

EL 3000 B register list for devices with KE firmware from V2.01 (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
0	x		x			Device class	R	uint(16)	2	1		55 = EL 3000 B Series
1	x			x		Device type	R	char	40	20	ASCII	EL 3500-10 B
21	x			x		Manufacturer	R	char	40	20	ASCII	
41	x			x		Manufacturer address	R	char	40	20	ASCII	
61	x			x		Manufacturer ZIP code	R	char	40	20	ASCII	
81	x			x		Manufacturer phone number	R	char	40	20	ASCII	
101	x			x		Manufacturer website	R	char	40	20	ASCII	
121	x			x		Nominal voltage	R	float	4	2	Floating point number IEEE754	500
123	x			x		Nominal current	R	float	4	2	Floating point number IEEE754	10
125	x			x		Nominal power	R	float	4	2	Floating point number IEEE754	400
131	x			x		Article no.	R	char	40	20	ASCII	35320207
151	x			x		Serial no.	R	char	40	20	ASCII	1234567890
171	x			x		User text	RW	char	40	20	ASCII	
191	x			x		Firmware version (KE)	R	char	40	20	ASCII	V2.01
211	x			x		Firmware version (HMI)	R	char	40	20	ASCII	V2.01
231	x			x		Firmware version (DR)	R	char	40	20	ASCII	V1.0.7
402	x	x				Remote mode	RW	uint(16)	2	1	Coils : Remote	0x0000 = off; 0xFF00 = on
405	x	x	x			DC output	RW	uint(16)	2	1	Coils : Converter	0x0000 = off; 0xFF00 = active
407	x	x	x			Condition of DC output after power fail alarm	RW	uint(16)	2	1	Coils : Auto-On	0x0000 = off; 0xFF00 = auto-on
408	x		x			Condition of DC output after powering the device	RW	uint(16)	2	1	Coils : Power-On	0xFFFF = off; 0xFFFE = Restore
409	x	x	x			Operation mode (UIP/UIR)	RW	uint(16)	2	1	Coils : Operation mode	0x0000 = UIP; 0xFF00 = IUR
410	x	x				Restart of the device (warm start)	W	uint(16)	2	1	Coils : Restart	0xFF00 = execute
411	x	x				Acknowledge alarms	W	uint(16)	2	1	Coils : Alarms	0xFF00 = acknowledge
416	x	x	x			Analog interface: Reference voltage (pin VREF)	RW	uint(16)	2	1	Coils : VREF	0x0000 = 10V; 0xFF00 = 5V
417	x	x	x			Analog interface: REM-SB level	RW	uint(16)	2	1	Coils : REM-SB Level	0x0000 = normal; 0xFF00 = inverted
418	x	x				Analog interface: REM-SB action	RW	uint(16)	2	1	Coils : REM-SB Action	0x0000 = DC off; 0xFF00 = DC auto
422	x	x	x			Speed of internal voltage controller	RW	uint(16)	2	1	Coils : Controller speed	0x0000 = slow; 0xFF00 = fast
425	x	x	x			DC output after leaving remote	RW	uint(16)	2	1	Coils : Condition	0x0000 = off (default); 0xFF00 = unchanged
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	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
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	minimum - 0xD0E5 (x - 102%)	Resistance value (the minimum value varies from model to model and can be calculated from the technical specification in the manual)
505		x				Device state	R	uint(32)	4	2	Bit 0- 4: Control location Bit 7 : DC input Bit 9-10 : Regulation mode Bit 11 : Remote control Bit 14 : External sense Bit 15 : Alarms Bit 16 : OVP Bit 17 : OCP Bit 18 : OPP Bit 19 : OT Bit 21 : Power fail Bit 30 : REM-SB	0x00 = frei; 0x01 = lokal; 0x02 = fern; 0x03 = USB; 0x04 = analog; 0x06 = Ethernet 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 = DC enabled; 1 = REM-SB disables DC output/input
507	x		x			Actual voltage	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual voltage (for translation see programming guide)
508	x		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)
850	x		x			Function generator: Start/stop	RW	uint(16)	2	1	Coils : Start/Stop	0x0000 = stop; 0xFF00 = run
851	x		x			Function generator: Select U	RW	uint(16)	2	1	Coils : Select U	0x0000 = off; 0xFF00 = activate FG for voltage
852	x		x			Function generator: Select I	RW	uint(16)	2	1	Coils : Select I	0x0000 = off; 0xFF00 = activate FG for current
854	x		x			Function generator: Submit new function data during run	RW	uint(16)	2	1	Coils : Submit	0x0000 = do nothing; 0xFF00 = Submit for next run
900	x		x			Function generator: Static level 1	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	0x6666 = 50%
901	x		x			Function generator: static level 2	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	0x6666 = 50%
902	x			x		Function generator: t1 (rise time P1->P2)	RW	float	4	2	Floating point number IEEE754 format Value: 3µs-6.000.000.000µs Resolution: 3µs	3000 = 3000µs Rule: (t1 + t2 + t3 + t4) <= 100 min.
