

M-Bus read register table for the meter MGX20300 and MGX20306

M-bus Command	Contents	M-bus register header DIF	M-bus register VIF	Response/example	Remarks	LCD page
1. REQ UD2: 10 5B xx 2. EEPROM contents: 68 03 03 68 53 xx B4 3. RAM Contents: 68 03 03 68 53 xx B1				68 xx xx 68 08 xx 72	68 [data length] 68 08 [Address] 72 [header] [datablocks] [checksum] 16	
	Serial number	Header		46 02 02 16		
	Manufacturer ID			25 CD		
	Version			01	Same as the major version of the software	
	Medium			02	Electricity	
	Access number			04	Every time the meter is read this number is increased by 1 up to 255, then it becomes 0 again	
	Status			00	00 = OK 02 = error	
	Signature			00 00	Always 00 00	

1. REQ UD2						
10 5B 00				68 4B 4B 68 08 00 72	68 xx xx [Data length] 68 08 xx [Address] 72	
	Datablocks:					
	Total active energy	0C	04	95 42 00 00	42,95kWh	
	Total active energy T1	8C 10	04	83 42 00 00	42,83	
	Total active energy T2	8C 10	04	12 00 00 00	0,12	
	Total forward active energy	1C	04	04 46 00 00	46,04	
	Forward active energy T1	9C 10	04	27 44 00 00	44,27	
	Forward active energy T2	9C 20	04	77 01 00 00	1,77	
	Total reverse active energy	2C	04	09 03 00 00	3,09	
	Reverse active energy T1	AC 10	04	44 01 00 00	1,44	
	Reverse active energy T2	AC 20	04	65 01 00 00	1,65	
	Checksum			15 16	xx 16	

2. EEPROM contents						
68 03 03 68 53 00 B4				68 E9 E9 68 08 00 72	68 xx xx [Data length] 68 08 xx [Address] 72	
	Datablocks:					
	Hardware version	0A	FD 0C	04 01	1,04	
	Firmware version	0A	FD 0E	18 02	2,18	
	Meter max ampere	0A	FD 5C	00 01	100	
	S0 output rate	0C	FD 3A	00 00 00 01	10000	
	Combined code	09	FD 3A	10	10	
	Total reactive energy	0E	7C 04 68 72 61 76	20 02 00 00 00	0,22	
	Total reactive energy T1	8E 10	7C 04 68 72 61 76	80 02 00 00 00	0,28	
	Total reactive energy T2	8E 20	7C 04 68 72 61 76	60 00 00 00 00	0,06	
	Forward reactive energy	1E	7C 04 68 72 61 76	40 03 00 00 00	0,34	
	Forward reactive energy T1	9E 10	7C 04 68 72 61 76	70 01 00 00 00	0,17	
	Forward reactive energy T2	9E 20	7C 04 68 72 61 76	70 01 00 00 00	0,17	
	Reverse reactive energy	2E	7C 04 68 72 61 76	60 05 00 00 00	0,56	
	Reverse reactive energy T1	AE 10	7C 04 68 72 61 76	50 04 00 00 00	0,45	
	Reverse reactive energy T2	AE 20	7C 04 68 72 61 76	10 01 00 00 00	0,11	
	Blocked (only for CT version)	49	FD 3A	02	02	
	CT rate (only for CT version)	0A	FD 3A	00 00		
	L1 total active energy	4C	04	14 15 00 00	15,14	
	L2 total active energy	8C 01	04	58 13 00 00	13,58	
	L3 total active energy	CC 01	04	23 14 00 00	14,23	
	L1 forward active energy	5C	04	29 16 00 00	16,29	
	L2 forward active energy	9C 01	04	55 14 00 00	14,55	
	L3 forward active energy	DC 01	04	20 15 00 00	15,20	
	L1 reverse active energy	6C	04	15 01 00 00	1,15	
	L2 reverse active energy	AC 01	04	97 00 00 00	0,97	
	L3 reverse active energy	EC 01	04	97 00 00 00	0,97	
	Checksum			C9 16	xx 16	
	Header			68 90 90 68 08 00 72	68 xx xx [Data length] 68 08 xx [Address] 72	
	L1 total reactive energy	4E	7C 04 68 72 61 76	70 00 00 00 00	0,07	
	L2 total reactive energy	8E 01	7C 04 68 72 61 76	50 01 00 00 00	0,15	
	L3 total reactive energy	CE 01	7C 04 68 72 61 76	00 00 00 00 00	0	
	L1 forward reactive energy	5E	7C 04 68 72 61 76	30 01 00 00 00	0,13	
	L2 forward reactive energy	9E 01	7C 04 68 72 61 76	90 00 00 00 00	0,09	
	L3 forward reactive energy	DE 01	7C 04 68 72 61 76	20 01 00 00 00	0,12	
	L1 reverse reactive energy	6E	7C 04 68 72 61 76	00 02 00 00 00	0,20	
	L2 reverse reactive energy	AE 01	7C 04 68 72 61 76	40 02 00 00 00	0,24	
	L3 reverse reactive energy	EE 01	7C 04 68 72 61 76	20 01 00 00 00	0,12	
	Resettable kWh	0C	04	18 00 00 00	0,18	
	Checksum			69 16	xx 16	

