int	3500	sec	-	From Unit to PC
H50	078	[A_TI]Constant when controller load do self adjust				3500	sec	-	
H51 H52		[L_GB]Load_Gain_BackUp				9.99		- 1	
H52	087	[CS_T]Single change wait time [CD_T]Double change wait time		C	K	9.99		- 1	Data comparison
H53	089	[CD_1]Double change wait time [P C 1Pump change conditions		List		9.99		- 1	Comparison with
H55	092	[SD_T]Start-up double pump time	0.2	0.1	0	9.99		-	initial value
H56	094	ISP ElSpeed control selection effective	0.2			5.55	57	- 1	
H57	181	[PU_L]Double pump capacity	0	(200	L/min	- 1	Comparison with the values of the file
H58	182	[PU H]Single pump capacity	0	(200	L/min	-	
H59	183	[AM T]Alam measurement sampling time	0	-		999	ms	-	1
H60	184	[AMD1]Aam measurement data1	0			999	-	-	
	185	[AMD2]Alam measurement data2	0	(, ,	999	1 12		
H61		[AMD3]Alam measurement data3	0	(999		-	

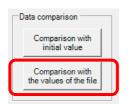
If the check is completed, but not all parameters are matched, the dialog box that marked mismatch number will appear. Press OK button to return.

The factory default value is displayed before the Comparing Value.

The blue mark that indicates mismatch will be displayed in the [i] column.

8.1.2 Data comparison [File]

1) Select [File]



Click [File] button.

2) Select file name

Organize 👻 New folder)II •	
Favorites	Name	Date modified	Type
E Desktop	Hybrid Win Picture	6/2/2014 12:11 PM	File folde
Downloads	HybridWin_En_Installer	6/1/2014 10:01 AM	File folde
💹 Recent Places			
🧠 OneDrive			
E			
Libraries			
Documents			
J Music			
Pictures			
videos			
Computer			
Local Disk (C:)			
👝 ボリューム (D:)	<[
1 1811.81			

Checking file can be selected from file forlder in left figure box. Double Click the file or click [Open (O)] button.

To stop the comparison, click [Cancel] button.

3) "Matched" or "Not matched"

There is a same display screen as [Initial Value]. Please refer to the "8.1.1 Data comparison [Initial Value]" for more information.

8.2 Communication test

The communication test between a personal computer and a unit can be operated in this process.

1) Select [Communication test]



Click [Communication test] button on a main screen.

2) Normal end



When the test is finished normally, left figure box is shown. Click [OK] button to return parameter setting screen.

3) In the case of error

-	unit and the connection of the communication line.
	inconfirmation message

When there is some error, left figure box is shown. Click [OK] button to return parameter setting screen. Chapter 8 Other features

<Memo>

Chapter 9. Precautions

9.1 Troubleshooting

9.1.1 Can not be installed

If the installation is not successful, you may be able to install it successfully by doing the following.

- The user name can only be alphanumeric characters when log in (if you are logged in with a user name that contains kanji, hiragana, etc., it may not be installed correctly).
- log in with administrator privileges
- Install by moving the installer to desktop.
- Modify the settings of the security software
- 9.1.2 Communication is not possible

The following dialog box is displayed, when you transfer parameters, or do communication test.

There was no response from the unit. Please confirm the power supply of the
unit and the connection of the communication line.

Message	Reason	Countermeasure
	Power of the unit is not turned on.	Please turn on the power.
	Communication cable is not	Please connect the communication
	connected.	cable.
		Please connect correctly, refer to "2.5
	The cable connection is not correct.	Connecting the communication
		cable."
	The communication port selection on	Please select the communication port
	the PC side is wrong.	correctly, refer to "3.1 the
		communication port settings ".
here was no response from the	Noise Influence.	Please take measures by referring to
unit. Please confirm the power of		"2.4.3 Noise countermeasures".
the unit, the connection of	Communication cable is broken.	Please change the communication
communication line.		cable.
	Target model is the super unit with	Diagon ant compative by referring to
	communication function, and you did	Please set correctly by referring to "2.2 Communication Specifications".
	not change the communication settings.	2.2 Communication Specifications .
	Configuration changes are not	
	reflected.	Please turn on the power again.
	Try to communicate immediately	Please do communication work, after
	after power-on, When the target unit	the "CHG" display is end on the panel
	is EcoRich and the "CHG" is	and the pressure is displayed at the
	displayed on the panel.	normal mode.

