PSI 9000 register list for devices with KE firmware from V2.06 (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	Access condition for writing	Data type	Data length in bytes	Number of registers	Data	Example	Profibus/Profinet slot	Profibus/Profinet index in slot
0		x				Device class	R		uint(16)	2	1		20 - ELR 9000	1	0
1		x				Device type	R		char	40	20		ELR 9080-170	1	1
21		x				Manufacturer	R		char	40	20			1	2
41		x				Manufacturer address	R		char	40	20			1	3
61		x				Manufacturer ZIP code	R		char	40	20			1	4
81		x				Manufacterer phone number	R		char	40	20			1	5
101		x				Manufacturer website	R		char	40	20			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	170	1	8
125		x				Nominal power	R		float	4	2	Floating point number IEEE754	3500	1	9
127		x				Max. Internal resistance	R		float	4	2	Floating point number IEEE754	12	1	10
129		x				Min. Internal resistance	R		float	4	2	Floating point number IEEE754	0.005	1	11
131		x				Article no.	R		char	40	20		33230401	1	12
151		x				Serial no.	R		char	40	20		100010002	1	13
171		x			x	User text	RW	REM	char	40	20			1	14
191		x				Firmware version (KE)	R		char	40	20		V2.01 05.09.2012	1	15
211		x				Firmware version (HMI)	R		char	40	20		V2.02 13.08.2012	1	16
231		x				Firmware version (DR)	R		char	40	20		V2.01 10.09.2012	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	RW	REM	uint(16)	2	1	Coils : output	0x0000 = off; 0xFF00 = on	2	4
408		x		x		Condition of output/input after powering the device	RW	REM	uint(16)	2	1	Reg : Power-On	0xFFFF = off; 0xFFFE = restore	2	6
409	x		x			Operation mode (UIP/UIR)	RW	REM	uint(16)	2	1	Coils : Operation mode	0x0000 = UIP; 0xFF00 = UIR	2	7
410			x			Restart of the device (warm start)	W	REM	uint(16)	2	1	Coils : Restart	0xFF00 = execute	2	8
411			x			Acknowledge alarms	W	REM	uint(16)	2	1	Coils : Alarms	0xFF00 = acknowledge	2	9
416	x		x			Analog interface: Reference voltage (Vref)	RW	REM	uint(16)	2	1	Coils : Vref	0x0000 = 10V; 0xFF00 = 5V	2	14
500		x		x		Set voltage value	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)	2	23
501		x		x		Set current value	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value (for translation see programming guide)	2	24
502		x		x		Set power value	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Power value (for translation see programming guide)	2	25
503		x		x		Set resistance value	RW	REM	uint(16)	2	1	ELR: variable - 0xCCCC (x - 100%) Minimum value needs to be calculated, refer to programming guide PS: 0x0000 - 0xCCCC (0 - 100%)	Resistance value (for translation see programming guide)	2	26
505		x				Device state	R		uint(32)	4	2	Bit 0- 4: Control location	0x00 = free; 0x01 = local; 0x02 = remote; 0x03 = USB; 0x04 = analog; 0x05 = Profibus; 0x06 = Ethernet; 0x08 = Master/Slave; 0x09 = RS232; 0x10 = CANopen; 0x11 = Devicenet; 0x12 = Modbus TCP 1P; 0x13 = Profinet 1P; 0x14 = Ethernet 1P; 0x15 = Ethernet 2P; 0x16 = Modbux TCP 2P; 0x17 = Profinet 2P	2	27
												Bit 5 : -			
												Bit 6 : Master-slave type	0 = Slave; 1 = Master		
												Bit 7 : Output state	0 = off; 1 = on		
												Bit 8 : MSB	0 = Master-Slave not in two-quadrant 1 = Master-Slave in two-quadrant		
												Bit 10-9: Regulation mode	00 = CV; 01 = CR; 10 = CC; 11 = CP		
												Bit 12-11 : -	0 = Current monitor is positiv; 1 = Current monitor is negativ		
												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 : -	0 = none; 1 = active		
												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)	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
550		x		x		Overvoltage protection threshold (OVP)	RW	REM	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OVP threshold (for translation see programming guide)	3	0
553		x		x		Overcurrent protection threshold (OCP)	RW	REM	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OCP threshold (for translation see programming guide)	3	3
556		x		x		Overpower protection threshold (OPP)	RW	REM	uint(16)	2	1	0x0000 - 0xE147 (0 - 110%)	OPP threshold (for translation see programming guide)	3	6
559		x		x		Undervoltage detection (UVD)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	UVD threshold (for translation see programming guide)	3	9
560		x		x		Adjustable UVD notification	RW	REM	uint(16)	2	1	Coils : Adjustable UVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	10
