N1100 / N2000 / N3000

Communication Protocol - V2.0x A

1. SERIAL COMMUNICATION

1.1 COMMUNICATION INTERFACE

The optional serial interface RS485 allows to address up to 247 controllers in a network communicating remotely with a host computer or master controller.

RS485 Interface

- Compatible line signals with RS485 standard
- 2 wire connection from master to up to 31 slaves indicators in a multidrop bus.
 It is possible address 247 nodes with multiple outputs converters.
- Maximum communication distance: 1000 meters
- The RS485 signals are:

D1 = D: Bidirectional data line.

 $D0 = \overline{D}$: Bidirectional inverted data line.

C = GND: Optional connection which left communication better.

General Characteristics

- Optically isolated serial interface
- Programmable baud rate: 1200, 2400, 4800, 9600 or 19200bps.
- Data Bits: 8
- Parity: None
- Stop Bits: 1

Communication Protocol

The MOSBUS RTU slave is implemented, available in most SCADA softwares in the market.

All configurable parameters can be accessed (for reading or writing) through the Registers Table. Broadcast commands are supported as well (address 0).

The available Modbus commands are:

- 03 Read Holding Register
- 05 Force Single Coil (Force Digital Output state)
- 06 Preset Single Register

The registers are arranged in a table in such a way that several registers can be read in the same request.

1.2 CONFIGURATION OF SERIAL COMMUNICATION PARAMETERS

Two parameters must be configured in the device for serial communication:

bRud: Baud rate. All devices with same baud rate.

Rddr: Device communication address. Each device must have an exclusive address.

1.3 REGISTERS TABLE

Equivalent to the registers referenced as 4XXXX.

The holding registers are basically a list of the internal indicator parameters. All registers above address 12 can be read or written. The registers up to this address in more are read only. Please verify each case. Each table parameter is a 16 bits two complement signed word.

Holding Registers	Parameter	Register Description
0000	Active SV	Read: Active control SV (main SV, from ramp and soak or from remote SV). Write: to main SV Range: from 5PLL to 5PHL .
0001	PV	Read: Process Variable Write: not allowed. Range: From 5PLL to 5PHL . The dPPo prompt gives the decimal point position.
0002	MV	Read: Output Power in automatic or manual mode. Write: not allowed. See address 29. Range: 0 to 1000 (0.0 to 100.0%).
0003	-	Reserved.
0004	Display value	Read: Current value shown on display. Write: Current value shown on display. Range: -1999 to 9999. The range depends on the displayed parameter.
0005	Prompt index	Read: Current prompt position in the parameters flowchart. Write: not allowed. Range: 0000h to 060Ch Prompt number format: XXYYh, where: XX—menu cycle number (see operation manual) YY—prompt number (index).
0006	Status Word 1	Read: Status bits. See table 2 Write: not allowed.