904		x			x	Function generator: t2 (hold time level 2)	RW	float	4	2	Floating point number IEEE754 format Value: 3µs-6.000.000.000µs Resolution: 3µs	3000 = 3000µs Rule: (t1 + t2 + t3 + t4) <= 100 min.
906		x			x	Function generator: t3 (fall time P2->P1)	RW	float	4	2	Floating point number IEEE754 format Value: 3µs-6.000.000.000µs Resolution: 3µs	3000 = 3000µs Rule: (t1 + t2 + t3 + t4) <= 100 min.
908		x			x	Function generator: t4 (hold time level 1)	RW	float	4	2	Floating point number IEEE754 format Value: 3µs-6.000.000.000µs Resolution: 3µs	3000 = 3000µs Rule: (t1 + t2 + t3 + t4) <= 100 min.
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)
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)
9002	x		x			Upper limit of current set value (I-max)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
9003	x		x			Lower limit of current set value (I-min)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide)
9004	x		x			Upper limit of power set value (P-max)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Power value (for translation see programming guide)
9006	x		x			Upper limit of resistance set value (R-max)	RW	uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%)	Resistance value (for translation see programming guide)
10007	x		x			Ethernet: TCP keep-alive	RW	uint(16)	2	1	Coils: Keep-alive on/off	0x0000 = off; 0xFF00 = on
10008	x		x			Ethernet: DHCP	RW	uint(16)	2	1	Coils: DHCP on/off	0x0000 = off; 0xFF00 = on
10010	x		x			Protocol: Modbus	RW	uint(16)	2	1	Coils: MODBUS on/off	0x0000 = off; 0xFF00 = on
10011	x		x			Protocol: SCPI	RW	uint(16)	2	1	Coils: SCPI on/off	0x0000 = off; 0xFF00 = on
10017	x					Ethernet: DHCP status	R	uint(16)	2	1	Bit0: DHCP running	0 = manual; 1 = DHCP
10502	x		x			Ethernet: IP address	RW	uint(8)	4	2	Bytes 0 - 3: 0.255	192.168.0.2 (default)
10504	x		x			Ethernet: Subnet mask	RW	uint(8)	4	2	Bytes 0 - 3: 0.255	255.255.255.0 (Standard)
10506	x		x			Ethernet: Gateway	RW	uint(8)	4	2	Bytes 0 - 3: 0.255	192.168.0.1 (default)
10508	x		x			Ethernet: Host name	RW	char	54	27	ASCII	"Client" (default)
10535	x		x			Ethernet: Domain name	RW	char	54	27	ASCII	"Workgroup" (default)
10562	x		x			Ethernet: DNS	RW	uint(8)	4	2	Bytes 0 - 3: 0.255	0.0.0.0 (default)
10566	x		x			USB: Connection timeout (in milliseconds)	RW	uint(16)	2	1	5..65535	Default: 5 ms
10567	x					Ethernet: MAC	RW	uint(8)	6	3	Bytes 0 - 5: 0.255	00:50:C2:C3:12:34 or 00:50:C2:C3-12:34
10572	x		x			Ethernet: Port	RW	uint(16)	2	1	0..65536 (except 80)	5025 (default)
10573	x		x			Ethernet: TCP Socket timeout (in seconds)	RW	uint(16)	2	1	5..65535	Default: 5 s
11000	x		x			MPP Tracking: MPP-Mode	RW	uint(16)	2	1	0..4	0 (default), 1 (MPP1), 2 (MPP2), 3 (MPP3), 4 (MPP4)
11001	x		x			MPP Tracking: Uoc (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11002	x		x			MPP Tracking: Isc (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value (for translation see programming guide)
11003	x		x			MPP Tracking: Umpp (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11004	x		x			MPP Tracking: Imp (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value (for translation see programming guide)
11005	x		x			MPP Tracking: Pmpp (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Power value (for translation see programming guide)
