PSI 9000 2U/3U/15U/24U register list for devices with KE firmware from V2.24 (Anybus) or V2.08 (GPIB) (check the installed version in your device's MENU in item INFO HW, SW)

Modbus address	Read coils (0x01)	Read holding registers (0x03)	Write single coil (0x05)	Write single register (0x06)	Write multiple registers (0x10)	Description	Access	Data type	Data length in bytes	Number of registers	Data	Example	Profibus slot / Profinet subslot	Profibus/Profinet index in slot	EtherCAT SDO/PDO?
0		x				Device class	R	uint(16)	2	1		21, 33, 35, 37 = PSI 9000 Series	1	0	x
1		x				Device type	R	char	40	20	ASCII	PSI 9080-170	1	1	x
21		x				Manufacturer	R	char	40	20	ASCII		1	2	x
41		x				Manufacturer address	R	char	40	20	ASCII		1	3	x
61		x				Manufacturer ZIP code	R	char	40	20	ASCII		1	4	x
81		x				Manufacturer phone number	R	char	40	20	ASCII		1	5	x
101		x				Manufacturer website	R	char	40	20	ASCII		1	6	x
121		x				Nominal voltage	R	float	4	2	Floating point number IEEE754	80	1	7	x
123		x				Nominal current	R	float	4	2	Floating point number IEEE754	170	1	8	x
125		x				Nominal power	R	float	4	2	Floating point number IEEE754	3500	1	9	x
127		x				Max. Internal resistance	R	float	4	2	Floating point number IEEE754	12	1	10	x
129		x				Min. Internal resistance	R	float	4	2	Floating point number IEEE754	0	1	11	x
131		x				Article no.	R	char	40	20	ASCII	33230401	1	12	x
151		x				Serial no.	R	char	40	20	ASCII	1234560001	1	13	x
171		x			x	User text	RW	char	40	20	ASCII		1	14	x
191		x				Firmware version (KE)	R	char	40	20	ASCII	V2.01 05.09.2012	1	15	x
211		x				Firmware version (HMI)	R	char	40	20	ASCII	V2.02 13.08.2012	1	16	x
231		x				Firmware version (DR)	R	char	40	20	ASCII	V2.01 10.09.2012	1	17	x
402	x		x			Remote mode	RW	uint(16)	2	1	Coils : Remote	0x0000 = off; 0xFF00 = on	2	1	x
405	x		x			DC output	RW	uint(16)	2	1	Coils : Output	0x0000 = off; 0xFF00 = on	2	4	x
407	x		x			Condition of DC output after power fail alarm	RW	uint(16)	2	1	Coils : Auto-On	0x0000 = off; 0xFF00 = auto-on	3	30	x
408		x		x		Condition of DC output after powering the device	RW	uint(16)	2	1	Reg : Power-On	0xFFFF = off; 0xFFFE = restore	2	6	x
409	x		x			Operation mode (UIP/UIR)	RW	uint(16)	2	1	Coils : Operation mode	0x0000 = UIP; 0xFF00 = UIR	2	7	x
410			x			Restart of the device (warm start)	W	uint(16)	2	1	Coils : Restart	0xFF00 = execute	2	8	x
411			x			Acknowledge alarms	W	uint(16)	2	1	Coils : Alarms	0xFF00 = acknowledge	2	9	x
416	x		x			Analog interface: Reference voltage (pin VREF)	RW	uint(16)	2	1	Coils : VREF	0x0000 = 10V; 0xFF00 = 5V	2	14	x
417	x		x			Analog interface: REM-SB level	RW	uint(16)	2	1	Coils : REM-SB Level	0x0000 = normal; 0xFF00 = inverted	2	36	x
418			x			Analog interface: REM-SB action	W	uint(16)	2	1	Coils : REM-SB Action	0x0000 = DC off; 0xFF00 = DC auto	2	37	x
425	x		x			DC output/input after leaving remote	R(W)	uint(16)	2	1	Coils : Condition	0x0000 = off; 0xFF00 = unchanged			
426	x		x			Function generator XY: Select PV mode	RW	uint(16)	2	1	Coils : PV mode	0x0000 = off; 0xFF00 = on	5	13	x
440		x		x		Analog interface: Pin 14 configuration	RW	uint(16)	2	1	Alarms 1	0x0000 = OVP (default); 0x0001 = OCP; 0x0002 = OPP; 0x0003 = OVP + OCP; 0x0004 = OVP + OPP; 0x0005 = OCP + OPP; 0x0006 = OVP + OCP + OPP;			
441		x		x		Analog interface: Pin 6 configuration	RW	uint(16)	2	1	Alarms 2	0x0000 = OT + PF (default); 0x0001 = OT; 0x0002 = PF;			