	Software	Read: The firmware version of controller. If V1.00, the read
	Version	value will be 100. Write: not allowed.
0008	ID	Read: controller identification number.
		Write: not allowed. Values:
		1 – N1100; 2 - N2000; 3 - N1500.
0009	Status	Other values: special instruments. Read: Status bits. See table 2.
	Word 2	Write: not allowed.
0010	Status Word 3	Read: Status bits. See table 2. Write: not allowed.
0011	ir_	Integral Rate (in repetitions/min)
0012	dŁ	Range: 0 to 3000 (0.00 to 30.00) Derivative Time (in seconds). Range: 0 to 250
0013	РЬ	Proportional Band (in percentage)
0014	-	Range: 0 to 5000 (0.0 to 500.0) Reserved.
0015	cŁ	Cycle Time (PWM, in seconds)
0016	-	Range: 5 to 1000 (0.5 to 100.0) Reserved.
0017	HYSE	On/Off Control Hysteresis (in selected type engineering unit). Range: 0 to SPHL - SPLL
0018	-	Reserved.
0019	ouLL	Output Low Limit (minimum output power)
0020	ouHL	Range: 0 to 1000 (0.0 to 100.0%). Output High Limit (minimum output power)
0021	RuEn	Range: 0 to 1000 (0.0 to 100.0%). N2000 only.
0021	חשבח	Auto/Man key Enable – 👺.
0022	FFunc	1 → Key enabled 0 → Key disabled N2000 only.
0022	FFUNE	F key function.
		0 → Not used. 7 → Controller start/stop. 8 → Select remote SP. 9 → Ramp and soak hold.
		10 → Enable ramp and soak profile 1.
0023	Serial number H	Serial Number High (Upper display). Range: 0 to 9999. Read only
0024	Serial	Serial Number Low (Lower display).
0025	number L SV	Range: 0 to 9999. Read only Control Setpoint (Prompt Setpoint).
0000	FOLI	Range: from SPLL to SPHL.
0026	SPLL	Setpoint Low limit. Range: minimum value depends on the input type selected
0027	SPHL	in LYPE (see op. Manual) to SPHL. Setpoint High limit.
0027	3, 1,5	Range: minimum value is 5PLL and maximum depends on
0028	Manual	the input type selected in LYPE (see op. Manual). Manual output power (in percentage)
	MV	Range: 0 to 1000 (0.0 to 100.0%)
0000		IPV offset
0029	oFF5	Range: from 5PLL to 5PHL .
0029		PV decimal point position
	oFF5 dPPo	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000
	oFF5	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint.
0030	oFF5 dPPo	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm
0030	oFF5 dPPo	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential
0030	oFFS dPPo SPA I	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PH I.
0030 0031 0032 0033	oFFS dPPo SPA I SPA2 SPA3	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I . Alarm 3 Setpoint. Range: same as in 5PR I .
0030	oFFS dPPo SPA I	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8
0030 0031 0032 0033 0034	SPR I SPRZ SPRZ SPRZ SPRY	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I;
0030 0031 0032 0033 0034 0035	SPRI SPRI SPRZ SPRZ SPRZ SPRZ SPRZ SPRZ	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF.
0030 0031 0032 0033 0034 0035	SPRI SPRI SPRI SPRI SPRI FURI	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I.
0030 0031 0032 0033 0034 0035	SPRI SPRI SPRZ SPRZ SPRZ SPRZ SPRZ SPRZ	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039	SPRI SPRI SPRI SPRI SPRI SPRI FURI FURI FURI	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039 0040	SPRI SPRI SPRI SPRI SPRI FURI FURI FURI HYRI HYRI	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 1 Hysteresis. Range: 0 to 9999 (0.00 to 99.99%) Alarm 2 Hysteresis. Range: same as in HYR I.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039	SPRI SPRI SPRI SPRI SPRI SPRI FURI FURI FURI	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039 0040 0041	SPRI SPRI SPRI SPRI SPRI SPRI FURI FURI FURI HYRI HYRI HYRI HYRI HYRI	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 1 Hysteresis. Range: 0 to 9999 (0.00 to 99.99%) Alarm 2 Hysteresis. Range: same as in HYR I. Alarm 3 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039 0040 0041 0042	SPRI SPRI SPRI SPRI SPRI SPRI FURI FURI FURI HYRI HYRI HYRI HYRI HYRY	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at SPLL for non-differential alarm or SPLL - SPLH for differential alarm The maximum value is at SPHL for non-differential alarm or at SPHL - SPLL for differential alarm. Alarm 2 Setpoint. Range: same as in SPR I. Alarm 3 Setpoint. Range: same as in SPR I. Alarm 4 Setpoint. Range: oto 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 1 Hysteresis. Range: oto 9999 (0.00 to 99.99%) Alarm 2 Hysteresis. Range: same as in HYR I. Alarm 3 Hysteresis. Range: same as in HYR I.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039 0040 0041 0042 0043	SPRI SPRI SPRI SPRI SPRI FURI FURI FURI HYRI HYRI HYRI HYRI HYRI HYRI HYRI HY	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at SPLL for non-differential alarm or SPLL - SPLH for differential alarm The maximum value is at SPHL for non-differential alarm or at SPHL - SPLL for differential alarm. Alarm 2 Setpoint. Range: same as in SPR I. Alarm 3 Setpoint. Range: same as in SPR I. Alarm 4 Setpoint. Range: o to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 1 Hysteresis. Range: o to 9999 (0.00 to 99.99%) Alarm 2 Hysteresis. Range: same as in HYR I. Alarm 3 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 5 Hysteresis. Range: same as in HYR I. Alarm 6 Hysteresis. Range: same as in HYR I. Alarm 7 Hysteresis. Range: same as in HYR I. Alarm 8 Hysteresis. Range: same as in HYR I. Alarm 9 Hysteresis. Range: same as in HYR I. Alarm 1 Hysteresis. Range: same as in HYR I. Alarm 1 Hysteresis. Range: same as in HYR I. Alarm 1 Hysteresis. Range: same as in HYR I.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039 0040 0041 0042 0043	SPRI SPRI SPRI SPRI SPRI SPRI FURI FURI FURI HYRI HYRI HYRI HYRI HYRI HYRI HYRI HY	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: o to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 1 Hysteresis. Range: o to 9999 (0.00 to 99.99%) Alarm 2 Hysteresis. Range: same as in HYR I. Alarm 3 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I.
0030 0031 0032 0033 0034 0035 0036 0037 0038 0039 0040 0041 0042 0043	SPRI SPRI SPRI SPRI SPRI FURI FURI FURI HYRI HYRI HYRI HYRI HYRI HYRI HYRI HY	PV decimal point position Range: 0 to 3 0→0.000; 1→00.00; 2→000.0; 3→0000 Alarm 1 Setpoint. Range: The minimum value is at 5PLL for non-differential alarm or 5PLL - 5PLH for differential alarm The maximum value is at 5PHL for non-differential alarm or at 5PHL - 5PLL for differential alarm. Alarm 2 Setpoint. Range: same as in 5PR I. Alarm 3 Setpoint. Range: same as in 5PR I. Alarm 4 Setpoint. Range: same as in 5PR I. Alarm 1 Function. Range: 0 to 8 0→oFF; 1→ IErr; 2→r5; 3→rFR I; 4→Lo; 5→H I; 6→d IFL; 7→d IFH; 8→d IF. Alarm 2 Function. Range: same as in FUR I. Alarm 3 Function. Range: same as in FUR I. Alarm 4 Function. Range: same as in FUR I. Alarm 1 Hysteresis. Range: 0 to 9999 (0.00 to 99.99%) Alarm 2 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 5 Hysteresis. Range: same as in HYR I. Alarm 6 Hysteresis. Range: same as in HYR I. Alarm 7 Hysteresis. Range: same as in HYR I. Alarm 8 Hysteresis. Range: same as in HYR I. Alarm 9 Hysteresis. Range: same as in HYR I. Alarm 1 Hysteresis. Range: same as in HYR I. Alarm 1 Hysteresis. Range: same as in HYR I. Alarm 1 Hysteresis. Range: same as in HYR I. Alarm 2 Hysteresis. Range: same as in HYR I. Alarm 3 Hysteresis. Range: same as in HYR I. Alarm 4 Hysteresis. Range: same as in HYR I. Alarm 5 Hysteresis. Range: same as in HYR I. Alarm 6 Hysteresis. Range: same as in HYR I. Alarm 7 Hysteresis. Range: same as in HYR I. Alarm 8 Hysteresis. Range: same as in HYR I. Alarm 9 Hysteresis. Range: same as in HYR I. Alarm 1 Hysteresis. Range: 0 to 18. See operation manual. Communication Baud-Rate. Range: 0 to 4

