



## N20K48 MODULAR CONTROLLER

COMMUNICATION PROTOCOL V1.0x

**NOVUS**  
We Measure, We Control, We Record

UK  
CA

FC

 **ANATEL**  
00388-21-07089

CE

<b>1</b>	<b>COMMUNICATION INTERFACE</b> .....	<b>3</b>
1.1	RS485 INTERFACE.....	3
1.2	COMMUNICATION PROTOCOL.....	3
<b>2</b>	<b>REGISTERS TABLE</b> .....	<b>4</b>
<b>3</b>	<b>STATUS WORDS</b> .....	<b>33</b>
3.1	WORDS.....	33
3.2	PERIPHERAL DESCRIPTOR.....	34
3.3	ERROR CONDITIONS.....	35

# 1 COMMUNICATION INTERFACE

The optional RS485 serial interface allows you to address up to 247 networked controllers, communicating remotely with a computer or master controller.

## 1.1 RS485 INTERFACE

- Signals compatible with RS485 standard.
- 2-wire connection between 1 master and up to 247 devices in bus topology. The communication signals are electrically isolated from all other devices.
- Maximum connection distance: 1000 meters.
- RS485 signals are:

D1	D	D +	B	Bidirectional data line.	Terminal 3
D0	$\bar{D}$	D -	A	Inverted bidirectional data line.	Terminal 2
C				Optional connection that improves communication performance.	Terminal 1
GND					

Table 1 – RS485 Signals

## 1.2 COMMUNICATION PROTOCOL

The device supports the slave MODBUS RTU protocol, available in most supervision software. Through the Registers Table, it is possible to access (read and/or write) all the configurable parameters.

The Modbus commands available are the following:

- 03 - *Read Holding Register*
- 05 - *Force Single Coil*
- 06 - *Preset Single Register*
- 16 - *Preset Multiple Register*

The registers are described in the [REGISTERS TABLE](#) chapter. All registers are 16-bit integers.

## 2 REGISTERS TABLE

The controller has the following registers:

ADDRESS	REGISTER	DESCRIPTION	TYPE
0	INFO_ID	Device ID.	RO
1	INFO_FW_VERSION	Firmware version.	RO
2	INFO_FW_RELEASE	Firmware release version.	RO
3	INFO_SERIAL_NUM_HI	Serial number.	RO
4	INFO_SERIAL_NUM_LO		RO
5	INFO_SSID01	Bluetooth device name.	RO
6	INFO_SSID02		RO
7	INFO_SSID03		RO
8	INFO_SSID04		RO
		Reserved.	
19	INFO_STATUS01	See tables in the <a href="#">STATUS WORDS</a> chapter.	RO
20	INFO_STATUS02		RO
21	INFO_STATUS03		RO
23	INFO_HW_SET_HI	See tables in the <a href="#">PERIPHERAL DESCRIPTOR</a> section.	RO
24	INFO_HW_SET_LO	See tables in the <a href="#">PERIPHERAL DESCRIPTOR</a> section.	RO
25	INFO_SCREEN_VALUE	Configurable value shown on the current screen. The range depends on the screen shown.	RO
		Reserved.	
28	INFO_CJ_TEMP	Cold Junction temperature.	RO
29	INFO_CJ1	Cold Junction 1 – Partial temperature.	RO
30	INFO_CJ2	Cold Junction 2 – Partial temperature.	RO
31	INFO_BLE_LQI	Bluetooth communication quality index.	RO
32	INFO_SYS_ERROR_HI	See tables in the <a href="#">ERROR CONDITIONS</a> section.	RO
33	INFO_SYS_ERROR_LO	See tables in the <a href="#">ERROR CONDITIONS</a> section.	RO
		Reserved.	
51	PROTECTION	Password protection level. Range: 1 ~ 4.	RW
		Reserved.	
53	OPEN_SESSION	Open session. Range: 0~65335.	RW
		Reserved.	
62	RESTORE_CALIB	Restore factory calibration.	RW
63	IHM_COMMAND	HMI access: 1 → Next screen 2 → Increases value 4 → Decreases value 8 → Returns to the previous screen 16 → Next cycle	RW
		Reserved.	
66	RESET_COUNTER	Reset counter.	RO
		Reserved.	
74	AI_ENABLE	Enable analog input: 0 → No 1 → Yes	RW
75	AI_TYPE	Set the sensor type of the analog input: 0 → T/C J 1 → T/C K 2 → T/C T 3 → T/C N 4 → T/C R	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		5 → T/C S 6 → T/C B 7 → T/C E 8 → Pt100 9 → 0 to 20 mA 10 → 4 to 20 mA 11 → 0 to 50 mV 12 → 0 to 5 V 13 → 0 to 10 V	
76	AI_FILTER	Set a filter with one decimal place (In seconds). Range: 0 ~ 65535.	RW
77	AI_UNIT	Set the temperature unit: 0 → C° 1 → F°	RW
78	AI_LL_HI	Low operation limit for linear inputs. Range: -1999 ~ 9999.	RW
79	AI_LL_LO		
80	AI_HL_HI	High operation limit for linear inputs. Range: -1999 ~ 9999.	RW
81	AI_HL_LO		
		Reserved.	
84	AI_SQRT	Enable the analog input square root: 0 → Yes 1 → No	RW
		Reserved.	
87	AI_GRID_FREQ	Network frequency: 0 → 50 Hz 1 → 60 Hz	RW
88	AI_DIAG	Analog input status: Bit 1 → Reserved Bit 2 → Reserved Bit 3 → Reserved Bit 4 → Reserved Bit 5 → Reserved Bit 6 → Reserved Bit 7 → Reserved Bit 8 → Open input Bit 9 → Signal above operating limit Bit 10 → Signal below operating limit Bit 11 → Cold Junction error Bit 12 → Pt100 error Bit 13 → Reserved Bit 14 → Reserved Bit 15 → Reserved	RO
		Reserved.	
103	AI_OFFST_LL_HI	Offset operation: Lower limits.	RO
104	AI_OFFST_LL_LO		
105	AI_OFFST_HL_HI	Offset operation: Upper limits.	RO
106	AI_OFFST_HL_LO		
		Reserved.	
110	PULSE_ENABLE	Enable pulse output: 0 → Disabled 1 → Enabled	RW
111	RELAY_ENABLE	Enable relay output: 0 → Disabled 1 → Enabled	RW
112	PULSE_STATE	Pulse output status.	RW
113	RELAY_STATE	Relay output status.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Reserved.	
129	SSID01	Bluetooth device name. Range: 0000h to FFFFh.	RW
130	SSID02		RW
131	SSID03		RW
132	SSID04		RW
143	BLE_EN	Disable Bluetooth communication: 0 → Disabled 1 → Enabled	RW
		Reserved.	
200	CTRL_SP	Main screen control Setpoint. Maximum range: From <b>SPLLI</b> to the value set in <b>SPHI</b> .	RW
201	CTRL_PV1	Process variable. Maximum range: The minimum value is the value set in <b>SPII</b> . The maximum value is set in <b>SPHI</b> . The position of the decimal point depends on the <b>dPPa</b> screen. For temperature readings, the value will always be multiplied by 10, regardless of the <b>dPPa</b> value.	RW
202	CTRL_MV1	Current output power (manual or automatic). Range: 0 ~ 1000 (0.0 ~ 100.0 %).	RW
		Reserved.	
210	CTRL_REMOTE_SP_EN	Enable remote Setpoint: 0 → Disabled 1 → Enabled	RW
211	CTRL_REMOTE_SP	Remote Setpoint value. Maximum range: From <b>SPLLI</b> to the value set in <b>SPHI</b> .	
212	CTRL_ACT	Control action: 0 → Inverse 1 → Direct	RW
213	CTRL_AUTO	Control mode: 0 → Manual 1 → Automatic	RW
214	CTRL_RUN	Start device run: 0 → No 1 → Yes	RW
215	CTRL_IE_MV_ONOFF	ON/OFF control output in case of error: 0 → OFF 1 → ON	RW
216	CTRL_IE_MV	PID control output in case of error. Maximum range: The minimum value is the value set in CTRL_OULL. The maximum value is the value set in CTRL_OUHL.	RW
		Reserved.	
218	CTRL_BIAS	PID control Bias: Range: -1000 to 1000.	RW
219	CTRL_HYST	ON/OFF control hysteresis. Range: The minimum value depends on the input type set in <b>LYPE</b> . The maximum value is the value set in <b>SPHL - SPLL</b> .	RW
220	CTRL_SPLL	Setpoint operation: Lower limit. Range: The minimum value depends on the input type set in <b>LYPE</b> . The maximum value is the value set in <b>SPHL</b> .	RW
221	CTRL_SPHL	Setpoint operation: Upper limit. Range: From <b>SPLL</b> to the maximum allowed for the selected input in <b>LYPE</b> .	RW
222	CTRL_RSPLL	Remote Setpoint: Lower limit. Range: The minimum value depends on the input type set in <b>LYPE</b> . The maximum value is the value set in <b>SPHL</b> .	RW
223	CTRL_RSPHL	Remote Setpoint: Upper limit.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: The minimum value depends on the input type set in <b>LYPE</b> . The maximum value is the value set in <b>SPHL</b> .	
224	CTRL_OULL	Control output operation: Lower limit. Range: -1000 ~ CTRL_OUHL.	RW
225	CTRL_OUHL	Control output operation: Upper limit. Range: CTRL_OULL ~ 1000.	RW
226	CTRL_SFST	Soft Start time. Range: 0 ~ 9999s.	RW
		Reserved.	
234	CTRL_RT_SP_LL	Setpoint retransmission operation: Lower limit	RW
235	CTRL_RT_SP_HL	Setpoint retransmission operation: Upper limit.	RW
236	CTRL_RT_PV_LL	PV retransmission operation: Lower limit.	RW
237	CTRL_RT_PV_HL	PV retransmission operation: Upper limit.	RW
		Reserved.	
247	RS_PRN_EXEC	Ramps and Soaks program being executed. Range: 0 ~ 20.	RW
248	RS_PRN_EDIT	Ramps and Soaks program to be view (edit). Range: 0 ~20.	RW
249	RS_SEG	Current program segment. Range: 0 ~ 20.	RW
250	RS_SEG_TIME	Current program time. Range: 0 ~ 9999s.	RW
251	RS_FIRST_PG	Saves the first program performed. Range: 0 ~ 20.	RW
252	RS_TBAS	Ramps and Soaks time base: 0 → Seconds 1 → Minutes	RW
253	RS_RESUME_MODE	Resume Program function: 0 → Returns at the beginning of program 1 → Returns at the beginning of segment 2 → Returns at the exact point where it stopped 3 → Returns with control disabled	RW
254	RS_PROG_TYPE	Allows you to define the program type: 0 → Does not use any program 1 → Ramp to Soak 2 → Ramps and Soaks program	RW
255	RS_MAX_RATE	Ramp to Soak rate. Range: 0 ~ 1000s.	RW
256	RS_TIMER_SOAK	Soak (Ramp to Soak) time (minutes). Range: 0 ~ 9999s.	RW
257	TUNE_AUTO	Allows you to define the tuning mode to be used: 0 → OFF 1 → Fast auto-tuning 2 → Precise auto-tuning 3 → Self-adaptive + precise tuning 4 → Forces a new precise + self-adaptive auto-tuning 5 → Forces a new precise + auto-tuning when <b>RUN = YES</b> or when the controller is powered on	RW
258	TUNE_PB	Proportional band. Range: 0 ~ 5000.	RW
259	TUNE_IR	Integral rate (In repetitions/min). Range: 0 ~ 2400.	RW
260	TUNE_DT	Derivative time (In seconds). Range: 0 ~ 2400.	RW
261	TUNE_CT	PWM cycle period (In seconds).	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 5 ~ 1000.	
		Reserved.	
279	INPUT_DPPO	Position of the decimal point in the PV and SP values: 0 → XXXX 1 → XXX.X 2 → XX.XX 3 → X.XXX	RW
280	INPUT_LL_PV1	Lower limit of the sensor set in AI_TYPE.	RO
281	INPUT_HL_PV1	Upper limit of the sensor set in AI_TYPE.	RO
		Reserved.	
296	TIMER_START	Sets the timer start mode: 0 → Disabled 1 → Triggers when the PV value reaches the SP value 2 → Triggers when the user presses the F key 3 → Triggers when control is enabled 4 → Triggers with the digital input	RW
297	TIMER_END	Sets the T1 output behavior at the end of T1 timing: 0 → Turn off output 1 → Turn on output	RW
298	TIMER_DIR	Sets the timer counting mode: 0 → Countdown 1 → Start counting from 0	RW
299	TIMER_T1COUNTER	T1 timer current value. Range: 0 ~ 5999.	RO
300	TIMER_T2COUNTER	T2 timer current value. Range: 0 ~ 5999.	RO
301	TIMER_T1	Sets a time base for timer 1. Range: 0 ~ 5999.	RW
302	TIMER_T2	Sets a time base for timer 2. Range: 0 ~ 5999.	RW
303	TIMER_BASE	Sets the time base adopted by the timers: 0 → minutes:seconds 1 → hours:minutes	RW
304	TIMER_RUN	Sets the control behavior at the end of the timings: 0 → Control continues to operate 1 → Control is disabled	RW
305	TIMER_T1_EN	Displays (and sets) the Timer 1 (t1) parameter in Operation Cycle.	RW
		Reserved.	
310	FUA1	Alarm function. Range: 0 to 10. 0 → OFF 1 → L o 2 → H i 3 → d iF 4 → d iF.L 5 → d iF.H 6 → i.Err 7 → r5 8 → End.t 9 → Lbd	RW
311	SPA1	Alarm 1 Setpoint.	RW
312	HYA1	Alarm 1 Hysteresis.	RW
313	BLA1	Alarm 1 initial block: 0 → No 1 → Yes	RW
314	T1A1	Time 1 of alarm timer 1. Range: 0 ~ 5999.	RW



