

mPower 311 Series Register List for units with KE firmware V3.02 or later.																Check the installed version in MENU > INFO HW, SW	
Modbus address (dec)	Modbus address (hex)	Read coils (0x01)	Read holding registers (0x03)	Write single coil (0x05)	Write multiple registers (0x10)	Description	Access	Data type	Data length in bytes	Number of registers	Data	Example	Profibus slot	Profibus index	EtherCAT	SDO/DDP?	
0	0x0000	x				Device class	R	uint(16)	2	1		See programming guide in section "A"	1	0x0100	x		
1	0x0001	x				Device type	R	char	40	20	ASCII	PSI 10080-1000	1	0x0101	x		
21	0x0015	x				Manufacturer	R	char	40	20	ASCII		1	0x0102	x		
41	0x0029	x				Manufacturer address	R	char	40	20	ASCII		1	0x0103	x		
61	0x003D	x				Manufacturer ZP code	R	char	40	20	ASCII		1	0x0104	x		
81	0x0051	x				Manufacturer phone number	R	char	40	20	ASCII		1	0x0105	x		
101	0x0065	x				Manufacturer website	R	char	40	20	ASCII		1	0x0106	x		
121	0x0079	x				Nominal voltage	R	float	4	2	Floating point number IEEE754	900	2	0x0107	x		
123	0x007B	x				Nominal current	R	float	4	2	Floating point number IEEE754	100	1	0x0108	x		
125	0x007D	x				Nominal power	R	float	4	2	Floating point number IEEE754	30000	1	0x0109	x		
127	0x007F	x				Max. internal resistance	R	float	4	2	Floating point number IEEE754	5	1	0x010A	x		
129	0x0081	x				Min. internal resistance	R	float	4	2	Floating point number IEEE754	0	1	0x010B	x		
131	0x0083	x				Article no.	R	char	40	20	ASCII	06230801	1	0x010C	x		
151	0x0097	x				Serial no.	R	char	40	20	ASCII	1234560001	1	0x010D	x		
171	0x00AB	x		x		User text	RW	char	40	20	ASCII		1	0x010E	x		
191	0x00BF	x				Firmware version (KE)	R	char	40	20	ASCII		1	0x010F	x		
211	0x00D3	x				Firmware version (HMI)	R	char	40	20	ASCII		1	0x0110	x		
231	0x00E7	x				Firmware version (DR)	R	char	40	20	ASCII		1	0x0111	x		
402	0x0192	x	x			Remote mode	RW	uint(16)	2	1	Coil - Remote	0x0000 = off, 0xF000 = on	2	0x0200	x		
405	0x0195	x	x			DC output/pump	RW	uint(16)	2	1	Coil - Output/pump	0x0000 = off, 0xF000 = on	2	0x0203	x		
407	0x0197	x	x			Condition of DC output/input after power fail alarm	RW	uint(16)	2	1	Coil - Auto-On	0x0000 = off, 0xF000 = auto	3	0x031C	x		
408	0x0198	x	x	x		Condition of DC output/pump after powering the device	RW	uint(16)	2	1	Reg - Power-On	0xFFFE = off, 0xFFFF = restore	2	0x0205	x		
409	0x0199	x	x			Operation mode (UPI/UR)	RW	uint(16)	2	1	Coil - Operation mode	0x0000 = UP, 0xF000 = UR	2	0x0206	x		
410	0x019A	x	x			Restart of the device (warm start)	W	uint(16)	2	1	Coil - Restart	0xF000 = execute	2	0x0207	x		
411	0x019B	x	x			Acknowledge alarms	W	uint(16)	2	1	Coil - Alarms	0xF000 = acknowledge	2	0x0208	x		
416	0x01A0	x	x	x		Analog interface: Reference voltage (pin VREF)	RW	uint(16)	2	1	Coil - VREF	0x0000 = RV, 0xF000 = PV	2	0x0209	x		
417	0x01A1	x	x	x		Analog interface: REM-SB level	RW	uint(16)	2	1	Coil - REM-SB Level	0x0000 = normal, 0xF000 = inverted	2	0x020A	x		
418	0x01A2	x	x	x		Analog interface: REM-SB action	W	uint(16)	2	1	Coil - REM-SB Action	0x0000 = off, 0xF000 = auto	2	0x020C	x		