0048	RcŁ	Control action. Range: 0→reverse; 1→direct.
0049	REUN	Auto tune enable. Range: 0→no; 1→yes.
0050	blr i	Alarm 1 power-up inhibit. Range: 0→no; 1→yes.
0051	PT45	Alarm 2 power-up inhibit
		Range: same as in bLR I .
0052	PT H3	Alarm 3 power-up inhibit Range: same as in bLR 1 .
0053	BLR4	Alarm 4 power-up inhibit
	02,,,	Range: same as in bLR I .
0054	Key	Key press remote action. Range: 0 to 9
		$1 \rightarrow \bigcirc; 2 \rightarrow \blacktriangle; 4 \rightarrow \boxed{\bullet}; 8 \rightarrow \tiny \texttt{BACK}; 9 \rightarrow \tiny \texttt{BACK} e \bigcirc.$
0055	r5LL	Remote Setpoint Low limit
		Range: Minimum value depends on the input type selected in LYPE , and maximum value is in r5HL .
0056	r5HL	Remote Setpoint High limit
		Range: Minimum value is in rsll, and maximum depends on
		the input type selected in LYPE .
0057	lo I	IO 1 Function. Range: 0 to 5 Refer to operation manual for more details.
0058	lo 2	IO 2 Function. Range: 0 to 5
	,,,	Refer to operation manual for more details.
0059	10 B	IO 3 Function. Range: 0 to 10
		Refer to operation manual for more details.
0060	10 4	IO 4 Function. Range: 0 to 10 Refer to operation manual for more details.
0061	lo 5	IO 5 Function. Range: 0 to 16
		Refer to operation manual for more details.
0062	R IL I	Alarm 1 Time 1. Range: 0 to 6500s
0000	D " ¬	Refer to operation manual for more details.
0063	B IFS	Alarm 1 Time 2 (in seconds) Range: same as in Filt .
0064	R2E 1	Alarm 2 Time 1 (in seconds)
		Range: same as in A IL I .
0065	H5F5	Alarm 2 Time 2 (in seconds)
0066	rrr,	Range: same as in FIL I.
0066	SFSŁ	Soft-Start time (in seconds) Range: 0 to 9999
0067	un it	Temperature unit. Range: 0 to 1
		0→°C; 1→°F.
0068	ь IRS	Bias. Range: -100 to +100%.
0069	1o 6	N2000 only.
		IO 6 Function. Allowed values: 0, 6, 7, 8, 9 and 10. Refer to operation manual for more details.
0070	R&S	Ramp and Soak segment being executed (read only).
	Segment	Range: 0 to 4
0071	Prn	Ramp and Soak segment to be viewed or edited.
0072	Pro	Range: 1 to 4 Ramp and Soak segment to be executed
0012	FFR	Range: 0 to 4
		Inalige. U to 4
0073	PE I	Segment 1 Event of R&S Program 1.
		Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual.
0073	PE I	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1.
0074	PE2	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE 1 .
	PE2 PE3	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1.
0074	PE2	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I . Segment 3 Event of R&S Program 1. Range: same as in PE I . Segment 4 Event of R&S Program 1.
0074 0075 0076	PE2 PE3 PE4	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I . Segment 3 Event of R&S Program 1. Range: same as in PE I . Segment 4 Event of R&S Program 1. Range: same as in PE I .
0074	PE2 PE3	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I . Segment 3 Event of R&S Program 1. Range: same as in PE I . Segment 4 Event of R&S Program 1. Range: same as in PE I . Segment 5 Event of R&S Program 1.
0074 0075 0076	PE2 PE3 PE4 PE5	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I . Segment 3 Event of R&S Program 1. Range: same as in PE I . Segment 4 Event of R&S Program 1. Range: same as in PE I .
0074 0075 0076 0077	PE2 PE3 PE4 PE5 PE6	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE 1. Segment 3 Event of R&S Program 1. Range: same as in PE 1. Segment 4 Event of R&S Program 1. Range: same as in PE 1. Segment 5 Event of R&S Program 1. Range: same as in PE 1. Segment 6 Event of R&S Program 1. Range: same as in PE 1. Segment 6 Event of R&S Program 1. Range: same as in PE 1.
0074 0075 0076 0077	PE2 PE3 PE4 PE5	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1.
0074 0075 0076 0077 0078	PE2 PE3 PE4 PE5 PE6 PE7	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I.
0074 0075 0076 0077	PE2 PE3 PE4 PE5 PE6	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 1. Range: same as in PE I.
0074 0075 0076 0077 0078	PE2 PE3 PE4 PE5 PE6 PE7	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I.
0074 0075 0076 0077 0078 0079	PE2 PE3 PE4 PE5 PE6 PE7 PE1 PE2	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079	PE2 PE3 PE4 PE5 PE6 PE7	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080 0081	PE3 PE4 PE5 PE6 PE7 PE 1 PE2 PE3	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080	PE2 PE3 PE4 PE5 PE6 PE7 PE1 PE2	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE 1. Segment 3 Event of R&S Program 1. Range: same as in PE 1. Segment 4 Event of R&S Program 1. Range: same as in PE 1. Segment 5 Event of R&S Program 1. Range: same as in PE 1. Segment 6 Event of R&S Program 1. Range: same as in PE 1. Segment 7 Event of R&S Program 1. Range: same as in PE 1. Segment 7 Event of R&S Program 1. Range: same as in PE 1. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE 1. Segment 3 Event of R&S Program 2. Range: same as in PE 1. Segment 3 Event of R&S Program 2. Range: same as in PE 1. Segment 3 Event of R&S Program 2. Range: same as in PE 1.
0074 0075 0076 0077 0078 0079 0080 0081	PE3 PE4 PE5 PE6 PE7 PE 1 PE2 PE3	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080 0081 0082	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083 0084	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083 0084	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083 0084 0085 0086	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5 PE6 PE7 PE6	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 1 Event of R&S Program 3. Range: 0 to 15. See op. Manual.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083 0084 0085 0086	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5 PE5 PE7	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: oto 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 1 Event of R&S Program 3. Range: oto 15. See op. Manual. Segment 2 Event of R&S Program 3. Range: 0 to 15. See op. Manual.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083 0084 0085 0086 0087	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5 PE6 PE7 PE7 PE6	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE 1. Segment 3 Event of R&S Program 1. Range: same as in PE 1. Segment 4 Event of R&S Program 1. Range: same as in PE 1. Segment 5 Event of R&S Program 1. Range: same as in PE 1. Segment 5 Event of R&S Program 1. Range: same as in PE 1. Segment 6 Event of R&S Program 1. Range: same as in PE 1. Segment 7 Event of R&S Program 1. Range: same as in PE 1. Segment 1 Event of R&S Program 2. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE 1. Segment 3 Event of R&S Program 2. Range: same as in PE 1. Segment 4 Event of R&S Program 2. Range: same as in PE 1. Segment 5 Event of R&S Program 2. Range: same as in PE 1. Segment 6 Event of R&S Program 2. Range: same as in PE 1. Segment 7 Event of R&S Program 2. Range: same as in PE 1. Segment 1 Event of R&S Program 2. Range: same as in PE 1. Segment 1 Event of R&S Program 2. Range: same as in PE 1. Segment 1 Event of R&S Program 2. Range: same as in PE 1. Segment 1 Event of R&S Program 3. Range: same as in PE 1. Segment 1 Event of R&S Program 3. Range: same as in PE 1.
0074 0075 0076 0077 0078 0079 0080 0081 0082 0083 0084 0085 0086	PE2 PE3 PE4 PE5 PE6 PE1 PE2 PE3 PE4 PE5 PE6 PE7 PE6	Segment 1 Event of R&S Program 1. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 1. Range: same as in PE I. Segment 3 Event of R&S Program 1. Range: same as in PE I. Segment 4 Event of R&S Program 1. Range: same as in PE I. Segment 5 Event of R&S Program 1. Range: same as in PE I. Segment 6 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 1. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: oto 15. See op. Manual. Segment 2 Event of R&S Program 2. Range: same as in PE I. Segment 3 Event of R&S Program 2. Range: same as in PE I. Segment 4 Event of R&S Program 2. Range: same as in PE I. Segment 5 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 2. Range: same as in PE I. Segment 6 Event of R&S Program 2. Range: same as in PE I. Segment 7 Event of R&S Program 3. Range: same as in PE I. Segment 1 Event of R&S Program 3. Range: 0 to 15. See op. Manual. Segment 2 Event of R&S Program 3.