442		x		x		Analog interface: Pin 15 configuration	RW	uint(16)	2	1	Status DC	0x0000 = CV; 0x0001 = DC output status			
500		x		x		Set voltage value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide)	2	23	x
501		x		x		Set current value or irradiation (PV function)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide) / Irradiation	2	24	x
502		x		x		Set power value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)	2	25	x
503		x		x		Set resistance value	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Resistance value (for translation see programming guide)	2	26	x
505		x				Device state	R	uint(32)	4	2	Bit 0- 4: Control location	0x00 = free; 0x01 = local; 0x03 = USB; 0x04 = analog; 0x05 = Profibus; 0x06 = Ethernet; 0x08 = Master/Slave; 0x09 = RS232; 0x10 = CANopen; 0x12 = Modbus TCP 1P; 0x13 = Profinet 1P; 0x14 = Ethernet 1P; 0x15 = Ethernet 2P; 0x16 = Modbus TCP 2P; 0x17 = Profinet 2P; 0x18 = GPIB; 0x19 = CAN; 0x1A = EtherCAT	2	27	x
											Bit 6 : Master-slave type	0 = Slave; 1 = Master			
											Bit 7 : Output state	0 = off; 1 = on			
											Bit 10-9 : Regulation mode	00 = CV; 01 = CR; 10 = CC; 11 = CP			
											Bit 11 : Remote control	0 = off; 1 = on			
											Bit 13 : Function generator	0 = stopped; 1 = running			
											Bit 14 : External sense	0 = off; 1 = on			
											Bit 15 : Alarm	0 = none; 1 = active			
											Bit 16 : OVP	0 = none; 1 = active			
											Bit 17 : OCP	0 = none; 1 = active			
											Bit 18 : OPP	0 = none; 1 = active			
											Bit 19 : OT	0 = none; 1 = active			
											Bit 23-21: Power fail	0 = none; 1 = active			
											Bit 24 : UVD	0 = none; 1 = active			
											Bit 25 : OVD	0 = none; 1 = active			
											Bit 26 : UCD	0 = none; 1 = active			
											Bit 27 : OCD	0 = none; 1 = active			
											Bit 28 : OPD	0 = none; 1 = active			
											Bit 29 : MSP	0 = OK; 1 = Master-slave protection			
											Bit 30 : REM-SB	0 = DC enabled; 1 = REM-SB disables power output			
507		x				Actual voltage	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual voltage (for translation see programming guide)	2	28	x
508		x				Actual current	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual current (for translation see programming guide)	2	29	x
509		x				Actual power	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual power (for translation see programming guide)	2	30	x
520		x				Count of OV alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	20	x
521		x				Count of OC alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	21	x
522		x				Count of OP alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	22	x
523		x				Count of OT alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	23	x
524		x				Count of PF alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	24	x
550		x		x		Overvoltage protection threshold (OVP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OVP threshold (for translation see programming guide)	3	0	x
553		x		x		Overcurrent protection threshold (OCP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OCP threshold (for translation see programming guide)	3	3	x
556		x		x		Overpower protection threshold (OPP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OPP threshold (for translation see programming guide)	3	6	x