ADDRESS	REGISTER	DESCRIPTION	TYPE
315	T2A1	Time 2 of alarm timer 1. Range: 0 ~ 5999.	RW
316	LBDT1	Loop Break Detection time range. Range: 0 ~ 5999.	RW
317	EN_SPA1	Displays (and sets) the <b>SP.A1</b> parameter in Operation Cycle.	RW
318	FLSH1	Indicates alarm conditions by flashing the PV indication.	RW
319	FUA2	Alarm function. Range: 0 to 10. 0 → OFF 1 → <b>Lo</b> 2 → <b>Hi</b> 3 → <b>dIF</b> 4 → <b>dIF.L</b> 5 → <b>dIF.H</b> 6 → <b>..Err</b> 7 → <b>rS</b> 8 → <b>End.t</b> 9 → <b>Lbd</b>	RW
320	SPA2	Alarm 2 Setpoint.	RW
321	HYA2	Alarm 2 Hysteresis.	RW
322	BLA2	Alarm 2 initial block: 0 → No 1 → Yes	RW
323	T1A2	Time 1 of alarm timer 2. Range: 0 ~ 5999.	RW
324	T2A2	Time 2 of alarm timer 2. Range: 0 ~ 5999.	RW
325	LBDT2	Loop Break Detection time range. Range: 0 ~ 5999.	RW
326	EN_SPA2	Displays (and sets) the <b>SP.A2</b> parameter in Operation Cycle.	RW
327	FLSH2	Indicates alarm conditions by flashing the PV indication.	RW
328	FUA3	Alarm function. Range: 0 to 10. 0 → OFF 1 → <b>Lo</b> 2 → <b>Hi</b> 3 → <b>dIF</b> 4 → <b>dIF.L</b> 5 → <b>dIF.H</b> 6 → <b>..Err</b> 7 → <b>rS</b> 8 → <b>End.t</b> 9 → <b>Lbd</b>	RW
329	SPA3	Alarm 3 Setpoint.	RW
330	HYA3	Alarm 3 Hysteresis.	RW
331	BLA3	Alarm 3 initial block: 0 → No 1 → Yes	RW
332	T1A3	Time 1 of alarm timer 3. Range: 0 ~ 5999.	RW
333	T2A3	Time 2 of alarm timer 3. Range: 0 ~ 5999.	RW
334	LBDT3	Loop Break Detection time range. Range: 0 ~ 5999.	RW
335	EN_SPA3	Displays (and sets) the <b>SP.A3</b> parameter in Operation Cycle.	RW
336	FLSH3	Indicates alarm conditions by flashing the PV indication.	RW
337	FUA4	Alarm function. Range: 0 to 10.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		0 → OFF 1 → L <sub>o</sub> 2 → H <sub>i</sub> 3 → d iF 4 → d iF.L 5 → d iF.H 6 → i.Err 7 → r5 8 → End.t 9 → Lbd	
338	SPA4	Alarm 4 Setpoint.	RW
339	HYA4	Alarm 4 Hysteresis.	RW
340	BLA4	Alarm 4 initial block: 0 → No 1 → Yes	RW
341	T1A4	Time 1 of alarm timer 4. Range: 0 ~ 5999.	RW
342	T2A4	Time 2 of alarm timer 4. Range: 0 ~ 5999.	RW
343	LBDT4	Loop Break Detection time range. Range: 0 ~ 5999.	RW
344	EN_SPA4	Displays (and sets) the <b>SP.R4</b> parameter in Operation Cycle.	RW
345	FLSH4	Indicates alarm conditions by flashing the PV indication.	RW
		Reserved.	
400	PTOL_PG1	Program 1 tolerance (Ramps and Soaks). Range: 0 to ( <b>SPHI</b> - <b>SPI I</b> ) value.	RW
401	LP_PG1	Program Link 1 (Ramps and Soaks). Range: 0 to 20.	RW
402	PSP0_PG1	Setpoint 0 of program 1. Range: From <b>SPI I</b> to the value set in <b>SPHI</b> .	RW
403	PT1_PG1	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
404	PE1_PG1	Event of segment 1 of program 1 (R&S). Range: 0 to 15.	RW
405	PSP1_PG1	Setpoint 1 of program 1. Range: From <b>SPI I</b> to the value set in <b>SPHI</b> .	RW
406	PT2_PG1	Time 2 of program 1. Range: 0 ~ 9999 minutes.	RW
407	PE2_PG1	Event of segment 2 of program 1 (R&S). Range: 0 to 15.	RW
408	PSP2_PG1	Setpoint 2 of program 1. Range: From <b>SPI I</b> to the value set in <b>SPHI</b> .	RW
409	PT3_PG1	Time 3 of program 1. Range: 0 ~ 9999 minutes.	RW
410	PE3_PG1	Event of segment 3 of program 1 (R&S). Range: 0 to 15.	RW
411	PSP3_PG1	Setpoint 3 of program 1. Range: From <b>SPI I</b> to the value set in <b>SPHI</b> .	RW
412	PT4_PG1	Time 4 of program 1. Range: 0 ~ 9999 minutes.	RW
413	PE4_PG1	Event of segment 4 of program 1 (R&S). Range: 0 to 15.	RW
414	PSP4_PG1	Setpoint 4 of program 1. Range: From <b>SPI I</b> to the value set in <b>SPHI</b> .	RW
415	PT5_PG1	Time 5 of program 1.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 ~ 9999 minutes.	
416	PE5_PG1	Event of segment 5 of program 1 (R&S). Range: 0 to 15.	RW
417	PSP5_PG1	Setpoint 0 of program 5. Range: From <b>SP11</b> to the value set in <b>SPHI</b> .	RW
418	PT6_PG1	Time 6 of program 1. Range: 0 ~ 9999 minutes.	RW
419	PE6_PG1	Event of segment 6 of program 1 (R&S). Range: 0 to 15.	RW
420	PSP6_PG1	Setpoint 6 of program 1. Range: From <b>SP11</b> to the value set in <b>SPHI</b> .	RW
421	PT7_PG1	Time 7 of program 1. Range: 0 ~ 9999 minutes.	RW
422	PE7_PG1	Event of segment 7 of program 1 (R&S). Range: 0 to 15.	RW
423	PSP7_PG1	Setpoint 7 of program 1. Range: From <b>SP11</b> to the value set in <b>SPHI</b> .	RW
424	PT8_PG1	Time 8 of program 1. Range: 0 ~ 9999 minutes.	RW
425	PE8_PG1	Event of segment 8 of program 1 (R&S). Range: 0 to 15.	RW
426	PSP8_PG1	Setpoint 8 of program 1. Range: From <b>SP11</b> to the value set in <b>SPHI</b> .	RW
427	PT9_PG1	Time 9 of program 1. Range: 0 ~ 9999 minutes.	RW
428	PE9_PG1	Event of segment 9 of program 1 (R&S). Range: 0 to 15.	RW
429	PSP9_PG1	Setpoint 9 of program 1. Range: From <b>SP11</b> to the value set in <b>SPHI</b> .	RW
		Reserved.	
440	PTOL_PG2	Program 2 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
441	LP_PG2	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
442	PSP0_PG2	Setpoint 0 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
443	PT1_PG2	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
444	PE1_PG2	Event of segment 2 of program 1 (R&S). Range: 0 to 15.	RW
445	PSP1_PG2	Setpoint 1 of program 2 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
446	PT2_PG2	Time 2 of program 2 of program 1. Range: 0 ~ 9999 minutes.	RW
447	PE2_PG2	Event of segment 2 of program 2 (R&S). Range: 0 to 15.	RW
448	PSP2_PG2	Setpoint 2 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
449	PT3_PG2	Time 3 of program 2. Range: 0 ~ 9999 minutes.	RW
450	PE3_PG2	Event of segment 3 of program 2 (R&S). Range: 0 to 15.	RW
451	PSP3_PG2	Setpoint 3 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
452	PT4_PG2	Time 4 of program 2. Range: 0 ~ 9999 minutes.	RW
453	PE4_PG2	Event of segment 4 of program 2 (R&S). Range: 0 to 15.	RW
454	PSP4_PG2	Setpoint 4 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
455	PT5_PG2	Time 5 of program 2. Range: 0 ~ 9999 minutes.	RW
456	PE5_PG2	Event of segment 5 of program 2 (R&S). Range: 0 to 15.	RW
457	PSP5_PG2	Setpoint 5 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
458	PT6_PG2	Time 6 of program 2. Range: 0 ~ 9999 minutes.	RW
459	PE6_PG2	Event of segment 6 of program 2 (R&S). Range: 0 to 15.	RW
460	PSP6_PG2	Setpoint 6 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
461	PT7_PG2	Time 7 of program 2. Range: 0 ~ 9999 minutes.	RW
462	PE7_PG2	Event of segment 7 of program 2 (R&S). Range: 0 to 15.	RW
463	PSP7_PG2	Setpoint 7 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
464	PT8_PG2	Time 8 of program 2. Range: 0 ~ 9999 minutes.	RW
465	PE8_PG2	Event of segment 8 of program 2 (R&S). Range: 0 to 15.	RW
466	PSP8_PG2	Setpoint 8 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
467	PT9_PG2	Time 9 of program 2. Range: 0 ~ 9999 minutes.	RW
468	PE9_PG2	Event of segment 9 of program 2 (R&S). Range: 0 to 15.	RW
469	PSP9_PG2	Setpoint 9 of program 2. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	RW
480	PTOL_PG3	Program 3 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	
481	LP_PG3	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
482	PSP0_PG3	Setpoint 0 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
483	PT1_PG3	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
484	PE1_PG3	Event of segment 3 of program 1 (R&S). Range: 0 to 15.	RW
485	PSP1_PG3	Setpoint 1 of program 3 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
486	PT2_PG3	Time 2 of program 3 of program 1. Range: 0 ~ 9999 minutes.	RW
487	PE2_PG3	Event of segment 2 of program 3 (R&S). Range: 0 to 15.	RW
488	PSP2_PG3	Setpoint 2 of program 3.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	
489	PT3_PG3	Time 3 of program 3. Range: 0 ~ 9999 minutes.	RW
490	PE3_PG3	Event of segment 3 of program 3 (R&S). Range: 0 to 15.	RW
