# MONITOUCH

## **TECHNICAL INFORMATION**

## TI-TS-0002v100EN

## **REPLACEMENT INFO FOR OLD MODELS to TS2000**

Type Software version Required options Use Date Version Author Revised Approved Languages

# **TECHNOSHOT and Frenic ACE (MODBUS RTU)**

How to communicate a TS panel with a inverter Frenic ACE through RS485 Modbus RTU.



1- Ceate a screen program with V-SFT6, select a TS panel and select FRENIC-ACE Modbus RTU as a communication driver.

Edit Model Selection		
Edit Model		
TS107* 👻		
✓ i Series UG Series		
Size	Connection Device	Selection
800 x 480 👻	Connected Device	Thermo controller/Servo/Inverter
Color	Maker	Fuii Electric
32K-Color w∕ blinking ▼	Madal	
Option Upit	Model	
	PLC No.	<u> </u>
Touch switch		Recent Devices >
Analog Switch		Finish Cancel
	C	
Memory Expansion		
None		
OK Cancel		

For Fuji Electric

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- 2- Set the communication parameters, these parameters must match with the inverter parameters.

Hardware Setting						
Close(C)		PLC1 Properties Fuji Electric FRENIC	ά×			
PLC Setting	9	Reset to Default				
PLC1		Communication Setting				
			Connection Mode	1:1		
PLC2			Signal Level	RS-422/485		
			Baud Rate	19200BPS		
			Data Length	8-Bit		
PLC3	PLC1 Fuji Electric FRENIC-Ace(MO		Stop Bit	2-Bit		
- 12			Parity	None		
		COM1	Port No.	1		
PLC4		Retrials	3			
- 12		Time-out Time(*100msec)	30			
			Send Delay Time(*msec)	10		
PLC5			Start Time(*sec)	0		
			Code	DEC		
DLCC			Text Process	LSB->MSB		
		сома	Comm. Error Handling	Continue		
			Detail			
PLC7			Priority	1		
			System device(\$s) V7 Compatible	None		
		I	Multi-link2 with V9	None		
PLC8			Target Settings			
		I	Use Connection Check Device	None		

3- Set the following parameters on the Frenic-ACE inverter.

Function Code		Item	Setting	Example		
y01		Station address	<u>1</u> to 31	1		
y04	RS-485 setting (touch panel) Stop bit		1: 4800 bps 2: 9600 bps <u>3: 19200 bps</u> 4: 38400 bps	3		
<b>y</b> 06			0: None 1: Even 2: Odd 3: None	0		
y07			For Modbus RTU communication, the stop bit setting is automatically made according to the parity bit setting. When "0" is specified for y06, "2 bits" is set for stop bit. When "1", "2", or "3" is specified for y06, "1 bit" is set for stop bit.	-		
y10		Communication protocol <sup>*1</sup>	0: Modbus RTU <u>1: SX (loader) protocol</u> 2: FGI-bus	0		
y11		Station address	<u>1</u> to 31	1		
y14		Baud rate	1: 4800 bps 2: 9600 bps <u>3: 19200 bps</u> 4: 38400 bps	3		
y16	RS-485 setting 2 (control	Parity bit	0: None 1: Even 2: Odd 3: None			
y17	circuit)	Stop bit	For Modbus RTU communication, the stop bit setting is automatically made according to the parity bit setting. When "0" is specified for y16, "2 bits" is set for stop bit. When "1", "2", or "3" is specified for y16, "1 bit" is set for stop bit.	-		
y20		Communication protocol <sup>*1</sup>	0: Modbus RTU 2: FGI-bus	0		
y98	Bus function		Frequency         Operation Command           ①         Function code H30         Function code H30           1         Commanded from the fieldbus         Function code H30           2         Function code H30         Commanded from the fieldbus           3         Commanded from the fieldbus         Commanded from the fieldbus	0		





Function Code	Item	Setting			Example
y99	Support link function	<u>0</u> 1 2 3	Frequency Function code H30, y98 Commanded from the loader Function code H30, y98 Commanded from the loader	Operation Command Function code H30, y98 Function code H30, y98 Commanded from the loader Commanded from the loader	0
H30	Link function <sup>*2</sup>	3     Commanded from the loader       3     Commanded from the loader       1     RS-485 communication       2     Inverter       3     RS-485 communication       4     RS-485 communication       5     RS-485 communication       6     Inverter       7     RS-485 communication       8     RS-485 communication		Operation Command Inverter Inverter RS-485 communication RS-485 communication Inverter RS-485 communication RS-485 communication (control circuit) RS-485 communication (control circuit) RS-485 communication (control circuit)	3

\*1 \*2 Select "Modbus RTU" for the communication protocol on the inverter when connecting with the TS.

When "0" is specified for y98 (bus function) as well as y99 (support link function), the frequency and operation command can be set on

When making the frequency and operation command settings on the TS connected to the connector for the touch panel, specify "3" for function code H30. When making those settings on the TS connected to the terminal block on control circuit, specify "8" for function code H30.

\*3 The communication parameter (data length) is fixed to 8 bits.

4- Connection diagram. ( Make sure to put on TS, DIP switches 2 and 3 to ON )



#### Wiring diagram 10 - COM1



5- On the screen program select PLC1 and use the "calculator" icon to open a dialog with the detail of all inverter parameters with a description.

Num. Display	Σ.
Device	to Display
Contents Device	
PLC	.1 👻 #403589 🔄 🗮 🗖
Style	angth 1-Word
Text to	Display
Function Displ	ay Format DEC (w/o sign)
Digit:	5 (*) / 32
Device Input PLC1 Fuji Electric : FRENIC-Ace(MODBUS	nal Point 0 10
Туре	Refer to Signal Name
PLC1       4       00000         Internal       7       9       F         0       7       9       F         1       7       8       9       F         1       7       8       9       F         1       7       8       8       0       •         0       •       1       2       3       A       B       0       •       cL       CR         0       •       0       •       CL       CR       0       •       CL       CR         Other Settings       •	410059       U174 Customizable Logic Strage Area 5         410050       U175 Customizable Logic Strage Area 5         410076       U191 Customizable Logic Step No. Selection         410077       U192 Customizable Logic Step n(Logic circuit)         410079       U194 Customizable Logic Step n(Input 1)         410079       U194 Customizable Logic Step n(Input 2)         410079       U194 Customizable Logic Step n(Type of timer)         410080       U195 Customizable Logic Step n(Type of timer)         410081       U195 Customizable Logic RDM version Upper digit(Monitor)         410082       U197 Customizable Logic RDM version Upper digit(Monitor)         410083       U198 Customizable Logic RDM version Lower digit(Monitor)         410084       U199 Customizable Logic RDM version Lower digit(Monitor)         410083       U198 Customizable Logic RDM version Lower digit(Monitor)         410084       U199 Customizable Logic RDM version Lower digit(For User setting)         403586       y01 RS-485 Communications 1(Communications error processing)         403587       y02 RS-485 Communications 1(Data length)         403599       v04 RS-485 Communications 1(Data length)         Close       Select       Open
Preview Display Comment DATA_D_00000	Finish Cancel

### Document history.

Version	Changes applied	Date	Written	Revised	Approved

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