

CR3 Series Cleanroom Monitor

SETUP GUIDE: MODBUS COMMUNICATION



Modbus Specification

Modbus Protocol

This section describes the implementation of the Modbus protocol. It is intended to assist control system programmers who may need to add support to their systems to communicate with this device. This device communicates on standard Modbus networks using RTU mode transmission. It operates as a slave device (address from 1 to 255) and expects a Modbus master device to transmit queries, which it will answer.

RTU Message Format

| TO MICSSage I Office | | | | | | |
|----------------------|--|--|--|--|--|--|
| Modbus Framing | 8 bit binary | | | | | |
| Data Bits | start bits 1 data bits 8 parity bits none, odd or even stop bits 1 or 2 | | | | | |
| Baud Rate | 9600, 19200, 38400, 57600, 76800 or 115200 | | | | | |
| Duplex | Half duplex | | | | | |
| Error Checking | Cyclical Redundancy Check (CRC) CRC-16 polynomial x16+x15+x2+x0 0x8005 or reversed version 0xA001 or CRC-CITT polynomial x16+x12+x5+x0 0x1021 or reversed version 0x8408 | | | | | |
| Latency | More than 3.5 characters minimum, 50, 100, 150, 200, 250, 300 or 350 mS | | | | | |

RTU Framing Support and Bit Sequences

| Start | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Stop | |
|-------|---|---|---|---|---|---|---|---|------|------|
| Start | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Stop | Stop |
| Start | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Odd | Stop |
| Start | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Even | Stop |

Modbus Register Addressing

| Modbus Address | Typical Offset | Units | Data Type | | Notes |
|-------------------|-------------------|------------|--------------|---------------|---|
| 40001 | +0 | | Word | Read | 16-bit integer, Digital Input Status 0 = Not Activated, 1 = Activated |
| 40002 | +1 | °C °F | Word | Read | 16-bit integer, Temperature Value x 10 (multiplier = 10) 0 to 500 for 0 to 50.0 °C, 320 to 1220 for 32.0 to 122.0 °F |
| 40003 | +2 | %RH | Word | Read | 16-bit integer, RH Value x 10 (multiplier = 10) 0 to 1000 for 0 to 100.0 %RH |
| 40004 | +3 | Pa mmWc | Word | Read | 16-bit integer, Differential Pressure Value x 10 (multiplier = 10) -5000 to 5000 for -500 to 500 Pa, -500 to 500 for -50.0 to 50.0 mmWc |
| 40005 | +4 | | Word | Read | 16-bit integer, TEMP Alarm Low Status 0 = No Alarm, 1 = Alarm |
| 40006 | +5 | | Word | Read | 16-bit integer, TEMP Alarm High Status $0 = \text{No Alarm}, 1 = \text{Alarm}$ |
| 40007 | +6 | | Word | Read | 16-bit integer, RH Alarm Low Status 0 = No Alarm, 1 = Alarm |
| 40008 | +7 | | Word | Read | 16-bit integer, RH Alarm High Status 0 = No Alarm, 1 = Alarm |
| 40009 | +8 | | Word | Read | 16-bit integer, DP Alarm Low Status 0 = No Alarm, 1 = Alarm |
| 40010 | +9 | | Word | Read | 16-bit integer, DP Alarm High Status 0 = No Alarm, 1 = Alarm |
| 40011 | +10 | °C °F | Word | Read | 16-bit integer, Temperature Min Value x 10 (multiplier = 10) 0 to 500 for 0 to 50.0 °C, 320 to 1220 for 32.0 to 122.0 °F |
| 40012 | +11 | °C °F | Word | Read | 16-bit integer, Temperature Max Value x 10 (multiplier = 10) 0 to 500 for 0 to 50.0 °C, 320 to 1220 for 32.0 to 122.0 °F |
| 40013 | +12 | %RH | Word | Read | 16-bit integer, RH Min Value x 10 (multiplier = 10) 0 to 1000 for 0 to 100.0 %RH |
| 40014 | +13 | %RH | Word | Read | 16-bit integer, RH Max Value x 10 (multiplier = 10) 0 to 1000 for 0 to 100.0 %RH |
| 40015 | +14 | Pa mmWc | Word | Read | 16-bit integer, DP Min Value x 10 (multiplier = 10) -5000 to 5000 for -500 to 500 Pa, -500 to 500 for -50.0 to 50.0 mmWc |
| 40016 | +15 | Pa mmWc | Word | Read | 16-bit integer, DP Max Value x 10 (multiplier = 10) -5000 to 5000 for -500 to 500 Pa, -500 to 500 for -50.0 to 50.0 mmWc |
| 40017 | +16 | | Word | Read Write | 16-bit integer, Min Max Reset 0 = Normal, 1 = Reset all min max values |
| 40018 | +17 | °C °F | Word | Read Write | 16-bit integer, Temperature Offset -5 to 5 °C, -10 to 10 °F |
| 40019 | +18 | %RH | Word | Read Write | 16-bit integer, RH Offset -10 to 10 for -10 to 10 %RH |