491	PSP3_PG3	Setpoint 3 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
492	PT4_PG3	Time 4 of program 3. Range: 0 ~ 9999 minutes.	RW
493	PE4_PG3	Event of segment 4 of program 3 (R&S). Range: 0 to 15.	RW
494	PSP4_PG3	Setpoint 4 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
495	PT5_PG3	Time 5 of program 3. Range: 0 ~ 9999 minutes.	RW
496	PE5_PG3	Event of segment 5 of program 3 (R&S). Range: 0 to 15.	RW
497	PSP5_PG3	Setpoint 5 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
498	PT6_PG3	Time 6 of program 3. Range: 0 ~ 9999 minutes.	RW
499	PE6_PG3	Event of segment 6 of program 3 (R&S). Range: 0 to 15.	RW
500	PSP6_PG3	Setpoint 6 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
501	PT7_PG3	Time 7 of program 3. Range: 0 ~ 9999 minutes.	RW
502	PE7_PG3	Event of segment 7 of program 3 (R&S). Range: 0 to 15.	RW
503	PSP7_PG3	Setpoint 7 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
504	PT8_PG3	Time 8 of program 3. Range: 0 ~ 9999 minutes.	RW
505	PE8_PG3	Event of segment 8 of program 3 (R&S). Range: 0 to 15.	RW
506	PSP8_PG3	Setpoint 8 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
507	PT9_PG3	Time 9 of program 3. Range: 0 ~ 9999 minutes.	RW
508	PE9_PG3	Event of segment 9 of program 3 (R&S). Range: 0 to 15.	RW
509	PSP9_PG3	Setpoint 9 of program 3. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	RW
520	PTOL_PG4	Program 4 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
521	LP_PG4	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
522	PSP0_PG4	Setpoint 0 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
523	PT1_PG4	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
524	PE1_PG4	Event of segment 4 of program 1 (R&S). Range: 0 to 15.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
525	PSP1_PG4	Setpoint 1 of program 4 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
526	PT2_PG4	Time 2 of program 4 of program 1. Range: 0 ~ 9999 minutes.	RW
527	PE2_PG4	Event of segment 2 of program 4 (R&S). Range: 0 to 15.	RW
528	PSP2_PG4	Setpoint 2 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
529	PT3_PG4	Time 3 of program 4. Range: 0 ~ 9999 minutes.	RW
530	PE3_PG4	Event of segment 3 of program 4 (R&S). Range: 0 to 15.	RW
531	PSP3_PG4	Setpoint 3 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
532	PT4_PG4	Time 4 of program 4. Range: 0 ~ 9999 minutes.	RW
533	PE4_PG4	Event of segment 4 of program 4 (R&S). Range: 0 to 15.	RW
534	PSP4_PG4	Setpoint 4 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
535	PT5_PG4	Time 5 of program 4. Range: 0 ~ 9999 minutes.	RW
536	PE5_PG4	Event of segment 5 of program 4 (R&S). Range: 0 to 15.	RW
537	PSP5_PG4	Setpoint 5 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
538	PT6_PG4	Time 6 of program 4. Range: 0 ~ 9999 minutes.	RW
539	PE6_PG4	Event of segment 6 of program 4 (R&S). Range: 0 to 15.	RW
540	PSP6_PG4	Setpoint 6 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
541	PT7_PG4	Time 7 of program 4. Range: 0 ~ 9999 minutes.	RW
542	PE7_PG4	Event of segment 7 of program 4 (R&S). Range: 0 to 15.	RW
543	PSP7_PG4	Setpoint 7 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
544	PT8_PG4	Time 8 of program 4. Range: 0 ~ 9999 minutes.	RW
545	PE8_PG4	Event of segment 8 of program 4 (R&S). Range: 0 to 15.	RW
546	PSP8_PG4	Setpoint 8 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
547	PT9_PG4	Time 9 of program 4. Range: 0 ~ 9999 minutes.	RW
548	PE9_PG4	Event of segment 9 of program 4 (R&S). Range: 0 to 15.	RW
549	PSP9_PG4	Setpoint 9 of program 4. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
560	PTOL_PG5	Program 5 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
561	LP_PG5	Program Link (Ramps and Soaks).	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 to 20.	
562	PSP0_PG5	Setpoint 0 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
563	PT1_PG5	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
564	PE1_PG5	Event of segment 5 of program 1 (R&S). Range: 0 to 15.	RW
565	PSP1_PG5	Setpoint 1 of program 5 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
566	PT2_PG5	Time 2 of program 5 of program 1. Range: 0 ~ 9999 minutes.	RW
567	PE2_PG5	Event of segment 2 of program 5 (R&S). Range: 0 to 15.	RW
568	PSP2_PG5	Setpoint 2 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
569	PT3_PG5	Time 3 of program 5. Range: 0 ~ 9999 minutes.	RW
570	PE3_PG5	Event of segment 3 of program 5 (R&S). Range: 0 to 15.	RW
571	PSP3_PG5	Setpoint 3 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
572	PT4_PG5	Time 4 of program 5. Range: 0 ~ 9999 minutes.	RW
573	PE4_PG5	Event of segment 4 of program 5 (R&S). Range: 0 to 15.	RW
574	PSP4_PG5	Setpoint 4 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
575	PT5_PG5	Time 5 of program 5. Range: 0 ~ 9999 minutes.	RW
576	PE5_PG5	Event of segment 5 of program 5 (R&S). Range: 0 to 15.	RW
577	PSP5_PG5	Setpoint 5 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
578	PT6_PG5	Time 6 of program 5. Range: 0 ~ 9999 minutes.	RW
579	PE6_PG5	Event of segment 6 of program 5 (R&S). Range: 0 to 15.	RW
580	PSP6_PG5	Setpoint 6 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
581	PT7_PG5	Time 7 of program 5. Range: 0 ~ 9999 minutes.	RW
582	PE7_PG5	Event of segment 7 of program 5 (R&S). Range: 0 to 15.	RW
583	PSP7_PG5	Setpoint 7 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
584	PT8_PG5	Time 8 of program 5. Range: 0 ~ 9999 minutes.	RW
585	PE8_PG5	Event of segment 8 of program 5 (R&S). Range: 0 to 15.	RW
586	PSP8_PG5	Setpoint 8 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
587	PT9_PG5	Time 9 of program 5. Range: 0 ~ 9999 minutes.	RW
588	PE9_PG5	Event of segment 9 of program 5 (R&S).	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 to 15.	
589	PSP9_PG5	Setpoint 9 of program 5. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
600	PTOL_PG6	Program 6 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
601	LP_PG6	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
602	PSP0_PG6	Setpoint 0 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
603	PT1_PG6	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
604	PE1_PG6	Event of segment 6 of program 1 (R&S). Range: 0 to 15.	RW
605	PSP1_PG6	Setpoint 1 of program 6 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
606	PT2_PG6	Time 2 of program 6 of program 1. Range: 0 ~ 9999 minutes.	RW
607	PE2_PG6	Event of segment 2 of program 6 (R&S). Range: 0 to 15.	RW
608	PSP2_PG6	Setpoint 2 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
609	PT3_PG6	Time 3 of program 6. Range: 0 ~ 9999 minutes.	RW
610	PE3_PG6	Event of segment 3 of program 6 (R&S). Range: 0 to 15.	RW
611	PSP3_PG6	Setpoint 3 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
612	PT4_PG6	Time 4 of program 6. Range: 0 ~ 9999 minutes.	RW
613	PE4_PG6	Event of segment 4 of program 6 (R&S). Range: 0 to 15.	RW
614	PSP4_PG6	Setpoint 4 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
615	PT5_PG6	Time 5 of program 6. Range: 0 ~ 9999 minutes.	RW
616	PE5_PG6	Event of segment 5 of program 6 (R&S). Range: 0 to 15.	RW
617	PSP5_PG6	Setpoint 5 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
618	PT6_PG6	Time 6 of program 6. Range: 0 ~ 9999 minutes.	RW
619	PE6_PG6	Event of segment 6 of program 6 (R&S). Range: 0 to 15.	RW
620	PSP6_PG6	Setpoint 6 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
621	PT7_PG6	Time 7 of program 6. Range: 0 ~ 9999 minutes.	RW
622	PE7_PG6	Event of segment 7 of program 6 (R&S). Range: 0 to 15.	RW
623	PSP7_PG6	Setpoint 7 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
624	PT8_PG6	Time 8 of program 6. Range: 0 ~ 9999 minutes.	RW



