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XPOW3710 Driver Manual

Power Measurement 3710 ACM Protocol Driver

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XPOW3710 technical specifications

General information

XPOW3710 driver allows you to connect with POWER MEASUREMENT 3710 ACM Power Meter Series. The RS-485 specification allows for multiple devices (up to 32) on a single loop, whereas the RS-232C climate allows for only a single device.

The communication settings are:

8 Data bits, no parity and 1 stop bit. Baudrate is configurable.

Command list

Commands

Read Long Real-Time

Description of this command:

This command retrieves a detailed account of the real-time data measured by the 3710 ACM meter.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-69

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

3

Values that are returned:

Value in PointValue (0) = Software Revision Code.

Value in PointValue (1) = Feature Code.

Value in PointValue (2) = Input Mode Code (0-4).

Value in PointValue (3) = Year (Minus 1900).

Value in PointValue (4) = Month (1-12).

Value in PointValue (5) = Day (1-31).

Value in PointValue (6) = Hour (0-23).

Value in PointValue (7) = Minute (0-59).

Value in PointValue (8) = Second (0-59).

if the 3710 ACM is operating in 3-WIRE DELTA mode:

Value in PointValue (9) = L-L Voltage Phase AB.

Value in PointValue (10) = L-L Voltage Phase BC.

Value in PointValue (11) = L-L Voltage Phase CA.

Value in PointValue (12) = Average L-L Voltage.

Value in PointValue (13) = Not used.

Value in PointValue (14) = Not used.

Value in PointValue (15) = Not used.

Value in PointValue (16) = Amperage Phase A.

Value in PointValue (17) = Amperage Phase B.

Value in PointValue (18) = Amperage Phase C.

Value in PointValue (19) = Average Amperage.

Value in PointValue (20) = Total KVA.

Value in PointValue (21) = Not used.

Value in PointValue (22) = Not used.

Value in PointValue (23) = Not used.

Value in PointValue (24) = Total KW.

Value in PointValue (25) = Total KVAR.

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Value in PointValue (26) = Present KW Demand.
Value in PointValue (27) = Power Factor (2's complement x 100).
Value in PointValue (28) = Frequency (x10).
Value in PointValue (29) = KW Hour Total.
Value in PointValue (30) = KW Hour Exported (Reverse).
Value in PointValue (31) = KVAR Hour Total.
Value in PointValue (32) = Alarm Status Bytes (See Alarm Status Bytes Table).
Value in PointValue (33) = VAUX.
Value in PointValue (34) = Present AMP Demand.
if the 3710 ACM is operating in 4-WIRE WYE, SINGLE, 3-WIRE WYE

or *DEMO mode*:

Value in PointValue (9) = L-N Voltage Phase A.
Value in PointValue (10) = L-N Voltage Phase B.
Value in PointValue (11) = L-N Voltage Phase C (not valid for SINGLE mode).
Value in PointValue (12) = Average L-N Voltage.
Value in PointValue (13) = L-L Voltage Phase AB.
Value in PointValue (14) = L-L Voltage Phase BC (not valid for SINGLE mode).
Value in PointValue (15) = L-L Voltage Phase CA (not valid for SINGLE mode).
Value in PointValue (16) = Amperage Phase A.
Value in PointValue (17) = Amperage Phase B.
Value in PointValue (18) = Amperage Phase C.
Value in PointValue (19) = Average Amperage.
Value in PointValue (20) = Total KVA.
Value in PointValue (21) = KW Phase A.
Value in PointValue (22) = KW Phase B.
Value in PointValue (23) = KW Phase C (not valid for SINGLE mode).
Value in PointValue (24) = Total KW.
Value in PointValue (25) = Total KVAR.
Value in PointValue (26) = Present KW Demand.
Value in PointValue (27) = Power Factor (2's complement x 100).
Value in PointValue (28) = Frequency (x10).
Value in PointValue (29) = KW Hour Total.
Value in PointValue (30) = KW Hour Exported (Reverse).
Value in PointValue (31) = KVAR Hour Total.
Value in PointValue (32) = Alarm Status Bytes (See Alarm Status Bytes Table).
Value in PointValue (33) = VAUX.
Value in PointValue (34) = Present AMP Demand.
Value in PointValue (35) = KVA Phase A.
Value in PointValue (36) = KVA Phase B.
Value in PointValue (37) = KVA Phase C (not valid for SINGLE mode).
Value in PointValue (38) = KVAR Phase A.
Value in PointValue (39) = KVAR Phase B.
Value in PointValue (40) = KVAR Phase C (not valid for SINGLE mode).