| 40020 | +19 | °C °F | Word | Read Write | 16-bit integer, TEMP Alarm Low Setpoint (TALS) x 10 TLS-min <= TALS <= TLS-max (multiplier = 10) |
|-------|-----|------------|------|---------------|---|
| 40021 | +20 | °C °F | Word | Read Write | 16-bit integer, TEMP Low Setpoint Min (TLS-min) 0 to 26 °C or 32 to 79 °F |
| 40022 | +21 | °C °F | Word | Read Write | 16-bit integer, TEMP Low Setpoint Max (TLS-max) 4 to 30 °C or 39 to 86 °F |
| 40023 | +22 | °C °F | Word | Read Write | 16-bit integer, TEMP Alarm High Setpoint (TAHS) x 10 THS-min <= TAHS <= THS-max (multiplier = 10) |
| 40024 | +23 | °C °F | W | Read Write | 16-bit integer, TEMP High Setpoint Min (THS-min) 16 to 46 °C or 61 to 115 °F |
| 40025 | +24 | °C °F | Word | Read Write | 16-bit integer, TEMP High Setpoint Max (THS-max) 20 to 50 °C or 68 to 122 °F |
| 40026 | +25 | °C °F | Word | Read Write | 16-bit integer, TEMP Alarm Hysteresis x 10 (multiplier = 10) 0 to 10 for 0 to 1.0 °C or 0 to 20 for 0 to 2.0 °F |
| 40027 | +26 | sec | Word | Read Write | 16-bit integer, TEMP Alarm On Delay 0 to 255 seconds |
| 40028 | +27 | %RH | Word | Read Write | 16-bit integer, RH Alarm Low Setpoint (RHALS) RHLS-min <= RHALS <= RHLS-max |
| 40029 | +28 | %RH | Word | Read Write | 16-bit integer, RH Low Setpoint Min (RHLS-min) 0 to 60 %RH |
| 40030 | +29 | %RH | Word | Read Write | 16-bit integer, RH Low Setpoint Max (RHLS-max) 10 to 70 %RH |
| 40031 | +30 | %RH | Word | Read Write | 16-bit integer, RH Alarm High Setpoint (RHAHS) RHHS-min <= RHAHS <= RHHS-max |
| 40032 | +31 | %RH | Word | Read Write | 16-bit integer, RH High Setpoint Min (RHHS-min) 40 to 90 %RH |
| 40033 | +32 | %RH | Word | Read Write | 16-bit integer, RH High Setpoint Max (RHHS-max) 50 to 100 %RH |
| 40034 | +33 | %RH | Word | Read Write | 16-bit integer, RH Alarm Hysteresis 0 to 5 %RH |
| 40035 | +34 | sec | Word | Read Write | 16-bit integer, RH Alarm On Delay 0 to 255 seconds |
| 40036 | +35 | Pa mmWc | Word | Read Write | 16-bit integer, DP Alarm Low Setpoint (DPALS) DPLS-min <= DPALS <= DPLS-max |
| 40037 | +36 | Pa mmWc | Word | Read Write | 16-bit integer, DP Low Setpoint Min (DPLS-min) -500 to 0 Pa or -50 to 0 mmWc |
| 40038 | +37 | Pa mmWc | Word | Read Write | 16-bit integer, DP Low Setpoint Max (DPLS-max) -400 to 400 Pa or -40 to 40 mmWc |
| 40039 | +38 | Pa mmWc | Word | Read Write | 16-bit integer, DP Alarm High Setpoint (DPAHS) DPHS-min <= DPAHS <= DPHS-max |
| 40040 | +39 | Pa mmWc | Word | Read Write | 16-bit integer, DP High Setpoint Min (DPHS-min) -400 to 400 Pa or -40 to 40 mmWc |
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| 40041 | +40 | Pa mmWc | Word | Read Write | 16-bit integer, DP High Setpoint Max (DPHS-max) 0 to 500 Pa or 0 to 50 mmWc |
|-------|-----|------------|------|---------------|--|
| 40042 | +41 | Pa mmWc | Word | Read Write | 16-bit integer, DP Alarm Hysteresis 0 to 50 Pa (multiplier = 1) or 0 to 50 mmWc (multiplier = 10) |
| 40043 | +42 | sec | Word | Read Write | 16-bit integer, DP Alarm On Delay 0 to 255 seconds |
| 40044 | +43 | sec | Word | Read Write | 16-bit integer, Buzzer Auto Reset Time 0 to 255 seconds |
| 40045 | +44 | % | Word | Read Write | 16-bit integer, Analog Out TEMP Override 0 to 100 % |
| 40046 | +45 | % | Word | Read Write | 16-bit integer, Analog Out RH Override 0 to 100 % |
| 40047 | +46 | % | Word | Read Write | 16-bit integer, Analog Out DP Override 0 to 100 % |
| 40048 | +47 | sec | Word | Read Write | 16-bit integer, Digital Input Self-reset Time 1 to 255 seconds |
| 40049 | +48 | | Word | Read Write | 16-bit integer, TEMP Units $0 = {}^{\circ}C$, $1 = {}^{\circ}F$ |
| 40050 | +49 | | Word | Read Write | 16-bit integer, DP Units 0 = Pa, 1 = mmWc |
| 40051 | +50 | | Word | Read Write | 16-bit integer, DP Auto Zero 0 = Normal Operation, 1 = Perform Auto Zero |
| 40052 | +51 | | Word | Read Write | 16-bit integer, TEMP Response Time 0 = Fast, 1 = Slow |
| 40053 | +52 | | Word | Read Write | 16-bit integer, RH Response Time 0 = Fast, 1 = Slow |
| 40054 | +53 | | Word | Read Write | 16-bit integer, DP Response Time 0 = Fast, 1 = Slow |
| 40055 | +54 | | Word | Read Write | 16-bit integer, TEMP Display 0 = Off, 1 = On |
| 40056 | +55 | | Word | Read Write | 16-bit integer, RH Display 0 = Off, 1 = On |
| 40057 | +56 | | Word | Read Write | 16-bit integer, DP Display 0 = Off, 1 = On |
| 40058 | +57 | | Word | Read Write | 16-bit integer, TEMP Out Direction 0 = Direct, 1 = Reverse |
| 40059 | +58 | | Word | Read Write | 16-bit integer, RH Out Direction $0 = Direct, 1 = Reverse$ |
| 40060 | +59 | | Word | Read Write | 16-bit integer, DP Out Direction $0 = \text{Direct}, \ 1 = \text{Reverse}$ |
| 40061 | +60 | | Word | Read Write | 16-bit integer, Analog Output Override 0 = Normal, 1 = Override |
| 40062 | +61 | | Word | Read Write | 16-bit integer, Buzzer Reset 0 = Manual Only, 1 = Manual + Automatic |
| L | 1 | 1 | | L | |

| 40063 | +62 | Word | Read Write | 16-bit integer, Alarm Acknowledge 0 = Normal, 1 = Alarm Acknowledged |
|-------|-----|------|---------------|--|
| 40064 | +63 | Word | Read Write | 16-bit integer, Digital Input Mode 0 = Latch, 1 = Momentary Self-reset |
| 40065 | +64 | Word | Read Write | 16-bit integer, Digital Input Status 0 = Inactive, 1 = Active |
| 40066 | +65 | Word | Read Write | 16-bit integer, Setpoint Lock 0 = Not Locked, 1 = Locked |
| 40067 | +66 | Word | Read Write | 16-bit integer, User Menu Lock 0 = Not Locked, 1 = Locked |
| 40068 | +67 | Word | Read Write | 16-bit integer, Installer Menu Lock 0 = Not Locked, 1 = Locked |
| 40069 | +68 | Word | Read Write | 16-bit integer, Display Brightness $0 = \text{Low}, 1 = \text{High}$ |
| 40070 | +69 | Word | Read Write | 16-bit integer, TEMP Analog Input Range $0 = 0-35$ °C, $1 = 0-50$ °C |
| 40071 | +70 | Word | Read Write | 16-bit integer, DP Analog Input Range $0 = \pm 250 \text{ Pa}, 1 = \pm 500 \text{ Pa}$ |
| 40072 | +71 | Word | Read Write | 16-bit integer, Analog Input Signal Type $0 = mA$, $1 = Voltage$ |
| 40073 | +72 | Word | Read Write | 16-bit integer, Analog Input Volt Range $0 = 0.5 \text{ V}, 1 = 0.10 \text{ V}$ |
| 40074 | +73 | Word | Read Write | 16-bit integer, Analog Output Signal Type $0 = mA$, $1 = Voltage$ |
| 40075 | +74 | Word | Read Write | 16-bit integer, Analog Output Volt Range $0 = 0-5 \text{ V}, 1 = 0-10 \text{ V}$ |
| 40076 | +75 | Word | Read Write | 16-bit integer, TEMP Alarm Operation 1=Low Alarm, 2=High Alarm, 3=Both, 4=Disable |
| 40077 | +76 | Word | Read Write | 16-bit integer, RH Alarm Operation 1=Low Alarm, 2=High Alarm, 3=Both, 4=Disable |
| 40078 | +77 | Word | Read Write | 16-bit integer, DP Alarm Operation 1=Low Alarm, 2=High Alarm, 3=Both, 4=Disable |
| 40079 | +78 | Word | Read Write | 16-bit integer, Buzzer Assignment 1=TEMP, 2=RH, 3=DP, 4=Disable, 5=All |
| 40080 | +79 | Word | Read Write | 16-bit integer, Digital Input Function 1=Disable, 2=Freeze, 3=Silence |