ADDRESS	REGISTER	DESCRIPTION	TYPE
625	PE8_PG6	Event of segment 8 of program 6 (R&S). Range: 0 to 15.	RW
626	PSP8_PG6	Setpoint 8 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
627	PT9_PG6	Time 9 of program 6. Range: 0 ~ 9999 minutes.	RW
628	PE9_PG6	Event of segment 9 of program 6 (R&S). Range: 0 to 15.	RW
629	PSP9_PG6	Setpoint 9 of program 6. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
640	PTOL_PG7	Program 7 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
641	LP_PG7	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
642	PSP0_PG7	Setpoint 0 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
643	PT1_PG7	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
644	PE1_PG7	Event of segment 7 of program 1 (R&S). Range: 0 to 15.	RW
645	PSP1_PG7	Setpoint 1 of program 7 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
646	PT2_PG7	Time 2 of program 7 of program 1. Range: 0 ~ 9999 minutes.	RW
647	PE2_PG7	Event of segment 2 of program 7 (R&S). Range: 0 to 15.	RW
648	PSP2_PG7	Setpoint 2 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
649	PT3_PG7	Time 3 of program 7. Range: 0 ~ 9999 minutes.	RW
650	PE3_PG7	Event of segment 3 of program 7 (R&S). Range: 0 to 15.	RW
651	PSP3_PG7	Setpoint 3 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
652	PT4_PG7	Time 4 of program 7. Range: 0 ~ 9999 minutes.	RW
653	PE4_PG7	Event of segment 4 of program 7 (R&S). Range: 0 to 15.	RW
654	PSP4_PG7	Setpoint 4 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
655	PT5_PG7	Time 5 of program 7. Range: 0 ~ 9999 minutes.	RW
656	PE5_PG7	Event of segment 5 of program 7 (R&S). Range: 0 to 15.	RW
657	PSP5_PG7	Setpoint 5 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
658	PT6_PG7	Time 6 of program 7. Range: 0 ~ 9999 minutes.	RW
659	PE6_PG7	Event of segment 6 of program 7 (R&S). Range: 0 to 15.	RW
660	PSP6_PG7	Setpoint 6 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
661	PT7_PG7	Time 7 of program 7.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 ~ 9999 minutes.	
662	PE7_PG7	Event of segment 7 of program 7 (R&S). Range: 0 to 15.	RW
663	PSP7_PG7	Setpoint 7 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
664	PT8_PG7	Time 8 of program 7. Range: 0 ~ 9999 minutes.	RW
665	PE8_PG7	Event of segment 8 of program 7 (R&S). Range: 0 to 15.	RW
666	PSP8_PG7	Setpoint 8 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
667	PT9_PG7	Time 9 of program 7. Range: 0 ~ 9999 minutes.	RW
668	PE9_PG7	Event of segment 9 of program 7 (R&S). Range: 0 to 15.	RW
669	PSP9_PG7	Setpoint 9 of program 7. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
680	PTOL_PG8	Program 8 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
681	LP_PG8	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
682	PSP0_PG8	Setpoint 0 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
683	PT1_PG8	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
684	PE1_PG8	Event of segment 8 of program 1 (R&S). Range: 0 to 15.	RW
685	PSP1_PG8	Setpoint 1 of program 8 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
686	PT2_PG8	Time 2 of program 8 of program 1. Range: 0 ~ 9999 minutes.	RW
687	PE2_PG8	Event of segment 2 of program 8 (R&S). Range: 0 to 15.	RW
688	PSP2_PG8	Setpoint 2 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
689	PT3_PG8	Time 3 of program 8. Range: 0 ~ 9999 minutes.	RW
690	PE3_PG8	Event of segment 3 of program 8 (R&S). Range: 0 to 15.	RW
691	PSP3_PG8	Setpoint 3 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
692	PT4_PG8	Time 4 of program 8. Range: 0 ~ 9999 minutes.	RW
693	PE4_PG8	Event of segment 4 of program 8 (R&S). Range: 0 to 15.	RW
694	PSP4_PG8	Setpoint 4 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
695	PT5_PG8	Time 5 of program 8. Range: 0 ~ 9999 minutes.	RW
696	PE5_PG8	Event of segment 5 of program 8 (R&S). Range: 0 to 15.	RW
697	PSP5_PG8	Setpoint 5 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
698	PT6_PG8	Time 6 of program 8. Range: 0 ~ 9999 minutes.	RW
699	PE6_PG8	Event of segment 6 of program 8 (R&S). Range: 0 to 15.	RW
700	PSP6_PG8	Setpoint 6 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
701	PT7_PG8	Time 7 of program 8. Range: 0 ~ 9999 minutes.	RW
702	PE7_PG8	Event of segment 7 of program 8 (R&S). Range: 0 to 15.	RW
703	PSP7_PG8	Setpoint 7 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
704	PT8_PG8	Time 8 of program 8. Range: 0 ~ 9999 minutes.	RW
705	PE8_PG8	Event of segment 8 of program 8 (R&S). Range: 0 to 15.	RW
706	PSP8_PG8	Setpoint 8 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
707	PT9_PG8	Time 9 of program 8. Range: 0 ~ 9999 minutes.	RW
708	PE9_PG8	Event of segment 9 of program 8 (R&S). Range: 0 to 15.	RW
709	PSP9_PG8	Setpoint 9 of program 8. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
720	PTOL_PG9	Program 9 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
721	LP_PG9	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
722	PSP0_PG9	Setpoint 0 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
723	PT1_PG9	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
724	PE1_PG9	Event of segment 9 of program 1 (R&S). Range: 0 to 15.	RW
725	PSP1_PG9	Setpoint 1 of program 9 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
726	PT2_PG9	Time 2 of program 9 of program 1. Range: 0 ~ 9999 minutes.	RW
727	PE2_PG9	Event of segment 2 of program 9 (R&S). Range: 0 to 15.	RW
728	PSP2_PG9	Setpoint 2 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
729	PT3_PG9	Time 3 of program 9. Range: 0 ~ 9999 minutes.	RW
730	PE3_PG9	Event of segment 3 of program 9 (R&S). Range: 0 to 15.	RW
731	PSP3_PG9	Setpoint 3 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
732	PT4_PG9	Time 4 of program 9. Range: 0 ~ 9999 minutes.	RW
733	PE4_PG9	Event of segment 4 of program 9 (R&S). Range: 0 to 15.	RW
734	PSP4_PG9	Setpoint 4 of program 9.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	
735	PT5_PG9	Time 5 of program 9. Range: 0 ~ 9999 minutes.	RW
736	PE5_PG9	Event of segment 5 of program 9 (R&S). Range: 0 to 15.	RW
737	PSP5_PG9	Setpoint 5 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
738	PT6_PG9	Time 6 of program 9. Range: 0 ~ 9999 minutes.	RW
739	PE6_PG9	Event of segment 6 of program 9 (R&S). Range: 0 to 15.	RW
740	PSP6_PG9	Setpoint 6 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
741	PT7_PG9	Time 7 of program 9. Range: 0 ~ 9999 minutes.	RW
742	PE7_PG9	Event of segment 7 of program 9 (R&S). Range: 0 to 15.	RW
743	PSP7_PG9	Setpoint 7 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
744	PT8_PG9	Time 8 of program 9. Range: 0 ~ 9999 minutes.	RW
745	PE8_PG9	Event of segment 8 of program 9 (R&S). Range: 0 to 15.	RW
746	PSP8_PG9	Setpoint 8 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
747	PT9_PG9	Time 9 of program 9. Range: 0 ~ 9999 minutes.	RW
748	PE9_PG9	Event of segment 9 of program 9 (R&S). Range: 0 to 15.	RW
749	PSP9_PG9	Setpoint 9 of program 9. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
760	PTOL_PG10	Program 10 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
761	LP_PG10	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
762	PSP0_PG10	Setpoint 0 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
763	PT1_PG10	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
764	PE1_PG10	Event of segment 10 of program 1 (R&S). Range: 0 to 15.	RW
765	PSP1_PG10	Setpoint 1 of program 10 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
766	PT2_PG10	Time 2 of program 10 of program 1. Range: 0 ~ 9999 minutes.	RW
767	PE2_PG10	Event of segment 2 of program 10 (R&S). Range: 0 to 15.	RW
768	PSP2_PG10	Setpoint 2 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
769	PT3_PG10	Time 3 of program 10. Range: 0 ~ 9999 minutes.	RW
770	PE3_PG10	Event of segment 3 of program 10 (R&S). Range: 0 to 15.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
771	PSP3_PG10	Setpoint 3 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
