# FIMX8 | AIR FILTER MONITOR

## Modbus register map

# MODBUS REGISTER MAP

## INPUT REGISTERS

| | | Data type | Description | Raw data | Values |
|---|---|---|---|---|---|
| 1 | Differential Pressure Channel 1 | unsigned integer | Measured differential pressure channel 1 | 0—1.000 | 100 = 100 Pa |
| 2 | Filter Warning Status Channel 1 | unsigned integer | Status of the filter according to the measured pressure | 0—1 | 0 = OK<br>1 = Filter warning |
| 3 | Filter Alarm Status Channel 1 | unsigned integer | Status of the filter according to the measured pressure | 0—1 | 0 = OK<br>1 = Filter alarm |
| 4 | Sensor Fault Channel 1 | unsigned integer | Indicates a failure in pressure sensor 1 | 0—1 | 0 = Sensor OK<br>1 = Sensor Fault |
| 5 | Differential Pressure Channel 2 | unsigned integer | Measured differential pressure channel 2 (only available in FIM28-1K0-XX) | 0 – 1.000 | 100 = 100 Pa |
| 6 | Filter Warning Status Channel 2 | unsigned integer | Status of the filter according to the measured pressure of channel 2 (only available in FIM28-1K0-XX) | 0—1 | 0 = OK<br>1 = Filter warning |
| 7 | Filter Alarm Status Channel 2 | unsigned integer | Status of the filter according to the measured pressure of channel 2 (only available in FIM28-1K0-XX) | 0—1 | 0 = OK<br>1 = Filter alarm |
| 8 | Sensor Fault Channel 2 | unsigned integer | Indicates a failure in pressure sensor 2 (only available in FIM28-1K0-XX) | 0—1 | 0 = Sensor OK<br>1 = Sensor Fault |
| 9—10 | | | Reserved, return 0 | | |

## HOLDING REGISTERS

| | | Data type | Description | Raw data | Values | Factory default values |
|---|---|---|---|---|---|---|
| 1 | Device slave address | unsigned integer | Modbus device address | 1—247 | | 1 |
| 2 | Modbus baud rate | unsigned integer | Modbus communication baud rate | 0—6 | 0 = 4.800<br>1 = 9.600<br>2 = 19.200<br>3 = 38.400<br>4 = 57.600<br>5 = 115.200<br>6 = 230.400 | 2 |
| 3 | Modbus parity | unsigned integer | Parity check mode | 0—2 | 0 = 8N1<br>1 = 8E1<br>2 = 8O1 | 1 |
| 4 | Device type | unsigned integer | Device type. Read only | 1.120—1.124 | 1.120 = FIM18-1K0-WF<br>1.121 = FIM18-1K0-EW<br>1.122 = N/A<br>1.123 = FIM28-1K0-WF<br>1.124 = FIM28-1K0-EW | |
| 5 | HW version | unsigned integer | Hardware version of the device. Read only | XXXX | 0x0100 = HW version 1.0 | |
| 6 | FW version | unsigned integer | Firmware version of the device. Read only | XXXX | 0x0100= FW version 1.0 | |
| 7—9 | | | Reserved, return 0 | | | |
| 10 | Modbus registers reset | unsigned integer | Resets Modbus Holding registers to default values. When finished this register is automatically reset to '0' | 0—1 | 0 = Idle<br>1 = Reset Modbus Registers | 0 |
| 11 | Filter Warning Pressure channel 1 | unsigned integer | Pressure level in Pa which alerts that the filter starts to clog | 0—Filter Alarm Pressure channel 1 | 100 = 100 Pa | 50 |
| 12 | Filter Alarm Pressure channel 1 | unsigned integer | Pressure level in Pa which alerts that the filter is clogged and needs cleaning/replacement | Filter Warning Pressure channel 1—1.000 | 100 = 100 Pa | 100 |
| 13—19 | | | Reserved, return 0 | | | |
| 20 | Recalibrate Sensor Channel 1 | unsigned integer | Recalibrate sensor 1 | 0—1 | 0 = Idle<br>1 = Recalibrate | 0 |

## HOLDING REGISTERS

| | | Data type | Description | Raw data | Values | Factory default values |
|---|---|---|---|---|---|---|
| 21 | Filter Warning Pressure channel 2 | unsigned integer | Pressure level in Pa which alerts that the filter starts to clog (only available in FIM28-1K0-XX) | 0—Filter Alarm Pressure channel 2 | 100 = 100 Pa | 50 |
| 22 | Filter Alarm Pressure channel 2 | unsigned integer | Pressure level in Pa which alerts that the filter is clogged and needs cleaning/replacement (only available in FIM28-1K0-XX) | Filter Warning Pressure channel 2—1.000 | 100 = 100 Pa | 100 |
| 23—29 | | | Reserved, return 0 | | | |
| 30 | Recalibrate Sensor Channel 2 | unsigned integer | Recalibrate sensor 2 (only available in FIM28-1K0-XX) | 0—1 | 0 = Idle<br>1 = Recalibrate | 0 |
| 31 | LEDs Brightness | unsigned integer | Brightness of the LEDs | 0 – 10 | 0 = OFF<br>1 = 10 %<br>2 = 20 %<br>3 = 30 %<br>4 = 40 %<br>5 = 50 %<br>6 = 60 %<br>7 = 70 %<br>8 = 80 %<br>9 = 90 %<br>10 = Full brightness | 5 |
| 32—40 | | | Reserved, return 0 | | | |

**Note:** The holding registers can be managed via the following Modbus commands: “Read Holding Registers”, “Write Single Register” or “Write Multiple Registers”.

**The free Sentera configuration and monitoring software 3SModbus can be downloaded via**: https://www.sentera.eu/en/3SMCenter