The subsequent status information follows for ALL modes:

Value in PointValue (41) = Relay #1 Status Byte (See Relay Status Byte Table).
Value in PointValue (42) = Relay #2 Status Byte.
Value in PointValue (43) = Relay #3 Status Byte.
Value in PointValue (44) = Status Input Status Byte (See Status Input Status Byte Table).
Value in PointValue (45) = Setpoint #1 Status Byte (See Setpoint Status Byte Table).
Value in PointValue (46) = Setpoint #2 Status Byte.
Value in PointValue (47) = Setpoint #3 Status Byte.
Value in PointValue (48) = Setpoint #4 Status Byte.
Value in PointValue (49) = Setpoint #5 Status Byte.
Value in PointValue (50) = Setpoint #6 Status Byte.
Value in PointValue (51) = Setpoint #7 Status Byte.
Value in PointValue (52) = Setpoint #8 Status Byte.
Value in PointValue (53) = Setpoint #9 Status Byte.
Value in PointValue (54) = Setpoint #10 Status Byte.
Value in PointValue (55) = Setpoint #11 Status Byte.
Value in PointValue (56) = Setpoint #12 Status Byte.
Value in PointValue (57) = Setpoint #13 Status Byte.
Value in PointValue (58) = Setpoint #14 Status Byte.

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Value in PointValue (59) = Setpoint #15 Status Byte.
Value in PointValue (60) = Setpoint #16 Status Byte.
Value in PointValue (61) = Setpoint #17 Status Byte.
Value in PointValue (62) = S1 Input Counter.
Value in PointValue (63) = Event Log Counter.
Value in PointValue (64) = Snapshot Log Counter.
Value in PointValue (65) = Max/min Log Counter.
Value in PointValue (66) = I4 Neutral Current.
Value in PointValue (67) = KVARH Reverse.
Value in PointValue (68) = KVAH.

Read Short Real-Time

Description of this command:

This command retrieves a condensed version of the real-time data measured by the 3710 ACM meter.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-20

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

4

Values that are returned:

Value in PointValue (0) = Software Revision Code.
Value in PointValue (1) = Feature Code.
Value in PointValue (2) = Input Mode Code (0-4).
Value in PointValue (3) = Year (Minus 1900).
Value in PointValue (4) = Month (1-12).
Value in PointValue (5) = Day (1-31).
Value in PointValue (6) = Hour (0-23).
Value in PointValue (7) = Minute (0-59).
Value in PointValue (8) = Second (0-59).
Value in PointValue (9) = Average Voltage (L-L for DELTA, L-N otherwise).
Value in PointValue (10) = Average current.
Value in PointValue (11) = Total KVA.
Value in PointValue (12) = Total KW.
Value in PointValue (13) = Total KVAR.
Value in PointValue (14) = Present KW Demand.
Value in PointValue (15) = Power Factor (2's complement x 100).
Value in PointValue (16) = Alarm Status Bytes (See Alarm Status Bytes Table).
Value in PointValue (17) = VAUX.
Value in PointValue (18) = Present AMP Demand.
Value in PointValue (19) = I4 Neutral Current.