559		x		x		Undervoltage detection (UVD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UVD threshold (for translation see programming guide)	3	9	x
560		x		x		Adjustable UVD notification	RW	uint(16)	2	1	Adjustable UVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	10	x
561		x		x		Overvoltage detection (OVD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OVD threshold (for translation see programming guide)	3	11	x
562		x		x		Adjustable OVD notification	RW	uint(16)	2	1	Adjustable OVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	12	x
563		x		x		Undercurrent detection (UCD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UCD threshold (for translation see programming guide)	3	13	x
564		x		x		Adjustable UCD notification	RW	uint(16)	2	1	Adjustable UCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	14	x
565		x		x		Overcurrent detection (OCD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OCD threshold (for translation see programming guide)	3	15	x
566		x		x		Adjustable OCD notification	RW	uint(16)	2	1	Adjustable OCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	16	x
567		x		x		Overpower detection (OPD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OPD threshold (for translation see programming guide)	3	17	x
568		x		x		Adjustable OPD notification	RW	uint(16)	2	1	Adjustable OPD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	18	x
650	x		x			Master-slave: Link mode on MS bus	RW	uint(16)	2	1	Coils : Mode	0x0000 = Slave; 0xFF00 = Master	4	0	x
651		x		x		Master-slave: Address	RW	uint(16)	2	1	Reg : Address	0x0001…0x000F	4	1	x
653	x		x			Master-slave: Enable MS	RW	uint(16)	2	1	Coils : MS on/off	0x0000 = off; 0xFF00 = on	4	3	x
654			x			Master-slave: Init MS	W	uint(16)	2	1	Coils : MS start init	0xFF00 = Start init	4	4	x
655		x		x		Master-slave: Condition	R	uint(16)	2	1	Reg : MS status	0x0000 = not initialised; 0x0001 = init running; 0x0003 = set defaults; 0x0004 = setup interface; 0x0005 = assignment; 0xFFFC = disrupted; 0xFFFD = different models detected, init not OK; 0xFFFE = error; 0xFFFF = init OK	4	5	x
656		x				Master-slave: Total voltage in V	R	float	4	2	Floating point number IEEE754	500	4	6	x
658		x				Master-slave: Total current in A	R	float	4	2	Floating point number IEEE754	300	4	7	x
660		x				Master-slave: Total power in W	R	float	4	2	Floating point number IEEE754	1500	4	8	x
662		x				Master-slave: Number of initialised slaves	R	uint(16)	2	1		1…15	4	9	x
850	x		x			Function generator Arbitary: Start/stop	RW	uint(16)	2	1	Coils : Start/Stop	0x0000 = Stop; 0xFF00 = Start	5	0	x
851	x		x			Function generator Arbitrary: Select U	RW	uint(16)	2	1	Coils : U	0x0000 = not assigned; 0xFF00 = Assign function to voltage	5	1	x
852	x		x			Function generator Arbitrary: Select I	RW	uint(16)	2	1	Coils : I	0x0000 = not assigned; 0xFF00 = Assign function to current	5	2	x
854	x		x			Function generator XY: Select U-I mode	RW	uint(16)	2	1	Coils : U-I	0x0000 = not assigned; 0xFF00 = Assign function to U-I curve	5	4	x
855	x		x			Function generator XY: Select I-U mode	RW	uint(16)	2	1	Coils : I-U	0x0000 = not assigned; 0xFF00 = Assign function to I-U curve	5	5	x
859		x		x		Function generator Arbitrary: Start sequence	RW	uint(16)	2	1	0x0001…0x0063		5	9	x
860		x		x		Function generator Arbitrary: End sequence	RW	uint(16)	2	1	0x0001…0x0063		5	10	x
861		x		x		Function generator Arbitrary: Sequence cycles	RW	uint(16)	2	1	0x0000...0x03E7	0x0000 = infinite	5	11	x