3. RAM contents						
68 03 03 68 53 00 B1				68 E4 E4 68 08 00 72	68 xx xx [Data length] 68 08 xx [Address] 72	
	Datablocks					
	L1 voltage	4B	FD 47	30 27 02	227,3V	
	L2 voltage	8B 01	FD 47	00 00 00	0	
	L3 voltage	CB 01	FD 47	00 00 00	0	
	L1 current	4B	FD 5A	16 04 00	4,16	
	L2 current	8B 01	FD 5A	00 00 00	0	
	L3 current	CB 01	FD 5A	00 00 00	0	
	Total active power	0C	2B	46 09 00 00	0,946	
	L1 active power	4C	2B	46 09 00 00	0,946	
	L2 active power	8C 01	2B	00 00 00 00	0	
	L3 active power	CC 01	2B	00 00 00 00	0	
	Total reactive power	0C	7C 03 72 61 76	00 00 00 00	0	
	L1 reactive power	4C	7C 03 72 61 76	00 00 00 00	0	
	L2 reactive power	8C 01	7C 03 72 61 76	00 00 00 00	0	
	L3 reactive power	CC 01	7C 03 72 61 76	00 00 00 00	0	
	Total apparent power	0C	7C 02 41 56	4609 00 00	0,946	
	L1 apparent power	4C	7C 02 41 56	46 09 00 00	0,946	
	L2 apparent power	8C 01	7C 02 41 56	00 00 00 00	0	
	L3 apparent power	CC 01	7C 02 41 56	00 00 00 00	0	
	Total power factor	0A	FD 3A	00 01	1	
	L1 power factor	4A	FD 3A	00 01	1	
	L2 power factor	8A 01	FD 3A	00 00	0	
	L3 power factor	CA 01	FD 3A	00 00	0	
	Grid frequency	0A	7C 02 7A 48	03 50	50,30	
	Tariff	09	7C 01 54	02	2	
	Comb. Active status word	0B	FD 17	00 11 01	11 100	
	Power on off counter	0A	FD 60	12 00	12	
	4 Q reading	09	7C 01 51	04	4	
	L1 4Q	49	7C 01 51	04	4	
	L2 4Q	89 01	7C 01 51	03	3	
	L3 4Q	C9 01	7C 01 51	03	3	
	Checksum			81 16	xx 16	

Default	
Baudrate	9600
Databits	8
Parity	Even
Stopbit	1
Address	00
Broadcast primary address	FE

CRC settings without checksum	
Start byte REQ UD2	2
Start byte EEPROM contents	5
Start byte RAM contents	5
CRC type	SUM
Terminating symbol	16
HEX	-
Low byte first	-
1 byte	-

CRC settings with checksum	
No CRC	-

M-Bus write register table for the meters MGX20300 and MGX20306

Contents	Command part 1	Address	command part	New value	Response	Remarks	Note								
								B8 = 300	B9 = 600	BA = 1200	BB = 2400	BC = 4800	BD = 9600		
Baudrate	68 03 03 68 53	01	-	BB	E5 (new Baud 2400)	B8 = 300; B9 = 600; BA = 1200; BB = 2400; BC = 4800; BD = 9600		68 53 00 68 53 00 88 08 16 (47 ms) E5	68 53 00 68 53 00 89 0C 16 (375 ms) E5	68 53 00 68 53 00 BA 0D 16 (188 ms) E5	68 53 00 68 53 00 8B 0E 16 (125 ms) E5	68 53 00 68 53 00 BC 0F 16 (63 ms) E5	68 53 00 68 53 00 BD 10 16 (47 ms) E5		
Primary address	68 06 06 68 53	01	51 01 7A	01	E5 (new id 01)	000 - 247 write in HEX		68 06 06 68 53 F6 51 01 7A 01 16 16 (47 ms) E5	68 06 06 68 53 00 51 01 7A 13 32 16 (47 ms) E5	68 06 06 68 53 13 51 01 7A 50 82 16 (47 ms) E5	68 06 06 68 53 50 51 01 7A 84 F3 16 (47 ms) E5	68 06 06 68 53 84 51 01 7A 81 54 16 (47 ms) E5	68 06 06 68 53 81 51 01 7A F6 C6 16 (47 ms) E5		
Secondary address	68 09 09 68 53	01	51 0C 79	15 01 23 45	E5 (new address 1501 2345)	4 bytes BCD same as read		11111111	78563412	99999999	SN				
Tariff mode	68 08 08 68 53	01	09 7C 01	02	E5 (tariff 2)	T1 = 01 ; T2=02		T1	T2						
Combined code	68 07 07 68 53	01	51 09 FD 3	05	E5 (combined code 05)	01, 04, 05, 06, 09 and 10		01	04	05	06	09	10	11	
S0 rate	68 0A 0A 68 53	01	51 0C FD 3	00 00 01 00	E5 (S0 rate 100)	10000, 2000, 1000, 100, 10, 1, 0.1, 0.01		0,01	0,1	1	10	100	1000	2000	10000
Resettable kWh	68 09 09 68 53	01	51 0C 04	4 byte value	E5	In case value is ignored, always set to 0		Reset							
Reset power on off counter	68 08 08 68 53	01	51 0A FD 6	2 byte value	E5	Value is ignored, always reset to 0		Reset							

SND NKE	10 40	01	-	-	E5	send to primary or secondary address and resets all communication								10 40 FE 3E 16 (15 ms) E5
----------------	-------	----	---	---	----	---	--	--	--	--	--	--	--	---------------------------------

Selecting slave by secondary addressing	Serial number	Manufacturer ID	Generation version	Medium	
68 0B 0B 68 53 FD 52	aa aa aa aa	bb bb	cc	dd	
Input	01 00 07 13	25 CD	01		68 0B 0B 68 53 FD 52 46 02 02 16 25 CD 01 02 F7 16 (32 ms) E5
Remarks	13070001	-	Major version of the software	Electricity	68 03 03 68 53 FD B1 01 16