

PSB 9000 register list for devices with KE firmware from V2.23 (standard) or V2.07 (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 multiple registers (0x06)	Description	Access	Data type	Data length in bytes	Number of registers	Example	Profibus slot / Profinet subnet	Profibus/Profinet index in slot	EtherCAT SDO/PDO?	
0	x				Device class	R	uint16	2	1	58 = PSB 9000 Series	1	0	x	
1	x				Device type	R	char	40	20	PSB 9080-120	1	1	x	
21	x				Manufacturer	R	char	40	20		1	2	x	
41	x				Manufacturer address	R	char	40	20		1	3	x	
61	x				Manufacturer ZIP code	R	char	40	20		1	4	x	
81	x				Manufacturer phone number	R	char	40	20		1	5	x	
101	x				Manufacturer website	R	char	40	20		1	6	x	
121	x				Nominal voltage	R	float	4	2	Floating point number IEEE754	1	7	x	
123	x				Nominal current	R	float	4	2	Floating point number IEEE754	1	8	x	
125	x				Nominal power	R	float	4	2	Floating point number IEEE754	1	9	x	
127	x				Max. internal resistance	R	float	4	2	Floating point number IEEE754	1	10	x	
129	x				Min. internal resistance	R	float	4	2	Floating point number IEEE754	1	11	x	
131	x				Article no.	R	char	40	20	3000201	1	12	x	
151	x				Serial no.	R	char	40	20	1234565001	1	13	x	
171	x		x		User text	RW	char	40	20		1	14	x	
191	x				Firmware version (KE)	R	char	40	20		1	15	x	
211	x				Firmware version (HM)	R	char	40	20		1	16	x	
231	x				Firmware version (DR)	R	char	40	20		1	17	x	
402	x	x	x		Remote mode	RW	uint16	2	1	Coils : Remote	2	1	x	
405	x	x			DC output/input	RW	uint16	2	1	Coils : Output	2	4	x	
407	x	x			Condition of DC output/input after power fail alarm	RW	uint16	2	1	Coils : /Auto-On	3	30	x	
408	x	x			Condition of DC output/input after powering the device	RW	uint16	2	1	Coils : Power-On	2	16	x	
409	x	x	x		Operation mode (UPL/UR)	RW	uint16	2	1	Coils : Operation mode	2	7	x	
410	x	x			Restart of the device (warm start)	W	uint16	2	1	Coils : Restart	2	8	x	
411	x	x			Acknowledge alarms	W	uint16	2	1	Coils : Alarms	2	9	x	
416	x	x			Analog interface: Reference voltage (pin VREF)	RW	uint16	2	1	Coils : VREF	2	14	x	
417	x	x			Analog interface: REM-SB level	RW	uint16	2	1	Coils : REM-SB Level	2	36	x	
418	x	x			Analog interface: REM-SB action	W	uint16	2	1	Coils : REM-SB Action	2	37	x	
425	x	x			DC output/input after leaving remote	RW	uint16	2	1	Coils : Condition	2			
440	x	x			Analog interface: Pin 14 configuration	RW	uint16	2	1	Alarm selection 1				
										0x0000 = OVP (default); 0x0001 = OCP; 0x0002 = OPP; 0x0003 = OVP + OCP; 0x0004 = OVP + OPP; 0x0005 = OCP + OPP; 0x0006 = OVP + OCP + OPP;				
441	x	x	x		Analog interface: Pin 6 configuration	RW	uint16	2	1	Alarm selection 2				
										0x0000 = OT + PF; (default) 0x0001 = OT; 0x0002 = PF;				
498	x	x	x		Sink mode: Set power value	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	21	x	
499	x	x	x		Sink mode: Set current value	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	20	x	
500	x	x	x		Set voltage value	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	23	x	
501	x	x	x		Source mode: Set current value	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	24	x	
502	x	x	x		Source mode: Set power value	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	25	x	
503	x	x	x		Source mode: Set resistance value	RW	uint16	2	1	variable - 0x00E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	2	26	x	
504	x	x	x		Sink mode: Set resistance value	RW	uint16	2	1	variable - 0x00E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	2	22	x	
505	x				Device state	R	uint32	4	2	Bit 0-4: Control location Bit 6 : Master-slave type Bit 7 : Output state Bit 8 : Calibration is enabled Bit 9 : Regulation mode Bit 12 : PSB/PSBE 9000 operation mode Bit 13 : Function generator Bit 14 : External sense Bit 15 : Alarm Bit 16 : OVP Bit 17 : OCP Bit 18 : OPP Bit 19 : OT Bit 21 : Power fail 1 Bit 22 : Power fail 2 Bit 23 : Power fail 3 Bit 24 : UVD Bit 25 : OVD Bit 26 : UCD Bit 27 : OCD Bit 28 : OPD Bit 29 : MSP Bit 30 : REM-SB Bit 31 : OCP/OPP cause 0 = Slave; 1 = Master 0 = off; 1 = on 0 = off; 1 = on 0 = CV; 01 = CR; 10 = CC; 11 = CP 0 = source; 1 = sink 0 = stopped; 1 = running 0 = off; 1 = on 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = OK; 1 = Master-slave protection 0 = DC enabled; 1 = REM-SB disables power output 0 = source mode; 1 = sink mode	2	27	x	