0090	PE4	Segment 4 Event of R&S Program 3.
		Range: same as in PE I .
0091	PE5	Segment 5 Event of R&S Program 3.
	'	Range: same as in PE I .
0092	PE5	Segment 6 Event of R&S Program 3.
0092	rco	9
		Range: same as in PE I .
0093	PE7	Segment 7 Event of R&S Program 3.
		Range: same as in PE I .
0094	PE I	Segment 1 Event of R&S Program 4.
		Range: 0 to 15. See op. Manual.
0095	PE2	Segment 2 Event of R&S Program 4.
0033	,	ı ö
	053	Range: same as in PE I .
0096	PE3	Segment 3 Event of R&S Program 4.
		Range: same as in PE I .
0097	PE4	Segment 4 Event of R&S Program 4.
		Range: same as in PE I .
0098	PE5	Segment 5 Event of R&S Program 4.
		Range: same as in PE I .
0099	PE5	Segment 6 Event of R&S Program 4.
0099	760	ı -
	053	Range: same as in PE I.
0100	PE7	Segment 7 Event of R&S Program 4.
		Range: same as in PE I .
0101	PE I	Segment 1 Event of R&S Program 5.
1	- '	Range: 0 to 15. See op. Manual.
0102	PE2	Segment 2 Event of R&S Program 5.
0.02	'	Range: same as in PE I .
0102	PE3	Segment 3 Event of R&S Program 5.
0103	רכז	
		Range: same as in PE I .
0104	PE4	Segment 4 Event of R&S Program 5.
		Range: same as in PE I .
0105	PE5	Segment 5 Event of R&S Program 5.
	- ==	Range: same as in PE I .
0106	PE5	Segment 6 Event of R&S Program 5.
0100	,,,,	
	063	Range: same as in PE I .
0107	PE7	Segment 7 Event of R&S Program 5.
		Range: same as in PE I .
0108	PE I	Segment 1 Event of R&S Program 6.
		Range: 0 to 15. See op. Manual.
0109	PE2	Segment 2 Event of R&S Program 6.
	,	Range: same as in PE I .
0110	PE3	Segment 3 Event of R&S Program 6.
0110	LE3	ı -
	5514	Range: same as in PE I .
0111	PE4	Segment 4 Event of R&S Program 6.
		Range: same as in PE I .
0112	PE5	Segment 5 Event of R&S Program 6.
		Range: same as in PE I .
0113	PE5	Segment 6 Event of R&S Program 6.
	,	Range: same as in PE I .
0114	PE7	Segment 7 Event of R&S Program 6.
0114	FEI	ı "
	55 4	Range: same as in PE I .
0115	PE I	Segment 1 Event of R&S Program 7.
		Range: 0 to 15. See op. Manual.
0116	PE2	Segment 2 Event of R&S Program 7.
		Range: same as in PE I .
0117	PE3	Segment 3 Event of R&S Program 7.
1		Range: same as in PE I .
0118	PE4	Segment 4 Event of R&S Program 7.
0110	1.67	ı ü
0440	DEE	Range: same as in PE I .
0119	PE5	Segment 5 Event of R&S Program 7.
		Range: same as in PE I .
0120	PE5	Segment 6 Event of R&S Program 7.
		Range: same as in PE I .
0121	PE7	Segment 7 Event of R&S Program 7.
1		Range: same as in PE I .
0122	PŁoL	R&S Program 1 Tolerance
0122	,	Range: 0 to valor de (5PHL - 5PLL).
0400		·
0123	LP	Program 1 Link
	<u> </u>	Range: 0 to 7
0124	PE 1	Time 1 of Program 1. Range: 0 to 9999 minutes.
0125	Pt2	Time 2 of Program 1. Range: 0 to 9999 minutes.
0126	PE3	Time 3 of Program 1. Range: 0 to 9999 minutes.
	_	
0127	PE4	Time 4 of Program 1. Range: 0 to 9999 minutes.
0128	PŁ5	Time 5 of Program 1. Range: 0 to 9999 minutes.
0129	PŁ5	Time 6 of Program 1. Range: 0 to 9999 minutes.
0130	PET	Time 7 of Program 1. Range: 0 to 9999 minutes.
0131	PSP0	Setpoint 0 of Program 1.
		Range: From 5PLL to 5PHL .