900		x			x	Function generator Arbitrary: Setup for sequence 1	RW	float	32	16	Bytes 0-3: Us/Is(AC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator	6	0	x
											Bytes 4-7: Ue/Ie(AC) in V				
											Bytes 8-11: fs(1/T) in Hz	Integer in IEEE754 format: 0...10000 Hz			
											Bytes 12-15: fe(1/T) in Hz	Integer in IEEE754 format: 0...10000 Hz			
											Bytes 16-19: Angle in degrees	Integer in IEEE754 format: 0°...359°			
											Bytes 20-23: Us/Is(DC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator			
											Bytes 24-27: Ue/Ie(DC) in V				
											Bytes 28-31: Sequence time in µs	Floating point number in IEEE754 format: 100 µs...36,000,000,000 µs			
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
2468		x			x	Function generatorArbitrary: Setup for sequence 99	RW	float	32	16	Bytes 0-3: Us/Is(AC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator	6	98	x
											Bytes 4-7: Ue/Ie(AC) in V				
											Bytes 8-11: fs(1/T) in Hz	Integer in IEEE754 format: 0...10000 Hz			
											Bytes 12-15: fe(1/T) in Hz	Integer in IEEE754 format: 0...10000 Hz			
											Bytes 16-19: Angle in degrees	Integer in IEEE754 format: 0°...359°			
											Bytes 20-23: Us/Is(DC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator			
											Bytes 24-27: Ue/Ie(DC) in V				
											Bytes 28-31: Sequence time in µs	Floating point number in IEEE754 format: 100 µs...36,000,000,000 µs			
2600		x			x	Function generator: X/Y table, block 0	RW	uint(16)	32	16	UI mode: set voltage value IU mode: set current value (16 values block)	value = real set value of voltage * 0.8 / Unom * 32768 or value = real set value of current * 0.8 / Inom * 32768	7	0	x
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
6680		x			x	Function generator: X/Y table, block 255	RW	uint(16)	32	16	UI mode: set voltage value IU mode: set current value (16 values block)	value = real set value of voltage * 0.8 / Unom * 32768 or value = real set value of current * 0.8 / Inom * 32768	7	255	x
9000		x		x		Upper limit of voltage set value (U-max)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide)	2	31	x
9001		x		x		Lower limit of voltage set value (U-min)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide)	2	32	x
9002		x		x		Upper limit of current set value (I-max)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)	2	33	x
9003		x		x		Lower limit of current set value (I-min)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)	2	34	x
9004		x		x		Upper limit of power set value (P-max)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)	2	35	x
9006		x		x		Upper limit of resistance set value (R-max)	RW	uint(16)	2	1	ELR: variable - 0xD0E5 (x - 102%) Minimum value needs to be cal-culated, refer to programming guide PS: 0x0000 - 0xD0E5 (0 - 102%)	Resistance value (for translation see programming guide)	2	37	x
10007	x		x			Ethernet: TCP keep-alive timeout	RW	uint(16)	2	1	Coils: Keep-alive on/off	0x0000 = off; 0xFF00 = on			
10008	x		x			Ethernet/Profinet/Modbus TCP: DHCP	RW	uint(16)	2	1	Coils: DHCP on/off	0x0000 = off; 0xFF00 = on			
10010	x		x			Protocol: Modbus	RW	uint(16)	2	1	Coils: MODBUS on/off	0x0000 = off; 0xFF00 = on			
10011	x		x			Protocol: SCPI	RW	uint(16)	2	1	Coils: SCPI on/off	0x0000 = off; 0xFF00 = on			
