Modbus address (dec)	Modbus address (hex)	Read coils (0x01) 60 60 60 60 60 60 60 60 60 60 60 60 60	Write single coil (0x05)	Write single register (0x06)	Write multiple registers (0x10)	t for devices with KE firmware from V2.08 (check the instance) Description Newtoo class	Access	rsion Data type	Data length in bytes	Number of registers	Data Example 1 67 = ELR 10000 Series	Profibus slot / Profinet subslot	Profibus/Profinet index in slot	× EtherCAT SDO/PDO?
1 21 41 61 81 101 121 123 125 127 129 131 151 171	0x0001 0x00015 0x0029 0x003D 0x0051 0x0065 0x0079 0x007B 0x007D 0x007F 0x0081 0x0097 0x00AB	x x x x x x x x x x x x x x x x x x x	(events used by the control of the co	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		char 40 char 4	200 200 200 200 200 200 200 200 200 200	DASCI	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 2 3 4 5 6 6 7 8 8 9 10 11 12 13 14	x x x x x x x x x x x x x x x x x x x
211 231 402 405 407 408 409 410 411 411 416 417 418 425 425 425 440	0x00D3 0x00E7 0x0192 0x0195 0x0197 0x0198 0x0199 0x019B 0x014D 0x01AD 0x01AD 0x01AD 0x01BB	X	X	x	F	irmware version (MM) irmware version (DR) kernote mode Cu frout Condition of DC input after power fail alarm condition of DC input after power fail alarm portation of DC input after power fail alarm condition of DC input after power fail alarm persion mode (UPUR) kestant of the device (warm start) cknowledge alarms chrowledge alarms chalog interface: Reference voltage (pin VREF) randog interface: Pin 14 configuration analog interface: Pin 14 configuration	RW R	c	(16) 2 (16) 2	20 0 0 20 0 20 0 20 0 0 0 0 0 0 0 0 0 0	10 ASCI	1 1 2 2 2 3 3 2 2 2 2 2 2 2 2 2 2 2 2 2	17 1 4 30 6 7 8 9 14 12 13 42 43 44	x x x x x x x x x x x x x x x x x x x
442 500 501 502 503 505	0x01BA 0x01F4 0x01F5 0x01F6 0x01F7 0x01F9	x x x x	<	x x x x	£ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	unalog interface: Pin 15 configuration set voltage value et current value or irradiation (PV function) et power value et resistance value ev/ce state	RW RW RW RW	uint((16) 2 (16) 2 (16) 2 (16) 2	2 1	1 Status DC / reg. mode	2	46 23 24 25	x x x x
											Bit 9-10 : Regulation mode			
507 508 509 511 520 521 522 523 524	0x01FB 0x01FC 0x01FD 0x01FF 0x0208 0x0209 0x020A 0x020B 0x020C	X X X X X X X X X X	(((((((((((((((((((x		citial voltage citial current citial current citial current levice state 2 Count of CV alarms since power up Count of CV alarms since power up Count of CP alarms since power up Count of OT alarms since power up Count of PF alarms since power up Count of PF alarms since power up Count of PF alarms since power up		uint(uint(uint(uint(uint(uint(uint(uint((16) 2 (16) 2 (32) 4 (16) 2 (16) 2 (16) 2 (16) 2	2 12 12 12 12 12 12 12 12 12 12 12 12 12	Bit 29 : MSP	2 2 2 3 3 3 3	_	x x x x x
553 556 559 560 561 562 563 564 565 566 567 568 577	0x0229 0x022C 0x022F 0x0230 0x0231 0x0232 0x0233 0x0234 0x0235 0x0236 0x0237 0x0238	x x x x x x x x x x x x x x x x x x x	(x x x x x x x x x x x x x x x x x x x		Descourer protection threshold (CCP) Descriptor protection threshold (CCP) Indervoltage detection (IVD)	RW RW RW RW RW RW RW RW RW RW		(16) 2 (16) 2	2 1 2 1 2 1 2 1 2 1 2 1	1 0x0000 - 0xE147 (0 - 110%) CPP threshold (for translation see programming guide) 1 0x0000 - 0xE147 (0 - 110%) CPP threshold (for translation see programming guide) 1 0x0000 - 0x0E167 (0 - 110%) CPP threshold (for translation see programming guide) 1 0x0000 - 0x0DE5 (0 - 102%) UVD threshold (for translation see programming guide) 1 Adjustable UVD roeffication 0x0000 = nothing; 0x0001 = signat; 0x0002 = warring; 0x0003 = alarm 0x0000 - nothing; 0x0001 = signat; 0x0002 = warring; 0x0003 = alarm 0x0000 - 0x00E5 (0 - 102%) UVD threshold (for translation see programming guide) 1 Adjustable UVD roeffication 0x0000 = nothing; 0x0001 = signat; 0x0002 = warring; 0x0003 = alarm 0x0000 - nothold; 0x0000 - nothold; 0x0000 = nothing; 0x0001 = signat; 0x0002 = warring; 0x0003 = alarm 10x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide) 1 0x0000 - 0x00E5 (0 - 102%) OCD threshold (for translation see programming guide)	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6 9 10 11 12 13 14 15 16	x x x x x
653 654 655 656 658 660 662 666 667	0x028D 0x028E 0x028F 0x0290 0x0292 0x0294 0x029A 0x029B 0x0352 0x0353	X X X X X X X X X X X X X X X X X X X	(x	N	Asster-slave: Enable MS disster-slave: Total voltage in V disster-slave: Total currer in A disster-slave: Total power in W disster-slave: Number of initialised slaves disster-slave: Sus termination disster-slave: Bus termination disster-slave: Bus termination disster-slave: Sus termination disster-sl	RW W RW RW	f uint(uint(uint(uint(uint(116) 2 116) 2 116) 2 116) 2 116) 2 116) 2 116) 2 116) 2	2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1	1 Coil MS enerf	4 4 4 4 4 4 4 5 5	7 8 9 10 11	x x x x x x x x x x x x x x x x x x x
852 854 855 856 859 860 861 862	0x0354 0x0356 0x0357 0x0358 0x035B 0x035C 0x035D 0x035E	x x x	X X X	x x x	F F F F	unction generator Arbitrary; Select I unction generator XY; Select I U mode unction generator Arbitrary; Slant sequence unction generator Arbitrary; Sequence occupies unction generator Arbitrary; Sequence occupies unction generator Arbitrary; Sequence occupies unction generator Arbitrary; Setup for sequence 1 unction generator Arbitrary; Setup for sequence 1	RW RW RW RW RW RW W	uint(uint(uint(uint(uint(uint((16) 2 (16) 2 (16) 2 (16) 2 (16) 2 (16) 2	2 1 2 1 2 1 2 1 2 1 2 1	1	5 5 5 5 5 6	4 5 14 9	x x x x
2468 2468	↓ 0x09A4 0x0A28	x x		1		iunction generatorArbitrary: Setup for sequence 99	RW RW	f uint(1 1 1 loat 32 (16) 32	2 16	Bytes 2-2-2: Unfa(OC) in V or A Floating point number in EEET74 format, see device manual for value range, chapter about function generator in EEET74 format, see device manual for value range, chapter about function generator in EEET74 format: 100 µs36,000,000,000 µs Floating point number in EEET74 format: 100 µs36,000,000,000 µs Floating point number in EEET74 format : 100 µs36,000,000,000 µs Floating point number in EEET74 format see device manual for value range, chapter about function generator Bytes 3-11: fs(1/7) in Hz	6	99	↓ ×
9000 9001 9002 9003 9004 9006	0x1A18 0x1A18 0x2328 0x2329 0x232A 0x232B 0x232C 0x232E	**************************************	(x x x x x x	L L L	iunction generator: X/Y table, block 255 Ipper limit of voltage set value (U-max) ower limit of voltage set value (U-mix) peper limit our crest set value (I-mix) ower limit of current set value (I-mix) ower limit of current set value (I-mix) peper limit of power set value (I-mix) pper limit of power set value (I-mix) pper limit of presistance set value (IR-max)	RW RW RW RW	uint(uint(uint(uint(uint((16) 