0132	PSP I	Setpoint 1 of Program 1
	2523	Range: same as in P5P0 .
0133	PSP2	Setpoint 2 of Program 1 Range: same as in P5P0 .
0134	PSP3	Setpoint 3 of Program 1
		Range: same as in P5P0 .
0135	P5P4	Setpoint 4 of Program 1
0136	PSPS	Range: same as in P5P0 . Setpoint 5 of Program 1
0100	ב וב י	Range: same as in P5PD .
0137	PSP6	Setpoint 6 of Program 1
0138	PSP7	Range: same as in P5P0 . Setpoint 7 of Program 1
0136	Fari	Range: same as in P5P0 .
0139	PŁoL	R&S Program 2 Tolerance
24.42		Range: 0 to valor de (5PHL - 5PLL).
0140	LP	Program 2 Link Range: 0 to 7
0141	Pt 1	Time 1 of Program 2. Range: 0 to 9999 minutes.
0142	Pt2	Time 2 of Program 2. Range: 0 to 9999 minutes.
0143	PE3	Time 3 of Program 2. Range: 0 to 9999 minutes.
0144	PEH	Time 4 of Program 2. Range: 0 to 9999 minutes.
0145	PŁ5	Time 5 of Program 2. Range: 0 to 9999 minutes.
0146 0147	PE5	Time 6 of Program 2. Range: 0 to 9999 minutes.
0147	P£7 PSP0	Time 7 of Program 2. Range: 0 to 9999 minutes. Setpoint 0 of Program 2. Range: From 5PLL to 5PHL .
0149	P5P 1	Setpoint 1 of Program 2
		Range: same as in P5P0 .
0150	PSP2	Setpoint 2 of Program 2
0151	PSP3	Range: same as in P5P0 . Setpoint 3 of Program 2
0101	ב וב י	Range: same as in P5P0 .
0152	P5P4	Setpoint 4 of Program 2
0450	DEDE	Range: same as in P5P0 .
0153	PSPS	Setpoint 5 of Program 2 Range: same as in P5PD .
0154	PSP6	Setpoint 6 of Program 2
	0503	Range: same as in PSPD .
0155	P5P7	Setpoint 7 of Program 2 Range: same as in P5P0 .
0156	PŁoL	R&S Program 3 Tolerance
		Range: 0 to (5PHL - 5PLL).
0157	LP	Program 3 Link
0158	PL 1	Range: 0 to 7 Time 1 of Program 3. Range: 0 to 9999 minutes.
0159	PE2	Time 2 of Program 3
		Range: same as in Pt 1 .
0160	PE3	Time 3 of Program 3 Range: same as in Pt 1 .
0161	PEY	Time 4 of Program 3
		Range: same as in Pt 1.
0162	PŁ5	Time 5 of Program 3
0163	PŁ6	Range: same as in Pt 1. Time 6 of Program 3
		Range: same as in Pt 1 .
0164	PE7	Time 7 of Program 3
0165	PSP0	Range: same as in PL ! . Setpoint 0 of Program 3. Range: from 5PLL to 5PHL .
0166	P5P 1	Setpoint 1 of Program 3
		Range: same as in P5P0 .
0167	PSP2	Setpoint 2 of Program 3
0168	PSP3	Range: same as in P5P0 . Setpoint 3 of Program 3
		Range: same as in P5P0 .
0169	P5P4	Setpoint 4 of Program 3
0170	PSP5	Range: same as in P5P0 . Setpoint 5 of Program 3
0170		Range: same as in PSPD .
0171	PSP6	Setpoint 6 of Program 3
0470	פפסי	Range: same as in P5P0 .
0172	PSP7	Setpoint 7 of Program 3 Range: same as in P5PD .
0173	PtoL	R&S Program 4 Tolerance
		Range: 0 to (5PHL - 5PLL).
0174	LP	Program 4 Link Range: 0 to 7
0175	PL 1	Time 1 of Program 4
		Range: 0 to 9999 (in minutes)
0176	PE2	Time 2 of Program 4 Range: same as in Pt 1.
0177	PE3	Range: same as in PE i. Time 3 of Program 4
		Range: same as in Pt 1 .