RTU Function Codes

0x03 --- Read holding registers
Query

| | tarting Starting address LSB | | Quantity of CRC gisters LSB LSB | CRC MSB |
|--|------------------------------|--|---------------------------------|------------|
|--|------------------------------|--|---------------------------------|------------|

^{*} Starting address = 0x0000 to 0x004F, Quantity of registers = 0x0001 to 0x0050

Response

| Slave address Function Byte count Register (0x01 to 0xFF) code (0x03) 2N value MSE | Register value LSB | CRC LSB | CRC MSB |
|--|--------------------|------------|------------|
|--|--------------------|------------|------------|

^{*} N= Quantity of registers

0x06 --- Write single register

Query

| Slave address (0x01 to 0xFF) | Function code 0x06 | Register address MSB | Register address LSB | Register value MSB | Register value LSB | CRC LSB | CRC MSB |
|------------------------------|--------------------|-------------------------|-------------------------|-----------------------|-----------------------|------------|------------|
|------------------------------|--------------------|-------------------------|-------------------------|-----------------------|-----------------------|------------|------------|

Response

| Slave address (0x01 to 0xFF) | Function code 0x06 | Register address MSB | Register address LSB | Register value MSB | Register value LSB | CRC LSB | CRC MSB | |
|------------------------------|--------------------|-------------------------|-------------------------|-----------------------|-----------------------|------------|------------|--|
| | | | | | | | i | |

^{*} Register address = 0x0010 to 0x004F, Registers value = 0x0000 to 0xFFFF

Exception response

| Slave address | Function | Exception code | CRC | CRC | |
|------------------|-------------|----------------------|-----|-----|---|
| (0x01 to 0xFF) | code + 0x80 | 0x01, 0x02 or 0x03 | LSB | MSB | ! |

^{*} An exception response is only returned if the CRC is correct Exception code 01 --- illegal function, 02 --- illegal address, 03 --- illegal data value

Note that the registers may be read individually or multiple registers may be read at the same time by changing the query as shown below.

To read several registers with one query...

0x03 --- Read ALL REGISTERS

| Q | uery | | | | | | | | | |
|---|------------------------------|------|------------------|--------------------|------|-------------------|--|------------|------------|--|
| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x00 (Note 1) | 0x00 | 0x05 (Note2) | | CRC LSB | CRC MSB | |
| R | Response | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x03 | 0x0A (Note 3) | Register va MSB | - | ster value LSB | | CRC LSB | CRC MSB | |

- Note 1: The starting address (A) may be 0x0000 to 0x004F. The read multiple feature will read all registers from the starting address forward. If the starting address is 0x0000 then registers 40001 to 40080 can be read. If the starting address is 0x000A then registers 40011 to 40080 can be read.
- Note 2: The quantity of registers (N) may be 0x0001 to 0x0050, but must be limited to 80 A. If the starting address (A) is set to 0x0000 then N may be 0x0001 to 0x0050. If the starting address is set to 0x000A then N may be 0x0001 to 0x0046.
- Note 3: The byte count (B) will always be 2N. If the quantity of registers (N) is 0x0001 then B will be 0x02. If N is 0x0005 then B will be 0x0A.

The RTU function codes supported by the clean room sensor are shown below.

0x03 --- Read Digital Input Status

Query

| Slave address (0x01 to 0xFF) 0x03 0x00 0x00 0x00 0x01 CRC LSB CRC MSB |
|---|
|---|

Response

| | | | | | | |
|------------------------------|------|------|---------------------|-------------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value 0x00 | Register value LSB * | CRC LSB | CRC MSB |

^{*} Register value = 0x0000 for inactive status, 0x0001 for active status

0x03 --- Read Temperature Value

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| Query | | | | | | | |
|------------------------------|------|------|-------------------|------|-------------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x01 | 0x00 | 0x01 | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register v MSB | | Register value LSB * | CRC LSB | CRC MSB |

^{*} Register value = 0x0000 to 0x01F4, corresponding to 0.0 to 50.0 °C (multiplier = 10) or = 0x0140 to 0x04C4, corresponding to 32.0 to 122.0 °F (multiplier = 10)

The temperature value is either in °C (default) or °F depending on the value of the TEMP Units register.

This register has a multiplier of 10, the application must divide by 10 to obtain the correct value.

0x03 --- Read RH Value

| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x02 | 0x00 | 0x01 | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|------|------|------------|------------|
| R | esponse | | | | | | | |

| response | | | | | | |
|------------------------------|------|------|-------------------------|-------------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |

^{*} Register value = 0x0000 to 0x03E8, corresponding to 0 to 100 %RH (multiplier = 10)

This register has a multiplier of 10, the application must divide by 10 to obtain the correct value.

0x03 --- Read Differential Pressure Value

Query

| ч. | | | | | | | | |
|----|------------------------------|------|------|------|------|------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x03 | 0x00 | 0x01 | CRC LSB | CRC MSB |

Response

| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|-------------------------|-------------------------|------------|------------|
|---------------------------------|------|------|-------------------------|-------------------------|------------|------------|

^{*} Register value = 0xEC78 to 0x1388, corresponding to -500.0 to 500.0 Pa (multiplier = 10)

The differential pressure value is either in Pa (default) or mmWc depending on the value of the DP Units register.

This register has a multiplier of 10, the application must divide by 10 to obtain the correct value.

0x03--- Read TEMP Alarm Low Status

Query

| | Slave address | 0x03 0x0 | 0x04 | 0x00 | 0x01 | CRC MSB |
|--|---------------|----------|------|------|------|------------|

Response

| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value MSB * | Register value LSB * | CRC | CRC MSB |
|------------------------------|------|------|-------------------------|-------------------------|-----|------------|
| (OXOT to OXIT) | | | MSD | LSD | LSD | MSD |

Register value = 0x0000 for No Alarm, 0x0001 for Alarm.

0x03 --- Read TEMP Alarm High Status

Ouerv

| Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x05 | 0x00 | 0x01 | CRC LSB | CRC MSB |
|------------------------------|------|------|------|------|------|------------|------------|
|------------------------------|------|------|------|------|------|------------|------------|

Response

| Slave address | 0x03 | 0v02 | Register value | Register value | CRC | CRC |
|------------------|-------|-----------|----------------|----------------|-----|-----|
| (0x01 to 0xFF) | 0.003 | 0x03 0x02 | MSB * | LSB * | LSB | MSB |

Register value = 0x0000 for No Alarm, 0x0001 for Alarm.

0x03--- Read RH Alarm Low Status

Query

| Slave address 0x03 0x00 0x06 0x00 0x01 CRC CRC CRC MSB | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x06 | 0x00 | 0x01 | | CRC MSB |
|--|------------------------------|------|------|------|------|------|--|------------|
|--|------------------------------|------|------|------|------|------|--|------------|

Response

| op onse | | | | | | |
|---------------------------------|------|------|-------------------------|----------------|-----|------------|
| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value MSB * | Register value | CRC | CRC MSB |
| (0001 10 0000) | | | MSD " | LSB * | LSB | MSD |

Register value = 0x0000 for No Alarm, 0x0001 for Alarm.