2 (16) 2 (16) 2 (16) 2 (16) 2 (16) 2	2 1	U mode: set current value (16 value block) 1 0x0000 - 0xD0E5 (0 - 102%) Current value (for translation see programming guide) 1 0x0000 - 0xD0E5 (0 - 102%) Current value (for translation see programming guide) 1 0x0000 - 0xD0E5 (0 - 102%) Current value (for translation see programming guide) 1 0x0000 - 0xD0E5 (0 - 102%) Power value (for translation see programming guide) 1 ELR: variable - 0xD0E5 (x - 102%) Mirrium value needs to be cal-culated, refer to programming guide PS: 0x0000 - 0xD0E5 (0 - 102%) Resistance value (for translation see programming guide)	_	31 32 33 34 35 37	x x
10008 10008 10010 10011 10012 10013 10020	0x2717 0x2718 0x271A 0x271B 0x271C 0x271C 0x271D	x x x x x x x x x	x x x x		F F	thernet TCP keep-alive timout thernetProfinetModbus TCP: DHCP rotocol: Modbus rotocol: SCPI testart interface card fodbus specification compliance ny&us module: Type	RW RW RW RW RW RW	uint(uint(uint(uint(uint((16) 2 (16) 2 (16) 2 (16) 2 (16) 2	2 1	1 Coil: Keep-alive onloff			
10021 10041 10043 10251 10252 10253 10269 10300 10354 10502 10504 10508	0x2725 0x2739 0x273B 0x280B 0x280C 0x280D 0x281D 0x282B 0x283C 0x2872 0x2908 0x290A 0x290A	X X X X X X X X X X X X X X X X X X X	(X F X F X F X E X E X E	InyBus module: Interface type InyBus module: Version namber InyBus module: Sersion Limber InyBus module: Sersion Limber Intolbus Edent number Intolbus Edent Liber-defineable "Function tag" Intolbus Edent Liber-defineable "Sersion tag" Intolbus Edent Liber-defineable Installation date Intolbus Edent Liber-defineable Installation date Intolbus Edent Liber-defineable Installation date Intolbus Edent Liber-defineable Station name" InternetModobus TCP: But dorses IdentedModobus TCP: Subnet mask InternetModobus TCP: Subnet mask InternetModobus TCP: Subnet mask InternetModobus TCP: Subnet mask InternetModobus TCP: Libert name	R R RW RW RW RW RW RW RW RW	uint uint(uint(c c c c c c uint uint uint uint uint uint uint uint	(32) 4 (16) 2 (16) 2 (16) 2 (thar 32) (thar 22) (thar 40) (thar 54) (thar 200) (thar 200)	2 16 2 16 2 16 2 16 2 16 2 16 2 16 2 16	Dx001 A = EtherCAT	8888888888	5	
10535 10562 10564 10566 10567 10570	0x2927 0x2942 0x2944 0x2946 0x2947 0x294A	x x x x x x x x x x x x x x x x x x x	(x	X E X E E E E E E E E E E E E E E E E E	thernetModbus TCP: Domain name	RW RW RW R RW	uint uint(uint(uint(thar 54 tt(8) 4 tt(8) 4 tt(8) 4 tt(8) 6 tt(8) 6 tt(8) 6 tt(8) 6 tt(16) 2	27 24 22 1 22 1 3 3 3	77 ASCII "Verkgroup" (default) 2 Bytes 0-3 0.265 0.0.0 (default) 2 Bytes 0-3 0.255 0.0.0 (default) 1 5.05535 0.0.0 (default) 1 5.05535 0.0.0 (default) 1 6.05535 0.0.0 (default) 1 6.05036 0.0.0 (default) 1 7.05036 0.0.0 (defaul			
10573 10700 10701 10701 10702 10704	0x294D 0x29CC 0x29CD 0x29CD 0x29CE 0x29D0 0x29D2	x x x	×	x	x (thernet TCP Socket timout (in seconds) \$232/CANopen/CAN: Baud rate **AN: ID format **AN: ID format **AN: Termination AN: Base ID **CAN: Broadcast ID	RW RW RW RW	uint(uint(uint(uint(uint(uint((16) 2 (16) 2 (16) 2 (32) 4	2 1 1	1 5.05535			