Range: same as in Pt.			·
PES	0178	PE4	<u> </u>
Range: same as in Pt.	0170	DLE	
PEB	0179	763	
PET	0180	PŁ5	Time 6 of Program 4
Range: same as in Pt.			
Otto PSP0 Setpoint 0 of Program 4 Range: from SPLL to SPML	0181	PE7	<u> </u>
PSP Setpoint 1 of Program 4 Range: same as in PSP0.	0100	000	
Range: same as in PSP0.			
PSP2 Selpoint 2 of Program 4 Range: same as in PSP0.	0103	rari	
Display	0184	PSP2	
Range: Same as in PSPD.			-
P5P4 Range: same as in P5P0.	0185	P5P3	, ,
Range: same as in PSPD.	0186	PCP4	
PSP6 Setpoint 6 of Program 4 Range: same as in PSP0.	0100	, ,, ,	, ,
P5P6 Sepoint 6 of Program 4 Range: same as in P5P0.	0187	PSP5	
Range: same as in PSPD.		0505	
P5P1 Sepoint 7 of Program 4 Range: same as in P5P0.	0188	7576	, ,
Range: same as in PSPU.	0189	PSP7	
Range: O to (5PHL - 5PLL). 1			
1911 LP	0190	PŁoL	<u> </u>
Range: 0 to 7	0404		
PE Time 1 of Program 5 Range: 0 to 9999 (in minutes)	0191	[7	9
Range: 0 to 9999 (in minutes)	0192	Pt 1	
Range: same as in Pt. I.			Range: 0 to 9999 (in minutes)
PEB	0193	PF5	
Range: same as in Pt. I.	0104	רוח	
PES	0194	PES	<u> </u>
Range: same as in Pt I.	0195	P+4	-
Range: same as in Pt I.			<u> </u>
0197 PLB Time 6 of Program 5 Range: same as in Pt. I. 0198 PLT Time 7 of Program 5 Range: same as in Pt. I. 0199 PSPID Setpoint 0 of Program 5 Range: from SPLL to SPHL. 0200 PSP I Setpoint 1 of Program 5 Range: same as in PSPID. 0201 PSP2 Setpoint 2 of Program 5 Range: same as in PSPID. 0202 PSP3 Setpoint 3 of Program 5 Range: same as in PSPID. 0203 PSP4 Setpoint 4 of Program 5 Range: same as in PSPID. 0204 PSP5 Setpoint 6 of Program 5 Range: same as in PSPID. 0204 PSP5 Setpoint 6 of Program 5 Range: same as in PSPID. 0205 PSP6 Setpoint 7 of Program 5 Range: same as in PSPID. 0206 PSP7 Setpoint 7 of Program 5 Range: same as in PSPID. 0207 PLOL R&S Program 6 Tolerance Range: ot to (SPHL - SPLL). 0208 LP Program 6 Link Range: Ot to 9999 (in minutes) 0210 PL2 Time 1 of Program 6 Range: ot to 9999 (in minutes) 0211 PL3 Time 3 of Program 6 Range: same as in PL I. 0212 PL4 Time 5 of Program 6 Range: same as in PL I.	0196	PŁ5	<u> </u>
Range: same as in Pt 1.	0107	DLE	
PET	0197	rco	<u> </u>
Range: same as in Pt 1.	0198	PŁ7	
Range: from SPLL to SPHL.			Range: same as in Pt 1 .
Description	0199	PSP0	
Range: same as in PSPD.	0200	DCD !	
Range: same as in PSPD.	0200	י יביי	
0202 P5P3 Setpoint 3 of Program 5 Range: same as in P5P0. 0203 P5P4 Setpoint 4 of Program 5 Range: same as in P5P0. 0204 P5P5 Setpoint 6 of Program 5 Range: same as in P5P0. 0205 P5P6 Setpoint 6 of Program 5 Range: same as in P5P0. 0206 P5P7 Setpoint 7 of Program 5 Range: same as in P5P0. 0207 Ptol. R&S Program 6 Tolerance Range: 0 to (5PHL - 5PLL). 0208 LP Program 6 Link Range: 0 to 7 0209 Pt I Time 1 of Program 6 Range: same as in Pt I. 0210 Pt2 Time 2 of Program 6 Range: same as in Pt I. 0211 Pt3 Time 3 of Program 6 Range: same as in Pt I. 0212 Pt4 Time 4 of Program 6 Range: same as in Pt I. 0213 Pt5 Time 6 of Program 6 Range: same as in Pt I. 0214 Pt6 Time 6 of Program 6 Range: same as in Pt I. 0215 Pt7 Time 7 of Program 6 Range: same as in Pt I. 0216 P5P0 Setpoint 0 of Program 6. Range: from 5PtL to 5PHL. 0217 P5P1 Setpoint 0 of Program 6. Range: from 5PtL to 5PHL. 0218 <t< td=""><td>0201</td><td>PSP2</td><td></td></t<>	0201	PSP2	
Range: same as in PSPD.		0503	5
0203 P5P4 Setpoint 4 of Program 5 Range: same as in P5P0. 0204 P5P5 Setpoint 5 of Program 5 Range: same as in P5P0. 0205 P5P6 Setpoint 6 of Program 5 Range: same as in P5P0. 0206 P5P1 Setpoint 7 of Program 5 Range: same as in P5P0. 0207 PŁoL R&S Program 6 Tolerance Range: 0 to (5PHL - 5PLL). 0208 LP Program 6 Link Range: 0 to 7 0209 PŁ I Time 1 of Program 6 Range: ot 0 9999 (in minutes) 0210 PŁ2 Time 2 of Program 6 Range: same as in PŁ I. 0211 PŁ3 Time 3 of Program 6 Range: same as in PŁ I. 0212 PŁ4 Time 4 of Program 6 Range: same as in PŁ I. 0213 PŁ5 Time 5 of Program 6 Range: same as in PŁ I. 0214 PŁ6 Time 6 of Program 6 Range: same as in PŁ I. 0215 PŁ 7 Time 7 of Program 6. Range: same as in PŁ I. 0216 PSP0 Setpoint 0 of Program 6. Range: same as in PŁ I. 0217 PSP1 Setpoint 2 of Program 6. Range: same as in PSP0. 0218 PSP2 Setpoint 2 of Program 6.	0202	7573	
Range: same as in PSPD.	0203	PSP4	-
Range: same as in PSPD.			,
0205 P5P6 Setpoint 6 of Program 5 Range: same as in P5P0. 0206 P5P7 Setpoint 7 of Program 5 Range: same as in P5P0. 0207 PŁoL R&S Program 6 Tolerance Range: 0 to (5PHL - 5PLL). 0208 LP Program 6 Link Range: 0 to 7 0209 PŁ I Time 1 of Program 6 Range: 0 to 9999 (in minutes) 0210 PŁZ Time 2 of Program 6 Range: same as in PŁ I. 0211 PŁ J Time 3 of Program 6 Range: same as in PŁ I. 0212 PŁ J Time 4 of Program 6 Range: same as in PŁ I. 0213 PŁ S Time 5 of Program 6 Range: same as in PŁ I. 0214 PŁ B Time 6 of Program 6 Range: same as in PŁ I. 0215 PŁ T Time 7 of Program 6 Range: same as in PŁ I. 0216 PSPO Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSPD. 0218 PSP2 Setpoint 2 of Program 6	0204	PSP5	, ,
Range: same as in PSPD.	0205	DEDE	
0206 P5P1 Setpoint 7 of Program 5 Range: same as in P5P0. 0207 PŁoL R&S Program 6 Tolerance Range: 0 to (5PHL - 5PLL). 0208 LP Program 6 Link Range: 0 to 7 0209 PŁ I Time 1 of Program 6 Range: 0 to 9999 (in minutes) 0210 PŁZ Time 2 of Program 6 Range: same as in PŁ I. 0211 PŁ3 Time 3 of Program 6 Range: same as in PŁ I. 0212 PŁY Time 4 of Program 6 Range: same as in PŁ I. 0213 PŁ5 Time 5 of Program 6 Range: same as in PŁ I. 0214 PŁ5 Time 6 of Program 6 Range: same as in PŁ I. 0215 PŁ1 Time 7 of Program 6 Range: same as in PŁ I. 0216 PSP0 Setpoint 0 of Program 6 Range: same as in PŁ I. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSP0. 0218 PSP2 Setpoint 2 of Program 6	0203	ן רסרם	, ,
Range: same as in P5P0.	0206	PSP7	
Range: 0 to (5PHL - 5PLL).			
Description Personal Control 0208 LP Program 6 Link Range: 0 to 7 0209 Pt Time 1 of Program 6 Range: 0 to 9999 (in minutes) 0210 Pt Time 2 of Program 6 Range: same as in Pt I. 0211 Pt Time 3 of Program 6 Range: same as in Pt I. 0212 Pt Time 4 of Program 6 Range: same as in Pt I. 0213 Pt Time 5 of Program 6 Range: same as in Pt I. 0214 Pt Time 6 of Program 6 Range: same as in Pt I. 0215 Pt Time 7 of Program 6 Range: same as in Pt I. 0216 PSPO Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSPD. 0218 PSP2 Setpoint 2 of Program 6	0207	PtoL	9
Range: 0 to 7	0208) P	
0209 PE I Time 1 of Program 6 Range: 0 to 9999 (in minutes) 0210 PE2 Time 2 of Program 6 Range: same as in PE I. 0211 PE3 Time 3 of Program 6 Range: same as in PE I. 0212 PE4 Time 4 of Program 6 Range: same as in PE I. 0213 PE5 Time 5 of Program 6 Range: same as in PE I. 0214 PE5 Time 6 of Program 6 Range: same as in PE I. 0215 PE7 Time 7 of Program 6 Range: same as in PE I. 0216 PSP0 Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSP0. 0218 PSP2 Setpoint 2 of Program 6	5200		9
0210 PE2 Time 2 of Program 6 Range: same as in PE I. 0211 PE3 Time 3 of Program 6 Range: same as in PE I. 0212 PE4 Time 4 of Program 6 Range: same as in PE I. 0213 PE5 Time 5 of Program 6 Range: same as in PE I. 0214 PE5 Time 6 of Program 6 Range: same as in PE I. 0215 PE7 Time 7 of Program 6 Range: same as in PE I. 0216 PSP0 Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSP0. 0218 PSP2 Setpoint 2 of Program 6	0209	PŁ I	Time 1 of Program 6
Range: same as in Pt I.		5	
0211 PE3 Time 3 of Program 6 Range: same as in PE I. 0212 PE4 Time 4 of Program 6 Range: same as in PE I. 0213 PE5 Time 5 of Program 6 Range: same as in PE I. 0214 PE5 Time 6 of Program 6 Range: same as in PE I. 0215 PE7 Time 7 of Program 6 Range: same as in PE I. 0216 PSP0 Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSP0. 0218 PSP2 Setpoint 2 of Program 6	0210	LF5	_
Range: same as in Pt I.	0211	PLI	
0212 PŁY Time 4 of Program 6 Range: same as in PŁ I. 0213 PŁS Time 5 of Program 6 Range: same as in PŁ I. 0214 PŁS Time 6 of Program 6 Range: same as in PŁ I. 0215 PŁ T Time 7 of Program 6 Range: same as in PŁ I. 0216 PSPO Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSPO. 0218 PSP2 Setpoint 2 of Program 6			<u> </u>
0213 PE5 Time 5 of Program 6 Range: same as in Pt I. 0214 PE6 Time 6 of Program 6 Range: same as in Pt I. 0215 Pt 7 Time 7 of Program 6 Range: same as in Pt I. 0216 P5P0 Setpoint 0 of Program 6. Range: from 5PtL to 5PHL. 0217 P5P I Setpoint 1 of Program 6 Range: same as in P5P0. 0218 P5P2 Setpoint 2 of Program 6	0212	PE4	Time 4 of Program 6
Range: same as in Pt I.	0010	D: F	
0214 PL5 Time 6 of Program 6 Range: same as in PL I. 0215 PL7 Time 7 of Program 6 Range: same as in PL I. 0216 PSP0 Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSP0. 0218 PSP2 Setpoint 2 of Program 6	0213	765	<u> </u>
Range: same as in Pt I.	0214	PŁБ	-
Range: same as in Pt 1.			Range: same as in Pt 1.
0216 PSPD Setpoint 0 of Program 6. Range: from SPLL to SPHL. 0217 PSP I Setpoint 1 of Program 6 Range: same as in PSPD. 0218 PSP2 Setpoint 2 of Program 6	0215	PET	<u> </u>
0217	0216	pcon	
Range: same as in P5P0 . 0218 P5P2 Setpoint 2 of Program 6			
0218 P5P2 Setpoint 2 of Program 6	JZ17		
Range: same as in P5P0 .	0218	PSP2	Setpoint 2 of Program 6
1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			Range: same as in P5P0 .

