EL 3	300	0 E	3 r	eg	ist	er list for devices with KE firmw	are	from	V2	2.0	1 (check the installed version in yo	ur device's MENU in item INFO HW, SW)
		SIES	(02)	register (0x06)	SIELS					"		
address	coils (0x01)	ısıbaı bu	Write single coil (0x05)	e registe	ibe regis				Data length in bytes	registers	Data	
Modbus ad	ad coils	ad Nolding na t	te single	te single	ne man 10)		Access	Data type	a length	mber of		
0 1	ч	X X X	Writ	x	·×O)	Description Device class Device type	R R	uint(16)	2 40	1	Data ASCII	Example 55 = EL 3000 B Series EL 3500-10 B
21 41 61		X X			X	Manufacturer Manufacturer address Manufacturer ZIP code	R R R	char char char	40 40 40	20 20	ASCII ASCII ASCII	22 0000 10 0
81 101 121		X X			X	Manufacterer phone number Manufacturer website Nominal voltage	R R R	char char float	40 40 4	20	ASCII ASCII Floating point number IEEE754	500
123 125 131		X X			X X	Nominal current Nominal power Article no.	R R R	float float char	4 40	20	Floating point number IEEE754 Floating point number IEEE754 ASCII	10 400 35320207
151 171 191		X X			X X	Serial no. User text Firmware version (KE)	R RW R	char char char	40 40 40	20 20	ASCII ASCII	1234567890
211 231 402	х	x	х		Х	Firmware version (HMI) Firmware version (DR) Remote mode	R R RW	char char uint(16)	40 40 2	20 1	ASCII ASCII Coils : Remote	V2.01 V1.0.7 0x0000 = off; 0xFF00 = on
405 407 408	X	х	x	х		DC output Condition of DC output after power fail alarm Condition of DC output after powering the device	RW RW	uint(16) uint(16) uint(16)	2 2	1	Coils : Converter Coils : Auto-On Coils : Power-On	0x0000 = off; 0xFF00 = active 0x0000 = off; 0xFF00 = auto-on 0xFFFE = off; 0xFFEE = Restore
409 410 411	Х	Х	x x	Х		Operation mode (UIP/UIR) Restart of the device (warm start) Acknowledge alarms	RW W	uint(16) uint(16) uint(16)	2 2 2	1	Coils : Operation mode Coils : Restart Coils : Alarms	0x0000 = UIP; 0xFF00 = UIR 0xFF00 = execute 0xFF00 = acknowledge
416 417 418 422	x x x		X X X			Analog interface: Reference voltage (pin VREF) Analog interface: REM-SB level Analog interface: REM-SB action Speed of internal voltage controller	RW RW RW	uint(16) uint(16) uint(16) uint(16)	2 2 2	1	Coils : VREF Coils : REM-SB Level Coils : REM-SB Action Coils : Controller speed	0x0000 = 10V; 0xFF00 = 5V 0x0000 = normal; 0xFF00 = inverted 0x0000 = DC off; 0xFF00 = DC auto 0x0000 = slow; 0xFF00 = fast
425 500 501	X	x x	X	x		Speed of mental voltage controller DC output after leaving remote Set voltage value Set current value	RW RW RW	uint(16) uint(16) uint(16)	2 2	1	Coils : Condition 0x0000 - 0xD0E5 (0 - 102%) 0x0000 - 0xD0E5 (0 - 102%)	0x0000 = sixw, 0xr+00 = rast 0x0000 = off (default); 0xFF00 = unchanged Voltage value (for translation see programming guide) Current value (for translation see programming guide)
502 503		X		X		Set power value Set resistance value	RW RW	uint(16) uint(16)	2	1	0x0000 - 0xD0E5 (0 - 102%) minimum - 0xD0E5 (x - 102%)	Resistance value (for translation see programming guide) (the minimum value varies from model to model and can be
505		х				Device state	R	uint(32)	4	2	Bit 0-4: Control location	calculated from the technical specification in the manual) 0x00 = frei; 0x01 = lokal; 0x02 = fern; 0x03 = USB; 0x04 = analog; 0x06 = Ethernet
