

EL 9000 B 2Q front USB port register list for devices with HMI firmware from V2.01 (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 = EL 9000 B 2Q series
1	x					Device type	R	char	40	20	ASCII	EL 9080-170 B 2Q
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	170
125	x					Nominal power	R	float	4	2	Floating point number IEEE754	2400
127	x					Max. Internal resistance	R	float	4	2	Floating point number IEEE754	15
129	x					Min. Internal resistance	R	float	4	2	Floating point number IEEE754	0.04
131	x					Article no.	R	char	40	20	ASCII	33200705
151	x					Serial no.	R	char	40	20	ASCII	
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 input	RW	uint(16)	2	1	Coils : Input	0x0000 = off; 0xFF00 = on
407	x		x			Condition of DC input after power fail alarm	RW	uint(16)	2	1	Coils : Input	0x0000 = off; 0xFF00 = auto-on
408	x			x		Condition of 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
416	x		x			Analog interface: Reference voltage (pin VREF)	RW	uint(16)	2	1	Coils : VREF	0x0000 = 10V; 0xFF00 = 5V
417	x		x			Analog interface: REM-SB level	RW	uint(16)	2	1	Coils : REM-SB Level	0x0000 = normal; 0xFF00 = inverted
418		x				Analog interface: REM-SB action	W	uint(16)	2	1	Coils : REM-SB Action	0x0000 = DC off; 0xFF00 = DC auto
422	x		x			Speed of internal voltage controller	RW	uint(16)	2	1	Coils : Controller speed	0x0000 = slow; 0xFF00 = fast
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 - 0xC0CC (0 - 100%)	Resistance value (for translation see programming guide)
505			x			Device state	R	uint(32)	4	2	Bit 0-4: Control location Bit 5 : - Bit 6 : Master-slave type Bit 7 : Input state Bit 8 : - Bit 9-10: Regulation mode Bit 12-11 : - Bit 13 : Function mode Bit 14 : External sense Bit 15 : Alarms 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 : OCD Bit 28 : OPD Bit 29 : MSS 0 = free; 0x03 = USB 0 = slave; 1 = master 0 = off; 1 = on 00 = CV; 01 = CR; 10 = CC; 11 = CP 0 = off; 1 = on 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 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

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	Coils : 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	Coils : 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	Coils : 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	Coils : 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	Coils : 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)
10566		x				RS232/USB: Connection timeout in milliseconds	R	uint(16)	2	1	5..65535	Default: 5ms