425	0x01A9	x	x			Condition of DC output/pump after leaving remote	R	uint(16)	2	1	Coil - Condition	0x0000 = off, 0xF000 = unchanged	2	0x0229	x		
426	0x01AA	x	x			Function generator XY: Select simple PV mode	RW	uint(16)	2	1	Coil - PV mode	0x0000 = off, 0xF000 = on	5	0x0309	x		
427	0x01AB	x	x	x		Voltage Controller Speed	RW	uint(16)	2	1	Level	0x0000 = Normal (default); 0x0001 = Slow; 0x0002 = Fast;	2	0x023B	x		
428	0x01AC	x	x	x		SEMI-F47	RW	uint(16)	2	1	OnOff	0x0000 = off; 0x0001 = on;	2	0x023C	x		
432	0x01B0	x	x	x		Reset device to factory settings	RW	uint(16)	2	1	Coil - Condition	0xFF00 = Trigger reset	2	0x022A	x		
440	0x01B8	x	x			Analog interface: Pin 14 configuration	RW	uint(16)	2	1	Alarms 1	0x0000 = OVP (default); 0x0001 = OCP; 0x0002 = OPP; 0x0003 = OVP + OCP; 0x0004 = OVP + OPP; 0x0005 = OCP + OPP; 0x0006 = OVP + OCP + OPP	2	0x022B	x		
441	0x01B9	x	x	x		Analog interface: Pin 6 configuration	RW	uint(16)	2	1	Alarms 2	0x0000 = OT + PF (default); 0x0001 = OT; 0x0002 = PF	2	0x022C	x		
442	0x01BA	x	x	x		Analog interface: Pin 15 configuration	RW	uint(16)	2	1	Status DC / reg. mode	0x0000 = CV; 0x0001 = DC output status	2	0x022D	x		
500	0x01F4	x	x	x		Set voltage value	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	Voltage value (for translation see programming guide)	2	0x0216	x		
501	0x01F5	x	x	x		Set current value or irradiation (PV function)	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	Current value (for translation see programming guide) / irradiation	2	0x0217	x		
502	0x01F6	x	x	x		Set power value	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	Power value (for translation see programming guide)	2	0x0218	x		
503	0x01F7	x	x	x		Set resistance value	RW	uint(16)	2	1	0x0000 - 0x00CC (0 - 100%)	Resistance value (for translation see programming guide)	2	0x0219	x		
505	0x01F9	x				Device state	R	uint(32)	4	2	Bit 0-4: Control location Bit 5 - Config mode Bit 6 - Master-slave type Bit 7 - Output state Bit 8-10: Regulation mode Bit 11 - Remote Bit 13 - Function generator Bit 14 - External sense Bit 15 - Alarms Bit 16 - OVP Bit 17 - OCP Bit 18 - OPP Bit 19 - OT Bit 21 - Power fail Bit 25 - OVD Bit 26 - UCD Bit 27 - OCD Bit 28 - OPD Bit 29 - MSP Bit 30 - REM-SB Bit 31 - SF alarm	0x00 = free; 0x01 = local; 0x03 = USB; 0x04 = analog; 0x05 = Profibus; 0x06 = Ethernet; 0x08 = Master/Slave; 0x09 = RS232; 0x10 = CANopen; 0x12 = Modbus TCP/IP; 0x13 = Profinet IP; 0x14 = Ethernet IP; 0x15 = Ethernet 2P; 0x16 = Modbus TCP 2P; 0x17 = Profinet 2P; 0x18 = GPB; 0x19 = CAN; 0x1A = EtherCAT; 0x1C = free (due to communication timeout (CTO))	2	0x021A	x		
507	0x01FB	x				Actual voltage	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual voltage (for translation see programming guide)	2	0x021B	x		
508	0x01FC	x				Actual current	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual current (for translation see programming guide)	2	0x021C	x		
509	0x01FD	x				Actual power	R	uint(16)	2	1	0x0000 - 0xFFFF (0 - 125%)	Actual power (for translation see programming guide)	2	0x021D	x		
511	0x01FF	x				Device state 2	R	uint(32)	4	2	Bit 1 - SF alarm Bit 4 - Power derating Bit 5 - Semi F47	0 = none; 1 = active	2	0x021E	x		