507	x				Actual voltage	R	uint16	2	1	0x0000 - 0xFFFF (0 - 125%)	2	28	x	
508	x				Actual current	R	uint16	2	1	0x0000 - 0xFFFF (0 - 125%)	2	29	x	
509	x				Actual power	R	uint16	2	1	0x0000 - 0xFFFF (0 - 125%)	2	30	x	
520	x				Count of OV alarms since power up	R	uint16	2	1	0x0000 - 0xFFFF	3	20	x	
521	x				Source mode: Count of OC alarms since power up	R	uint16	2	1	0x0000 - 0xFFFF	3	21	x	
522	x				Source mode: Count of OP alarms since power up	R	uint16	2	1	0x0000 - 0xFFFF	3	22	x	
523	x				Count of OT alarms since power up	R	uint16	2	1	0x0000 - 0xFFFF	3	23	x	
524	x				Count of PF alarms since power up	R	uint16	2	1	0x0000 - 0xFFFF	3	24	x	
525	x				Sink mode: Count of PF alarms since power up	R	uint16	2	1	0x0000 - 0xFFFF	3	25	x	
526	x				Sink mode: Count of OP alarms since power up	R	uint16	2	1	0x0000 - 0xFFFF	3	26	x	
550	x	x	x		Overvoltage protection threshold (OVP)	RW	uint16	2	1	0x0000 - 0xE147 (0 - 110%)	3	0	x	
551	x	x	x		Source mode: Overcurrent protection threshold (OCP)	RW	uint16	2	1	0x0000 - 0xE147 (0 - 110%)	3	3	x	
556	x	x	x		Source mode: Overpower protection threshold (OPP)	RW	uint16	2	1	0x0000 - 0xE147 (0 - 110%)	3	6	x	
559	x	x	x		Source mode: Undervoltage detection (UVD)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	9	x	
560	x	x	x		Source mode: Adjustable UVD notification	RW	uint16	2	1	Adjustable UVD notification	3	10	x	
561	x	x	x		Source mode: Overvoltage detection (OVD)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	11	x	
562	x	x	x		Source mode: Adjustable OVD notification	RW	uint16	2	1	Adjustable OVD notification	3	12	x	
563	x	x	x		Source mode: Undercurrent detection (UCD)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	13	x	
564	x	x	x		Source mode: Adjustable UCD notification	RW	uint16	2	1	Adjustable UCD notification	3	14	x	
565	x	x	x		Source mode: Overcurrent detection (OCD)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	15	x	
566	x	x	x		Source mode: Adjustable OCD notification	RW	uint16	2	1	Adjustable OCD notification	3	16	x	
567	x	x	x		Source mode: Overpower detection (OPD)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	17	x	
568	x	x	x		Source mode: Adjustable OPD notification	RW	uint16	2	1	Adjustable OPD notification	3	18	x	
569	x	x	x		Sink mode: Overcurrent protection threshold OCP	RW	uint16	2	1	0x0000 - 0xE147 (0 - 110%)	3	4	x	
570	x	x	x		Sink mode: Overpower protection threshold OPP	RW	uint16	2	1	0x0000 - 0xE147 (0 - 110%)	3	7	x	
571	x	x	x		Sink mode: Undercurrent detection UCD	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	31	x	
572	x	x	x		Sink mode: Adjustable UCD notification	RW	uint16	2	1	Adjustable UCD notification	3	32	x	
573	x	x	x		Sink mode: Overcurrent detection OCD	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	33	x	
574	x	x	x		Sink mode: Adjustable OCD notification	RW	uint16	2	1	Adjustable OCD notification	3	34	x	
575	x	x	x		Sink mode: Overpower detection OPD	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	3	35	x	
576	x	x	x		Sink mode: Adjustable OPD notification	RW	uint16	2	1	Adjustable OPD notification	3	36	x	
650	x	x	x		Master-slave: Link mode on MS bus	RW	uint16	2	1	Coils : Mode	4	0	x	
653	x	x	x		Master-slave: Enable MS	RW	uint16	2	1	Coils : MS on/off	4	3	x	
654	x	x	x		Master-slave: Init MS	W	uint16	2	1	Coils : MS start init	4	4	x	
655	x	x	x		Master-slave: Condition	R	uint16	2	1	Reg : MS status	4	5	x	
656	x				Master-slave: Total voltage in V	R	float	4	2	Floating point number IEEE754	4	6	x	
658	x				Master-slave: Total current in A	R	float	4	2	Floating point number IEEE754	4	7	x	
660	x				Master-slave: Total power in W	R	float	4	2	Floating point number IEEE754	4	8	x	