772	PT4_PG10	Time 4 of program 10. Range: 0 ~ 9999 minutes.	RW
773	PE4_PG10	Event of segment 4 of program 10 (R&S). Range: 0 to 15.	RW
774	PSP4_PG10	Setpoint 4 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
775	PT5_PG10	Time 5 of program 10. Range: 0 ~ 9999 minutes.	RW
776	PE5_PG10	Event of segment 5 of program 10 (R&S). Range: 0 to 15.	RW
777	PSP5_PG10	Setpoint 5 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
778	PT6_PG10	Time 6 of program 10. Range: 0 ~ 9999 minutes.	RW
779	PE6_PG10	Event of segment 6 of program 10 (R&S). Range: 0 to 15.	RW
780	PSP6_PG10	Setpoint 6 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
781	PT7_PG10	Time 7 of program 10. Range: 0 ~ 9999 minutes.	RW
782	PE7_PG10	Event of segment 7 of program 10 (R&S). Range: 0 to 15.	RW
783	PSP7_PG10	Setpoint 7 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
784	PT8_PG10	Time 8 of program 10. Range: 0 ~ 9999 minutes.	RW
785	PE8_PG10	Event of segment 8 of program 10 (R&S). Range: 0 to 15.	RW
786	PSP8_PG10	Setpoint 8 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
787	PT9_PG10	Time 9 of program 10. Range: 0 ~ 9999 minutes.	RW
788	PE9_PG10	Event of segment 9 of program 10 (R&S). Range: 0 to 15.	RW
789	PSP9_PG10	Setpoint 9 of program 10. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
800	PTOL_PG11	Program 11 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
801	LP_PG11	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
802	PSP0_PG11	Setpoint 0 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
803	PT1_PG11	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
804	PE1_PG11	Event of segment 11 of program 1 (R&S). Range: 0 to 15.	RW
805	PSP1_PG11	Setpoint 1 of program 11 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
806	PT2_PG11	Time 2 of program 11 of program 1. Range: 0 ~ 9999 minutes.	RW
807	PE2_PG11	Event of segment 2 of program 11 (R&S).	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 to 15.	
808	PSP2_PG11	Setpoint 2 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
809	PT3_PG11	Time 3 of program 11. Range: 0 ~ 9999 minutes.	RW
810	PE3_PG11	Event of segment 3 of program 11 (R&S). Range: 0 to 15.	RW
811	PSP3_PG11	Setpoint 3 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
812	PT4_PG11	Time 4 of program 11. Range: 0 ~ 9999 minutes.	RW
813	PE4_PG11	Event of segment 4 of program 11 (R&S). Range: 0 to 15.	RW
814	PSP4_PG11	Setpoint 4 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
815	PT5_PG11	Time 5 of program 11. Range: 0 ~ 9999 minutes.	RW
816	PE5_PG11	Event of segment 5 of program 11 (R&S). Range: 0 to 15.	RW
817	PSP5_PG11	Setpoint 5 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
818	PT6_PG11	Time 6 of program 11. Range: 0 ~ 9999 minutes.	RW
819	PE6_PG11	Event of segment 6 of program 11 (R&S). Range: 0 to 15.	RW
820	PSP6_PG11	Setpoint 6 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
821	PT7_PG11	Time 7 of program 11. Range: 0 ~ 9999 minutes.	RW
822	PE7_PG11	Event of segment 7 of program 11 (R&S). Range: 0 to 15.	RW
823	PSP7_PG11	Setpoint 7 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
824	PT8_PG11	Time 8 of program 11. Range: 0 ~ 9999 minutes.	RW
825	PE8_PG11	Event of segment 8 of program 11 (R&S). Range: 0 to 15.	RW
826	PSP8_PG11	Setpoint 8 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
827	PT9_PG11	Time 9 of program 11. Range: 0 ~ 9999 minutes.	RW
828	PE9_PG11	Event of segment 9 of program 11 (R&S). Range: 0 to 15.	RW
829	PSP9_PG11	Setpoint 9 of program 11. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
840	PTOL_PG12	Program 12 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
841	LP_PG12	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
842	PSP0_PG12	Setpoint 0 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
843	PT1_PG12	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
844	PE1_PG12	Event of segment 12 of program 1 (R&S). Range: 0 to 15.	RW
845	PSP1_PG12	Setpoint 1 of program 12 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
846	PT2_PG12	Time 2 of program 12 of program 1. Range: 0 ~ 9999 minutes.	RW
847	PE2_PG12	Event of segment 2 of program 12 (R&S). Range: 0 to 15.	RW
848	PSP2_PG12	Setpoint 2 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
849	PT3_PG12	Time 3 of program 12. Range: 0 ~ 9999 minutes.	RW
850	PE3_PG12	Event of segment 3 of program 12 (R&S). Range: 0 to 15.	RW
851	PSP3_PG12	Setpoint 3 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
852	PT4_PG12	Time 4 of program 12. Range: 0 ~ 9999 minutes.	RW
853	PE4_PG12	Event of segment 4 of program 12 (R&S). Range: 0 to 15.	RW
854	PSP4_PG12	Setpoint 4 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
855	PT5_PG12	Time 5 of program 12. Range: 0 ~ 9999 minutes.	RW
856	PE5_PG12	Event of segment 5 of program 12 (R&S). Range: 0 to 15.	RW
857	PSP5_PG12	Setpoint 5 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
858	PT6_PG12	Time 6 of program 12. Range: 0 ~ 9999 minutes.	RW
859	PE6_PG12	Event of segment 6 of program 12 (R&S). Range: 0 to 15.	RW
860	PSP6_PG12	Setpoint 6 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
861	PT7_PG12	Time 7 of program 12. Range: 0 ~ 9999 minutes.	RW
862	PE7_PG12	Event of segment 7 of program 12 (R&S). Range: 0 to 15.	RW
863	PSP7_PG12	Setpoint 7 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
864	PT8_PG12	Time 8 of program 12. Range: 0 ~ 9999 minutes.	RW
865	PE8_PG12	Event of segment 8 of program 12 (R&S). Range: 0 to 15.	RW
866	PSP8_PG12	Setpoint 8 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
867	PT9_PG12	Time 9 of program 12. Range: 0 ~ 9999 minutes.	RW
868	PE9_PG12	Event of segment 9 of program 12 (R&S). Range: 0 to 15.	RW
869	PSP9_PG12	Setpoint 9 of program 12. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
880	PTOL_PG13	Program 13 tolerance (Ramps and Soaks).	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 to valor de (SPHL - SPLL).	
881	LP_PG13	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
882	PSP0_PG13	Setpoint 0 of program 13. Range: From SPLL to the value set in SPHL.	RW
883	PT1_PG13	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
884	PE1_PG13	Event of segment 13 of program 1 (R&S). Range: 0 to 15.	RW
885	PSP1_PG13	Setpoint 1 of program 13 of program 1. Range: From SPLL to the value set in SPHL.	RW
886	PT2_PG13	Time 2 of program 13 of program 1. Range: 0 ~ 9999 minutes.	RW
887	PE2_PG13	Event of segment 2 of program 13 (R&S). Range: 0 to 15.	RW
888	PSP2_PG13	Setpoint 2 of program 13. Range: From SPLL to the value set in SPHL.	RW
889	PT3_PG13	Time 3 of program 13. Range: 0 ~ 9999 minutes.	RW
890	PE3_PG13	Event of segment 3 of program 13 (R&S). Range: 0 to 15.	RW
891	PSP3_PG13	Setpoint 3 of program 13. Range: From SPLL to the value set in SPHL.	RW
892	PT4_PG13	Time 4 of program 13. Range: 0 ~ 9999 minutes.	RW
893	PE4_PG13	Event of segment 4 of program 13 (R&S). Range: 0 to 15.	RW
894	PSP4_PG13	Setpoint 4 of program 13. Range: From SPLL to the value set in SPHL.	RW
895	PT5_PG13	Time 5 of program 13. Range: 0 ~ 9999 minutes.	RW
896	PE5_PG13	Event of segment 5 of program 13 (R&S). Range: 0 to 15.	RW
897	PSP5_PG13	Setpoint 5 of program 13. Range: From SPLL to the value set in SPHL.	RW
898	PT6_PG13	Time 6 of program 13. Range: 0 ~ 9999 minutes.	RW
899	PE6_PG13	Event of segment 6 of program 13 (R&S). Range: 0 to 15.	RW
900	PSP6_PG13	Setpoint 6 of program 13. Range: From SPLL to the value set in SPHL.	RW
901	PT7_PG13	Time 7 of program 13. Range: 0 ~ 9999 minutes.	RW
902	PE7_PG13	Event of segment 7 of program 13 (R&S). Range: 0 to 15.	RW
903	PSP7_PG13	Setpoint 7 of program 13. Range: From SPLL to the value set in SPHL.	RW
904	PT8_PG13	Time 8 of program 13. Range: 0 ~ 9999 minutes.	RW
905	PE8_PG13	Event of segment 8 of program 13 (R&S). Range: 0 to 15.	RW
906	PSP8_PG13	Setpoint 8 of program 13. Range: From SPLL to the value set in SPHL.	RW
907	PT9_PG13	Time 9 of program 13.	RW



ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 ~ 9999 minutes.	
908	PE9_PG13	Event of segment 9 of program 13 (R&S). Range: 0 to 15.	RW
909	PSP9_PG13	Setpoint 9 of program 13. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
920	PTOL_PG14	Program 14 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
921	LP_PG14	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
922	PSP0_PG14	Setpoint 0 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
923	PT1_PG14	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
924	PE1_PG14	Event of segment 14 of program 1 (R&S). Range: 0 to 15.	RW
925	PSP1_PG14	Setpoint 1 of program 14 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
926	PT2_PG14	Time 2 of program 14 of program 1. Range: 0 ~ 9999 minutes.	RW
927	PE2_PG14	Event of segment 2 of program 14 (R&S). Range: 0 to 15.	RW
928	PSP2_PG14	Setpoint 2 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
929	PT3_PG14	Time 3 of program 14. Range: 0 ~ 9999 minutes.	RW
930	PE3_PG14	Event of segment 3 of program 14 (R&S). Range: 0 to 15.	RW
931	PSP3_PG14	Setpoint 3 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
932	PT4_PG14	Time 4 of program 14. Range: 0 ~ 9999 minutes.	RW
933	PE4_PG14	Event of segment 4 of program 14 (R&S). Range: 0 to 15.	RW
934	PSP4_PG14	Setpoint 4 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
935	PT5_PG14	Time 5 of program 14. Range: 0 ~ 9999 minutes.	RW
936	PE5_PG14	Event of segment 5 of program 14 (R&S). Range: 0 to 15.	RW
937	PSP5_PG14	Setpoint 5 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
938	PT6_PG14	Time 6 of program 14. Range: 0 ~ 9999 minutes.	RW
939	PE6_PG14	Event of segment 6 of program 14 (R&S). Range: 0 to 15.	RW
940	PSP6_PG14	Setpoint 6 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
941	PT7_PG14	Time 7 of program 14. Range: 0 ~ 9999 minutes.	RW
942	PE7_PG14	Event of segment 7 of program 14 (R&S). Range: 0 to 15.	RW
943	PSP7_PG14	Setpoint 7 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
944	PT8_PG14	Time 8 of program 14. Range: 0 ~ 9999 minutes.	RW
945	PE8_PG14	Event of segment 8 of program 14 (R&S). Range: 0 to 15.	RW
946	PSP8_PG14	Setpoint 8 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
947	PT9_PG14	Time 9 of program 14. Range: 0 ~ 9999 minutes.	RW
948	PE9_PG14	Event of segment 9 of program 14 (R&S). Range: 0 to 15.	RW
949	PSP9_PG14	Setpoint 9 of program 14. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
960	PTOL_PG15	Program 15 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
961	LP_PG15	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
962	PSP0_PG15	Setpoint 0 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
963	PT1_PG15	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
964	PE1_PG15	Event of segment 15 of program 1 (R&S). Range: 0 to 15.	RW
965	PSP1_PG15	Setpoint 1 of program 15 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
966	PT2_PG15	Time 2 of program 15 of program 1. Range: 0 ~ 9999 minutes.	RW
967	PE2_PG15	Event of segment 2 of program 15 (R&S). Range: 0 to 15.	RW
968	PSP2_PG15	Setpoint 2 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
969	PT3_PG15	Time 3 of program 15. Range: 0 ~ 9999 minutes.	RW
970	PE3_PG15	Event of segment 3 of program 15 (R&S). Range: 0 to 15.	RW
971	PSP3_PG15	Setpoint 3 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
972	PT4_PG15	Time 4 of program 15. Range: 0 ~ 9999 minutes.	RW
973	PE4_PG15	Event of segment 4 of program 15 (R&S). Range: 0 to 15.	RW
974	PSP4_PG15	Setpoint 4 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
975	PT5_PG15	Time 5 of program 15. Range: 0 ~ 9999 minutes.	RW
976	PE5_PG15	Event of segment 5 of program 15 (R&S). Range: 0 to 15.	RW
977	PSP5_PG15	Setpoint 5 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
978	PT6_PG15	Time 6 of program 15. Range: 0 ~ 9999 minutes.	RW
979	PE6_PG15	Event of segment 6 of program 15 (R&S). Range: 0 to 15.	RW
980	PSP6_PG15	Setpoint 6 of program 15.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	
981	PT7_PG15	Time 7 of program 15. Range: 0 ~ 9999 minutes.	RW
982	PE7_PG15	Event of segment 7 of program 15 (R&S). Range: 0 to 15.	RW
983	PSP7_PG15	Setpoint 7 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
984	PT8_PG15	Time 8 of program 15. Range: 0 ~ 9999 minutes.	RW
985	PE8_PG15	Event of segment 8 of program 15 (R&S). Range: 0 to 15.	RW
986	PSP8_PG15	Setpoint 8 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
987	PT9_PG15	Time 9 of program 15. Range: 0 ~ 9999 minutes.	RW
988	PE9_PG15	Event of segment 9 of program 15 (R&S). Range: 0 to 15.	RW
989	PSP9_PG15	Setpoint 9 of program 15. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
1000	PTOL_PG16	Program 16 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
1001	LP_PG16	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
1002	PSP0_PG16	Setpoint 0 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1003	PT1_PG16	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
1004	PE1_PG16	Event of segment 16 of program 1 (R&S). Range: 0 to 15.	RW
1005	PSP1_PG16	Setpoint 1 of program 16 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1006	PT2_PG16	Time 2 of program 16 of program 1. Range: 0 ~ 9999 minutes.	RW
1007	PE2_PG16	Event of segment 2 of program 16 (R&S). Range: 0 to 15.	RW
1008	PSP2_PG16	Setpoint 2 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1009	PT3_PG16	Time 3 of program 16. Range: 0 ~ 9999 minutes.	RW
1010	PE3_PG16	Event of segment 3 of program 16 (R&S). Range: 0 to 15.	RW
1011	PSP3_PG16	Setpoint 3 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1012	PT4_PG16	Time 4 of program 16. Range: 0 ~ 9999 minutes.	RW
1013	PE4_PG16	Event of segment 4 of program 16 (R&S). Range: 0 to 15.	RW
1014	PSP4_PG16	Setpoint 4 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1015	PT5_PG16	Time 5 of program 16. Range: 0 ~ 9999 minutes.	RW
1016	PE5_PG16	Event of segment 5 of program 16 (R&S). Range: 0 to 15.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
1017	PSP5_PG16	Setpoint 5 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1018	PT6_PG16	Time 6 of program 16. Range: 0 ~ 9999 minutes.	RW
1019	PE6_PG16	Event of segment 6 of program 16 (R&S). Range: 0 to 15.	RW
1020	PSP6_PG16	Setpoint 6 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1021	PT7_PG16	Time 7 of program 16. Range: 0 ~ 9999 minutes.	RW
1022	PE7_PG16	Event of segment 7 of program 16 (R&S). Range: 0 to 15.	RW
1023	PSP7_PG16	Setpoint 7 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1024	PT8_PG16	Time 8 of program 16. Range: 0 ~ 9999 minutes.	RW
1025	PE8_PG16	Event of segment 8 of program 16 (R&S). Range: 0 to 15.	RW
1026	PSP8_PG16	Setpoint 8 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1027	PT9_PG16	Time 9 of program 16. Range: 0 ~ 9999 minutes.	RW
1028	PE9_PG16	Event of segment 9 of program 16 (R&S). Range: 0 to 15.	RW
1029	PSP9_PG16	Setpoint 9 of program 16. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
1040	PTOL_PG17	Program 17 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
1041	LP_PG17	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
1042	PSP0_PG17	Setpoint 0 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1043	PT1_PG17	Time 1 of program 17. Range: 0 ~ 9999 minutes.	RW
1044	PE1_PG17	Event of segment 1 of program 17 (R&S). Range: 0 to 15.	RW
1045	PSP1_PG17	Setpoint 1 of program 17 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1046	PT2_PG17	Time 2 of program 17 of program 1. Range: 0 ~ 9999 minutes.	RW
1047	PE2_PG17	Event of segment 2 of program 17 (R&S). Range: 0 to 15.	RW
1048	PSP2_PG17	Setpoint 2 of program 17. Range: De <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1049	PT3_PG17	Time 3 of program 17. Range: 0 ~ 9999 minutes.	RW
1050	PE3_PG17	Event of segment 3 of program 17 (R&S). Range: 0 to 15.	RW
1051	PSP3_PG17	Setpoint 3 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1052	PT4_PG17	Time 4 of program 17. Range: 0 ~ 9999 minutes.	RW
1053	PE4_PG17	Event of segment 4 of program 17 (R&S).	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 to 15.	
1054	PSP4_PG17	Setpoint 4 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1055	PT5_PG17	Time 5 of program 17. Range: 0 ~ 9999 minutes.	RW
1056	PE5_PG17	Event of segment 5 of program 17 (R&S). Range: 0 to 15.	RW
1057	PSP5_PG17	Setpoint 5 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1058	PT6_PG17	Time 6 of program 17. Range: 0 ~ 9999 minutes.	RW
1059	PE6_PG17	Event of segment 6 of program 17 (R&S). Range: 0 to 15.	RW
1060	PSP6_PG17	Setpoint 6 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1061	PT7_PG17	Time 7 of program 17. Range: 0 ~ 9999 minutes.	RW
1062	PE7_PG17	Event of segment 7 of program 17 (R&S). Range: 0 to 15.	RW
1063	PSP7_PG17	Setpoint 7 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1064	PT8_PG17	Time 8 of program 17. Range: 0 ~ 9999 minutes.	RW
1065	PE8_PG17	Event of segment 8 of program 17 (R&S). Range: 0 to 15.	RW
1066	PSP8_PG17	Setpoint 8 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1067	PT9_PG17	Time 9 of program 17. Range: 0 ~ 9999 minutes.	RW
1068	PE9_PG17	Event of segment 9 of program 17 (R&S). Range: 0 to 15.	RW
1069	PSP9_PG17	Setpoint 9 of program 17. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
1080	PTOL_PG18	Program 18 tolerance (Ramps and Soaks). Range: 0 to valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
1081	LP_PG18	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
1082	PSP0_PG18	Setpoint 0 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1083	PT1_PG18	Time 1 of program 18. Range: 0 ~ 9999 minutes.	RW
1084	PE1_PG18	Event of segment 18 of program 1 (R&S). Range: 0 to 15.	RW
1085	PSP1_PG18	Setpoint 1 of program 18 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1086	PT2_PG18	Time 2 of program 18 of program 1. Range: 0 ~ 9999 minutes.	RW
1087	PE2_PG18	Event of segment 2 of program 18 (R&S). Range: 0 to 15.	RW
1088	PSP2_PG18	Setpoint 2 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1089	PT3_PG18	Time 3 of program 18. Range: 0 ~ 9999 minutes.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
1090	PE3_PG18	Event of segment 3 of program 18 (R&S). Range: 0 to 15.	RW
1091	PSP3_PG18	Setpoint 3 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1092	PT4_PG18	Time 4 of program 18. Range: 0 ~ 9999 minutes.	RW
1093	PE4_PG18	Event of segment 4 of program 18 (R&S). Range: 0 to 15.	RW
1094	PSP4_PG18	Setpoint 4 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1095	PT5_PG18	Time 5 of program 18. Range: 0 ~ 9999 minutes.	RW
1096	PE5_PG18	Event of segment 5 of program 18 (R&S). Range: 0 to 15.	RW
1097	PSP5_PG18	Setpoint 5 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1098	PT6_PG18	Time 6 of program 18. Range: 0 ~ 9999 minutes.	RW
1099	PE6_PG18	Event of segment 6 of program 18 (R&S). Range: 0 to 15.	RW
1100	PSP6_PG18	Setpoint 6 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1101	PT7_PG18	Time 7 of program 18. Range: 0 ~ 9999 minutes.	RW
1102	PE7_PG18	Event of segment 7 of program 18 (R&S). Range: 0 to 15.	RW
1103	PSP7_PG18	Setpoint 7 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1104	PT8_PG18	Time 8 of program 18. Range: 0 ~ 9999 minutes.	RW
1105	PE8_PG18	Event of segment 8 of program 18 (R&S). Range: 0 to 15.	RW
1106	PSP8_PG18	Setpoint 8 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1107	PT9_PG18	Time 9 of program 18. Range: 0 ~ 9999 minutes.	RW
1108	PE9_PG18	Event of segment 9 of program 18 (R&S). Range: 0 to 15.	RW
1109	PSP9_PG18	Setpoint 9 of program 18. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
1120	PTOL_PG19	Program 19 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
1121	LP_PG19	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
1122	PSP0_PG19	Setpoint 0 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1123	PT1_PG19	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
1124	PE1_PG19	Event of segment 19 of program 1 (R&S). Range: 0 to 15.	RW
1125	PSP1_PG19	Setpoint 1 of program 19 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1126	PT2_PG19	Time 2 of program 19 of program 1.	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
		Range: 0 ~ 9999 minutes.	
1127	PE2_PG19	Event of segment 2 of program 19 (R&S). Range: 0 to 15.	RW
1128	PSP2_PG19	Setpoint 2 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1129	PT3_PG19	Time 3 of program 19. Range: 0 ~ 9999 minutes.	RW
1130	PE3_PG19	Event of segment 3 of program 19 (R&S). Range: 0 to 15.	RW
1131	PSP3_PG19	Setpoint 3 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1132	PT4_PG19	Time 4 of program 19. Range: 0 ~ 9999 minutes.	RW
1133	PE4_PG19	Event of segment 4 of program 19 (R&S). Range: 0 to 15.	RW
1134	PSP4_PG19	Setpoint 4 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1135	PT5_PG19	Time 5 of program 19. Range: 0 ~ 9999 minutes.	RW
1136	PE5_PG19	Event of segment 5 of program 19 (R&S). Range: 0 to 15.	RW
1137	PSP5_PG19	Setpoint 5 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1138	PT6_PG19	Time 6 of program 19. Range: 0 ~ 9999 minutes.	RW
1139	PE6_PG19	Event of segment 6 of program 19 (R&S). Range: 0 to 15.	RW
1140	PSP6_PG19	Setpoint 6 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1141	PT7_PG19	Time 7 of program 19. Range: 0 ~ 9999 minutes.	RW
1142	PE7_PG19	Event of segment 7 of program 19 (R&S). Range: 0 to 15.	RW
1143	PSP7_PG19	Setpoint 7 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1144	PT8_PG19	Time 8 of program 19. Range: 0 ~ 9999 minutes.	RW
1145	PE8_PG19	Event of segment 8 of program 19 (R&S). Range: 0 to 15.	RW
1146	PSP8_PG19	Setpoint 8 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1147	PT9_PG19	Time 9 of program 19. Range: 0 ~ 9999 minutes.	RW
1148	PE9_PG19	Event of segment 9 of program 19 (R&S). Range: 0 to 15.	RW
1149	PSP9_PG19	Setpoint 9 of program 19. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
		Reserved.	
1160	PTOL_PG20	Program 20 tolerance (Ramps and Soaks). Range: 0 too valor de ( <b>SPHL</b> - <b>SPLL</b> ).	RW
1161	LP_PG20	Program Link (Ramps and Soaks). Range: 0 to 20.	RW
1162	PSP0_PG20	Setpoint 0 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW

