PSI 9000 Slave / PSB 9000 Slave / ELR 9000 HP Slave / EL 9000 B 2Q front USB port register list for devices with HMI firmware from V2.02

(check the installed version by reading register 211)

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
0		x				Device class	R	uint(16)	2	1		52 = Front HMI for ELR 9000 & PSI 9000 Slave series 62 = Front HMI for PSB 9000 Slave series
1		x				Device type	R	char	40	20	ASCII	PSI 9080-510
21		x				Manufacturer	R	char	40	20	ASCII	
41		x				Manufacturer address	R	char	40	20	ASCII	
61		x				Manufacturer ZIP code	R	char	40	20	ASCII	
81		x				Manufacturer phone number	R	char	40	20	ASCII	
101		x				Manufacturer website	R	char	40	20	ASCII	
121		x				Nominal voltage	R	float	4	2	Floating point number IEEE754	80
123		x				Nominal current	R	float	4	2	Floating point number IEEE754	510
125		x				Nominal power	R	float	4	2	Floating point number IEEE754	15000
127		x				Max. Internal resistance	R	float	4	2	Floating point number IEEE754	30
131		x				Article no.	R	char	40	20	ASCII	06290364
151		x				Serial no.	R	char	40	20	ASCII	1000000001
171		x			x	User text	RW	char	40	20	ASCII	
191		x				Firmware version (KE)	R	char	40	20	ASCII	V2.17
211		x				Firmware version (HMI)	R	char	40	20	ASCII	V2.01
231		x				Firmware version (DR)	R	char	40	20	ASCII	V1.6.4
402	x		x			Remote mode	RW	uint(16)	2	1	Coils : Remote	0x0000 = off; 0xFF00 = on
405	x		x			DC output / DC input	RW	uint(16)	2	1	Coils : Output / input	0x0000 = off; 0xFF00 = on
407	x		x			Condition of DC output / DC input after power fail alarm	RW	uint(16)	2	1	Coils : Output / input	0x0000 = off; 0xFF00 = auto
408		x		x		Condition of DC output / DC input after powering the device	RW	uint(16)	2	1	Reg : Power-On	0xFFFF = off; 0xFFFE = restore
409	x		x			Operation mode (UIP/UIR)	RW	uint(16)	2	1	Coils : Operation mode	0x0000 = UIP; 0xFF00 = UIR
411			x			Acknowledge alarms	W	uint(16)	2	1	Coils : Alarms	0xFF00 = acknowledge
498		x		x		Set power value (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)
499		x		x		Set current value (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
500		x		x		Set voltage value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide)
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
502		x		x		Set power value	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)
503		x		x		Set resistance value	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Resistance value (for translation see programming guide)
504		x		x		Set resistance value (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Resistance value (for translation see programming guide)
505		x				Device state	R	uint(32)	4	2	Bit 0- 4: Control location	0x00 = free; 0x03 = USB
											Bit 5 : -	
											Bit 6 : Master-slave type	0 = slave; 1 = master
											Bit 7 : Output / input state	0 = off; 1 = on
											Bit 8 : -	
											Bit 9-10 : Regulation mode	00 = CV; 01 = CR; 10 = CC; 11 = CP
											Bit 12-11 : -	
											Bit 13 : Function mode	0 = off; 1 = on
											Bit 14 : External sense	0 = off; 1 = on
											Bit 15 : Alarms	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 20 : -	
											Bit 21 : Power fail 1	0 = none; 1 = active
											Bit 22 : Power fail 2	0 = none; 1 = active
											Bit 23 : Power fail 3	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 : MSS	0 = OK; 1 = Master-slave in secure mode
507		x				Actual voltage	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual voltage (for translation see programming guide)
508		x				Actual current	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual current (for translation see programming guide)
509		x				Actual power	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual power (for translation see programming guide)
520		x				Count of OV alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count
521		x				Count of OC alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count
522		x				Count of OP alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count
523		x				Count of OT alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count
524		x				Count of PF alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count
525		x				Count of OC alarms since power up (PSB 9000 only, sink mode)	R	uint(16)	2	1	0x0000 - 0xFFFF	Count
526		x				Count of OP alarms since power up (PSB 9000 only, sink mode)	R	uint(16)	2	1	0x0000 - 0xFFFF	Count
550		x		x		Overvoltage protection threshold (OVP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OVP threshold (for translation see programming guide)
553		x		x		Overcurrent protection threshold (OCP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OCP threshold (for translation see programming guide)
556		x		x		Overpower protection threshold (OPP)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OPP threshold (for translation see programming guide)
559		x		x		Undervoltage detection (UVD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UVD threshold (for translation see programming guide)
560		x		x		Adjustable UVD notification	RW	uint(16)	2	1	Adjustable UVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
561		x		x		Overvoltage detection (OVD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OVD threshold (for translation see programming guide)
562		x		x		Adjustable OVD notification	RW	uint(16)	2	1	Adjustable OVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
563		x		x		Undercurrent detection (UCD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UCD threshold (for translation see programming guide)
564		x		x		Adjustable UCD notification	RW	uint(16)	2	1	Adjustable UCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
565		x		x		Overcurrent detection (OCD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OCD threshold (for translation see programming guide)
566		x		x		Adjustable OCD notification	RW	uint(16)	2	1	Adjustable OCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
567		x		x		Overpower detection (OPD)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OPD threshold (for translation see programming guide)
568		x		x		Adjustable OPD notification	RW	uint(16)	2	1	Adjustable OPD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
569		x		x		Overcurrent protection threshold OCP (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OCP threshold (for translation see programming guide)
570		x		x		Overpower protection threshold OPP (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OPP threshold (for translation see programming guide)
571		x		x		Undercurrent detection UCD (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	UCD threshold (for translation see programming guide)
572		x		x		Adjustable UCD notification (PSB 9000 only, sink mode)	RW	uint(16)	2	1	Adjustable UCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
573		x		x		Overcurrent detection OCD (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OCD threshold (for translation see programming guide)
574		x		x		Adjustable OCD notification (PSB 9000 only, sink mode)	RW	uint(16)	2	1	Adjustable OCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
575		x		x		Overpower detection OPD (PSB 9000 only, sink mode)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	OPD threshold (for translation see programming guide)
576		x		x		Adjustable OPD notification (PSB 9000 only, sink mode)	RW	uint(16)	2	1	Adjustable OPD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm
9000		x				Upper limit of voltage set value (U-max)	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide)
9001		x				Lower limit of voltage set value (U-min)	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide)
9002		x				Upper limit of current set value (I-max)	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
9003		x				Lower limit of current set value (I-min)	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
9004		x				Upper limit of power set value (P-max)	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)
9006		x				Upper limit of resistance set value (R-max)	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Resistance value (for translation see programming guide)
9007		x				Upper limit of resistance set value (R-max)PSB 9000: sink mode	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Resistance value (for translation see programming guide)
9008		x				Upper limit of current set value (I-max)PSB 9000: sink mode	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
9009		x				Lower limit of current set value (I-min)PSB 9000: sink mode	R	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
10566		x				USB: Connection timeout in milliseconds	R	uint(16)	2	1	5..65535	Default: 5ms