Read Setup

Description of this command:

This command retrieves a packet containing the present setup parameters.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-28

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

10

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Values that are returned:

- Value in PointValue (0) = Software Revision Code.
- Value in PointValue (1) = Feature Code.
- Value in PointValue (2) = Input Mode Code (0-4).
- Value in PointValue (3) = Voltage Scale (0-999999)..
- Value in PointValue (4) = Baudrate(See Baudrate Table).
- Value in PointValue (5) = Voltage Mode (See Input Mode Codes Table).
- Value in PointValue (6) = Present Password.
- Value in PointValue (7) = Phase Sequence (0=ABC,1=ACB).
- Value in PointValue (8) = Snapshot Interval.
- Value in PointValue (9) = Demand Period (0-99 min).
- Value in PointValue (10) = Reserved.
- Value in PointValue (11) = Number of Demand Period (1-15).
- Value in PointValue (12) = IOU Range (0=0-20 mA, 1=4-20 mA).
- Value in PointValue (13) = IOU Key (0-25).
- Value in PointValue (14) = Standard Frequency (50, 60 o 400).
- Value in PointValue (15) = IOU Scale (0-999999).
- Value in PointValue (16) = Serial Communication Mode (0=RS232, 1=RS485).
- Value in PointValue (17) = KWH per pulse.
- Value in PointValue (18) = Log Status Word (See Log Status Word Table).
- Value in PointValue (19) = KVARH per pulse.
- Value in PointValue (20) = VAUX Scale (0-999999).
- Value in PointValue (21) = Neutral Current Scale (0-9999).
- Value in PointValue (22) = R1 Mode (0=Setpoint, 1=KWH Pulse y 2=KVARH pulse).
- Value in PointValue (23) = R1 Value.
- Value in PointValue (24) = R2 Mode (0=Setpoint, 1=KWH Pulse y 2=KVARH pulse).
- Value in PointValue (25) = R2 Value.
- Value in PointValue (26) = R3 Mode (0=Setpoint, 1=KWH Pulse y 2=KVARH pulse).
- Value in PointValue (27) = R3 Value.

Read Status

Description of this command:

This command is used to determine the status of the relays, the status inputs and all setpoints.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-25

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

12

Values that are returned:

- Value in PointValue (0) = Software Revision Code.
- Value in PointValue (1) = Feature Code.
- Value in PointValue (2) = Input Mode Code (0-4).
- Value in PointValue (3) = Relay #1 Status Byte (See Relay Status Byte Table).
- Value in PointValue (4) = Relay #2 Status Byte.
- Value in PointValue (5) = Relay #3 Status Byte.
- Value in PointValue (6) = Status Input Status Byte (See Status Input Status Byte Table).
- Value in PointValue (7) = Setpoint #1 Status Byte (See Setpoint Status Byte Table).
- Value in PointValue (8) = Setpoint #2 Status Byte.
- Value in PointValue (9) = Setpoint #3 Status Byte.
- Value in PointValue (10) = Setpoint #4 Status Byte.
- Value in PointValue (11) = Setpoint #5 Status Byte.
- Value in PointValue (12) = Setpoint #6 Status Byte.
- Value in PointValue (13) = Setpoint #7 Status Byte.
- Value in PointValue (14) = Setpoint #8 Status Byte.
- Value in PointValue (15) = Setpoint #9 Status Byte.
- Value in PointValue (16) = Setpoint #10 Status Byte.
- Value in PointValue (17) = Setpoint #11 Status Byte.

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Value in PointValue (18) = Setpoint #12 Status Byte.
Value in PointValue (19) = Setpoint #13 Status Byte.
Value in PointValue (20) = Setpoint #14 Status Byte.
Value in PointValue (21) = Setpoint #15 Status Byte.
Value in PointValue (22) = Setpoint #16 Status Byte.
Value in PointValue (23) = Setpoint #17 Status Byte.
Value in PointValue (24) = S1 Input Counter.

Read Time

Description of this command:

This command retrieves the present time used by the 3710 ACM.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-9

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

13

Values that are returned:

Value in PointValue (0) = Software Revision Code.
Value in PointValue (1) = Feature Code.
Value in PointValue (2) = Input Mode Code (0-4).
Value in PointValue (3) = Year (Minus 1900).
Value in PointValue (4) = Month (1-12).
Value in PointValue (5) = Day (1-31).
Value in PointValue (6) = Hour (0-23).
Value in PointValue (7) = Minute (0-59).
Value in PointValue (8) = Second (0-59).

Read Setpoints

Description of this command:

This command retrieves the setpoint parameters used to control the relays associated with the meter.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-90

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

14

Meaning of the DriverP3 parameter:

Start Setpoint number (0-17).

