

# **TECHNICAL INFORMATION**

### TI-V-POWER CLOUD-0003v100EN

# Ladder Transfer through V9 / VPN

Type Software version Required options Use Date Version Author Revised Approved Languages V-Power Cloud All versions Not required Fuji technical staff XX/XX/XXXX 1.0.0 xxxxxxxx xxxxxxxx xxxxxxxx English

#### Introduction.

It is needed: V-Connect software, VPN license, log into the "V-Power Cloud" authentication server from the "V-Connect" management tool, settings in the V9 local menu. FRENIC Loader Software and V-SFT 6.0.15.0 or higher.

\* Always log in (in V-Connect) using the administrator ID immediately after domain creation.

#### Procedure.

- 1- Connect V9 to Frenic Ace and check the communication is established.
- MJ1 PLC MJ1/2 Name No. Name No. **RJ45** RJ - 45 DX-4 FG AAAAAAA 12345678 12345678 DX+ 5 +RD/+SD 1 Dallind -RD/-SD 2 SG 5 \* Use shielded twist-pair cables.
- a- Wiring diagram.



### b- Settings for FRENIC ACE

	In	e parameter	is fixed for comr	nunication by FREINIC-Loader driver.	$\frown$	
	Function Code	Item		Setting	Example	
Port1	y01		Station address	1 to 247	1	
	y04	RS-485 setting (communication port 1)	Baud rate	1: 4800 bps 2: 9600 bps 3: 19200 bps 4: 38400 bps	3	
	y05		Data length	0: 8 bits 1: 7 bits	0	
	y06		Parity bit	<u>0: None</u> 1: Even parity 2: Odd 3: None	1	Fixed
	y07	-	Stop bit	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 it. When "1", "2", or "3" is specified for y06 "1 bit" is set for stop bit.	1	1
	y10		Communication protocol <sup>*1</sup>	0: Modbus RTU 1: SX (loader) protocol	1	
	y11		Station address	1 to 247	1	
	y14		Baud rate	1: 4800 bps 2: 9600 bps <u>3: 19200 bps</u> 4: 38400 bps	3	
	y15	RS-485 setting 2 (communication port 2)	Data length	0: 8 bits 1: 7 bits	0	
Port2	y16		Parity bit	<u>0: None</u> 1: Even 2: Odd 3: None	1	Fixed
	y17		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.	1	
	y20		Communication protocol *1	0: Modbus RTU 1: SX (loader) protocol	1	

FRENIC-ACE (or y11, y14, y16, y17, y20 for Port2) The parameter is fixed for communication by FRENIC-Loader driver.

c- Communication settings on V-SFT6. Configure the communication settings like the images below.

PLC1 Connection Device Selection								
Connected Device	Thermo controller/Servo/Inverter							
Maker	Fuji Electric 🔹							
Model	FRENIC Series (Loader)							
Target Port No.	MJ1 🔹							
	<u>Recent Devices &gt;</u>							
	Finish Cancel							

Connected device: Thermo controller/Servo/Inverter Maker: Fuji Electric Model: FRENIC Series (Loader) Target Port: MJ1 And press Finish.



Hardware Setting	1					X
Close(C)				PLC1 Properties Fuji Electric FRENIC Se	eries (Loader)	ά×
Hardware Setting PLC Setting PLC2 PLC2 PLC3 PLC4 PLC5 PLC5 PLC5 PLC5 PLC5	PLC1 Fuji Electric FRENIC Series (L.		<u>см</u> М.11 V910* 1024 x 600 32К-Color w// blinking	PLC1 Properties Fuji Electric FRENIC Si Reset to Default ↓ Communication Setting Connection Mode Signal Level Baud Rate Data Length Stop Bit Parity Port No. Retrials Time-out Time(*100msec) Send Delay Time(*nec) Stat Time(*sec) Code Text Process Come Env Handline	I:1         II:1           RS-422/485         192008PS           8-Bit         1-Bit           1-Bit         Even           1         3           100         20           1         0           2D         1           DEC         LSB->MSB	
PLC6 PLC7 PLC8			мј2	Comm. Error Handling Detail Priority System device(\$s) V7 Compatible Target Settings Use Connection Check Device	Stop 1 None None	
Edit Model	Control Area	Buzzer	Backlight	Code A code can be set.		
•			Þ			

