

Preliminary PSB 9000 register list for devices with KE firmware from V2.xx (standard) or Vx.xx (with 3W) (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 subnet	Profibus/Profinet index in slot	
0	x					Device class	R	uint(16)	2	1		58 = PSB 9000 Series	1	0	
1	x					Device type	R	char	40	20	ASCII	PSB 9080-120	1	1	
21	x					Manufacturer	R	char	40	20	ASCII		1	2	
41	x					Manufacturer address	R	char	40	20	ASCII		1	3	
61	x					Manufacturer ZIP code	R	char	40	20	ASCII		1	4	
81	x					Manufacturer phone number	R	char	40	20	ASCII		1	5	
101	x					Manufacturer website	R	char	40	20	ASCII		1	6	
121	x					Nominal voltage	R	float	4	2	Floating point number IEEE754	80	1	7	
123	x					Nominal current	R	float	4	2	Floating point number IEEE754	120	1	8	
125	x					Nominal power	R	float	4	2	Floating point number IEEE754	500	1	9	
127	x					Max. Internal resistance	R	float	4	2	Floating point number IEEE754	25	1	10	
129	x					Min. Internal resistance	R	float	4	2	Floating point number IEEE754	0.02	1	11	
131	x					Article no.	R	char	40	20	ASCII	30000301	1	12	
151	x					Serial no.	R	char	40	20	ASCII	100010002	1	13	
171	x		x			User text	RW	char	40	20	ASCII		1	14	
191	x					Firmware version (KE)	R	char	40	20	ASCII		1	15	
211	x					Firmware version (HMI)	R	char	40	20	ASCII		1	16	
231	x					Firmware version (DR)	R	char	40	20	ASCII		1	17	
402	x		x			Remote mode	RW	uint(16)	2	1	Coils : Remote	0x0000 = off, 0xFF00 = on	2	1	
405	x		x			DC output/input	RW	uint(16)	2	1	Coils : Output	0x0000 = off, 0xFF00 = on	2	4	
407	x		x			Condition of DC output/input after power fail alarm	RW	uint(16)	2	1	Coils : Auto-On	0x0000 = off, 0xFF00 = auto-on	3	30	
408	x			x		Condition of DC output/input after powering the device	RW	uint(16)	2	1	Reg : Power-On	0x4FFF = off, 0x4FFE = restore	2	6	
409	x		x			Operation mode (UIP/UIR)	RW	uint(16)	2	1	Coils : Operation mode	0x0000 = UIP, 0xFF00 = UIR	2	7	
410		x				Restart of the device (warm start)	W	uint(16)	2	1	Coils : Restart	0x4F00 = execute	2	8	
411		x				Acknowledge alarms	W	uint(16)	2	1	Coils : Alarms	0x4F00 = acknowledge	2	9	
416	x		x			Analog interface: Reference voltage (pin VREF)	RW	uint(16)	2	1	Coils : VREF	0x0000 = 10V, 0xFF00 = 5V	2	14	
417	x		x			Analog interface: REM-SB level	RW	uint(16)	2	1	Coils : REM-SB Level	0x0000 = normal, 0xFF00 = inverted	2	36	
418	x		x			Analog interface: REM-SB action	W	uint(16)	2	1	Coils : REM-SB Action	0x0000 = DC off, 0xFF00 = DC auto	2	37	
425	x		x			DC output/input after leaving remote	RW	uint(16)	2	1	Coils : Condition	0x0000 = off, 0xFF00 = unchanged			
498	x		x			Sink mode: Set power value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)	2	?	
499	x		x			Sink mode: Set current value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)	2	?	
500	x		x			Set voltage value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide)	2	23	
501	x		x			Source mode: Set current value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)	2	24	
502	x		x			Source mode: Set power value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)	2	25	
503		x				Source mode: Set resistance value	RW	uint(16)	2	1	variable - 0xD0E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	Resistance value (for translation see programming guide)	2	26	
504		x		x		Sink mode: Set resistance value	RW	uint(16)	2	1	variable - 0xD0E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	Resistance value (for translation see programming guide)	2	?	
505		x				Device state	R	uint(32)	4	2	Bit 0-4: Control location Bit 5 : -- Bit 6 : Master-slave type Bit 7 : Output state Bit 8 : Calibration is enabled Bit 9-10 : Regulation mode Bit 12 : PSB 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 20 : Otpre 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 : OCP Bit 28 : OCD Bit 29 : MSS Bit 30 : REM-SB Bit 31 : OCP/OPP cause 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 = GPB; 0x19 = CAN; 0x1A = EtherCAT 0 = Slave; 1 = Master 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 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = OK; 1 = Master-slave in secure mode 0 = DC enabled; 1 = REM-SB disables power output 0 = source mode; 1 = sink mode	2	27		
507	x					Actual voltage	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual voltage (for translation see programming guide)	2	28	
508	x					Actual current	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual current (for translation see programming guide)	2	29	
509	x					Actual power	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual power (for translation see programming guide)	2	30	
520	x					Count of OV alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF		3	20	
521	x					Source mode: Count of OC alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF		3	21	
522	x					Source mode: Count of OP alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF		3	22	
523	x					Count of OT alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF		3	23	
524	x					Count of PF alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF		3	24	
525	x					Sink mode: Count of PF alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF		3	?	
526	x					Sink mode: Count of OP alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF		3	?	