520	0x0208	x				Count of OV alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	0x0312	x		
521	0x0209	x				Count of OC alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	0x0313	x		
522	0x020A	x				Count of OP alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	0x0314	x		
523	0x020B	x				Count of OT alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	0x0315	x		
524	0x020C	x				Count of PF alarms since power up	R	uint(16)	2	1	0x0000 - 0xFFFF	Count	3	0x0316	x		
550	0x0226	x	x			Overvoltage protection threshold (OVP)	RW	uint(16)	2	1	0x0000 - 0x0147 (0 - 110%)	OVP threshold (for translation see programming guide)	3	0x02FE	x		
551	0x0227	x	x			Overcurrent protection threshold (OCP)	RW	uint(16)	2	1	0x0000 - 0x0147 (0 - 110%)	OCP threshold (for translation see programming guide)	3	0x0301	x		
556	0x022C	x	x			Overpower protection threshold (OPP)	RW	uint(16)	2	1	0x0000 - 0x0147 (0 - 110%)	OPP threshold (for translation see programming guide)	3	0x0304	x		
559	0x022F	x	x			Undervoltage detection (UVD)	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	UVD threshold (for translation see programming guide)	3	0x0307	x		
560	0x0230	x	x			Adjustable UVD notification	RW	uint(16)	2	1	Adjustable UVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	0x0308	x		
561	0x0231	x	x			Overvoltage detection (OVD)	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	OVD threshold (for translation see programming guide)	3	0x0309	x		
562	0x0232	x	x			Adjustable OVD notification	RW	uint(16)	2	1	Adjustable OVD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	0x030A	x		
563	0x0233	x	x			Undercurrent detection (UCD)	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	UCD threshold (for translation see programming guide)	3	0x030B	x		
564	0x0234	x	x			Adjustable UCD notification	RW	uint(16)	2	1	Adjustable UCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	0x030C	x		
565	0x0235	x	x			Overcurrent detection (OCD)	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	OCD threshold (for translation see programming guide)	3	0x030D	x		
566	0x0236	x	x			Adjustable OCD notification	RW	uint(16)	2	1	Adjustable OCD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	0x030E	x		
567	0x0237	x	x			Overpower detection (OPD)	RW	uint(16)	2	1	0x0000 - 0x00E5 (0 - 102%)	OPD threshold (for translation see programming guide)	3	0x030F	x		
568	0x0238	x	x			Adjustable OPD notification	RW	uint(16)	2	1	Adjustable OPD notification	0x0000 = nothing; 0x0001 = signal; 0x0002 = warning; 0x0003 = alarm	3	0x0310	x		
577	0x0241	x	x	x		Condition of DC output/pump after OT alarm	RW	uint(16)	2	1	Reg. Condition	0x0000 = off; 0x0001 = restore (default)	3	0x0323	x		
650	0x028A	x	x			Master-slave: Link mode on MS bus	RW	uint(16)	2	1	Coil Mode	0x0000 = Slave; 0xF000 = Master	4	0x03FD	x		
653	0x028D	x	x			Master-slave: Enable MS	RW	uint(16)	2	1	Coil MS enable	0x0000 = off; 0xF000 = on	9	0x0400	x		
654	0x028E	x	x			Master-slave: Init MS	W	uint(16)	2	1	Reg MS status init	0xFF00 = Start/init	4	0x0401	x		