											Bit 11 : Remote control	0 = off; 1 = on 00 = CV; 01 = CR; 10 = CC; 11 = CP 0 = off; 1 = on
											Bit 15 : Alarms Bit 16 : OVP	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
507		X		х		Actual voltage	R	uint(16)	2		Bit 30 : REM-SB 0x0000 - 0xFFFF (0 - 125%)	0 = DC enabled; 1 = REM-SB disables DC output/input Actual voltage (for translation see programming guide)
508 509 520 521		X X X		Х		Actual current Actual power Count of OV alarms since power up Count of OC alarms since power up	R R R	uint(16) uint(16) uint(16) uint(16)	2 2 2	1	0x0000 - 0xFFFF (0 - 125%) 0x0000 - 0xFFFF (0 - 125%) 0x0000 - 0xFFFF 0x0000 - 0xFFFF	Actual current (for translation see programming guide) Actual power (for translation see programming guide) Count Count
521 522 523 524		X X X				Count of OC alarms since power up Count of OP alarms since power up Count of OT alarms since power up Count of PF alarms since power up	R R R	uint(16) uint(16) uint(16) uint(16)	2 2 2	1	0x0000 - 0xFFFF 0x0000 - 0xFFFF 0x0000 - 0xFFFF 0x0000 - 0xFFFF	Count Count Count Count Count
524 550 553 556		X X X		X X		Count of PF alarms since power up Overvoltage protection threshold (OVP) Overcurrent protection threshold (OCP) Overpower protection threshold (OPP)	R RW RW	uint(16) uint(16) uint(16) uint(16)	2 2 2	1	0x0000 - 0xFFFF 0x0000 - 0xE147 (0 - 110%) 0x0000 - 0xE147 (0 - 110%) 0x0000 - 0xE147 (0 - 110%)	Count OVP threshold (for translation see programming guide) OCP threshold (for translation see programming guide) OPP threshold (for translation see programming guide)
556 850 851 852	x x	X	x x	X		Overpower protection threshold (OPP) Function generator: Start/stop Function generator: Select U Function generator: Select I	RW RW RW	uint(16) uint(16) uint(16) uint(16)	2 2 2	1	0x0000 - 0xE147 (0 - 110%) Coils : Start/Stop Coils : Select U Coils : Select I	OPP threshold (for translation see programming quide) 0x0000 = stop; 0xFF00 = run 0x0000 = off; 0xFF00 = activate FG for voltage 0x0000 = off; 0xFF00 = activate FG for current
852 854 900 901	X	x x	X	X X		Function generator: Select I Function generator: Static level 1 Function generator: Static level 2	RW RW RW	uint(16) uint(16) uint(16) uint(16)	2 2 2	1	Colls : Select I Colls : Submit 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	0x0000 = off; 0xF-F00 = activate FG for current 0x0000 = do nothing; 0xFF00 = Submit for next run 0x6666 = 50% 0x6666 = 50%
902		X		^	х	Function generator: t1 (rise time P1->P2)	RW	float	4		Floating point number IEEE754 format	3000 = 3000µs Rule: (t1 + t2 + t3 + t4) <= 100 min.
904		х			х	Function generator: t2 (hold time level 2)	RW	float	4	2	Value: 3µs-6.000.000.000µs	3000 = 3000μs Rule: (t1 + t2 + t3 + t4) <= 100 min.
906		х			х	Function generator: t3 (fall time P2->P1)	RW	float	4	2	Resolution: 3µs Floating point number IEEE754 format Value: 3µs-6.000.000.000µs	3000 = 3000μs Rule: (t1 + t2 + t3 + t4) <= 100 min.
908		х			х	Function generator: t4 (hold time level 1)	RW	float	4	2	Resolution: 3µs	3000 = 3000µs
											Value: 3μs-6.000.000.000μs Resolution: 3μs	Rule: (t1 + t2 + t3 + t4) <= 100 min.