0219	PSP3	Setpoint 3 of Program 6
	. = . =	Range: same as in P5P0 .
0220	P5P4	Setpoint 4 of Program 6
		Range: same as in P5P0 .
0221	PSP5	Setpoint 5 of Program 6
		Range: same as in P5P0 .
0222	PSP6	Setpoint 6 of Program 6
		Range: same as in P5P0 .
0223	P5P7	Setpoint 7 of Program 6
		Range: same as in P5P0 .
0224	PŁoL	R&S Program 7 Tolerance
		Range: 0 to (SPHL - SPLL).
0225	LP	Program 7 Link
		Range: 0 to 7
0226	Pt 1	Time 1 of Program 7
		Range: 0 to 9999 (in minutes)
0227	PF5	Time 2 of Program 7
		Range: same as in Pt 1.
0228	PE3	Time 3 of Program 7
	5 1.14	Range: same as in Pt 1.
0229	PE4	Time 4 of Program 7
	D) C	Range: same as in Pt 1.
0230	PŁ5	Time 5 of Program 7
0004	D) C	Range: same as in Pt I.
0231	PŁ6	Time 6 of Program 7
0232	רוח	Range: same as in Pt 1 . Time 7 of Program 7
0232	PE7	Range: same as in Pt 1 .
0233	PSP0	Setpoint 0 of Program 7. Range: from 5PLL to 5PHL .
		·
0234	PSP I	Setpoint 1 of Program 7
0005	0503	Range: same as in P5P0 .
0235	PSP2	Setpoint 2 of Program 7 Range: same as in P5P0 .
0236	PSP3	Setpoint 3 of Program 7
0236	בחבח	Range: same as in P5PD .
0237	PSP4	Setpoint 4 of Program 7
0237	רשרי	Range: same as in P5PD .
0238	PSPS	Setpoint 5 of Program 7
0230	ר סר ס	Range: same as in P5PD .
0239	P5P6	Setpoint 6 of Program 7
0239	פיכיו	Range: same as in P5PD .
0240	PSP7	Setpoint 7 of Program 7
0240	rari	Range: same as in P5PD .
L	1	mange, came as in r ar a.

