

EKM Metering V.3 Meter Communication Protocol

Data Format: High Byte --> Low Byte **Example:** 123456.78kWh (31 32 33 34 35 36 37 38)

Communication Sequence for Reading:

PC Send **Request** -->
Meter **Return** <--
PC Send **Read** -->
Meter **Return** <--
PC Send **Read** --> or 01 42 30 03 75 (End of Communication)
Meter **Return** <--
PC Send **Read** --> or 01 42 30 03 75 (End of Communication)
Meter **Return** <--
PC Send --> 01 42 30 03 75 (End of Communication)

Communication Sequence for Writing:

PC Send **Request** -->
Meter **Return** <--
PC Send **Password Check** -->
Meter **Return** 06H <--
PC Send **Write** -->
Meter **Return** 06H <--
PC Send --> 01 42 30 03 75 (End of Communication)

Request: 2F 3F 12 Bytes Address 21 0D 0A
Return: 02 2 Byte Meter Type 1 Byte Meter Firmware 12 Bytes Address 40 Bytes kWh
40 Bytes Rev.kWh 60 Bytes Instantaneous Values 6 Bytes Maximum Demand
1 Byte Maximum Demand Time 14 Bytes Current Time 73 Bytes Reserved 21 0D 0A 03 **CRC16** (255 Bytes total)

Read Last kWh : 01 52 31 02 30 30 31 31 03 **CRC16**
Return: 02 30 30 31 31 28 40 Bytes Last 1 Month 40 Bytes Last2 Month 40 Bytes Last 3 Month 40 Bytes Last 4 Month 40 Bytes Last 5 Month 40 Bytes Last 6 Month 6 Bytes Reserved 29 03 **CRC16** (255 Bytes total)

Read Last Rev. kWh : 01 52 31 02 30 30 31 32 03 **CRC16**
Return: 02 30 30 31 32 28 40 Bytes Last 1 Month 40 Bytes Last2 Month 40 Bytes Last 3 Month 40 Bytes Last 4 Month 40 Bytes Last 5 Month 40 Bytes Last 6 Month 6 Bytes Reserved 29 03 **CRC16** (255 Bytes total)

Read Period Tables 1 to 4: 01 52 31 02 30 30 37 30 03 **CRC16**
Return: 02 30 30 37 30 28 48 Bytes Period Table 1 48 Bytes Period Table 2 48 Bytes Period Table 3 48 Bytes Period Table 4 48 Bytes Seasons Table 6 Bytes Reserved 29 03 **CRC16** (255 Bytes total)

Read Period Tables 5 to 8: 01 52 31 02 30 30 37 31 03 **CRC16**
Return: 02 30 30 37 31 28 48 Bytes Period Table 5 48 Bytes Period Table 6 48 Bytes Period Table 7 48 Bytes Period Table 8 48 Bytes Seasons Table 6 Bytes Reserved 29 03 **CRC16** (255 Bytes total)

Password Check: 01 50 31 02 28 8 bytes Password 29 03 **CRC16**

Write New Address: 01 57 31 02 30 30 31 30 28 12 Bytes New Address 29 03 **CRC16**

Write New Password: 01 57 31 02 30 30 32 30 28 8 Bytes New Password 29 03 **CRC16**

Write Maximum Demand (Zero): 01 57 31 02 30 30 34 30 28 30 30 30 30 30 29 03 **CRC16**

Write Demand Time : 01 57 31 02 30 30 35 30 28 1 Byte Maximum Demand Time 29 03 **CRC16**

Write CT Ratio: 01 57 31 02 30 30 44 30 28 4 Bytes CT Ratio 29 03 **CRC16**

Write New Time : 01 57 31 02 30 30 36 30 28 14 Bytes New Time 29 03 **CRC16**

Write Period Table 1 : 01 57 31 02 30 30 37 30 28 48 Bytes Period Table 1 29 03 **CRC16**
Write Period Table 2 : 01 57 31 02 30 30 37 31 28 48 Bytes Period Table 2 29 03 **CRC16**
Write Period Table 3 : 01 57 31 02 30 30 37 32 28 48 Bytes Period Table 3 29 03 **CRC16**
Write Period Table 4 : 01 57 31 02 30 30 37 33 28 48 Bytes Period Table 4 29 03 **CRC16**
Write Period Table 5 : 01 57 31 02 30 30 37 34 28 48 Bytes Period Table 5 29 03 **CRC16**
Write Period Table 6 : 01 57 31 02 30 30 37 35 28 48 Bytes Period Table 6 29 03 **CRC16**
Write Period Table 7 : 01 57 31 02 30 30 37 36 28 48 Bytes Period Table 7 29 03 **CRC16**
Write Period Table 8 : 01 57 31 02 30 30 37 37 28 48 Bytes Period Table 8 29 03 **CRC16**

Write Seasons Table : 01 57 31 02 30 30 38 30 28 48 Bytes Seasons Table 29 03 **CRC16**

******CRC16** (2 Bytes) is calculated on the second character through the third from last character (03)