9000 9001 9002		X X		x x		Upper limit of voltage set value (U-max) Lower limit of voltage set value (U-min) Upper limit of current set value (I-max)	RW RW	uint(16) uint(16) uint(16)	2 2	1	0x0000 - 0xD0E5 (0 - 102%) 0x0000 - 0xD0E5 (0 - 102%) 0x0000 - 0xD0E5 (0 - 102%)	Voltage value (for translation see programming guide) Voltage value (for translation see programming guide) Current value (for translation see programming guide)
9003 9004 9006		X X		X X		Lower limit of current set value (I-min) Upper limit of power set value (P-max) Upper limit of resistance set value (R-max)	RW RW	uint(16) uint(16) uint(16)	2 2	1	0x0000 - 0xD0E5 (0 - 102%) 0x0000 - 0xD0E5 (0 - 102%) 0x0000 - 0xD0E5 (0 - 102%)	Current value (for translation see programming guide) Power value (for translation see programming guide) Resistance value (for translation see programming guide)
10007 10008 10010			X X			Ethernet: TCP keep-alive Ethernet: DHCP Protocol: Modbus	RW RW	uint(16) uint(16) uint(16)	2 2	1	Coils: Keep-alive on/off Coils: DHCP on/off Coils: MODBUS on/off	0x0000 = off; 0xFF00 = on 0x0000 = off; 0xFF00 = on 0x0000 = off; 0xFF00 = on
10011 10017 10502	Х	X X	х			Protocol: SCPI Ethernet: DHCP status Ethernet: IP address	RW R RW	uint(16) uint(16) uint(8)	2 4	1	Coils: SCPI on/off Bit0: DHCP running Bytes 0 - 3: 0255	0x0000 = off; 0xFF00 = on 0 = manual; 1 = DHCP 192.168.0.2 (default)
10504 10506 10508		X X			X	Ethernet: Subnet mask Ethernet: Gateway Ethernet: Host name Ethernet: Domain name	RW RW	uint(8) uint(8) char	4 4 54 54	2 27	Bytes 0 - 3: 0255 Bytes 0 - 3: 0255 ASCII	255.255.255.0 (Standard) 192.168.0.1 (default) "Client" (default)
10535 10562 10566 10567		X X X		х	Х	USB: Connection timeout (in milliseconds) Ethernet: MAC	RW RW RW	char uint(8) uint(16) uint(8)	4 2	2	Bytes 0 - 3: 0255 565535 Bytes 0 - 5: 0255	"Workgroup" (default) 0.0.0.0 (default) Default: 5 ms 00:50:C2:C3:12:34 or 00-50-C2-C3-12-34
10567 10572 10573 11000		X X X		x x		Ethernet: MAC Ethernet: Port Ethernet: TCP Socket timeout (in seconds) MPP Tracking: MPP-Mode	RW RW RW	uint(16) uint(16) uint(16)	2 2	1	0.65536 (except 80) 5.65535 04	00:30:22:C3:12:34
11001 11002 11003		X X		X X		MPP Tracking: Uoc (Setup) MPP Tracking: Isc (Setup) MPP Tracking: Umpp (Setup)	RW RW RW	uint(16) uint(16) uint(16)	2 2	1 1 1	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide) Current value (for translation see programming guide) Voltage value (for translation see programming guide)
11004 11005 11006 11007		X X X		X X		MPP Tracking: Impp (Setup) MPP Tracking: Pmpp (Setup) MPP Tracking: DeltaP (Setup) MPP Tracking: Umpp (Result in MPP1/2/4)	RW RW RW	uint(16) uint(16) uint(16) uint(16)	2 2 2 2	1	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0W - Nominal power 0x0000 - 0xCCCC (0 - 100%)	Current value (for translation see programming guide) Power value (for translation see programming guide) Power value (for translation see programming guide) Voltage value (for translation see programming guide)
11007 11008 11009 11010	х	X	х			MPP Tracking: Impp (Result in MPP1/2/4) MPP Tracking: Pmpp (Result in MPP1/2/4) MPP Tracking: Start/Stop	R R RW	uint(16) uint(16) uint(16)	2 2	1	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) Coils: Start/Stop	Vollage value (for translation see programming guide) Current value (for translation see programming guide) Dower value (for translation see programming guide) 0x0000 = stop; 0xFF00 = start