561		x		x		Overvoltage detection (OVD)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	OVD threshold (for translation see programming guide)	3	11
562		x		x		Adjustable OVD notification	RW	REM	uint(16)	2	1	Coils : Adjustable OVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	12
563		x		x		Undercurrent detection (UCD)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	UCD threshold (for translation see programming guide)	3	13
564		x		x		Adjustable UCD notification	RW	REM	uint(16)	2	1	Coils : Adjustable UCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	14
565		x		x		Overcurrent detection (OCD)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	OCD threshold (for translation see programming guide)	3	15
566		x		x		Adjustable OCD notification	RW	REM	uint(16)	2	1	Coils : Adjustable OCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	16
567		x		x		Overpower detection (OPD)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	OPD threshold (for translation see programming guide)	3	17
568		x		x		Adjustable OPD notification	RW	REM	uint(16)	2	1	Coils : Adjustable OPD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	18
650	x		x			Master-slave: Link mode	RW	REM	uint(16)	2	1	Coils : Mode	0x0000 = Slave; 0xFF00 = Master	4	0
651		x		x		Master-slave: Address	RW	REM	uint(16)	2	1	Reg : Address	0x0000…0x0010 (max. 17 units)	4	1
653	x		x			Master-slave: Enable MS	RW	REM	uint(16)	2	1	Coils : MS on/off	0x0000 = off; 0xFF00 = on	4	3
654			x			Master-slave: Init MS	W	REM	uint(16)	2	1	Coils : MS start init	0x0000 = off; 0xFF00 = on	4	4
655		x		x		Master-slave: Condition	R		uint(16)	2	1	Reg : MS status	0x0000 = not initialised; 0x0001 = init running; 0xFFFD = Different models detected, init not OK; 0xFFFF = init OK	4	5
656		x				Master-slave: Total voltage	R		float	4	2	Floating point number IEEE754	500	4	6
658		x				Master-slave: Total current	R		float	4	2	Floating point number IEEE754	850	4	7
660		x				Master-slave: Total power	R		float	4	2	Floating point number IEEE754	16.50	4	8
662		x				Master-slave: Number of initialised slaves	R		uint(16)	2	1		0…10	4	9
663		x				Master-slave: Slave in remote	R		uint(16)	2	1	Coils : Remote?	0x0000 = free; 0xFFFF = Remote		
850	x		x			Function generator Arbitary: Start/stop	RW	REM	uint(16)	2	1	Coils : Start/Stop	0x0000 = Stop; 0xFF00 = Start	5	0
851	x		x			Function generator Arbitrary: Select U	RW	REM	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	REM	uint(16)	2	1	Coils : I	0x0000 = not assigned; 0xFF00 = Assign function to current	5	2
854	x		x			Function generator XY: Select U-I mode	RW	REM	uint(16)	2	1	Coils : U-I	0x0000 = not assigned; 0xFF00 = Assign function to U-I curve	5	4
855	x		x			Function generator XY: Select I-U mode	RW	REM	uint(16)	2	1	Coils : I-U	0x0000 = not assigned; 0xFF00 = Assign function to I-U curve	5	5
859		x		x		Function generator Arbitrary: Start sequence	RW	REM	uint(16)	2	1	0x0001…0x0064		5	9
860		x		x		Function generator Arbitrary: End sequence	RW	REM	uint(16)	2	1	0x0001…0x0064		5	10
861		x		x		Function generator Arbitrary: Sequence cycles	RW	REM	uint(16)	2	1	0x0000…0x03E7	0x0000 = infinite	5	11
900		x			x	Function generator Arbitrary: Setup for sequence 1	RW	REM	float	32	16	Byte 3-0: Us/Is(AC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator	6	0
												Byte 7-4: Ue/Ie(AC) in V			
												Byte 15-12: fs(1/T) in Hz			
												Byte 19-16: fe(1/T) in Hz			
												Byte 11-8: Angle in degrees	Integer in IEEE754 format: 0°...359°		
												Byte 23-20: Us/Is(DC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator		
												Byte 27-24: Ue/Ie(DC) in V			
												Byte 31-28: Sequence time in µs	Floating point number in IEEE754 format: 100µs...360,000,000,000µs		
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
2484		x			x	Function generatorArbitrary: Setup for sequence 100	RW	REM	float	32	16	Byte 3-0: Us/Is(AC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator	6	99
												Byte 7-4: Ue/Ie(AC) in V			
												Byte 15-12: fs(1/T) in Hz			
												Byte 19-16: fe(1/T) in Hz			
												Byte 11-8: Angle in degrees	Integer in IEEE754 format: 0°...359°		
												Byte 23-20: Us/Is(DC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator		
												Byte 27-24: Ue/Ie(DC) in V			
												Byte 31-28: Sequence time in µs	Floating point number in IEEE754 format: 100µs...360,000,000,000µs		