10709 10710 10712 10714 10715 10716 10717 10718 10820	0x29D5 0x29D8 0x29DA 0x29DA 0x29DB 0x29DC 0x29DD 0x29DE 0x2A44	x x x x x x x x x x x x x x x x x x x	<	x x x x	x C C C C C C C C C C C C C C C C C C C	AN: Data length AN: Cyclic read: Base ID AN: Cyclic read time (in ms): Status AN: Cyclic read time (in ms): Status AN: Cyclic read time (in ms): Set value (U, I, P, R) AN: Cyclic read time (in ms): Limits 1 (U, I) AN: Cyclic read time (in ms): Limits 1 (U, I) AN: Cyclic read time (in ms): Actual values U, I, P Internal Ethernet Interface: Status	RW RW RW RW RW RW RW	uint(uint(uint(uint(uint(uint(uint(uint(uint((32) 4 (32) 4 (16) 2 (16) 2 (16) 2 (16) 2 (16) 2	2 1 2 1 2 1 2 1 2 1 2 1	Coli Data length			
10823 10825 10827 10829 10856 10883 10885 10888 10889 11000 11001 11002 11003	0x2A46 0x2A47 0x2A49 0x2A4B 0x2A4D 0x2A68 0x2A83 0x2A85 0x2A88 0x2A89 0x2AF8 0x2AF8 0x2AF9 0x2AFA 0x2AFB	X X X X X X X X X X X X X X X X X X X	<		x li x li x li x li	Itemal Ethernet interface: DHCP Internal Ethernet interface: Subret mask Itemal Ethernet interface: Hot name Itemal Ethernet interface: Domain name Itemal Ethernet interface: DNS Itemal Ethernet interface: DNS Itemal Ethernet interface: MAC Itemal Ethernet interface: TCP Socket timeout (in seconds) Itemal Ethernet interface: TCP Socket timeout (in seconds) Itemal Ethernet interface: TCP Socket timeout (in seconds) IPP Tracking: MPP-Mode IPP Tracking: MC (Setup) IPP Tracking: Ico (Setup) III Ico (Se	RW RW RW RW RW RW RW RW RW		tt(8) 4 tt(8) 4 tt(8) 4 tt(8) 4 thar 54 thar 54 thar 54 th(8) 4 tt(8) 6 (16) 2 (16) 2 (16) 2 (16) 2 (16) 2	1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1	1 Coil: DHCP onloff	9 9 9 9 9 9	3	x x x
11005 11006 11007 11008 11009 11009 11010 11011 11012 11013	0x2AFD 0x2AFE 0x2AFE 0x2B00 0x2B01 0x2B02 0x2B03 0x2B04 0x2B05	x x x x x x	x	x	n n n	IPP Tracking: Pmpp (Setup) IPP Tracking: DeltaP (Setup) IPP Tracking: DeltaP (Setup) IPP Tracking: DeltaP (Setup) IPP Tracking: Pmpp (Result in MPP1/2/4) IPP Tracking: Pmpp (Result in MPP1/2/4) IPP Tracking: Pmpp (Result in MPP1/2/4) IPP Tracking: Start/Stop IPP Tracking: Start/Stop IPP Tracking: Error during function IPP-Tracking: Error during function IPP-Tracking: : Herval (Setup) IPP-4: Start	RW R RW RW RW	uint(uint(uint(uint(uint(uint(uint(uint(uint((16) 2 (16) 2 (16) 2 (16) 2 (16) 2 (16) 2 (16) 2 (16) 2	2		999999999	66 77 88 99 110 111 122 13	x x x x x x x x x x x x
11015 11016 11017 11037 11057 11077 11097 11117	0x2B07 0x2B08 0x2B09 0x2B1D 0x2B31 0x2B45 0x2B59 0x2B6D	X X X X X X	<		x h x h x h	IPP4 : End IPP4 : Repetitions IPP4 : Repetitions IPP Tracking: User curve (MPP4 mode) voltage values 1-20 IPP Tracking: User curve (MPP4 mode) voltage values 21-40 IPP Tracking: User curve (MPP4 mode) voltage values 21-40 IPP Tracking: User curve (MPP4 mode) voltage values 61-80 IPP Tracking: User curve (MPP4 mode) voltage values 61-100 IPP Tracking: User curve (MPP4 mode) vesults 1-10 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 1-10 (10x Umon, Imon, Pmon)	RW RW RW RW RW RW	uint(uint(uint(uint(uint(uint((16) 40 (16) 40 (16) 40 (16) 40 (16) 40 (16) 40 (16) 60	20 20 20 20 20 20 20 20 30	MMPP4 mode	9 9 9 9 9 9	16 17 18 19 20	
11207	0x2BA9 0x2BC7 0x2BE5 0x2C03	x	ζ.		h	IPP Tracking: User curve (MPP4 mode) results 21-30 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 31-40 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 41-50 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 51-60 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 51-60 (10x Umon, Imon, Pmon)	R R R	uint((16) 60 (16) 60 (16) 60	30 30	(for translation see programming guide)	9	24 25 26 27	x