9.1.3 Warning message

Message	Reason	Countermeasure
There are <n> parameters that have not been set. Can not be proceeded.</n>	<n> parameters that have not been set have been transferred to the unit.</n>	Please set these parameters before transferring these parameters.
An error occurred when reading the data file.	An error occurred when reading the data file.	It is possible that the file is corrupted. Please read again.
The data file format is abnormal.	File that is not a parameter file has been selected.	Please select a parameter file.
The data file format is abnormal.	The data file format is abnormal.	Please use another data file.
File does not exist.	File does not exist.	Please specify the correct file name.
<n> datas are not enough.</n>	<n> parameters are not enough.</n>	Please set the data.
<n> datas are out of range.</n>	Datas of <i><</i> n <i>></i> parameters that read from the unit are out of range.	Please set the data within its range.
<n> datas do not match.</n>	<pre><n> datas mismatch compared to the value of the parameter stored in the file.</n></pre>	_
Controller type is different.	Read the model file wihich is different form the model that loaded the parameters. Or parameters are transferred to a different models by "PC \Rightarrow unit".	Writing parameters which match the displayed parameters to the unit. Or select the parameter file of the same model.
Pump capacity is different.	Read the file of the pump capacity that is different from the parameter that is displayed. Or parameters are transferred to the unit which the pump capacity is different by "PC \Rightarrow unit".	Writing parameters which match the displayed parameters to the unit. Or select the same pump capacity parameter file.
Can not open communication port.	It was not possible to open communication port.	Please ensure proper communication port settings. If the communication port is used by other applications, please quit that application.
Can not open file in write mode.	It was not possible to open the file in write mode.	Please change the file attributes to writable.
An error occurred while writing the file.	An error occurred while writing the file.	Please write again.
Input data is incorrect.	Input data is incorrect. Non-numeric (characters) was set.	Please enter the data correcttly.
Input data is out of range. The range is from <n2> from <n1>.</n1></n2>	Input data is out of range.	Check the input range, and set again.
A checksum error has occurred in the received data.	A checksum error has occurred in the received data. It may be affected by noise.	Please change the wiring route. Please check the communication cable.
System definition file is not found.	There is no system definition file.	Please uninstall the Hybrid-Win, and install the Hybrid-Win again.
Multi Language String Table File Not Exist.	There is no system definition file.	Please uninstall the Hybrid-Win, and install the Hybrid-Win again.

9.2 Frequently Asked Questions (Q & A)

Classification	Questions	Answer
Basic functions	Can not install	Please refer to "9.1.1 Can not be installed ".
	Can not communicate	Please refer to "9.1.2 Communication is not possible".
	Do not know what should be prepared	Please refer to "1.2.1 Preparation".
	Do not know what kind of communication cable can be used.	Please refer to "2.4.1 Preparation".
	Do not know the wiring method	Please refer to "2.5 Connecting the communication cable."
	Do not know which communication port should be chosen.	Please identify the communication port from the displayed name. Please refer to "3.1 Setup of Communication Port " for more information.
Parameter	Button is not displayed by	If you do the following, all buttons will be displayed.
function	parameter function	"Parameter transfer" function: parameter transfer [unit ⇒ PC] "File Edit" function: open the file [file read]
	Can not load the parameter file	Import only the files that you have saved by "Save" and "Save As". It is not possible to read the Excel file.
	When parameters are loaded, I	Please refer to "4.2 Parameter screen".
	When parameters are loaded, 🐸 is displayed	Please refer to "4.2 Parameter screen".
	The parameter value does not change	 The value is just changed on the screen. It is not transferred to the unit. Please transfer the parameter by "PC ⇒ unit". Please set the unit panel to normal mode (initial display). After turn on the power again, parameters will return to the original value, if an error occurs during parameter
		transfer. Please transfer again by all means, and make sure the transfer is successfully completed.
	Function "compared to the initial value" is not displayed	The function "compared to the initial value"can not be used by EcoRich and Oilcon.
	When turn on the power again, "UH system failure" occurs, after transferring the parameter to Oilcon	If an error occurs during parameter transfer, when turn on the power again, "UH system failure" will occur. Please write parameters to the Oilcon again, complete the writing correctly, then turn on the power again.
Waveform measurement function (EcoRich / Super Unit)	The setting item can not be changed	 Please press the communication start button to initiate the communication with the unit. The setting items can not be changed during measurement. It can not be changed after the measurement is complete.
	It is not possible to press the button	Operable button will be different according to communication and measurement state. Only these buttons that are displayed in black can be operated.
	Can not exit the screen	Please press the communication stop button to stop the communication.
	Measurement data is discontinuous	It may be affected by noise. Please measure again.

