EL 9000 T/DT register list for devices with KE firmware from V3.03 (check the installed version in your device's MENU in item INFO HW, SW)

Modbus address	Read coils (0x01)	Read holding registers	Write single coil (0x05)	Write single register (0x06)	Write multiple registers	Description	Access	Data type	Data length in bytes	Number of registers	Data	Example
0		x		x		Device class	R	uint(16)	2	1		44 = EL 9000 DT series, 51 = EL 9000 T series
1		x			x	Device type	R	char	40	20	ASCII	EL 9080-60 DT
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	Manufacterer 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	80
123		x			x	Nominal current	R	float	4	2	Floating point number IEEE754	60
125		x			x	Nominal power	R	float	4	2	Floating point number IEEE754	1200
127		x			x	Max. Internal resistance	R	float	4	2	Floating point number IEEE754	30
129		x			x	Min. Internal resistance	R	float	4	2	Floating point number IEEE754	0.09
131		x			x	Article no.	R	char	40	20	ASCII	33210506
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	V3.02 16.08.2016
211		x			x	Firmware version (HMI)	R	char	40	20	ASCII	V2.08 22.09.2016
231		x			x	Firmware version (DR)	R	char	40	20	ASCII	V1.0.4.1 30.06.2016
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 : Output/input	0x0000 = off; 0xFF00 = on
407	x		x			Condition of DC input after power fail alarm	RW	uint(16)	2	1	Coils : Auto-On	0x0000 = off; 0xFF00 = auto-on
408		x		x		Condition of DC input after powering the device	RW	uint(16)	2	1	Coils : 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
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			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		x			Analog interface: REM-SB action	RW	uint(16)	2	1	Coils : REM-SB Action	0x0000 = DC off; 0xFF00 = DC auto
425	x		x			DC input 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	0x00 = frei; 0x01 = lokal; 0x02 = fern; 0x03 = USB; 0x04 = analog; 0x06 = Ethernet
											Bit 5 : Config mode	0 = off; 1 = active
											Bit 7 : DC output/input state	0 = off; 1 = on
											Bit 9-10 : Regulation mode	00 = CV; 01 = CR; 10 = CC; 11 = CP
											Bit 11 : Remote	0 = off; 1 = on
											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 21 : Power fail	0 = none; 1 = active
											Bit 22 : Power fail	0 = none; 1 = active
											Bit 23 : Power fail	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 30 : REM-SB	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)
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
850	x		x			Function generator Arbitary: Start/stop	RW	uint(16)	2	1	Coils : Start/Stop	0x0000 = Stop; 0xFF00 = Start
851	x		x			Function generator Arbitrary: Select U	RW	uint(16)	2	1	Coils : Select U	0x0000 = not assigned; 0xFF00 = Assign function to voltage
852	x		x			Function generator Arbitrary: Select I	RW	uint(16)	2	1	Coils : Select I	0x0000 = not assigned; 0xFF00 = Assign function to current
859		x		x		Function generator Arbitrary: Start sequence	RW	uint(16)	2	1	0x0001…0x0064	
860		x		x		Function generator Arbitrary: End sequence	RW	uint(16)	2	1	0x0001…0x0064	
861		x		x		Function generator Arbitrary: Sequence cycles	RW	uint(16)	2	1	0x0000...0x03E7	0x0000 = infinite
900		x			x	Function generator Arbitrary: Setup for sequence 1	RW	float	32	16	Bytes 0-3: Us/Is(AC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator
											Bytes 4-7: Ue/Ie(AC) in V	
											Bytes 8-11: fs(1/T) in Hz	Integer in IEEE754 format: 0...10000Hz
											Bytes 12-15: fe(1/T) in Hz	
											Bytes 16-19: Angle in degrees	Integer in IEEE754 format: 0°...359°
											Bytes 20-23: Us/Is(DC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator
											Bytes 24-27: Ue/Ie(DC) in V	
											Bytes 28-31: Sequence time in µs	1...36000000 (36 Mio.)
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
2484		x			x	Function generatorArbitrary: Setup for sequence 100	RW	float	32	16	Bytes 0-3: Us/Is(AC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator
											Bytes 4-7: Ue/Ie(AC) in V	
											Bytes 8-11: fs(1/T) in Hz	Integer in IEEE754 format: 0...10000Hz
											Bytes 12-15: fe(1/T) in Hz	
											Bytes 16-19: Angle in degrees	Integer in IEEE754 format: 0°...359°
											Bytes 20-23: Us/Is(DC) in V	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator
											Bytes 24-27: Ue/Ie(DC) in V	
											Bytes 28-31: Sequence time in µs	1...36000000 (36 Mio.)
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 timeout	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	R	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) Ethernet: TCP keep-alive time (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 in % of Unom (for translation see programming guide)
11002		x		x		MPP Tracking: Isc (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value in % of Inom (for translation see programming guide)
11003		x		x		MPP Tracking: Umpp (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom (for translation see programming guide)
11004		x		x		MPP Tracking: Impp (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value in % of Inom (for translation see programming guide)
11005		x		x		MPP Tracking: Pmpp (Setup)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Power value in % of Pnom (for translation see programming guide)
11006		x		x		MPP Tracking: DeltaP (Setup)	RW	uint(16)	2	1	0 - 50 Watt	Power value in % of Pnom (for translation see programming guide)
11007		x				MPP Tracking: Umpp (Result in MPP1/2/4)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom (for translation see programming guide)
11008		x				MPP Tracking: Impp (Result in MPP1/2/4)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Current value in % of Inom (for translation see programming guide)
11009		x				MPP Tracking: Pmpp (Result in MPP1/2/4)	RW	uint(16)	2	1	0x0000 - 0xCCCC (0 - 100%)	Power value in % of Pnom (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)	RW	uint(16)	2	1	Coils: Status	0x0000 = running; 0xFF00 = finished
11012	x					MPP Tracking: Error during function	RW	uint(16)	2	1	Coils: Error	0x0000 = no error; 0xFF00 = error
11013		x		x		MPP-Tracking : Interval (Setup)	RW	uint(16)	2	1	0x0005 – 0xEA60	Regulation & measuring interval in milliseconds, either for tracking in modes 1 and 2 or for user curve progression in mode 3
11014		x		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		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 in % of Unom (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 in % of Unom (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 in % of Unom (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 in % of Unom (for translation see programming guide)
11180		x			x	MPP Tracking: User curve (MPP4 mode) voltage values 81-	RW	uint(16)	40	20	0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom (for translation see programming guide)
11200		x				MPP Tracking: User curve (MPP4 mode) results 1-10 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11230		x				MPP Tracking: User curve (MPP4 mode) results 11-20 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11260		x				MPP Tracking: User curve (MPP4 mode) results 21-30 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11290		x				MPP Tracking: User curve (MPP4 mode) results 31-40 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11320		x				MPP Tracking: User curve (MPP4 mode) results 41-50 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11350		x				MPP Tracking: User curve (MPP4 mode) results 51-60 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11380		x				MPP Tracking: User curve (MPP4 mode) results 61-70 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11410		x				MPP Tracking: User curve (MPP4 mode) results 71-80 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11440		x				MPP Tracking: User curve (MPP4 mode) results 81-90 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)
11470		x				MPP Tracking: User curve (MPP4 mode) results 91-100 (10x Umon, Imon, Pmon)	RW	uint(16)	60	30	0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%) 0x0000 - 0xCCCC (0 - 100%)	Voltage value in % of Unom Current value in % of Inom Power value in % of Pnom (for translation see programming guide)