10020		x				AnyBus module: Type	R	uint(16)	2	1	Reg: Type	0x0005 = Profibus 0x0009 = RS232 0x0010 = CANopen 0x0011 = Devicenet 0x0012 = Modbus-TCP 1P 0x0013 = Profinet 1P 0x0014 = Ethernet 1P 0x0015 = Ethernet 2P 0x0016 = Modbus-TCP 2P 0x0017 = Profinet 2P 0x0019 = CAN 0x001A = EtherCAT 0x00FF = no or unknown module plugged			x
10021		x				AnyBus module: Interface type	R	char	40	20	ASCII	"Profibus DPV1"			x
10041		x				AnyBus module: Version number	R	uint(8)	4	2					x
10043		x				AnyBus module: Serial number	R(W)	uint(32)	4	2					x
10251		x		x		Profibus: Ident number	RW	uint(16)	2	1		0xA001	8	0	
10252		x		x		Profibus/CanOpen: Slave address	RW	uint(16)	2	1		Profibus: 0-125 ; CANopen: 0-127	8	1	
10253		x			x	Profibus/Profinet: User-defineable "Function tag"	RW	char	32	16	ASCII	"Test"	8	2	
10269		x			x	Profibus/Profinet: User-defineable "Location tag"	RW	char	22	11	ASCII	"Test"	8	3	
10280		x			x	Profibus/Profinet: User-defineable installation date	RW	char	40	20	ASCII	"13.01.2012 09:59:00"	8	4	
10300		x			x	Profibus/Profinet: User-defineable description	RW	char	54	27	ASCII	"www.webpage.de"	8	5	
10354		x			x	Profinet: User-defineable "Station name"	RW	char	200	100	ASCII	"Test"	8	6	
10502		x			x	Ethernet/Modbus TCP: IP address	RW	uint(8)	4	2	Bytes 0-3: 0..255	192.168.0.2 (default)			
10504		x			x	Ethernet/Modbus TCP: Subnet mask	RW	uint(8)	4	2	Bytes 0-3: 0..255	255.255.255.0 (default)			
10506		x			x	Ethernet/Modbus TCP: Gateway	RW	uint(8)	4	2	Bytes 0-3: 0..255	192.168.0.1 (default)			
10508		x			x	Ethernet/Profinet/Modbus TCP: Host name	RW	char	54	27	ASCII	"Client" (default)			
10535		x			x	Ethernet/Profinet/Modbus TCP: Domain name	RW	char	54	27	ASCII	"Workgroup" (default)			
10562		x			x	Ethernet/Modbus TCP: DNS 1	RW	uint(8)	4	2	5..655350 = timeout inactive	0.0.0.0 (default)			
10564		x			x	Ethernet/Modbus TCP: DNS 2	RW	uint(8)	4	2	ASCII	0.0.0.0 (default)			
10566		x		x		RS232/USB: Connection timeout in milliseconds	RW	uint(16)	2	1	5..65535	Default: 5ms			
10567		x				Ethernet/Profinet/Modbus TCP: MAC	R	uint(8)	6	3	ASCII	00:50:C2:C3:12:34 or 00-50-C2-C3-12-34			
10570		x		x		Ethernet/Modbus TCP: Connection speed Ethernet port 1	RW	uint(16)	2	1	SMTP Error	0x0000 = Auto; 0x0001 = 10Mbit half duplex; 0x0002 = 10Mbit full duplex; 0x0003 = 100Mbit half duplex; 0x0004 = 100Mbit full duplex			
10571		x		x		Ethernet/Modbus TCP: Connection speed Ethernet port 2	RW	uint(16)	2	1		0x0000 = Auto; 0x0001 = 10Mbit half duplex; 0x0002 = 10Mbit full duplex; 0x0003 = 100Mbit half duplex; 0x0004 = 100Mbit full duplex			
10572		x		x		Ethernet/Modbus TCP: Port	RW	uint(16)	2	1	0..65535	5025 (default), except port 80			
10573		x		x		Ethernet: TCP Socket timeout (in seconds)	RW	uint(16)	2	1	5..65535 0 = timeout inactive	Default: 5 s			
10700		x		x		RS232/CANopen/CAN: Baud rate	RW	uint(16)	2	1	Baud rate	CAN / CANopen / RS232 0x00: 10kbps / 10kbps / 2400 Bd 0x01: 20kbps / 20kbps / 4800 Bd 0x02: 50kbps / 50kbps / 9600 Bd 0x03: 100kbps / 100kbps / 19200 Bd 0x04: 125kbps / 125kbps / 38400 Bd 0x05: 250kbps / 250kbps / 57600 Bd 0x06: 500kbps / 500kbps / 115200 Bd 0x07: 1Mbps / 800kbps / - 0x08: - / 1Mbps / - 0x09: - / Autobaud / -			
10701	x		x			CAN: ID format	RW	uint(16)	2	1	Coils: Base/Extended	0x0000 = Base (11 Bit); 0xFF00 = Extended (29 Bit)			
10702	x		x			CAN: Termination	RW	uint(16)	2	1	Coils: Bus termination	0x0000 = off; 0xFF00 = on			
10704		x			x	CAN: Base ID	RW	uint(32)	4	2	0x0000…0x07FF or 0x0000…0x1FFFFFFF	Default: 0x000			
