

ELR 9000 3U 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 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				Manufacturer 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		Standby on/off (input or output)	RW	REM	uint(16)	2	1	Coils : Input	0x0000 = on; 0xFF00 = off	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		Reference voltage of analog interface (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 - 0xC000 (0 - 100%)	Voltage value (for translation see programming guide)	2	23
501	x		x		Set current value	RW	REM	uint(16)	2	1	0x0000 - 0xC000 (0 - 100%)	Current value (for translation see programming guide)	2	24
502	x		x		Set power value	RW	REM	uint(16)	2	1	0x0000 - 0xC000 (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 - 0xC000 (x - 100%) Minimum value needs to be calculated, refer to programming guide PS: 0x0000 - 0xC000 (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  Bit 5 : - Bit 6 : Master-slave type Bit 7 : Input state Bit 8 : - Bit 10-9: 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 : - 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	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 = Modbus TCP 2P; 0x17 = Profinet 2P  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 = none; 1 = active 0 = none; 1 = active 0 = none; 1 = active 0 = OK; 1 = Master-slave in secure mode	2	27
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 - 0xC000 (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 - 0xC000 (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 - 0xC000 (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 - 0xC000 (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 - 0xC000 (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; 0xFFFF = 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 Arbitrary: 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
862			x		Function generator Arbitrary: Submit settings	W	REM	uint(16)	2	1	Coils : Submit Arbitrary	0xFF00 = Submit selected settings	5	12
900		x		x	Function generator Arbitrary: Setup for sequence 1	RW	REM	float	32	16	Byte 3-0: Us/Is(AC) in V 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 Byte 23-20: Us/Is(DC) in V Byte 27-24: Ue/Ie(DC) in V Byte 31-28: Sequence time in µs	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator  Integer in IEEE754 format: 0°...359° Floating point number in IEEE754 format, see device manual for value range, chapter about function generator  Floating point number in IEEE754 format: 100µs...360,000,000,000µs	6	0
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
2484		x		x	Function generatorArbitrary: Setup for sequence 100	RW	REM	float	32	16	Byte 3-0: Us/Is(AC) in V 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 Byte 23-20: Us/Is(DC) in V Byte 27-24: Ue/Ie(DC) in V Byte 31-28: Sequence time in µs	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator  Integer in IEEE754 format: 0°...359° Floating point number in IEEE754 format, see device manual for value range, chapter about function generator  Floating point number in IEEE754 format: 100µs...360,000,000,000µs	6	99
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 - 0xC000 (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 - 0xC000 (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 - 0xC000 (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 - 0xC000 (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 - 0xC000 (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 - 0xC000 (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)						