0x03 --- Read RH Alarm High Status

or = 0xFE0C to 0x01F4, corresponding to -50.0 to 50.0 mmWc (multiplier = 10)

Query

| Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x07 | 0x00 | 0x01 | CRC LSB | CRC MSB |
|---------------------------------|------|------|------------|------|----------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register v | | Register value | CRC LSB | CRC MSB |

Register value = 0x0000 for No Alarm, 0x0001 for Alarm.

0x03 --- Read DP Alarm Low Status

Query

| Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x08 | 0x00 | 0x01 | CRC LSB | CRC MSB |
|------------------------------|------|------|------|------|------|------------|------------|
| | | | | | | | |

Response

| Slave address (0x01 to 0xFF) 0x03 | 0x02 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|-----------------------------------|------|-------------------------|-------------------------|------------|------------|
|-----------------------------------|------|-------------------------|-------------------------|------------|------------|

Register value = 0x0000 for No Alarm, 0x0001 for Alarm.

0x03 --- Read DP Alarm High Status

Query

| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x09 | 0x00 | 0x01 | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------------|------|----------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address | 0x03 | 0x02 | Register v | | Register value | CRC | CRC |

LSB *

LSB

MSB

MSB *

Register value = 0x0000 for No Alarm, 0x0001 for Alarm.

0x03 --- Read TEMP Minimum Value

(0x01 to 0xFF)

Query

| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x0A | 0x00 | 0x01 | CRC LSB | CRC MSB |
|---|------------------------------|------|------|-------------------|------|-------------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register v MSB | | Register value LSB * | CRC LSB | CRC MSB |

Register Value x 10 (multiplier = 10) 0 to 500 for 0 to 50.0 °C, 320 to 1220 for 32.0 to 122.0 °F

0x03 --- Read TEMP Maximum Value

Query

| ~ | ucij | | | | | | | |
|---|------------------------------|------|------|------|------|------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x0B | 0x00 | 0x01 | CRC LSB | CRC MSB |

Response

| (0x01 to 0xFF) MSB * LSB * LSB MSB | Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|--|------------------------------|------|------|-------------------------|-------------------------|------------|------------|
|--|------------------------------|------|------|-------------------------|-------------------------|------------|------------|

Register Value x 10 (multiplier = 10) 0 to 500 for 0 to 50.0 °C, 320 to 1220 for 32.0 to 122.0 °F

0x03 --- Read RH Minimum Value

| Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x0C | 0x00 | 0x01 | CRC LSB | CRC MSB |
|------------------------------|------|------|------|------|------|------------|------------|
|------------------------------|------|------|------|------|------|------------|------------|

Response

| ICC | csponse | | | | | | | | | | |
|-----|------------------|------|------|----------------|----------------|-----|-----|--|--|--|--|
| | Slave address | 0x03 | 0x02 | Register value | Register value | CRC | CRC | | | | |
| | (0x01 to 0xFF) |) | | MSB * | LSB * | LSB | MSB | | | | |

Register Value x 10 (multiplier = 10) 0 to 1000 for 0 to 100% RH

0x03 --- Read RH Maximum Value

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|------------------------------|------|------|------|------|------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x0D | 0x00 | 0x01 | CRC LSB | CRC MSB |

Response

| Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|-------------------------|-------------------------|------------|------------|
| (0x01 to 0xFF) | | | MSB * | LSB * | LSB | MSB |

Register Value x 10 (multiplier = 10) 0 to 1000 for 0 to 100% RH

0x03 --- Read DP Minimum Value

Query

| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x0E | 0x00 | 0x01 | CRC LSB | CRC MSB | | | |
|----|------------------------------|------|------|-------------------------|------|-------------------------|------------|------------|--|--|--|
| Re | Response | | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x03 | 0x02 | Register value MSB * | | Register value LSB * | CRC LSB | CRC MSB | | | |

Register Value x 10 (multiplier = 10) -5000 to 5000 for -500 to 500 Pa, -500 to 500 for -50.0 to 50.0 mmWc

0x03 --- Read DP Maximum Value

Query

| | Slave address (0x01 to 0xFF) | 0x03 | 0x00 | 0x0F | 0x00 | 0x01 | CRC LSB | CRC MSB | |
|---|------------------------------|------|------|------|------|------|------------|------------|---|
| R | esponse | | | | | | | | - |

| N | sponse | | | | | | | | | | |
|---|------------------|------|------|----------------|----------------|-----|-----|--|--|--|--|
| | Slave address | 003 | 002 | Register value | Register value | CRC | CRC | | | | |
| | (0x01 to 0xFF) | 0x03 | 0x02 | MSB * | LSB * | LSB | MSB | | | | |

Register Value x 10 (multiplier = 10) -5000 to 5000 for -500 to 500 Pa, -500 to 500 for -50.0 to 50.0 mmWc

NOTE: All registers may be read in the same manner as shown above.

0x06 --- Write Min Max Reset

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|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x10 | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | | |
| R | Response | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x10 | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | | |

^{*} This register is used to reset all the min max values.

The available settings are:

0x0000 = Normal operation0x0001 = Reset all min max values

0x06 --- Write Temperature Offset

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x11 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | |
|------------------------------|------|------|------|----------------------|-------------------------|------------|------------|--|
| Response | | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x11 | Register value MSB | Register value LSB | CRC LSB | CRC MSB | |

^{*} This register is used to add or subtract an offset to the temperature value if necessary to conform to a local reference.

For $^{\circ}$ C operation, Register value = 0xFFFB to 0x0005 for -5 to 5 $^{\circ}$ C.

For °F operation, Register value = 0xFFF6 to 0x000A for -10 to 10 °F.

The TEMP Units (°C or °F) for the device should be selected first, and then add any offset if necessary.

0x06 --- Write RH Offset

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|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x12 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | |
| R | Response | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x12 | Register value MSB | Register value LSB | CRC LSB | CRC MSB | |

^{*} This register is used to add or subtract an offset to the RH value if necessary to conform to a local reference.

Register value = 0xFFF6 to 0x000A for -10 to 10 %RH.

0x06 --- Write TEMP Alarm Low Setpoint (TALS)

Ouerv

| Slave address $0x06$ $0x00$ $0x13$ Register Register CRC CRC $0x01$ to $0xFF$) $0x06$ $0x13$ Register Value MSB * Value LSB * LSB MSB |
|--|
|--|

Response

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x13 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| ` ' | | | | | | | |

^{*} This register is used to set the setpoint for the low temperature alarm.

Temperature units are either °C or °F as set by TEMP Units.

The default TALS is 15 °C or 59 °F.

Resolution is 0.1° so this register has a multiplier of 10. For 15.6 °C, write 156 = 0x009C.