11327 11357 11387	0x2C3F 0x2C5D 0x2C7B	×	<		h h	IPP Tracking: User curve (MPP4 mode) results 71-80 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 81-90 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 91-100 (10x Umon, Imon, Pmon) IPP Tracking: User curve (MPP4 mode) results 91-100 (10x Umon, Imon, Pmon)	R	uint((16) 60 (16) 60 (16) 60	300 300 300	Current value in % of from Power value in % of From (for translation see programming guide) Voltage value in % of I/nom Current value in % of I/nom Power value in % of I/nom (for translation see programming guide) Ox0000 - 0xCCCC (0 - 100%) Voltage value in % of I/nom Current value in % of I/nom Current value in % of I/nom Power value in % of I/nom Power value in % of I/nom Voltage value in % of I/nom Power value in % of I/nom Current value in % of I/nom Power value in % of I/nom (for translation see programming guide) Voltage value in % of I/nom Ourrent value in % of I/nom Current value in % of I/nom Ourrent value in % of I/nom Ourre	9	30 31	x
11502 11504 11506 11508 11510 11512 11513 11514 11516 11518 11522	0x2CFE 0x2CF0 0x2CF2 0x2CF4 0x2CF6 0x2CF8 0x2CF9 0x2CFA 0x2CFC 0x2CFC 0x2CFC 0x2CFC	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	<	x	x E x E x E x E x E x E x E x E x E x E	tatlery discharge test (static): Max. power attery discharge test (static): Max. resistance attery discharge test (static): Eicharge voltage attery discharge test (static): Max. capacity to discharge tattery discharge test (static): Max. discharge time tattery discharge test (static): Action upon reaching the max. discharge capacity tattery discharge test (static): Action upon reaching the max. discharge time tattery discharge test (static): Action upon reaching the max. discharge time tattery discharge test (dynamic): Current level 1 tattery discharge test (dynamic): Current level 2 attery discharge test (dynamic): Time of current level 1 tattery discharge test (dynamic): Time of current level 2 tattery discharge test (dynamic): Time of current level 2 tattery discharge test (dynamic): Time of current level 2 tattery discharge test (dynamic): Time of current level 2 tattery discharge test (dynamic): Time of current level 2	RW RW RW RW RW RW RW RW RW	f f uint() uint() uint() f f f	16) 2	1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1	2 Foating point number EEE754	11	2 3 4 5 6 7 8 9 10	x x x x x x x x x x x x x x x x x x x
11524 11526 11528 11530 11531 11531 11532 11535	0x2D02 0x2D04 0x2D06 0x2D08 0x2D0A 0x2D0B 0x2D0B	x x	x x x	x	X E X E X E E E E E E E	satlery discharge test (dynamic): Max. power lattery discharge test (dynamic): Discharge voltage lattery discharge test (dynamic): Discharge voltage lattery discharge test (dynamic): Max. capacity to discharge lattery discharge test (dynamic): Action upon reaching the max. discharge capacity lattery discharge test (dynamic): Action upon reaching the max. discharge time lattery discharge test (dynamic): Action upon reaching the max. discharge time lattery test: Start/stop lattery test: Mode selection	RW RW RW RW RW	f uint(uint(uint(uint(uint(uint(2 1	2 Floating point number EEET/54	11 11 11 11 11	13 14 15 16 17 18 21	х
11538 11540	0x2D10 0x2D12 0x2D14 0x2D14		(X E	iattery test: Discharged capacity in Ah lattery test: Discharged energy in Wh lattery test: Time at end of test	RW RW R		(16) 8	3 4	Dx0004 = Dynamic test Dxnamic test	11	23	x