662	x				Master-slave: Number of initialised slaves	R	uint16	2	1		4	9	x	
850	x	x	x		Function generator Arbitrary: Start/Stop	RW	uint16	2	1	Coils : Start/Stop	5	0	x	
851	x	x	x		Function generator Arbitrary: Select U	RW	uint16	2	1	Coils : U	5	1	x	
852	x	x	x		Function generator Arbitrary: Select I	RW	uint16	2	1	Coils : I	5	2	x	
859	x	x	x		Function generator Arbitrary: Start sequence	RW	uint16	2	1	0x0001...0x0003	5	9	x	
860	x	x	x		Function generator Arbitrary: End sequence	RW	uint16	2	1	0x0001...0x0003	5	10	x	
861	x	x	x		Function generator Arbitrary: Sequence cycles	RW	uint16	2	1	0x0000...0x00E7	5	11	x	
900	x	x		x	Function generator Arbitrary: Setup for sequence 1	RW	float	32	16	Bytes 0-3: UxIs(AC) in V Bytes 4-7: UxIs(AC) in V Bytes 8-11: Is(1/7) in Hz Bytes 12-15: Is(1/7) in Hz Bytes 16-19: Angle in degrees Bytes 20-23: UxIs(DC) in V Bytes 24-27: UxIs(DC) in V Bytes 28-31: Sequence time in µs	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator Integer in IEEE754 format 0...10000 Hz Integer in IEEE754 format 0...10000 Hz Integer in IEEE754 format 0...359° Floating point number in IEEE754 format, see device manual for value range, chapter about function generator Floating point number in IEEE754 format: 100 µs...36,000,000,000 µs	6	0	x
2468	x	x		x	Function generator Arbitrary: Setup for sequence 99	RW	float	32	16	Bytes 0-3: UxIs(AC) in V Bytes 4-7: UxIs(AC) in V Bytes 8-11: Is(1/7) in Hz Bytes 12-15: Is(1/7) in Hz Bytes 16-19: Angle in degrees Bytes 20-23: UxIs(DC) in V Bytes 24-27: UxIs(DC) in V Bytes 28-31: Sequence time in µs	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator Integer in IEEE754 format 0...10000 Hz Integer in IEEE754 format 0...359° Floating point number in IEEE754 format, see device manual for value range, chapter about function generator Floating point number in IEEE754 format: 100 µs...36,000,000,000 µs	6	98	x
9000	x	x	x		Upper limit of voltage set value (U-max)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	31	x	
9001	x	x	x		Lower limit of voltage set value (U-min)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	32	x	
9002	x	x	x		Source mode: Upper limit of current set value (I-max)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	33	x	
9003	x	x	x		Source mode: Lower limit of current set value (I-min)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	34	x	
9004	x	x	x		Source mode: Upper limit of power set value (P-max)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	35	x	
9005	x	x	x		Sink mode: Upper limit of power set value (P-max)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	36	x	
9006	x	x	x		Source mode: Upper limit of resistance set value (R-max)	RW	uint16	2	1	variable - 0x00E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	2	37	x	
9007	x	x	x		Sink mode: Upper limit of resistance set value (R-max)	RW	uint16	2	1	variable - 0x00E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	2	38	x	
9008	x	x	x		Sink mode: Upper limit of current set value (I-max)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	40	x	
9009	x	x	x		Sink mode: Lower limit of current set value (I-min)	RW	uint16	2	1	0x0000 - 0x00E5 (0 - 102%)	2	41	x	
10007	x	x	x		Ethernet: TCP keep-alive timeout	RW	uint16	2	1	Coils: Keep-alive on/off	0x0000 = off; 0xFF00 = on			
10008	x	x	x		Ethernet/Profinet/Modbus TCP: DHCP	RW	uint16	2	1	Coils: DHCP on/off	0x0000 = off; 0xFF00 = on			
10010	x	x	x		Protocol: Modbus	RW	uint16	2	1	Coils: MODBUS on/off	0x0000 = off; 0xFF00 = on			
10011	x	x	x		Protocol: SCPI	RW	uint16	2	1	Coils: SCPI on/off	0x0000 = off; 0xFF00 = on			
10020	x				AnyBus module: Type	R	uint16	2	1	Reg: Type	0x0005 = Profibus 0x0006 = 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			x	
10041	x				AnyBus module: Version number	R	uint8	4	2				x	
10043	x				AnyBus module: Serial number	RW	uint32	4	2				x	
10251	x	x	x		Profibus: Sent number	RW	uint16	2	1		0x0001		8	0
10252	x	x	x		Profibus: CanOpen Slave address	RW	uint16	2	1		Profibus: 0-125 CANopen: 0-127		8	1