11011 11012 11013	X					MPP Tracking: Finished (Function status for MPP1/2/4) MPP Tracking: Error during function MPP-Tracking: Interval (Setup)	R R	uint(16) uint(16) uint(16)	2 2	1	Coils: Status Coils: Error 0x0005 – 0xEA60	0x0000 = running; 0xFF00 = finished 0x0000 = no error; 0xFF00 = error Regulation & measuring interval in milliseconds (5 ms - 60000
11014		x		x		MPP4 : Start MPP4 : End	RW	uint(16)	2		0x0001 - 0x0064 0x0001 - 0x0064	ms), for the tracking in all modes Start voltage value out of 100 (related to registers 11100-11199) for use in MPP4 mode End voltage value out of 100 (related to registers 11100-11199)
11016 11100		X X		x	х	MPP4 : Repetitions MPP Tracking: User curve (MPP4 mode) voltage values 1-	RW RW RW	uint(16) uint(16)	2 40		0x0000 - 0xFFFF 0x0000 - 0xCCCC (0 - 100%)	for use in MPP4 mode 0x0000 = no repetitions Voltage value (for translation see programming guide)
11120		х				20 MPP Tracking: User curve (MPP4 mode) voltage values 21-40	RW	uint(16)	40		0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide)
11140		x				MPP Tracking: User curve (MPP4 mode) voltage values 41- 60 MPP Tracking: User curve (MPP4 mode) voltage values 61- 80	RW	uint(16) uint(16)	40		0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide) Voltage value (for translation see programming guide)
11180 11200		x			х	MPP Tracking: User curve (MPP4 mode) voltage values 81- 100 MPP Tracking: User curve (MPP4 mode) results 1-10 (10x	RW R	uint(16) uint(16)	40 60		0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value (for translation see programming guide) Voltage value
11230		х				Umon, Imon, Pmon) MPP Tracking: User curve (MPP4 mode) results 11-20 (10x	D	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Current value Power value (for translation see programming guide) Voltage value
11230		^				Umon, Imon, Pmon)		unii(10)	00	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage Value Current value Power value (for translation see programming guide)
11260		х				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
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%)	(for translation see programming guide) Voltage value Current value Power value
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%)	(for translation see programming guide) Voltage value Current value
11350		x				MPP Tracking: User curve (MPP4 mode) results 51-60 (10x	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Power value (for translation see programming guide) Voltage value
11380		Х				Umon, Imon, Pmon) MPP Tracking: User curve (MPP4 mode) results 61-70 (10x	R	uint(16)	60	20	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Current value Power value (for translation see programming guide) Voltage value
		^			_	Umon, Imon, Pmon)					0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Current value Power value (for translation see programming guide)
11410		х				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
11440		х				MPP Tracking: User curve (MPP4 mode) results 81-90 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	(for translation see programming guide) Voltage value Current value Power value
11470		х				MPP Tracking: User curve (MPP4 mode) results 91-100 (10x Umon, Imon, Pmon)	R	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	(for translation see programming guide) Voltage value Current value
11500		X			х	Battery test (static): Max. current	RW	float	4		0x0000 - 0xCCCC (0 - 100%) Floating point number IEEE754	Power value (for translation see programming guide) 0 - rated current