10706		x			x	CAN: Broadcast ID	RW	uint(32)	4	2	0x0000…0x07FF or 0x0000…0x1FFFFFFF	Default: 0x7FF			
10709	x		x			CAN: Data length	RW	uint(16)	2	1	Coils: Data length	0x0000 = Auto; 0xFF00 = Always 8 bytes			
10710		x			x	CAN: Cyclic read: Base ID	RW	uint(32)	4	2	0x0000…0x07FF or 0x0000…0x1FFFFFFF	Default: 0x100			
10712		x			x	CAN: Cyclic send: Base ID	RW	uint(32)	4	2	0x0000…0x07FF or 0x0000…0x1FFFFFFF	Default: 0x200			
10714		x		x		CAN: Cyclic read time (in ms): Status	RW	uint(16)	2	1	20…5000; 0 == OFF	Default: OFF			
10715		x		x		CAN: Cyclic read time (in ms): Set value (U, I, P, R)	RW	uint(16)	2	1	20…5000; 0 == OFF	Default: OFF			
10716		x		x		CAN: Cyclic read time (in ms): Limits 2 (P, R)	RW	uint(16)	2	1	20…5000; 0 == OFF	Default: OFF			
10717		x		x		CAN: Cyclic read time (in ms): Limits 1 (U, I)	RW	uint(16)	2	1	20…5000; 0 == OFF	Default: OFF			
10718		x		x		CAN: Cyclic read time (in ms): Actual values U, I, P	RW	uint(16)	2	1	20…5000; 0 == OFF	Default: OFF			
10900		x		x		GPIB address (option 3W)	RW	uint(16)	2	1	1…30	1			
12001		x		x		Function generator PV: Simulation mode	RW	uint(16)	2	1	Mode	0x0000 = off; 0x0001 = Irradiation/temperature; 0x0002 = Umpp/Impp; 0x0003 = Daily trend irradiation/temp.; 0x0004 = Daily trend Umpp/Impp			
12002		x				Function generator PV: MPP Voltage	R	uint(16)	2	1	0x0000 - 0xCCCC	MPP voltage (for translation see programming guide)			
12003		x				Function generator PV: MPP Current	R	uint(16)	2	1	0x0000 - 0xCCCC	MPP current (for translation see programming guide)			
12004		x				Function generator PV: MPP Power	R	uint(16)	2	1	0x0000 - 0xCCCC	MPP power (for translation see programming guide)			
12005	x		x			Function generator PV: Interpolation	RW	uint(16)	2	1	Coils: Interpolation	0x0000 = off; 0xFF00 = on			
12006	x		x			Function generator PV: Day trend (mode)	RW	uint(16)	2	1	Coils: Mode	0x0000 = read only; 0xFF00 = write			
12007			x			Function generator PV: Day trend (clear completely)	W	uint(16)	2	1	Coils: Clear	0xFF00 = clear			
12008		x			x	Function generator PV: Day trend (index)	RW	uint(32)	4	2	1…100000	0x00001 = Index 1			
12010		x			x	Function generator PV: Day trend index data	RW	)	12	6	Byte 0-3: Index [0x00000001…0x000186A0] Byte 4-5: E or U-MPP [0x0000…0xCCCC] Byte 6-7: Temp. ϑ or I-MPP [0x0000…0xCCCC] Byte 8-11: Δt in [ms] 500...1800000	Currently selected index Irradiation or U-MPP (for translation see register 12053) or U-MPP (for translation see programming guide) Module temperature (for translation see register 12052) or I-MPP (for translation see programming guide) Dwelltime of index			
12016		x		x		Function generator PV: Technology	RW	uint(16)	2	1	Technology	0x0000 = Manual; 0x0001 = cSI technology; 0x0002 = Thin film technology			
12017	x		x			Function generator PV: Input mode	RW	uint(16)	2	1	Coils: Mode	0x0000 = MPP; 0xFF00 = ULIK			
12018	x		x			Function generator PV: Activate data recording	RW	uint(16)	2	1	Coils: Record	0x0000 = halt; 0xFF00 = continue			
12019			x			Function generator PV: Clear recorded data	W	uint(16)	2	1	Coils: Clear	0xFF00 = clear			
12020		x				Function generator PV: Actual record count	R	uint(32)	4	2	0x00000000...0x0008CA00	0x0000000F = 15 recorded values			
12022		x			x	Function generator PV: Record index	RW	uint(32)	4	2	0x00000001...0x0008CA00	0x0008CA00 = Index 576,000 (highest possible index)			