Register	Value format
Status Word 1	bit 0 – Alarm 1 (0-inactive; 1-active)
	bit 1 – Alarm 2 (0-inactive; 1-active)
	bit 2 – Alarm 3 (0-inactive; 1-active)
	bit 3 – Alarm 4 (0-inactive; 1-active)
	bit 4 – Input – I/O 5 (0- inactive; 1- active)
	bit 5 – Input – I/O 3 (0- inactive; 1- active)
	bit 6 – Input – I/O 4 (0- inactive; 1- active) (N1100)
	 Input – I/O 6 (0- inactive; 1- active) (N2000)
	bit 7 – Reserved
	bit 8 – Hardware type
	bit 9 – Hardware type
	bit 10 – Reserved
	bit 11 – Reserved
	bit 12 – Reserved
	bit 13 – Reserved
	bit 14 – Reserved
	bit 15 – Reserved

Status Word 2	bit 0 – Automatic (0- manual; 1- automatic)
	bit 1 – Run (0-stop; 1-run)
	bit 2 – Control Action (0- reverse; 1 - direct)
	bit 3 – Reserved
	bit 4 – Auto-tune (0-no; 1-yes)
	bit 5 – Alarm 1 power-up inhibit (0-no; 1-yes)
	bit 6 – Alarm 2 power-up inhibit (0-no; 1-yes)
	bit 7 – Alarm 3 power-up inhibit (0-no; 1-yes)
	bit 8 – Alarm 4 power-up inhibit (0-no; 1-yes)
	bit 9 – Unit (0-°C; 1-°F)
	bit 10 – Reserved
	bit 11 – Output 1 status
	bit 12 – Output 2 status
	bit 13 – Output 3 status
	bit 14 – Output 4 status
	bit 15 – Output 5 status
Status Word 3	bit 0 – Very low PV conversion (0-no; 1-yes)
	bit 1 – Negative conversion after calibration (0-no; 1-yes)
	bit 2 – Very high PV conversion (0-no; 1-yes)
	bit 3 – Exceeded linearization limit (0-no; 1-yes)
	bit 4 – Very high Pt100 cable resistance (0-no; 1-yes)
	bit 5 – Self zero conversion out of range (0-no; 1-yes)
	bit 6 – Self span conversion out of range (0-no; 1-yes)
	bit 7 – Cold junction conversion out of range (0-no; 1-yes)
	bit 8 – Reserved
	bit 9 – Reserved
	bit 10 – Reserved
	bit 11 – Reserved
	bit 12 – Reserved
	bit 13 – Reserved
	bit 14 – Reserved
	bit 15 – Reserved

Table 2: Values of Status Words

Writing to an output bit is only possible if the output has no function assigned to it (the output is configured to OFF in Alarm Cycle).

Coil Status	Output description
1	Output 1 Status (I/O1)
2	Output 2 Status (I/O2)
3	Output 3 Status (I/O3)
4	Output 4 Status (I/O4)
5	Output 5 Status (I/O5)

Exception Responses - Error Conditions

The MODBUS RTU protocol checks the CRC in the data blocks received.

Reception errors are detected by the CRC, causing the controller to discard the packet, not sending any reply to the master.

After receiving an error-free packet, the controller processes the packet and verifies whether the request is valid or not, sending back an exception error code in case of an invalid request. Response frames containing error codes have the most significant bit of the Modbus command set.

If a WRITE command sends an out-of-range value to a parameter, the controller will clamp the value to the parameter range limits, replying with a value that reflects these limits (maximum or minimum value allowed for the parameter).

The controller ignores broadcast READ commands; the controller processes only broadcast WRITE commands.

Error Code	Error Description
01	Invalid Command
02	Invalid Register Number or out of range
03	Invalid Register Quantity or out of range