2600		x			x	Function generator: X/Y table, block 0	RW	REM	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
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
6680		x			x	Function generator: X/Y table, block 255	RW	REM	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
9000		x		x		Upper limit of voltage set value (U-max)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)	2	31
9001		x		x		Lower limit of voltage set value (U-min)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)	2	32
9002		x		x		Upper limit of current set value (I-max)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value (for translation see programming guide)	2	33
9003		x		x		Lower limit of current set value (I-min)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value (for translation see programming guide)	2	34
9004		x		x		Upper limit of power set value (P-max)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Power value (for translation see programming guide)	2	35
9006		x		x		Upper limit of resistance set value (R-max)	RW	REM	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Resistance value (for translation see programming guide)	2	37
10008	x		x			Ethernet/Profinet/Modbus TCP: DHCP	RW	REM	uint(16)	2	1	Coils: DHCP on/off			
10020		x				AnyBus module: Code number	R		uint(16)	2	1		0x0009 = RS232		
													0x000A = Agilent IO		
													0x0010 = CANopen		
													0x0011 = Devicenet		
													0x0012 = Modbus-TCP 1P		
													0x0013 = Profinet 1P		
													0x0014 = Ethernet 1P		
													0x0015 = Ethernet 2P		
													0x0016 = Modbus-TCP 2P		
													0x0017 = Profinet 2P		
10021		x				AnyBus module: Interface type	R		char	40	20		"Profibus DPV1"		
10041		x				AnyBus module: Version number	R		char	4	2				
10043		x				AnyBus module: Serial number	R		char	4	2				
10251		x		x		Profibus: Ident number	RW		uint(16)	2	1		0xA001	8	0
10252		x		x		Profibus/DeviceNet/CanOpen: Slave address	RW		uint(16)	2	1		Profibus: 0-125 Devicenet: 0-63 CANopen: 0-127	8	1
10253		x			x	Profibus/Profinet: User-defineable "Function tag"	RW	REM	char	32	16		"Test"	8	2
10269		x			x	Profibus/Profinet: User-defineable "Location tag"	RW	REM	char	22	11		"Test"	8	3
10280		x			x	Profibus/Profinet: User-defineable installation date	RW	REM	char	40	20		"13.01.2012 09:59:00"	8	4
10300		x			x	Profibus/Profinet: User-defineable description	RW	REM	char	54	27		"www.webpage.de"	8	5
10354		x			x	Profinet: User-defineable "Station name"	RW	REM	char	200	100		"Test"	8	6
10502		x			x	Ethernet/Profinet/Modbus TCP: IP address	RW	REM	uint(8)	4	2	Byte 0: 0..255 Byte 1: 0..255 Byte 2: 0..255 Byte 3: 0..256	192.168.0.2 (default)		
10504		x			x	Ethernet/Profinet/Modbus TCP: Subnet mask	RW	REM	uint(8)	4	2	Byte 0: 0..255 Byte 1: 0..255 Byte 2: 0..255 Byte 3: 0..256	255.255.255.0 (default)		
10506		x			x	Ethernet/Profinet/Modbus TCP: Gateway	RW	REM	uint(8)	4	2	Byte 0: 0..255 Byte 1: 0..255 Byte 2: 0..255 Byte 3: 0..256	192.168.0.1 (default)		
10508		x			x	Ethernet/Profinet/Modbus TCP: Host name	RW	REM	char	54	27		"Client" (default)		
10535		x			x	Ethernet/Profinet/Modbus TCP: Domain name	RW	REM	char	54	27		"Workgroup" (default)		
10562		x			x	Ethernet/Profinet/Modbus TCP: DNS 1	RW	REM	uint(8)	4	2		0.0.0.0 (default)		
10564		x			x	Ethernet/Profinet/Modbus TCP: DNS 2	RW	REM	uint(8)	4	2		0.0.0.0 (default)		
10567		x			(x)	Ethernet/Profinet/Modbus TCP: MAC	R(W)	REM	uint(8)	6	3		00:50:C2:C3:12:34 or 00-50-C2-C3-12-34		
10570		x		x		Ethernet/Profinet/Modbus TCP: Connection speed Ethernet port 1	RW	REM	uint(8)	2	1		0x0000 = Auto; 0x0001 = 10Mbit half duplex; 0x0002 = 10Mbit full duplex; 0x0003 = 100Mbit half duplex; 0x0004 = 100Mbit full duplex		
10571		x		x		Ethernet/Profinet/Modbus TCP: Connection speed Ethernet port 2	RW	REM	uint(8)	2	1		0x0000 = Auto; 0x0001 = 10Mbit half duplex; 0x0002 = 10Mbit full duplex; 0x0003 = 100Mbit half duplex; 0x0004 = 100Mbit full duplex		
10572		x		x		Ethernet/Profinet/Modbus TCP: Port	RW	REM	uint(16)	2	1	0..65536	5025 (default), except port 80		
10700		x		x		DeviceNet/CANopen: Baudrate	RW	REM	uint(16)	2	1		Devicenet / CANopen / RS232 0x00 125kbps / 10kbps / 2400 Bd 0x01 250kbps / 20kbps / 4800 Bd 0x02 500kbps / 50kbps / 9600 Bd 0x03 Autobaud / 100kbps / 19200 Bd 0x04 - / 125kbps / 38400 Bd 0x05 - / 250kbps / 57600 Bd 0x06 - / 500kbps / 115200 Bd 0x07 - / 800kbps / - 0x08 - / 1Mbps / - 0x09 - / Autobaud / -		