ADDRESS	REGISTER	DESCRIPTION	TYPE
1163	PT1_PG20	Time 1 of program 1. Range: 0 ~ 9999 minutes.	RW
1164	PE1_PG20	Event of segment 20 of program 1 (R&S). Range: 0 to 15.	RW
1165	PSP1_PG20	Setpoint 1 of program 20 of program 1. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1166	PT2_PG20	Time 2 of program 20 of program 1. Range: 0 ~ 9999 minutes.	RW
1167	PE2_PG20	Event of segment 2 of program 20 (R&S). Range: 0 to 15.	RW
1168	PSP2_PG20	Setpoint 2 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1169	PT3_PG20	Time 3 of program 20. Range: 0 ~ 9999 minutes.	RW
1170	PE3_PG20	Event of segment 3 of program 20 (R&S). Range: 0 to 15.	RW
1171	PSP3_PG20	Setpoint 3 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1172	PT4_PG20	Time 4 of program 20. Range: 0 ~ 9999 minutes.	RW
1173	PE4_PG20	Event of segment 4 of program 20 (R&S). Range: 0 to 15.	RW
1174	PSP4_PG20	Setpoint 4 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1175	PT5_PG20	Time 5 of program 20. Range: 0 ~ 9999 minutes.	RW
1176	PE5_PG20	Event of segment 5 of program 20 (R&S). Range: 0 to 15.	RW
1177	PSP5_PG20	Setpoint 5 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1178	PT6_PG20	Time 6 of program 20. Range: 0 ~ 9999 minutes.	RW
1179	PE6_PG20	Event of segment 6 of program 20 (R&S). Range: 0 to 15.	RW
1180	PSP6_PG20	Setpoint 6 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1181	PT7_PG20	Time 7 of program 20. Range: 0 ~ 9999 minutes.	RW
1182	PE7_PG20	Event of segment 7 of program 20 (R&S). Range: 0 to 15.	RW
1183	PSP7_PG20	Setpoint 7 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1184	PT8_PG20	Time 8 of program 20. Range: 0 ~ 9999 minutes.	RW
1185	PE8_PG20	Event of segment 8 of program 20 (R&S). Range: 0 to 15.	RW
1186	PSP8_PG20	Setpoint 8 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW
1187	PT9_PG20	Time 9 of program 20. Range: 0 ~ 9999 minutes.	RW
1188	PE9_PG20	Event of segment 9 of program 20 (R&S). Range: 0 to 15.	RW
1189	PSP9_PG20	Setpoint 9 of program 20. Range: From <b>SPLL</b> to the value set in <b>SPHL</b> .	RW