12024		x				Function generator PV: Data set	R		16	8	Byte 0-3:Actual index [0x00000001...0x0008CA00] Byte 4-5: U_ist [0x0000…0xCCCC] Byte 6-7: I_ist [0x0000…0xCCCC] Byte 8-9: P_ist [0x0000…0xCCCC] Byte 10-11: U_mpp [0x0000…0xCCCC] Byte 12-3: I_mpp [0x0000…0xCCCC] Byte 14-15: P_mpp [0x0000…0xCCCC]	Actual index Actual voltage Actual current Actual power MPP voltage MPP current MPP power			
12032		x				Function generator PV: Open circuit voltage	R	uint(16)	2	1	0x0000...0xCCCC	Open circuit voltage (for translation see programming guide)			
12033		x				Function generator PV: Short-circuit current	R	uint(16)	2	1	0x0000...0xCCCC	Short circuit current (for translation see programming guide)			
12034		x			x	Function generator PV: Fill factor (voltage)	RW	float	4	2	FFu, >0…1 (cSI: 0.8; thing film: 0.72)	Floating point number in IEEE754 format			
12036		x			x	Function generator PV: Fill factor (current)	RW	float	4	2	FFi, >0…1 (cSI: 0.9; thin film: 0.8)	Floating point number in IEEE754 format			
12038		x			x	Function generator PV: Temperature coefficient for Isc (Technology parameter)	RW	float	4	2	α in 1/°C; values >0…1 [cSI: 0.0004; thin film: 0.0002]	Floating point number in IEEE754 format			
12040		x			x	Function generator PV: Temperature coefficient for Uoc (Technology parameter)	RW	float	4	2	β in 1/°C; values <0…-1 [cSI: -0.004; thin film: -0.002]	Floating point number in IEEE754 format			
12042		x			x	Function generator PV: Correction factor Cu(Technology parameter)	RW	float	4	2	Cu without unit; values > 0…1 [cSI: 0.08593; thin film: 0.08419]	Floating point number in IEEE754 format			
12044		x			x	Function generator PV: Correction factor Cr (Technology parameter)	RW	float	4	2	Cr in m²/W; values >0…1 [cSI: 0.0001088; thin film: 0.0001476]	Floating point number in IEEE754 format			
12046		x			x	Function generator PV: Correction factor Cg/Es (Technology parameter)	RW	float	4	2	Cg in W/m²; values >0…1 [cSI: 0.002514; thin film: 0.001252]	Floating point number in IEEE754 format			
12048		x		x		Function generator PV: Open circuit voltage STC (Standard Test condition)	RW	uint(16)	2	1	0x0000 - 0xCCCC	Open circuit voltage (for translation see programming guide)			
12049		x		x		Function generator PV: Short circuit current STC	RW	uint(16)	2	1	0x0000 - 0xCCCC	Short circuit current (for translation see programming guide)			
12050		x		x		Function generator PV: MPP Voltage STC	RW	uint(16)	2	1	0x0000 - 0xCCCC	MPP voltage (for translation see programming guide)			
12051		x		x		Function generator PV: MPP current STC	RW	uint(16)	2	1	0x0000 - 0xCCCC	MPP current (for translation see programming guide)			
12052		x		x		Function generator PV: Module temperature	RW	uint(16)	2	1	ϑmodule in °C; 0x0000…0xCCCC corresponds to -40…80 °C	Module temperature (translation: value = [real value+40]/120*52428)			
12053		x		x		Function generator PV: Irradiation	RW	uint(16)	2	1	E in W/m²; 0x0000…0xCCCC corresponds to 0-1500 W/m	Irradiation (translation: value = real value/1500*52428)			
12054		x				Function generator PV: Status	R	uint(16)	2	1	Status code of PV simulation	0x0000 = Stop; 0x0001 = Run; 0x0002 = Stopped, mode fault; 0x0003 = Stopped, day trend fault; 0x0004 = Stopped, alarm; 0x0005 = Stopped, interpolation fault			
12055		x				Function generator PV: Actual day data count	R	uint(32)	4	2	0x00000000…0x000186A0	0x0000000F = 15 data samples written			