Rules are enforced: TLS-min <= TALS <= TLS-max

> TLS-max – TLS-min >= 4 °C or >= 7 °F TAHS - TALS >= 2 °C or >= 4 °F

0x06 --- Write TEMP Low Setpoint Min (TLS-min)

Ouerv

(0x01 to 0xFF)

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|---|------------------------------|------|------|------|----------------------|----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x14 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| F | Response | | | | | | | |
| | Slave address | 0x06 | 0x00 | 0x14 | Register | Register | CRC | CRC |

value MSB

value LSB

LSB

MSB

Temperature units are either °C or °F as set by TEMP Units.

The default TLS-min is 10 °C or 50 °F. Resolution is 1°.

Register value = 0x0000 to 0x001A for 0 to 26 °C or 0x0020 to 0x004F for 32 to 79 °F.

Rules are enforced: TLS-max – TLS-min >= 4 °C or >= 7 °F

0x06 --- Write TEMP Low Setpoint Max (TLS-max)

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x15 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x15 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the maximum setpoint for the low temperature alarm.

Temperature units are either °C or °F as set by TEMP Units.

The default TLS-max is 22 °C or 72 °F. Resolution is 1°.

Register value = 0x0004 to 0x001E for 4 to 30 °C or 0x0027 to 0x0056 for 39 to 86 °F.

Rules are enforced: TLS-max – TLS-min >= 4 °C or >= 7 °F

^{*} This register is used to set the minimum setpoint for the low temperature alarm.

0x06 --- Write TEMP Alarm High Setpoint (TAHS)

Ouerv

| Slave address Once Once Register Register CRC CRC | Zuciy | | | | | | |
|---|---------------|------|------|------|---|-----|------------|
| (0x01 to 0xFF) | Slave address | 0x06 | 0x00 | 0x16 | U | - C | CRC MSB |

Response

| (0x01 to 0xFF) Oxfor Oxfor value MSB value LSB LSB MSB |
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^{*} This register is used to set the setpoint for the high temperature alarm.

Temperature units are either °C or °F as set by TEMP Units.

The default TAHS is 25 °C or 77 °F.

Resolution is 0.1° so this register has a multiplier of 10. For 27.6 °C, write 276 = 0x0114.

Rules are enforced: THS-min <= TAHS <= THS-max

THS-max – THS-min >= 4 °C or >= 7 °F TAHS – TALS >= 2 °C or >= 4 °F

0x06 --- Write TEMP High Setpoint Min (THS-min)

Ouerv

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x17 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x17 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the minimum setpoint for the high temperature alarm.

Temperature units are either °C or °F as set by TEMP Units.

The default THS-min is 20 °C or 68 °F. Resolution is 1°.

Register value = 0x0010 to 0x002E for 16 to 46 °C or 0x003D to 0x0073 for 61 to 115 °F.

Rules are enforced: THS-max – THS-min \geq 4 °C or \geq 7 °F

0x06 --- Write TEMP High Setpoint Max (THS-max)

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x18 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x18 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the maximum setpoint for the high temperature alarm.

Temperature units are either °C or °F as set by TEMP Units.

The default THS-max is 30 °C or 86 °F. Resolution is 1°.

Register value = 0x0014 to 0x0032 for 20 to 50 °C or 0x0044 to 0x007A for 68 to 122 °F.

Rules are enforced: THS-max – THS-min \geq 4 °C or \geq 7 °F

0x06 --- Write TEMP Alarm Hysteresis

Ouerv

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x19 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x19 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the hysteresis for the low and high temperature alarms.

Temperature units are either °C or °F as set by TEMP Units.

The default hysteresis is 0.2 °C or 0.4 °F. Resolution is 0.1°. Multiplier = 10.

Register value = 0x0000 to 0x000A for 0 to 1.0 °C or 0x0000 to 0x0014 for 0 to 2.0 °F.

0x06 --- Write TEMP Alarm On Delay

Query

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1A | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1A | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the time delay for the low and high temperature alarms.

The delay prevents the alarm from setting immediately to prevent false alarms.

Register value = 0x0000 to 0x00FF for 0 to 255 seconds. Default value is 5 seconds.

0x06 --- Write RH Alarm Low Setpoint (RHALS)

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1B | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|----|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Re | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1B | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the setpoint for the low RH alarm.

The default RHALS is 30 %RH. Resolution is 1 %RH. For 20 %RH, write 0x0014.

Rules are enforced: RHLS-min <= RHALS <= RHLS-max

RHLS-max – RHLS-min >= 10 %RH RHAHS – RHALS >= 10 %RH

0x06 --- Write RH Low Setpoint Min (RHLS-min)

Query

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1C | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|------------------------------|------|------|------|-------------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1C | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the minimum setpoint for the low RH alarm.

The default RHLS-min is 20 %RH. Resolution is 1 %RH.

Register value = 0x0000 to 0x003C for 0 to 60 %RH.

Rules are enforced: RHLS-max - RHLS-min >= 10 % RH

0x06 --- Write RH Low Setpoint Max (RHLS-max)

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1D | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1D | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

 $[\]ensuremath{^{*}}$ This register is used to set the maximum setpoint for the low RH alarm.

The default RHLS-max is 40 %RH. Resolution is 1 %RH.

Register value = 0x000A to 0x0046 for 10 to 70 % RH.

Rules are enforced: RHLS-max – RHLS-min >= 10 %RH

0x06 --- Write RH Alarm High Setpoint (RHAHS)

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1E | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x1E | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the setpoint for the high RH alarm.

The default RHAHS is 65 %RH. Resolution is 1 %RH. For 60 %RH, write 0x003C.

Rules are enforced: RHHS-min <= RHAHS <= RHHS-max

RHHS-max – RHHS-min >= 10 %RH RHAHS – RHALS >= 10 %RH

0x06 --- Write RH High Setpoint Min (RHHS-min)

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Response

| Slave address (0x01 to 0xFI | 1 ()v()6 | 0x00 | 0x1F | Register value MSB | Register value LSB | CRC LSB | CRC MSB |
|--------------------------------|----------|------|------|-----------------------|-----------------------|------------|------------|
|--------------------------------|----------|------|------|-----------------------|-----------------------|------------|------------|

^{*} This register is used to set the minimum setpoint for the high RH alarm.

The default RHHS-min is 50 %RH. Resolution is 1 %RH.

Register value = 0x0028 to 0x005A for 40 to 90 %RH.

Rules are enforced: RHHS-max – RHHS-min >= 10 %RH

0x06 --- Write RH High Setpoint Max (RHHS-max)

Query

| Query | | | | | | | |
|---------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| Slave adda (0x01 to 0x | 0x06 | 0x00 | 0x20 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave addı (0x01 to 0x | 0x06 | 0x00 | 0x20 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the maximum setpoint for the high RH alarm.

The default RHHS-max is 80 %RH. Resolution is 1 %RH.

Register value = 0x0032 to 0x0064 for 50 to 100 %RH.

Rules are enforced: RHHS-max - RHHS-min >= 10 %RH

0x06 --- Write RH Alarm Hysteresis

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x21 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x21 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the hysteresis for the low and high RH alarms.

The default hysteresis is 2 %RH. Resolution is 1 %RH.

Register value = 0x0000 to 0x0005 for 0 to 5 % RH.