Values that are returned:

Value in PointValue (0) = Setpoint Record HMITalk1.DriverP3 Low Limit.
Value in PointValue (1) = Setpoint Record HMITalk1.DriverP3 High Limit.
Value in PointValue (2) = Setpoint Record HMITalk1.DriverP3 Release Time Delay.
Value in PointValue (3) = Setpoint Record HMITalk1.DriverP3 Operate Time Delay.
Value in PointValue (4) = Setpoint Record HMITalk1.DriverP3 Relay Number.
Value in PointValue (5) = Setpoint Record HMITalk1.DriverP3 Setpoint Key (0-20) (See Setpoint Key Codes Table).
Value in PointValue (6) = Setpoint Record HMITalk1.DriverP3+1 Low Limit.
Value in PointValue (7) = Setpoint Record HMITalk1.DriverP3+1 High Limit.
Value in PointValue (8) = Setpoint Record HMITalk1.DriverP3+1 Release Time Delay.
Value in PointValue (9) = Setpoint Record HMITalk1.DriverP3+1 Operate Time Delay.
Value in PointValue (10) = Setpoint Record HMITalk1.DriverP3+1 Relay Number.

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Value in PointValue (11) = Setpoint Record HMITalk1.DriverP3+1 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (12) = Setpoint Record HMITalk1.DriverP3+2 Low Limit.

Value in PointValue (13) = Setpoint Record HMITalk1.DriverP3+2 High Limit.

Value in PointValue (14) = Setpoint Record HMITalk1.DriverP3+2 Release Time Delay.

Value in PointValue (15) = Setpoint Record HMITalk1.DriverP3+2 Operate Time Delay.

Value in PointValue (16) = Setpoint Record HMITalk1.DriverP3+2 Relay Number.

Value in PointValue (17) = Setpoint Record HMITalk1.DriverP3+2 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (18) = Setpoint Record HMITalk1.DriverP3+3 Low Limit.

Value in PointValue (19) = Setpoint Record HMITalk1.DriverP3+3 High Limit.

Value in PointValue (20) = Setpoint Record HMITalk1.DriverP3+3 Release Time Delay.

Value in PointValue (21) = Setpoint Record HMITalk1.DriverP3+3 Operate Time Delay.

Value in PointValue (22) = Setpoint Record HMITalk1.DriverP3+3 Relay Number.

Value in PointValue (23) = Setpoint Record HMITalk1.DriverP3+3 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (24) = Setpoint Record HMITalk1.DriverP3+4 Low Limit.

Value in PointValue (25) = Setpoint Record HMITalk1.DriverP3+4 High Limit.

Value in PointValue (26) = Setpoint Record HMITalk1.DriverP3+4 Release Time Delay.

Value in PointValue (27) = Setpoint Record HMITalk1.DriverP3+4 Operate Time Delay.

Value in PointValue (28) = Setpoint Record HMITalk1.DriverP3+4 Relay Number.

Value in PointValue (29) = Setpoint Record HMITalk1.DriverP3+4 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (30) = Setpoint Record HMITalk1.DriverP3+5 Low Limit.

Value in PointValue (31) = Setpoint Record HMITalk1.DriverP3+5 High Limit.

Value in PointValue (32) = Setpoint Record HMITalk1.DriverP3+5 Release Time Delay.

Value in PointValue (33) = Setpoint Record HMITalk1.DriverP3+5 Operate Time Delay.

Value in PointValue (34) = Setpoint Record HMITalk1.DriverP3+5 Relay Number.

Value in PointValue (35) = Setpoint Record HMITalk1.DriverP3+5 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (36) = Setpoint Record HMITalk1.DriverP3+6 Low Limit.

Value in PointValue (37) = Setpoint Record HMITalk1.DriverP3+6 High Limit.

Value in PointValue (38) = Setpoint Record HMITalk1.DriverP3+6 Release Time Delay.

Value in PointValue (39) = Setpoint Record HMITalk1.DriverP3+6 Operate Time Delay.

Value in PointValue (40) = Setpoint Record HMITalk1.DriverP3+6 Relay Number.

