

# General Specifications

VP6F9281, VP6F9281A  
Modbus Communication Package  
Slave Version (for ALR111, ALR121)



GS 33J30Z38-01EN

[Release 6]

## ■ GENERAL

The Modbus Communication Package Slave version is a subsystem communication package designed for the PLC using Modbus protocol. The PLC is the master and ALR111 or ALR121 is the slave when using Modbus protocol.

## ■ FUNCTION SPECIFICATIONS

### Number of Communicable Data

Max.1000 words per ALR111 or ALR121

### Number of Communicable ALR111 or ALR121

Max.2 per PLC Station

### Transmission Specifications

Interface		ALR111: RS-232C (D-sub9 pin, 2 ports) ALR121: RS-422/RS-485 (2 ports) (*1)
Transmission method		Half-duplex
Synchronization method		Start-stop synchronization
Baud rate		1200, 2400, 4800, 9600, [19200] bps (*2)
Protocol		Modbus RTU
Transmission code		Binary
Character length		8 bits
Data type	Start bit	1
	Data bit	8
	Parity bit	None, [even], odd (*2)
	Stop bit	1
Control line	RS control	NO (*2)
	DR check	YES (*2)
	CD check	NO (*2)
	ER	NO
	CS	NO
Text frame	Start of text	None
	End of text	None
Control right		Master: PLC Slave: ALR111/121 (*3)

Note: [ ] indicates the recommended settings.

\*1: The two ports (port 1 and port 2) of a ALR module can access the same area or the different area of the communication I/O data by the definition.

\*2: This can be changed.

\*3: Slave address is set on each ALR111/ALR121 module.

**Accessible Devices of ALR111, ALR121**

Function code	Address within modbus PLC device	Size (word)	Device	Modbus protocol function code (hexadecimal)	
				Read	Write
CS0	00001 to 65535	1 to 8	Coil Status	01	05, 0F
IS1	00001 to 65535	1 to 8	Input Status (Relays)	02	
HR4	00001 to 65535	1 to 128	Holding Register	03	06, 10
IR3	00001 to 65535	1 to 128	Input Register	04	
EXS	-	1	Exception Status	07	
STS	-	10	Com Status Inf.	-	

**Data Size of Area in One Communication Definition**

Word Device: Max.128 words

Bit Device: Max.8 words

**Data Size in One Communication Frame**

Word Device: Max.125 words

Bit Device: Max.125 words

**Communication Program for Master**

To use this package and access ALR111 and ALR121, users are required to provide a communication program for the master.

**■ OPERATING ENVIRONMENT**

Operating environment of hardware, software and engineering is similar to the system requirements of CENTUM standard function needed when the communication module that this communicating software is used.

**■ RESTRICTION**

- This package does not support redundancy with a pair of ALR modules.

**■ MODEL AND SUFFIX CODES****● Modbus Communication Package Slave version (for ALR111, ALR121)**

		Description
<b>Model</b>	VP6F9281	Modbus Communication Package Slave version (for ALR111,ALR121)
<b>Suffix Codes</b>	-W	Basic software license
	1	Always 1
	1	English version
	-F□□□	□□□: 001 to 064 (The number of FCSs with this software)

**● Modbus Communication Package Slave version (for ALR111, ALR121) (no media)**

		Description
<b>Model</b>	VP6F9281A	Modbus Communication Package Slave version (for ALR111,ALR121) (no media)
<b>Suffix Codes</b>	-W	Basic software license
	1	Always 1
	1	English version
	-F□□□	□□□: 001 to 064 (The number of FCSs with this software)

**■ TRADEMARKS**

The names of corporations, organizations, products and logos herein are either registered trademarks or trademarks of Yokogawa Electric Corporation and their respective holders.