0x06 --- Write RH Alarm On Delay

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x22 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|----------------------|----------------------|------------|------------|
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Response

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x22 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | | | | | | | |

^{*} This register is used to set the time delay for the low and high RH alarms.

The delay prevents the alarm from setting immediately to prevent false alarms.

Register value = 0x0000 to 0x00FF for 0 to 255 seconds. Default value is 15 seconds.

0x06 --- Write DP Alarm Low Setpoint (DPALS)

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x23 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|------------------------------|------|------|------|----------------------|----------------------|------------|------------|
| Response | | | | | | | |

| | ve address 01 to 0xFF) | 0x06 | 0x00 | 0x23 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |
|--|---------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
|--|---------------------------|------|------|------|-----------------------|-----------------------|------------|------------|

^{*} This register is used to set the setpoint for the low differential pressure alarm.

Pressure units are either Pa or mmWc as set by DP Units.

The default DPALS is 0 Pa or 0 mmWc.

Resolution is 1 Pa (multiplier = 1) or 0.1 mmWc (multiplier = 10).

For 30 Pa, write 30 = 0x001E. For 3.0 mmWc, write 30 = 0x001E.

Rules are enforced: DPLS-min <= DPALS <= DPLS-max

DPLS-max – DPLS-min >= 100 Pa or >= 10 mmWc

DPAHS - DPALS >= 50 Pa or >= 5 mmWc

0x06 --- Write DP Low Setpoint Min (DPLS-min)

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x24 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|----------------------|-------------------------|------------|------------|
| R | lesponse | | | | | | | |
| | Slave address | 0x06 | 0x00 | 0x24 | Register | Register | CRC | CRC |

value MSB

Pressure units are either Pa or mmWc as set by DP Units.

The default DPLS-min is -400 Pa or -40 mmWc.

Resolution is 1 Pa or 1 mmWc.

(0x01 to 0xFF)

Register value = 0xFE0C to 0x0000 for -500 to 0 Pa or 0xFFCE to 0x0000 for -50 to 0 mmWc.

Rules are enforced: DPLS-max - DPLS-min >= 100 Pa or >= 10 mmWc

DPAHS - DPALS >= 50 Pa or >= 5 mmWc

MSB

LSB

value LSB

^{*} This register is used to set the minimum setpoint for the low differential pressure alarm.

0x06 --- Write DP Low Setpoint Max (DPLS-max)

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x25 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|----------------------|-------------------------|------------|------------|
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Response

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x25 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
|---------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|

^{*} This register is used to set the maximum setpoint for the low differential pressure alarm.

Pressure units are either Pa or mmWc as set by DP Units.

The default DPLS-max is 200 Pa or 20 mmWc.

Resolution is 1 Pa or 1 mmWc.

Register value = 0xFE70 to 0x0190 for -400 to 400 Pa or 0xFFD8 to 0x0028 for -40 to 40 mmWc.

Rules are enforced: DPLS-max - DPLS-min >= 100 Pa or >= 10 mmWc

DPAHS - DPALS >= 50 Pa or >= 5 mmWc

0x06 --- Write DP Alarm High Setpoint (DPAHS)

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| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x26 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|----------------------|----------------------|------------|------------|
| R | esponse | | | | | | | |

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|-----|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x26 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the setpoint for the high differential pressure alarm.

Pressure units are either Pa or mmWc as set by DP Units.

The default DPAHS is 200 Pa or 20 mmWc.

Resolution is 1 Pa (multiplier = 1) or 0.1 mmWc (multiplier = 10).

For -100 Pa, write -100 = 0xFF9C. For -10.0 mmWc, write -100 = 0xFF9C.

Rules are enforced: DPHS-min <= DPAHS <= DPHS-max

DPHS-max – DPHS-min >= 100 Pa or >= 10 mmWc

DPAHS – DPALS >= 50 Pa or >= 5 mmWc

0x06 --- Write DP High Setpoint Min (DPHS-min)

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| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x27 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | | |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|
| Response | | | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x27 | Register value MSB | Register value LSB | CRC LSB | CRC MSB | | |

^{*} This register is used to set the minimum setpoint for the high differential pressure alarm.

Pressure units are either Pa or mmWc as set by DP Units. The default DPHS-min is -100 Pa or -10 mmWc.

Resolution is 1 Pa or 1 mmWc.

Register value = 0xFE70 to 0x0190 for -400 to 400 Pa or 0xFFD8 to 0x0028 for -40 to 40 mmWc.

Rules are enforced: DPHS-max – DPHS-min \geq 100 Pa or \geq 10 mmWc

DPAHS - DPALS >= 50 Pa or >= 5 mmWc

0x06 --- Write DP High Setpoint Max (DPHS-max)

Ouerv

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x28 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x28 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the maximum setpoint for the high differential pressure alarm.

Pressure units are either Pa or mmWc as set by DP Units.

The default DPHS-max is 400 Pa or 40 mmWc.

Resolution is 1 Pa or 1 mmWc.

Register value = 0x0000 to 0x01F4 for 0 to 500 Pa or 0x0000 to 0x0032 for 0 to 50 mmWc.

Rules are enforced: DPHS-max – DPHS-min \geq 100 Pa or \geq 10 mmWc

DPAHS – DPALS >= 50 Pa or >= 5 mmWc

0x06 --- Write DP Alarm Hysteresis

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|------------------------------|------|------|------|-------------------------|-------------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x29 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x29 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the hysteresis for the low and high differential pressure alarms.

Pressure units are either Pa or mmWc as set by DP Units.

The default hysteresis is 5 Pa (multiplier = 1) or 0.5 mmWc (multiplier = 10). Resolution is 1 Pa or 0.1 mmWc.

Register value = 0x0000 to 0x0032 for 0 to 50 Pa or 0x0000 to 0x0032 for 0 to 5.0 mmWc.

0x06 --- Write DP Alarm On Delay

|--|

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2A | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|-------------------------|-------------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2A | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the time delay for the low and high differential pressure alarms.

The delay prevents the alarm from setting immediately to prevent false alarms.

Register value = 0x0000 to 0x00FF for 0 to 255 seconds. Default value is 10 seconds.

0x06 --- Write Buzzer Auto Reset Time

Ouerv

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2B | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2B | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the time before the buzzer resets if set to auto reset mode using Buzzer Reset. Register value = 0x0005 to 0x00FF for 5 to 255 seconds. Default value is 15 seconds.

0x06 --- Write Analog Out TEMP Override

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|----|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2C | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2C | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set TEMP analog output value for testing purposes.

The override is normally disabled unless enabled by Analog Output Override.

Enable the override first, then set the 0-100 % output signal as required to test the output signal.

Register value = 0x0000 to 0x0064 for 0 to 100 %. Default value is 50 %.

0x06 --- Write Analog Out RH Override

Query

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2D | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2D | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set RH analog output value for testing purposes.

The override is normally disabled unless enabled by Analog Output Override.

Enable the override first, then set the 0-100 % output signal as required to test the output signal.

Register value = 0x0000 to 0x0064 for 0 to 100 %. Default value is 50 %.

0x06 --- Write Analog Out DP Override

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|-------|---|
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| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2E | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|----|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Re | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2E | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set DP analog output value for testing purposes.