Value in PointValue (41) = Setpoint Record HMITalk1.DriverP3+6 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (42) = Setpoint Record HMITalk1.DriverP3+7 Low Limit.

Value in PointValue (43) = Setpoint Record HMITalk1.DriverP3+7 High Limit.

Value in PointValue (44) = Setpoint Record HMITalk1.DriverP3+7 Release Time Delay.

Value in PointValue (45) = Setpoint Record HMITalk1.DriverP3+7 Operate Time Delay.

Value in PointValue (46) = Setpoint Record HMITalk1.DriverP3+7 Relay Number.

Value in PointValue (47) = Setpoint Record HMITalk1.DriverP3+7 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (48) = Setpoint Record HMITalk1.DriverP3+8 Low Limit.

Value in PointValue (49) = Setpoint Record HMITalk1.DriverP3+8 High Limit.

Value in PointValue (50) = Setpoint Record HMITalk1.DriverP3+8 Release Time Delay.

Value in PointValue (51) = Setpoint Record HMITalk1.DriverP3+8 Operate Time Delay.

Value in PointValue (52) = Setpoint Record HMITalk1.DriverP3+8 Relay Number.

Value in PointValue (53) = Setpoint Record HMITalk1.DriverP3+8 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (54) = Setpoint Record HMITalk1.DriverP3+9 Low Limit.

Value in PointValue (55) = Setpoint Record HMITalk1.DriverP3+9 High Limit.

Value in PointValue (56) = Setpoint Record HMITalk1.DriverP3+9 Release Time Delay.

Value in PointValue (57) = Setpoint Record HMITalk1.DriverP3+9 Operate Time Delay.

Value in PointValue (58) = Setpoint Record HMITalk1.DriverP3+9 Relay Number.

Value in PointValue (59) = Setpoint Record HMITalk1.DriverP3+9 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Value in PointValue (60) = Setpoint Record HMITalk1.DriverP3+10 Low Limit.

Value in PointValue (61) = Setpoint Record HMITalk1.DriverP3+10 High Limit.

Value in PointValue (62) = Setpoint Record HMITalk1.DriverP3+10 Release Time Delay.

Value in PointValue (63) = Setpoint Record HMITalk1.DriverP3+10 Operate Time Delay.

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Value in PointValue (64) = Setpoint Record HMITalk1.DriverP3+10 Relay Number.
Value in PointValue (65) = Setpoint Record HMITalk1.DriverP3+10 Setpoint Key (0-20) (See Setpoint Key Codes Table).
Value in PointValue (66) = Setpoint Record HMITalk1.DriverP3+11 Low Limit.
Value in PointValue (67) = Setpoint Record HMITalk1.DriverP3+11 High Limit.
Value in PointValue (68) = Setpoint Record HMITalk1.DriverP3+11 Release Time Delay.
Value in PointValue (69) = Setpoint Record HMITalk1.DriverP3+11 Operate Time Delay.
Value in PointValue (70) = Setpoint Record HMITalk1.DriverP3+11 Relay Number.
Value in PointValue (71) = Setpoint Record HMITalk1.DriverP3+11 Setpoint Key (0-20) (See Setpoint Key Codes Table).
Value in PointValue (72) = Setpoint Record HMITalk1.DriverP3+12 Low Limit.
Value in PointValue (73) = Setpoint Record HMITalk1.DriverP3+12 High Limit.
Value in PointValue (74) = Setpoint Record HMITalk1.DriverP3+12 Release Time Delay.
Value in PointValue (75) = Setpoint Record HMITalk1.DriverP3+12 Operate Time Delay.
Value in PointValue (76) = Setpoint Record HMITalk1.DriverP3+12 Relay Number.
Value in PointValue (77) = Setpoint Record HMITalk1.DriverP3+12 Setpoint Key (0-20) (See Setpoint Key Codes Table).
Value in PointValue (78) = Setpoint Record HMITalk1.DriverP3+13 Low Limit.
Value in PointValue (79) = Setpoint Record HMITalk1.DriverP3+13 High Limit.
Value in PointValue (80) = Setpoint Record HMITalk1.DriverP3+13 Release Time Delay.
Value in PointValue (81) = Setpoint Record HMITalk1.DriverP3+13 Operate Time Delay.
Value in PointValue (82) = Setpoint Record HMITalk1.DriverP3+13 Relay Number.
Value in PointValue (83) = Setpoint Record HMITalk1.DriverP3+13 Setpoint Key (0-20) (See Setpoint Key Codes Table).
Value in PointValue (84) = Setpoint Record HMITalk1.DriverP3+14 Low Limit.
Value in PointValue (85) = Setpoint Record HMITalk1.DriverP3+14 High Limit.
Value in PointValue (86) = Setpoint Record HMITalk1.DriverP3+14 Release Time Delay.
Value in PointValue (87) = Setpoint Record HMITalk1.DriverP3+14 Operate Time Delay.
Value in PointValue (88) = Setpoint Record HMITalk1.DriverP3+14 Relay Number.
Value in PointValue (89) = Setpoint Record HMITalk1.DriverP3+14 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Read Analog Waveform