Classification	Questions	Answer
	Can not do trigger measurement	• Please select the trigger measurement function. After setting the trigger condition, please check the "Enable" check box. Please refer to the "5.1 Types with waveform measurement function (EcoRich / Super Unit)" for more information.
	No graph display	The graph cannot be displayed, when the saved file format is "csv". Please set file format as "Excel" to save. Please refer to "5.4.2 file save format" for more information.
	The desired operating waveform cannot be measured	Please set the trigger conditions in accordance with the desired operating waveform to be measured. Please refer to "5.4.5 Trigger conditions settings" for more information.
	It is not possible to select / release the flow rate	If the flow rate selection button is displayed, it is possible to select / release only by the button. Please press the flow rate select / release button. Show / Hide flow rate selection button is automatically selected depending on the target unit.
	Can not do flow rate trigger measurement	If the flow rate selection button is displayed, the trigger of the flow rate can not be set.
	The digital output signal can not be selected	Selected only from the output signal selection / output signal release button, it is possible to release. Please press the output signal selection / output signal release button.
	The trigger of the digital output signal can not be set	The trigger of digital output signal is set automatically and can not be changed. Please refer to measurement data list in "selection 5.4.3 measurement data" and "18 digital output signal" for more information.
	When pressing the measurement button, an error message will be displayed	When the file saving format is "csv", the file saving format must be specified. Please refer to the "5.4.4 Saving measurement data" for more information.
	"Do not support this connected model" is displayed.	Target model of this function is EcoRich / Super Unit. It does not correspond to the other models.
Waveform measurement function (Oilcon)	the setting item can not be changed	 Please press the communication start button to initiate the communication with the unit. The setting items can not be changed during measurement. Please change it after the measurement is complete.
	It is not possible to press the button	Operable button will be different according to communication and measurement state. Only these buttons that are displayed in black can be operated.
	Can not exit the screen	Please press the communication stop button to stop the communication
	Error message is displayed when pressing the measurement button	It is necessary tospecify the saving file, befor measuring. Please refer to the "6.5.2 Data measurement " for more information.
	"Do not support this connected model" is displayed.	Target model of this function is Oilcon. It does not correspond to the other models.
	There is an operation mode number which is not displayed in operation mode selection.	Only the operating number which can be set in the connecting model can be displayed.
	Operation mode, the target temperature does not change.	Press the "Settings" button to transfer the changes to the unit.
	The sampling interval and the display period of the monitor data is different.	The sampling interval and the display period of the monitor data is different. Please set the interval time when saving data to a file.
	Can not see the contents of the saved file.	If the connecting model is Oilcon, because internal information is included in measured data, the saved data is non-public. When surveying the cause of failure, please measure this data for our company.

Classification	Questions	Answer
	File can not be created.	During the data measurement, after finishing measuring a certain number of data, the file is created. Or the file is created when the measurement stop button is pressed.
Alarm history function	NO DATA is displayed in alarm information	If there is no remained data, NO DATA is displayed in history. It is not a malfunction. The displayed data, depending on the type of alarm, is different. In addition, the data to be displayed in EcoRich is limited.
	The value "0" is displayed in the alarm information The size of the screen can not be changed.	It does not store the value depending on the type of alarm. There are cases where "0" is displayed in the data. When the connecting model is Oilcon, the size of the screen cannot change.
	Alarm content is not displayed.	When the connecting model is Oilcon, the read data is not displayed. Files only can be saved.
	Can not see the contents of the saved file.	When the connecting model is Oilcon, because internal information is included in measured data, the saved data is non-public. When surveying the cause of failure, please measure this data for our company.

Chapter 9 Precautions

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