The override is normally disabled unless enabled by Analog Output Override.

Enable the override first, then set the 0-100 % output signal as required to test the output signal.

Register value = 0x0000 to 0x0064 for 0 to 100 %. Default value is 50 %.

0x06 --- Digital Input Self-reset Time

Ouerv

| • | | | | | | | | |
|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2F | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x2F | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the time before the digital input status self-resets. Only functional if set to momentary self-reset operation using Digital Input Mode. Register value = 0x0001 to 0x00FF for 1 to 255 seconds. Default value is 30 seconds.

0x06 --- Write TEMP Units

| | _ | | |
|----|----|--------|----|
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| Q | uery | | | | | | | |
|---|------------------------------|------|------|------|-------------------------|-----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x30 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x30 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} Register value = 0x0000 for °C, 0x0001 for °F. Default is °C.

0x06 --- Write DP Units

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x31 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|----|------------------------------|------|------|------|-------------------------|-------------------------|------------|------------|
| Re | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x31 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} Register value = 0x0000 for Pa, 0x0001 for mmWc. Default is Pa.

0x06 --- Write DP Auto Zero

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x32 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x32 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} Setting this register to 1 will initiate a pressure sensor auto zero function.

This register has no function for the Type C model with remote transmitters.

Rules are enforced: Only perform auto zero function if DP is within ± 0 - 20% of range.

Register value = 0x0000 for Normal Operation, 0x0001 for Perform Auto Zero. Default is 0.

0x06 --- Write TEMP Response Time

Onerv

| Query | | | | | | | |
|------------------------------|------|------|------|-------------------------|-------------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x33 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x33 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} For fast response there is a minimum amount of digital filtering applied to the measurement so that the sensor reacts quickly to changes. Slow response applies a longer period of filtering to the measurement and will slow down the sensor reaction to changes. Fast response = 1 update per second, Slow response = 1 update per 5 seconds.

Register value = 0x0000 for Fast, 0x0001 for Slow. Default is Fast.

0x06 --- Write RH Response Time

Onerv

| Query | | | | | | | |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x34 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x34 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} For fast response there is a minimum amount of digital filtering applied to the measurement so that the sensor reacts quickly to changes. Slow response applies a longer period of filtering to the measurement and will slow down the sensor reaction to changes. Fast response = 1 update per second, Slow response = 1 update per 5 seconds.

Register value = 0x0000 for Fast, 0x0001 for Slow. Default is Fast.

0x06 --- Write DP Response Time

Ouerv

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x35 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-------------------------|-------------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x35 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} For fast response there is a minimum amount of digital filtering applied to the measurement so that the sensor reacts quickly to changes. Slow response applies a longer period of filtering to the measurement and will slow down the sensor reaction to changes. Fast response = 1 update per second, Slow response = 1 update per 5 seconds.

Register value = 0x0000 for Fast, 0x0001 for Slow. Default is Fast.

0x06 --- Write TEMP Display

Oners

| Ų | uery | | | | | | | | | |
|---|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|--|--|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x36 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | | |
| R | Response | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x36 | Register value MSB | Register value LSB | CRC LSB | CRC MSB | | |

^{*} This register can be used to disable the display of the TEMP value and also the associated LEDs. Register value = 0x0000 for OFF, 0x0001 for ON. Default is ON.

0x06 --- Write RH Display

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x37 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | | |
|----|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|
| Re | Response | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x37 | Register value MSB | Register value LSB | CRC LSB | CRC MSB | | |

^{*} This register can be used to disable the display of the RH value and also the associated LEDs. Register value = 0x0000 for OFF, 0x0001 for ON. Default is ON.

0x06 --- Write DP Display

Ouerv

| Query | | | | | | | |
|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x38 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x38 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register can be used to disable the display of the DP value and also the associated LEDs. Register value = 0x0000 for OFF, 0x0001 for ON. Default is ON.

0x06 --- Write TEMP Out Direction

Ouerv

| Querj | | | | | | | |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x39 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x39 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} When set to Direct (0), the TEMP analog output signal will be either 0-5 Vdc, 0-10 Vdc or 4-20 mA. When set to Reverse (1), the signal will be reversed to 5-0 Vdc, 10-0 Vdc or 20-4 mA. Register value = 0x0000 for Direct, 0x0001 for Reverse. Default is Direct.

0x06 --- Write RH Out Direction

Onerv

| V | uery | | | | | | | | | | |
|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|--|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3A | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | | | |
| R | Response | | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3A | Register value MSB | Register value LSB | CRC LSB | CRC MSB | | | |

^{*} When set to Direct (0), the RH analog output signal will be either 0-5 Vdc, 0-10 Vdc or 4-20 mA. When set to Reverse (1), the signal will be reversed to 5-0 Vdc, 10-0 Vdc or 20-4 mA. Register value = 0x0000 for Direct, 0x0001 for Reverse. Default is Direct.

0x06 --- Write DP Out Direction

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3B | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | | | |
|----|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|--|
| Re | Response | | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3B | Register value MSB | Register value LSB | CRC LSB | CRC MSB | | | |

^{*} When set to Direct (0), the DP analog output signal will be either 0-5 Vdc, 0-10 Vdc or 4-20 mA. When set to Reverse (1), the signal will be reversed to 5-0 Vdc, 10-0 Vdc or 20-4 mA. Register value = 0x0000 for Direct, 0x0001 for Reverse. Default is Direct.

0x06 --- Write Analog Output Override

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3C | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | | |
|---|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|--|--|
| R | Response | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3C | Register value MSB | Register value LSB | CRC LSB | CRC MSB | | |

^{*} This register is used to enable the analog output overrides. Register value = 0x0000 for Normal, 0x0001 for Override. Default is Normal.

0x06 --- Write Buzzer Reset

Query

| Query | | | | | | | |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3D | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3D | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to control the buzzer reset operation. When set to Manual + Automatic (1), the alarm buzzer can be silenced by removing the alarm condition, pressing the <SILENCE> key or by setting Alarm Acknowledge via the network, or it will reset automatically when the Buzzer Auto Reset Time expires. When set to Manual (0), the alarm buzzer will not reset automatically after a time period.

Register value = 0x0000 for Manual Only, 0x0001 for Manual + Automatic. Default is Manual + Automatic.

0x06 --- Write Alarm Acknowledge

Query

| V | uel y | | | | | | | |
|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3E | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3E | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to acknowledge an alarm. Writing a 1 causes the same reaction as pressing the <SILENCE> key. Resets to 0 once registered.

Register value = 0x0000 for Normal, 0x0001 for Alarm Acknowledged. Default is Normal.

0x06 --- Write Digital Input Mode

Query

| Ì | Slave address | 0.01 | | | Register | Register | CRC | CRC |
|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | (0x01 to 0xFF) | 0x06 | 0x00 | 0x3F | value MSB * | value LSB * | LSB | MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x3F | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to set the digital input operating mode.

In latch mode, Digital Input Status will activate when there is a contact closure on the digital input and it will remain activated until Digital Input Status is reset manually by writing to the variable.

In momentary self-reset mode, the Digital Input Status will reset itself after a time period as set by Digital Input Self-reset Time between 1-255 seconds.