### 3 STATUS WORDS

#### 3.1 WORDS

REGISTER	VALUE FORM	
	BIT	DESCRIPTION
Status Word 01 – General	0	Voltage Pulse Output: 0 → Disabled / 1 → Enabled
	1	Relay Output: 0 → Disabled / 1 → Enabled
	2	Analog Input: 0 → Input OK / 1 → Input error
	3	USB Interface: 0 → Disconnected / 1 → Connected
	4	Bluetooth Interface: 0 → Disabled / 1 → Enabled
	5	Bluetooth connection with PC or smartphone: 0 → Disconnected / 1 → Connected
	6	Power Supply: 0 → Disconnected / 1 → Connected
	7	Process 1: 0 → Disabled / 1 → Enabled
	8	Process 2: 0 → Disabled / 1 → Enabled
	9	Network Frequency: 0 → 50 Hz / 1 → 60 Hz
	10	Reserved.
	11	Reserved.
	12	Reserved.
	13	Reserved.
	14	Reserved.
	15	System Operation: 0 → System OK / 1 → System error
Status Word 02 – Modules	0	Slot 1: 0 → Free slot / 1 → Slot in use
	1	Slot 2: 0 → Free slot / 1 → Slot in use
	2	Slot 3: 0 → Free slot / 1 → Slot in use
	3	Slot 4: 0 → Free slot / 1 → Slot in use
	4	Slot 5: 0 → Free slot / 1 → Slot in use
	5	Slot 6: 0 → Free slot / 1 → Slot in use
	6	Slot 7: 0 → Free slot / 1 → Slot in use
	7	Slot 8: 0 → Free slot / 1 → Slot in use
	8	Slot 1: 0 → Slot OK / 1 → Slot error
	9	Slot 2: 0 → Slot OK / 1 → Slot error
	10	Slot 3: 0 → Slot OK / 1 → Slot error
	11	Slot 4: 0 → Slot OK / 1 → Slot error
	12	Slot 5: 0 → Slot OK / 1 → Slot error
	13	Slot 6: 0 → Slot OK / 1 → Slot error
	14	Slot 7: 0 → Slot OK / 1 → Slot error
	15	Slot 8: 0 → Slot OK / 1 → Slot error
Status Word 03 – Process 1	0	Alarm 1: 0 → OFF / 1 → Enabled
	1	Alarm 2: 0 → OFF / 1 → Enabled
	2	Alarm 3: 0 → OFF / 1 → Enabled
	3	Alarm 4: 0 → OFF / 1 → Enabled
	4	Run: 0 → No / 1 → Yes
	5	Control Mode: 0 → Manual / 1 → Automatic
	6	Auto Tuning: 0 → No / 1 → Yes
	7	Control Action: 0 → Direct / 1 → Inverse
	8	Unity: 0 → °C / 1 → °F
	9	Open Sensor: 0 → Ok / 1 → Error
	10	Overflow: 0 → Ok / 1 → Error
	11	Underflow: 0 → Ok / 1 → Error
	12	Pt100: 0 → Ok / 1 → Error
	13	Cold Junction: 0 → Ok / 1 → Error
	14	Internal Error: 0 → Ok / 1 → Error

Table 2 – Status Words

You can only write to the digital output bits when the outputs are configured as "Coil" in the I/O configuration. For the controller native outputs, these will be the following addresses:

COIL STATUS	OUTPUT DESCRIPTION
0	Out.A Status (Pulse)
1	Out.B Status (Relay)

Table 3 – Coil status 1

The controller modular outputs will use the following address formats:

XY: Where

X is from 1 to 8 (Slot number)

Y is from 0 to 3 (Channel number)

### 3.2 PERIPHERAL DESCRIPTOR

The device has the following peripherals:

BIT	TYPE	
0	DI0	Digital Inputs
1	DI1	
2	DI2	
3	DI3	
4	DI4	
5	DI5	
6	DI6	
7	DI7	
8	DO0	Digital Outputs
9	DO1	
10	DO2	
11	DO3	
12	DO4	
13	DO5	
14	DO6	
15	DO7	
16	DO0_Relay	Relay Outputs
17	DO1_Relay	
18	DO2_Relay	
19	DO3_Relay	
20	DO4_Relay	
21	DO5_Relay	
22	DO6_Relay	
23	DO7_Relay	
24	AO0	Analog Outputs
25	AO1	
26	AI0	Analog Inputs
27	AI1	
28	Ethernet	Communication Interfaces
29	CAN	
30	RS485	

Table 4 – Description

### 3.3 ERROR CONDITIONS

When receiving a command, the device performs a CRC check on the received data block. If there is a CRC error during reception, the master will not receive a response. If the command is received without errors, the requested commands and registers will be executed. If invalid, an exception response with the corresponding error code will be sent.

In exception replies, the field corresponding to the Modbus command in the reply will be added to 80H.

If the write command has the value outside the allowed range, the maximum allowed value for this parameter will be forced.

Broadcast read commands are ignored by the controller. Thus, there will be no response. You can only write in Broadcast mode.

The device has the following error descriptors:

BIT	ERROR	DESCRIPTION
0	EVENT_DATA_FLASH_FATAL_ERROR	External memory fatal error.
1	EVENT_DATA_FLASH_ERROR	External memory error.
2	EVENT_DATA_CRC1_ERROR	CRC error in the retentive memory of image 1.
3	EVENT_DATA_CRC2_ERROR	CRC error in the retentive memory of image 2.
4	EVENT_DATA_FLASH_BACKUP1_ERROR	Error in the retentive memory backup of image 1.
5	EVENT_DATA_FLASH_BACKUP2_ERROR	Error in the retentive memory backup of image 2.
7	EVENT_WATCHDOG_ERROR	Task monitor error.
8	EVENT_WATCHDOG_EXCEED_ERROR	The capacity of the task monitor has been exceeded.
9	EVENT_WATCHDOG_TIMEOUT_ERROR	The task monitor operation has failed.
13	EVENT_REGISTERS_ERROR	The parameters integrity has been compromised.
14	EVENT_POWER_SUPPLY_ERROR	The power supply is off (powered by USB).

Table 5 – System errors