Description of this command:

This command retrieves the real time waveform raw data.

Methods used to run this command:

Analog Input / Digital Input

Number of points accepted by this command:

1-250

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

66

Meaning of the DriverP3 parameter:

Channel number (0-7).

Values that are sent:

Channel number	Input(Wye mode)	Input(Delta mode)
0	V1	VAB
1	I1	I1
2	V2	N/A
3	I2	I2
4	V3	VCB
5	I3	I3
6	I4	I4
7	Vaux	Vaux

Meaning of the DriverP4 parameter:

Indicates the direction of read.

- 0 = Read the first N samples, where N=Size-2.
- 1 = Read the last N samples, where N=Size-2.

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Values that are returned:

- Value in PointValue (0) = Number of samples.
- Value in PointValue (1) = Delay between each sample in microseconds.
- Value in PointValue (2) = Sample #1.
- Value in PointValue (3) = Sample #2.
- Value in PointValue (NumPoints) = Sample #N.

Set Time

Description of this command:

This command set the present time used by the 3710 ACM.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

7

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

7

Values that are sent:

- Value in PointValue (0) = Year (1-9999).
- Value in PointValue (1) = Month (1-12).
- Value in PointValue (2) = Day (1-31).
- Value in PointValue (3) = Hour (0-23).
- Value in PointValue (4) = Minute (0-59).
- Value in PointValue (5) = Second (0-59).
- Value in PointValue (6) = Number of seconds since 0:00 January 1, 1970.

Write Setup

Description of this command:

This command set the present time used by the 3710 ACM.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

23

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

11

Values that are sent:

- Value in PointValue (0) = New Unit Address
- Value in PointValue (1) = Voltage Scale (0-999999)
- Value in PointValue (2) = Current Scale (0-30000)
- Value in PointValue (3) = Baudrate (See Baudrate Codes Table)
- Value in PointValue (4) = Voltage Mode (0-4) (See Input Mode Codes Table)
- Value in PointValue (5) = New Password
- Value in PointValue (6) = Snapshot Interval (seconds)
- Value in PointValue (7) = Demand Period (0-99 min)
- Value in PointValue (8) = Number of Demand Period (1-15)
- Value in PointValue (9) = IOU Range (0=0-20 mA, 1=4-20 mA)
- Value in PointValue (10) = IOU Key
- Value in PointValue (11) = Standard Frequency (50, 60 o 400)
- Value in PointValue (12) = IOU Scale (0-999999)
- Value in PointValue (13) = KWH per pulse
- Value in PointValue (14) = Log Status Word (See Setpoint Key Codes Table)
- Value in PointValue (15) = KVARH per pulse
- Value in PointValue (16) = VAUX Scale (0-999999)
- Value in PointValue (17) = Neutral Current Scale (0-9999)

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Value in PointValue (18) = R1 Mode (0=Setpoint, 1=KWH Pulse y 2=KVARH pulse)
Value in PointValue (19) = R1 Value
Value in PointValue (20) = R2 Mode (0=Setpoint, 1=KWH Pulse y 2=KVARH pulse)
Value in PointValue (21) = R2 Value
Value in PointValue (22) = R3 Mode (0=Setpoint, 1=KWH Pulse y 2=KVARH pulse)
Value in PointValue (23) = R3 Value

Write Setpoints

Description of this command:

This command set the setpoint parameters in the meter.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

6

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

15

Meaning of the DriverP3 parameter:

Start Setpoint number (0-17).