Register value = 0x0000 for Latch, 0x0001 for Momentary Self-reset. Default is Momentary Self-reset.

0x06 --- Write Digital Input Status

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| ~ | acry | | | | | | | |
|---|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x40 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x40 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to indicate the digital input status. The register changes to 1 (ACTIVE) if the digital input has been activated. The Digital Input Status has two operating modes as set by Digital Input Mode. It can be either manually reset by writing 0 (INACTIVE) back to the register, or it can be self-resetting after a time period as set by Digital Input Self-reset Time.

Register value = 0x0000 for Inactive, 0x0001 for Active. Default is Inactive.

0x06 --- Write Setpoint Lock

Ouerv

| V | uci y | | | | | | | |
|---|---------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x41 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x41 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to lock the setpoints. If Locked, then the alarm setpoints cannot be changed via the User Menu. Register value = 0x0000 for Not Locked, 0x0001 for Locked. Default is Not Locked.

0x06 --- Write User Menu Lock

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x42 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x42 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to lock the User Menu. If Locked, then the User Menu cannot be accessed via the <MENU> key. Register value = 0x0000 for Not Locked, 0x0001 for Locked. Default is Not Locked.

0x06 --- Write Installer Menu Lock

Ouerv

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x43 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| Response | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x43 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register is used to lock the Installer Menu. If Locked, then the Installer Menu cannot be accessed by holding the <UP> and <DOWN> keys.

Register value = 0x0000 for Not Locked, 0x0001 for Locked. Default is Not Locked.

0x06 --- Display Brightness

| 1 | | | |
|---|---|---------------------|-----|
| | m | $\boldsymbol{\rho}$ | rt/ |

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x44 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | |
|---------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|--|
| Response | | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x44 | Register value MSB | Register value LSB | CRC LSB | CRC MSB | |

^{*} This register is used to control the brightness of the LED displays.

Register value = 0x0000 for Low Brightness, 0x0001 for High Brightness. Default is High Brightness.

0x06 --- TEMP Analog Input Range

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x45 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|-------------------------|-----------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x45 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register sets the input scale for the TEMP analog input signal. Only used for the remote transmitter model. Register value = 0x0000 for 0-35 °C, 0x0001 for 0-50 °C. Default is 0-50 °C.

0x06 --- DP Analog Input Range

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|----|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x46 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| Re | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x46 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register sets the input scale for the DP analog input signal. Only used for the remote transmitter model. Register value = 0x0000 for ± 250 Pa, 0x0001 for ± 500 Pa. Default is ± 250 Pa.

0x06 --- Analog Input Signal Type

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x47 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|-----------------------|-------------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x47 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register sets the analog input signal type. Only used for the remote transmitter model. Register value = 0x0000 for mA, 0x0001 for Voltage. Default is mA.

0x06 --- Analog Input Volt Range

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|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x48 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x48 | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register sets the analog input voltage range for voltage signal type. Only used for the remote transmitter model. Register value = 0x0000 for 0-5 Vdc, 0x0001 for 0-10 Vdc. Default is 0-5 Vdc.

0x06 --- Analog Output Signal Type

Query

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x49 | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB | | | |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|--|
| Response | | | | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x49 | Register value MSB | Register value LSB | CRC LSB | CRC MSB | | | |

^{*} This register sets the analog output signal type. Register value = 0x0000 for mA, 0x0001 for Voltage. Default is mA.

0x06 --- Analog Output Volt Range

Query

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4A | Register value MSB * | Register value LSB * | CRC LSB | CRC MSB |
|---|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| R | esponse | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4A | Register value MSB | Register value LSB | CRC LSB | CRC MSB |

^{*} This register sets the analog output voltage range for voltage signal type. Register value = 0x0000 for 0-5 Vdc, 0x0001 for 0-10 Vdc. Default is 0-5 Vdc.

0x06 --- Write TEMP Alarm Operation

Ouerv

| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4B | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | | | |
|------------------------------|------|------|------|-----------------------|-----------------------|-------------|------------|--|--|--|
| Response | | | | | | | | | | |
| Slave address | 0x06 | 0x00 | 0x4B | Register | Register | CRC I SR | CRC MSB | | | |

^{*} This register is used to configure the operation of the TEMP alarm.

The available settings are:

0x0001 = Low alarm only0x0002 = High alarm only

0x0003 = Both low and high alarms

0x0004 = Disable low and high TEMP alarmsDefault is 0x0004

0x06 --- Write RH Alarm Operation

Ouerv

| Query | | | | | | | | | |
|------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4C | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | | |
| Response | | | | | | | | | |
| Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4C | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | | |

^{*} This register is used to configure the operation of the RH alarm.

The available settings are:

0x0001 = Low alarm only0x0002 = High alarm only

0x0003 = Both low and high alarms

0x0004 = Disable low and high RH alarms

Default is 0x0004

0x06 --- Write DP Alarm Operation

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|----|-----|--------------|
| | 116 | 'rv |
| v | uc | / . J |

| V | zuci y | | | | | | | | | |
|---|---------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|--|
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4D | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | | |
| R | Response | | | | | | | | | |
| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4D | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | | |

^{*} This register is used to configure the operation of the DP alarm.

The available settings are:

0x0001 = Low alarm only0x0002 = High alarm only

0x0003 = Both low and high alarms

0x0004 = Disable low and high RH alarms

Default is 0x0003

0x06 --- Write Buzzer Assignment

Query

| | address o 0xFF) | 0x06 | 0x00 | 0x4E | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | |
|----------|--------------------|------|------|------|-----------------------|-----------------------|------------|------------|--|
| Response | | | | | | | | | |
| | address o 0xFF) | 0x06 | 0x00 | 0x4E | Register Value MSB | Register value LSB | CRC LSB | CRC MSB | |

^{*} This register is used to configure the operation of the buzzer and which alarm it will indicate.

The available settings are:

0x0001 = TEMP alarm only

0x0002 = RH alarm only

0x0003 = DP alarm only

0x0004 = Disable the buzzer

0x0005 = Buzzer activates on any alarm

Default is 0x0003

0x06 --- Write Digital Input Function

Ouerv

| | Slave address (0x01 to 0xFF) | 0x06 | 0x00 | 0x4F | Register Value MSB | Register value LSB | CRC LSB | CRC MSB |
|---|---------------------------------|------|------|------|-----------------------|-----------------------|------------|------------|
| R | lesponse | | | | | | | |

| Slave address (0x01 to 0xFF) 0x06 0x00 0x4F Register Value MSB value LSB CRC LSB | CRC MSB |
|--|------------|

^{*} This register is used to configure the function of the digital input.

The available settings are:

0x0001 = Disable (no function)

0x0002 = Door Freeze

0x0003 = Silence

Default is 0x0001

Exception response

| Slave address | Function | Exception code * | CRC | CRC |
|------------------|-------------|----------------------|-----|-----|
| (0x01 to 0xFF) | code + 0x80 | 0x01, 0x02 or 0x03 | LSB | MSB |

^{*} An exception response is only returned if the CRC is correct

Exception code 01 --- illegal function Exception code 02 --- illegal address

Exception code 03 --- illegal data value