655	0x028F	x	x	x		Master-slave: Condition	R	uint(16)	2	1	Reg MS status	0x0000 = not initiated; 0x0001 = init running; 0x0003 = set default; 0x0004 = setup interface; 0x0005 = assignment; 0xFFFC = disrupted; 0xFFFD = different models detected; init not OK; 0xFFFE = error; 0xFFFF = init OK; 0xFFFB = Termination not OK	4	0x0402	x		
656	0x0290	x				Master-slave: Total voltage in V	R	float	4	2	Floating point number IEEE754	500	4	0x0403	x		
659	0x0292	x				Master-slave: Total current in A	R	float	4	2	Floating point number IEEE754	900	4	0x0404	x		
660	0x0294	x				Master-slave: Total power in W	R	float	4	2	Floating point number IEEE754	150000	4	0x0405	x		
662	0x0296	x				Master-slave: Number of initialised slaves	R	uint(16)	2	1		1..63	4	0x0406	x		
666	0x029A	x				Master-slave: Bus termination	R	uint(16)	2	1	Coil - Termination	0x0000 = off; 0xF000 = on	4	0x0407	x		
667	0x029B	x				Master-slave: Bus bias	R	uint(16)	2	1	Coil - BIAS	0x0000 = off; 0xF000 = on	4	0x0408	x		
850	0x0352	x	x			Function generator Arbitrary: Start/stop	RW	uint(16)	2	1	Coil - Start/Stop	0x0000 = Stop; 0xFF00 = Start	5	0x04FC	x		
851	0x0353	x	x			Function generator Arbitrary: Select U	RW	uint(16)	2	1	Coil - U	0x0000 = not assigned; 0xF000 = Assign function to voltage	5	0x04FD	x		
852	0x0354	x	x			Function generator Arbitrary: Select I	RW	uint(16)	2	1	Coil - I	0x0000 = not assigned; 0xF000 = Assign function to current	5	0x04FE	x		
854	0x0358	x	x			Function generator XY: Select U-I mode	RW	uint(16)	2	1	Coil - U-I	0x0000 = not assigned; 0xF000 = Assign function to U-I curve	5	0x0500	x		
855	0x0357	x	x			Function generator XY: Select I-U mode	RW	uint(16)	2	1	Coil - I-U	0x0000 = not assigned; 0xF000 = Assign function to I-U curve	5	0x0501	x		
856	0x0358	x	x			Function generator XY: Select mode	RW	uint(16)	2	1	Reg. Mode	0x0000 = deactivated 0x0001 = I-U 0x0002 = Fuel cell 0x0005 = PV	5	0x050A	x		
859	0x035B	x	x			Function generator Arbitrary: Start sequence	RW	uint(16)	2	1	0x0001..0x0003	0x0001 = I-U 0x0002 = Fuel cell 0x0005 = PV	5	0x0505	x		
860	0x035C	x	x			Function generator Arbitrary: End sequence	RW	uint(16)	2	1	0x0001..0x0003		5	0x0506	x		
861	0x03D0	x				Function generator Arbitrary: Sequence cycles	RW	uint(16)	2	1	0x0000..0x03E7	0x0000 = infinite	5	0x0507	x		
862	0x035E	x	x			Function generator Arbitrary: Submit settings (only required for CAN, CANopen, EtherCAT CoE)	W	uint(16)	2	1	Coil - Submit Arbitrary	0xFF00 = Submit settings					
900	0x0384	x	x	x		Function generator Arbitrary: Setup for sequence 1	RW	float	32	16	Bytes 0-3: U-Isr(A/C) in V or A Bytes 4-7: U-Isr(A/C) in V or A Bytes 8-11: Isr(I/T) in Hz Bytes 12-15: Isr(I/T) in Hz Bytes 16-19: Angle in degrees Bytes 20-23: U-Isr(DC) in V or A Bytes 24-27: U-Isr(DC) in V or A Bytes 28-31: Sequence time in µs	Floating point number in IEEE754 format, see device manual for value range, chapter about function generator	6	0x05FB	x		
2468	0x09A4	x	x	x	x	Function generator Arbitrary: Setup for sequence 99	RW	float	32	16	Bytes 0-3: U-Isr(A/C) in V or A Bytes 4-7: U-Isr(A/C) in V or A Bytes 8-11: Isr(I/T) in Hz Bytes 12-15: Isr(I/T) in Hz Bytes 16-19: Angle in degrees Bytes 20-23: U-Isr(DC) in V or A Bytes 24-27: U						