Values that are sent:

Value in PointValue (0) = Setpoint Record HMITalk1.DriverP3 Low Limit.

Value in PointValue (1) = Setpoint Record HMITalk1.DriverP3 High Limit.

Value in PointValue (2) = Setpoint Record HMITalk1.DriverP3 Release Time Delay.

Value in PointValue (3) = Setpoint Record HMITalk1.DriverP3 Operate Time Delay.

Value in PointValue (4) = Setpoint Record HMITalk1.DriverP3 Relay Number.

Value in PointValue (5) = Setpoint Record HMITalk1.DriverP3 Setpoint Key (0-20) (See Setpoint Key Codes Table).

Clear KW Hours

Description of this command:

This command is used to clear the KW Hour parameter stored by the meter.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

22

Clear KVAR Hours

Description of this command:

This command is used to clear the KVAR Hour parameter stored by the 3710 ACM meter.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

23

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Control Relays

Description of this command:

This command is used to control the operations of the 3 relays used by the 3710 ACM meter.

Methods used to run this command:

Analog Output / Digital Output

Number of points accepted by this command:

1

Meaning of the DriverP0 parameter:

Unit Address (0-99).

Meaning of the DriverP1 parameter:

Password (0-99).

Meaning of the DriverP2 parameter:

26

Meaning of the DriverP3 parameter:

relay number (1-3).

Meaning of the DriverP4 parameter:

command mode.

- 0 = Normal.

- 1 = Operate.

- 2 = Release.

[Code Tables]

Code Tables

Input Mode Codes Table

0 = 4 WIRE WYE

1 = Delta

2 = Single Phase

3 = Demonstration

4 = 3 WIRE WYE

Baudrates Codes Table

1 = 300 Bauds

2 = 1200 Bauds

3 = 2400 Bauds

4 = 4800 Bauds

5 = 9600 Bauds

6 = 19200 Bauds

IOUT Key Codes Table

0 = Voltage Phase A

1 = Voltage Phase B

2 = Voltage Phase C

3 = Current Phase A

4 = Current Phase B

5 = Current Phase C

6 = KW Phase A

7 = KW Phase B

8 = KW Phase C

9 = KVA Phase A

10 = KVA Phase B

11 = KVA Phase C

12 = KVAR Phase A

13 = KVAR Phase B

14 = KVAR Phase C

15 = Voltage Average

16 = Current Average

17 = KW Total

18 = KVA Total

19 = KVAR Total

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- 20 = Power Factor
- 21 = KW Demand
- 22 = AMP Demand
- 23 = Frequency
- 24 = VAUX
- 25 = Neutral Current (I4)

Log Status Word Table

Bit Position	15-12	11-8	7-4	3-0	A	B	C	D
A) Log S4 status changes	0=No, 1=Yes							
B) Log S3 status changes	0=No, 1=Yes							
C) Log S2 status changes	0=No, 1=Yes							
D) Log S1 status changes	0=No, 1=Yes							

Setpoint Key Codes Table

- 0 = NOT USED
- 1 = OVER VOLTAGE
- 2 = UNDER VOLTAGE
- 3 = VOLTAGE UNBALANCE
- 4 = OVER CURRENT
- 5 = CURRENT UNBALANCE
- 6 = OVER KVA
- 7 = OVER KW FORWARD
- 8 = OVER KW REVERSE
- 9 = OVER KVAR FORWARD
- 10 = OVER KW DEMAND
- 11 = OVER AMP DEMAND
- 12 = OVER FREQUENCY (x10)
- 13 = UNDER FREQUENCY (x10)
- 14 = OVER VAUX
- 15 = UNDER VAUX
- 16 = PHASE REVERSAL
- 17 = UNDER PF LAGGING
- 18 = UNDER PF LEADING
- 19 = OVER I4
- 20 = OVER KVAR REVERSE