11006	x		x			MPP Tracking: DeltaP (Setup)	RW	uint(16)	2	1	0W - Nominal power	Power value (for translation see programming guide)
11007	x					MPP Tracking: Umpp (Result in MPP1/2/4)	R	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11008	x					MPP Tracking: Imp (Result in MPP1/2/4)	R	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value (for translation see programming guide)
11009	x					MPP Tracking: Pmpp (Result in MPP1/2/4)	R	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Power value (for translation see programming guide)
11010	x		x			MPP Tracking: Start/Stop	RW	uint(16)	2	1	Coils: Start/Stop	0x0000 = stop; 0xFF00 = start
11011	x					MPP Tracking: Finished (Function status for MPP1/2/4)	R	uint(16)	2	1	Coils: Status	0x0000 = running; 0xFF00 = finished
11012	x					MPP Tracking: Error during function	R	uint(16)	2	1	Coils: Error	0x0000 = no error; 0xFF00 = error
11013						MPP-Tracking : Interval (Setup)	RW	uint(16)	2	1	0x0005 - 0xEA60	Regulation & measuring interval in milliseconds (5 ms - 60000 ms), for the tracking in all modes
11014			x			MPP4 : Start	RW	uint(16)	2	1	0x0001 - 0x0064	Start voltage value out of 100 (related to registers 11100-11199) for use in MPP4 mode
11015			x			MPP4 : End	RW	uint(16)	2	1	0x0001 - 0x0064	End voltage value out of 100 (related to registers 11100-11199) for use in MPP4 mode
11016			x		x	MPP4 : Repetitions	RW	uint(16)	2	1	0x0000 - 0xFFFF	0x0000 = no repetitions
11100	x			x		MPP Tracking: User curve (MPP4 mode) voltage values 1-20	RW	uint(16)	40	20	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11120	x			x		MPP Tracking: User curve (MPP4 mode) voltage values 21-40	RW	uint(16)	40	20	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11140	x			x		MPP Tracking: User curve (MPP4 mode) voltage values 41-60	RW	uint(16)	40	20	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11160	x			x		MPP Tracking: User curve (MPP4 mode) voltage values 61-80	RW	uint(16)	40	20	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11180	x			x		MPP Tracking: User curve (MPP4 mode) voltage values 81-100	RW	uint(16)	40	20	0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11200	x					MPP Tracking: User curve (MPP4 mode) results 1-10 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11230	x					MPP Tracking: User curve (MPP4 mode) results 11-20 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11260	x					MPP Tracking: User curve (MPP4 mode) results 21-30 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11290						MPP Tracking: User curve (MPP4 mode) results 31-40 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11320			x			MPP Tracking: User curve (MPP4 mode) results 41-50 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11350	x					MPP Tracking: User curve (MPP4 mode) results 51-60 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11380	x					MPP Tracking: User curve (MPP4 mode) results 61-70 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11410	x					MPP Tracking: User curve (MPP4 mode) results 71-80 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value Current value Power value (for translation see programming guide)
11440	x					MPP Tracking: User curve (MPP4 mode) results 81-90 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000	