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	
553	x		x			Source mode: Overcurrent protection threshold (OCP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OCP threshold (for translation see programming guide)	3	3	
556	x		x			Source mode: Overpower protection threshold (OPP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OPP threshold (for translation see programming guide)	3	6	
559	x		x			Source mode: Undervoltage detection (UVD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UVD threshold (for translation see programming guide)	3	9	
560	x		x			Source mode: Adjustable UVD notification	RW	uint(16)	2	1	Adjustable UVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	10	
561	x		x			Source mode: Overvoltage detection (OVD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OVD threshold (for translation see programming guide)	3	11	
562	x		x			Source mode: Adjustable OVD notification	RW	uint(16)	2	1	Adjustable OVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	12	
563	x		x			Source mode: Undercurrent detection (UCD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UCD threshold (for translation see programming guide)	3	13	
564	x		x			Source mode: Adjustable UCD notification	RW	uint(16)	2	1	Adjustable UCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	14	
565	x		x			Source mode: Overcurrent detection (OCD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OCD threshold (for translation see programming guide)	3	15	
566	x		x			Source mode: Adjustable OCD notification	RW	uint(16)	2	1	Adjustable OCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	16	
567	x		x			Source mode: Overpower detection (OPD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OPD threshold (for translation see programming guide)	3	17	
568	x		x			Source mode: Adjustable OPD notification	RW	uint(16)	2	1	Adjustable OPD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	18	
569	x		x			Sink mode: Overcurrent protection threshold OCP	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OCP threshold (for translation see programming guide)	3	?	
570	x		x			Sink mode: Overpower protection threshold OPP	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OPP threshold (for translation see programming guide)	3	?	
571	x		x			Sink mode: Undercurrent detection UCD	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UCD threshold (for translation see programming guide)	3	?	
572	x		x			Sink mode: Adjustable UCD notification	RW	uint(16)	2	1	Adjustable UCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	?	
573	x		x			Sink mode: Overcurrent detection OCD	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OCD threshold (for translation see programming guide)	3	?	
574	x		x			Sink mode: Adjustable OCD notification	RW	uint(16)	2	1	Adjustable OCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	?	
575	x		x			Sink mode: Overpower detection OPD	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OPD threshold (for translation see programming guide)	3	?	
576	x		x			Sink mode: Adjustable OPD notification	RW	uint(16)	2	1	Adjustable OPD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	?	
650	x		x			Master-slave: Link mode on MS bus	RW	uint(16)	2	1	Coils : Mode	0x0000 = Slave; 0xFF00 = Master	4	0	
652	x		x			Master-slave: Link mode on Share bus	RW	uint(16)	2	1	Coils : Mode	0x0000 = Slave; 0xFF00 = Master	4	2	
653	x		x			Master-slave: Enable MS	RW	uint(16)	2	1	Coils : MS on/off	0x0000 = off, 0xFF00 = on	4	3	
654						Master-slave: Init MS	W	uint(16)	2	1	Coils : MS start init	0x4F00 = Start init	4	4	
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; 0xFFFF = different models detected, init not OK; 0xFFFE = error; 0xFFFD = init OK	4	5	
656	x					Master-slave: Total voltage in V	R	float	4	2	Floating point number IEEE754	500	4	6	
658	x					Master-slave: Total current in A	R	float	4	2	Floating point number IEEE754	300	4	7	
660	x					Master-slave: Total power in W	R	float	4	2	Floating point number IEEE754	1500	4	8	
662	x					Master-slave: Number of installed slaves	R	uint(16)	2	1		1...15	4	9	
850	x		x			Function generator Arbitrary: Start/stop	RW	uint(16)	2	1	Coils : Start/Stop	0x0000 = Stop; 0xFF00 = Start	5	0	
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	
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	
859	x		x	x		Function generator Arbitrary: Start sequence	RW	uint(16)	2	1	0x0001...0x0083		5	9	
860	x		x	x		Function generator Arbitrary: End sequence	RW	uint(16)	2	1	0x0001...0x0083		5	10	
861	x		x	x		Function generator Arbitrary: Sequence cycles	RW	uint(16)	2	1	0x0000...0x03E7	0x0000 = infinite	5	11	
900		x			x	Function generator Arbitrary: Setup for sequence 1	RW	float	32	16	Bytes 0-3: Us/Is(AC) in V Bytes 4-7: Ue/Is(AC) in V Bytes 8-11: Is(1/T) in Hz Bytes 12-15: Is(1/T) in Hz Bytes 16-19: Angle in degrees Bytes 20-23: Us/Is(DC) in V Bytes 24-27: Ue/Is(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	
2468		x			x	Function generator Arbitrary: Setup for sequence 99	RW	float	32	16	Bytes 0-3: Us/Is(AC) in V Bytes 4-7: Ue/Is(AC) in V Bytes 8-11: Is(1/T) in Hz Bytes 12-15: Is(1/T) in Hz Bytes 16-19: Angle in degrees Bytes 20-23: Us/Is(DC) in V Bytes 24-27: Ue/Is(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	98	
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	
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	
9002	x		x			Source mode: 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	
9003	x		x			Source mode: 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	
9004	x		x			Source mode: 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	
9005	x		x			Sink mode: 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	?	
9006	x		x			Source mode: Upper limit of resistance set value (R-max)	RW	uint(16)	2	1	variable - 0xD0E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	Resistance value (for translation see programming guide)	2	37	
9007	x		x			Sink mode: Upper limit of resistance set value (R-max)	RW	uint(16)	2	1	variable - 0xD0E5 (x - 102%) The minimum percent value needs to be calculated from the rating, see technical specs	Resistance value (for translation see programming guide)	2	?	
9008	x		x			Sink mode: 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	?	
9009	x		x			Sink mode: Lower limit of current set value (I-min)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 -				