Alarm Status Bytes Table

- (Bit Position 31 0) 00 = Setpoint #1 status 01 = Setpoint #2 status 02 = Setpoint #3 status 03 = Setpoint #4 status 04 = Setpoint #5 status 05 = Setpoint #6 status 06 = Setpoint #7 status 07 = Setpoint #8 status 08 = Setpoint #9 status 09 = Setpoint #10 status
- 10 = Setpoint #11 status
 - 11 = Setpoint #12 status
 - 12 = Setpoint #13 status
 - 13 = Setpoint #14 status
 - 14 = Setpoint #15 status
 - 15 = Setpoint #16 status
 - 16 = Setpoint #17 status
 - 17 = Reserved
 - 18 = Relay #1 Status
 - 19 = Relay #2 Status
 - 20 = Relay #3 Status
 - 21 = Status Input #1 status
 - 22 = Status Input #2 status
 - 23 = Status Input #3 status
 - 24 = Status Input #4 status
 - 25 = Alarm Status Change Flag
 - 26 = New Event Flag
 - 27 = New Min/Max Flag
 - 28 = Diagnostic Failure Flag
 - 29 = New Snapshot Flag

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30 = Reserved
31 = Reserved

Relay Status Byte Table

0 = Released
1 = Operated
2 = Forced Released
3 = Forced Operated

Status Input Status Byte Table

(Bit Position 7 ... 0) Bit 0 = Status Input #1: 0=Normal 1=Active Bit 1 = Status Input #2: 0=Normal 1=Active Bit 2 = Status Input #3: 0=Normal 1=Active Bit 3 = Status Input #4: 0=Normal 1=Active

Setpoint Status Byte Table

(Bit Position 7 ... 0) Bit 7 = Setpoint Status: 0=Normal 1=Active Bit 6-0 = Setpoint index
0 = NOT USED
1 = OVER VOLTAGE
2 = UNDER VOLTAGE
3 = VOLTAGE UNBALANCE
4 = OVER AMPERAGE
5 = AMPERAGE UNBALANCE
6 = OVER KVA
7 = OVER KW FORWARD
8 = OVER KW REVERSE
9 = OVER KVAR FORWARD
10 = OVER KW DEMAND
11 = OVER AMP DEMAND
12 = OVER FREQUENCY (x10)
13 = UNDER FREQUENCY (x10)
14 = OVER VAUX
15 = UNDER VAUX
16 = PHASE REVERSAL
17 = UNDER PF LAGGING
18 = UNDER PF LEADING
19 = OVER I4
20 = OVER KVAR REVERSE

Error messages

The following list shows the possible error messages that can be returned by the driver during a failed communication in the 'Status' property.

[1005] DRIVER (Internal): Invalid driver stage
[1300] PROTOCOL (Timeout): No answer
[1400] PROTOCOL (Format): Acknowledge not received
[1433] PROTOCOL (Format): Validation error in device response
[2118] CONFIG (NumValues): Invalid number of values (must be 24)
[2129] CONFIG (NumValues): Invalid number of values (must be 6)
[2130] CONFIG (NumValues): Invalid number of values (must be 7)
[2195] CONFIG (NumValues): Too many values (max=20)
[2202] CONFIG (NumValues): Too many values (max=25)
[2203] CONFIG (NumValues): Too many values (max=250)
[2205] CONFIG (NumValues): Too many values (max=28)
[2231] CONFIG (NumValues): Too many values (max=69)
[2240] CONFIG (NumValues): Too many values (max=9)
[2241] CONFIG (NumValues): Too many values (max=90)
[3007] CONFIG (P0): Invalid device address
[3563] CONFIG (P1): Invalid password
[4030] CONFIG (P2): Invalid command
[4517] CONFIG (P3): Invalid channel (max=7)

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[4522] CONFIG (P3): Invalid command mode
[4541] CONFIG (P3): Invalid first setpoint (max=17)
[5031] CONFIG (P4): Invalid read mode (0-1)
[5032] CONFIG (P4): Invalid relay number

Supported devices

This driver can communicate with these devices, but is not necessarily limited to this list:

POWER MEASUREMENT 3710 ACM Power Meter

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