Connection mode: 1:1 Signal level: RS422/485 Baud Rate: 19200 BPS Data Length: 8-bit Stop Bit: 1-bit Parity : Even Port Number: 1 Retrials: 3 Time out: 100 Send delay: 20 Start time: 1 Click the lower X (red arrow)

Hardware Setting			X
Close(C) PLC Setting PLC2 PLC3 PLC4 PLC5 PLC5 PLC6 PLC7 PLC8 PLC8 PLC8	PLC1 Fuji Electric FRENIC Series (L.	LAN Ladder Transfer Setting Use ladder transfer with the PLC connected to CN1 Use ladder transfer with the PLC connected to MJ1 Use ladder transfer with the PLC connected to MJ1 Plc1 Fuij Electric FRENIC Series (Loader) Use ladder transfer with the PLC connected to MJ2 Use ladder transfer with the PLC connected to LAN OK Cancel	
Edit Model	Control Area	Buzzer Backlight Local Port IP Address Video/RGB Local Mode	Ladder Transfer

Click Ladder Transfer Icon, select Use ladder for MJ1 (red arrow.



Transfer the program to the V9.

- d- Tranfer Screen program to V9.
- e- Connect V9 to VPN service ( please follow the detailed instruccions in TI-V-Power Cloud-0001 )
- f- Connect PC to VPN server with V-Connect (please follow the detailed instruccions in TI-V-Power Cloud-0001)

👌 V-Connect - Gustavo Martinez										1 23
Domain(D) Connection(C) Ac	ccess points	(S) User(U) View(V) T	ool(T) Help(H)							
🎬 Logout 🚸 Connect VPN 🚀 Di	isconnect V	/PN 🧔 Refresh 💣 Proxy set	tings 👔 Option settir	igs						
Access points  Access points  TERM001  TERM002  TERM004  TERM004  TERM005  TERM006		Access point name IP address Subnet mask DHCP Start Address DHCP assignment ip Perform routing of	address number	192.168 255.255 192.168 90 destinatic	5.50.1 5.255.0 5.50.10	lect All	Cancel All			
TERM007	=	VPN Terminal name	Active ID	Type	IP address	SubnetMask	routing	LocalNetwork1	SubnetMask1	*
		TERM001		DHCP				10.223.22.0	255.255.255.0	
TERM009		TERM002		DHCP				10.91.130.0	255.255.255.0	
		TERM003		DHCP		/				
		TERM004		DHCP				192.168.1.0	255.255.255.0	
		TERM005		DHCP						E
		TERM006		DHCP				192.168.16.0	255.255.255.0	
👤 name003 user		TERM007		DHCP						
👤 name 004 user		TERM008		DHCP						
🖳 👤 name005 user		TERM009		DHCP						
- 👤 name006 user		TERM010		DHCP				10.223.22.0	255.255.255.0	-
-2 name007 user		•			m					F
📃 👤 name008 user	-									
N Connect: keytothehighway										

Make sure to select the checkbox "Routing" of the panel which you want to route the VPN.

- *g* Check the connection with "ping" command going through LA1,LAN2 and VPN IP.
- h- Set the same serial port in FRENIC LOADER and in
   "LadderComOP", set LAN1 IP address and establish the connection. (LAN1 because we set LAN1 for Ladder transfer)

Ladder Transfer Setting		Communication Setting
Communication(C) Option(O)		
	ONLINE	Targel RS485:Data in Inverter Connection list C USB RS-485 C DSB
PC Used Port COM7 ▼ (○ USB (○ Ethernet		Port COM7  Baud rate 19200 [bps]  Flow control RTS
Virtual Port COM1 Port No 10000		Retry times 1 time  Timeout  Connected check
	END	



# Document history.

Version	Changes applied	Date	Written	Revised	Approved

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