11502 11504 11506 11508		X X X			X	Battery test (static): Max. power Battery test (static): Max. resistance Battery test (static): Discharge voltage Battery test (static): Max. capacity to discharge	RW RW RW	float float float float	4 4 4	2	Floating point number IEEE754	0 - rated power Min max. resistance, 0 = OFF 0 - rated voltage 0 - 99999.99
11508 11510 11512		x		Х		Battery test (static): Max. discharge time Battery test (static): Action upon reaching the max. discharge	RW	uint(32)	4 4	2	0x00000000 - 0x000A0000 (0 - 10 h) Battery static: action by reach	0x00010203 = 01:02:03 as HH:MM:SS, equivalent to [00][SEK][MIN][STD] 0x0000 = Do nothing (default)
11513		x		х		capacity Battery test (static): Action upon reaching the max. discharge		uint(16)	2		discharge capacity 0x0000 - 0x0002	0x0001 = Alert user 0x0002 = Stop test 0x0000 = Do nothing (default)
11514		X X			х	time Battery test (dynamic): Current level 1 Battery test (dynamic): Current level 2	RW RW	float float	4		Floating point number IEEE754 Floating point number IEEE754	0x0001 = Alert user 0x0002 = Stop test 0 - rated current 0 - rated current
11510		x x			Х	Battery test (dynamic): Current level 2 Battery test (dynamic): Time of current level 1 Battery test (dynamic): Time of current level 2	RW RW RW	float float float	4 4	2	Floating point number IEEE754 Floating point number IEEE754 Floating point number IEEE754	1-5999 s Rule: (t1 + t2) <= 6000s 1-5999 s
11516 11518 11520	1	.			X X	Battery test (dynamic): Max. power Battery test (dynamic): Discharge voltage	RW RW	float float	4 4	2	Floating point number IEEE754 Floating point number IEEE754	Rule: (t1 + t2) <= 6000s 0 - rated power 0 - rated voltage
11518 11520 11522 11524		X			Х	Battery test (dynamic): Max. capacity to discharge Battery test (dynamic): Max. discharge time	RW RW	float uint(32)	4 4	2	Floating point number IEEE754 0x00000000 - 0x000A0000 (0 - 10 h)	0 - 99999.99 0x00010203 = 01:02:03 as HH:MM:SS, equivalent to [00][SEK][MIN][STD]
11518 11520 11522 11524 11526 11528		X X				Battery test (dynamic): Action upon reaching the max.	RW	uint(16)	2	1	0x0000 - 0x0002	0x0000 = Do nothing (default) 0x0001 = Alert user
11518 11520 11522 11524 11526		x x x		x		discharge capacity Battery test (dynamic): Action upon reaching the max.	RW	uint(16)	2	4	0x0000 - 0x0002	0x0002 = Stop test
11518 11520 11522 11524 11526 11528 11530 11531		X X	x			Battery test (dynamic): Action upon reaching the max. discharge time Battery test: Start/stop	RW	uint(16)	2	1	0x0000 - 0x0002 Coils: Start/Stop	0x0002 = Stop test 0x0000 = Do nothing (default) 0x0001 = Alert user 0x0002 = Stop test 0x0000 = Stop; 0xFF00 = Run
11518 11520 11522 11524 11526 11528 11530	x x x	x x x	x			Battery test (dynamic): Action upon reaching the max. discharge time		, ,		1 1 1	0x0000 - 0x0002	0x0002 = Stop test 0x0000 = Do nothing (default) 0x0001 = Alert user 0x0002 = Stop test 0x0000 = Stop; 0xFF00 = Run 0x0000 = Running or not started; 0x00FF = Finished 0x0000 = No error; 0x00FF = Error 0x0000 = Battery test mode off (default); 0x0001 = Staticmode;
11518 11520 11522 11524 11526 11528 11530 11531 11532 11533 11534	х	x x x	x	x		Battery test (dynamic): Action upon reaching the max. discharge time Battery test: Start/stop Battery test: Status Battery test: Error status	RW R R	uint(16) uint(16) uint(16)	2 2 2	1 1 1 1	0x0000 - 0x0002 Coils: Start/Stop Coils: Test status Coils: Error status	0x0002 = Stop test 0x0000 = Do nothing (default) 0x0001 = Alert user 0x0002 = Stop test 0x0000 = Stop; 0xFF00 = Run 0x0000 = Running or not started; 0x00FF = Finished 0x0000 = No error; 0x00FF = Error