



Change sharp cut cyclone

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INTRODUCTION


Changing the sharp cut cyclone on the inlet requires a simple change in the software.



PARTS:

- [PM10 sharp cut cyclone](#) (1)
 - [PM2.5 sharp cut cyclone](#) (1)
 - [PM1 sharp cut cyclone](#) (1)
-

Step 1 — Enter service mode

<div>  Calibration and Service ▾ Instrument ▾ Sales & Support Demo AQY (AQY Demo-001) ▾ </div>								
Normal operation								
Calibration	Manual service mode Start							
History								
Manual Entry >	Calibration parameters							
		NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m ³	PM2.5 µg/m ³	TEMP °C
Gain	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.00
Offset	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0
a	1.100			2.550				
b				1.870				
	Real time measurements							
	Time	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m ³	PM2.5 µg/m ³	TEMP °C
	11:42 a.m.	2.9	29.6	24.2	23.7	1.7	1.1	15.74
	11:41 a.m.	2.8	29.2	24.0	23.5	1.6	1.0	15.63
	11:40 a.m.	3.1	29.7	24.2	23.8	1.9	1.2	15.60
	11:39 a.m.	3.6	30.2	24.1	23.7	1.5	1.0	15.55
	11:38 a.m.	4.7	30.4	23.4	23.0	1.3	0.8	15.48

- [Enter service mode](#) so any fluctuations in the data caused from this activity can be excluded from air quality reports.

Step 2 — Change cyclone on inlet



TSP

PM_{10.0}PM_{2.5}PM_{1.0}

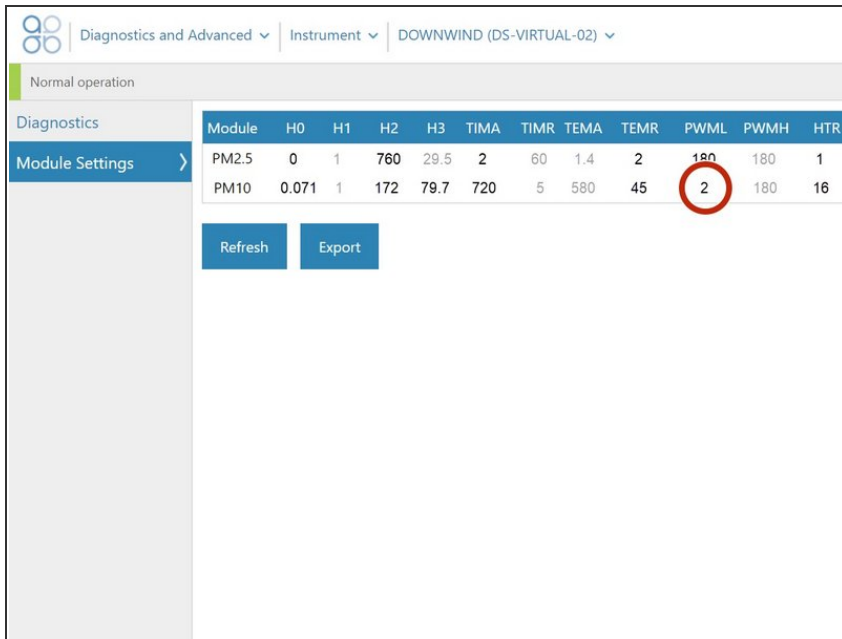
- Change the sharp cut cyclone on the inlet.

Step 3 — Add new cyclone

The screenshots show the Aeroqual configuration interface for a 'DOWNWIND (DS-VIRTUAL-02)' instrument. The interface is divided into several columns: Settings, System, Sensors, Communications, and PLC. The 'Sensors' column shows a list of active sensors, including 'PM10' and 'Add new sensor ...'. The 'System' column shows various settings like 'Name', 'Instrument type', 'Software version', 'Time zone', 'Location', 'Default averaging period', and 'Service time-out'. The 'Communications' column shows settings for 'Remote config interval', 'Remote config server', 'Offline reboot interval', 'Ethernet mode', 'Ethernet IP address', 'WIFI mode', 'WIFI SSID', 'Hidden SSID', and 'WIFI password'. The 'PLC' column shows a 'PLC' status indicator.

- From the home screen, click **Configure**.
 - Click **Settings** from the side menu.
 - Select the new cyclone from the **Add new sensor** drop-down in the **Sensors** column.
- i** The new cyclone shows up as offline initially.
- i** Don't remove the old cyclone yet.

Step 4 — Change PWML setting



Normal operation

Diagnostics

Module Settings >

Module	H0	H1	H2	H3	TIMA	TIMR	TEMA	TEMR	PWML	PWMH	HTR
PM2.5	0	1	760	29.5	2	60	1.4	2	180	180	1
PM10	0.071	1	172	79.7	720	5	580	45	2	180	16

Refresh Export

- From the home screen, click **Diagnostic and Advanced**.
- Select **Module Settings** from the side menu.
- Change the **PWML** setting for the previous cyclone to the **PWML** setting for the new cyclone. In this example, it changed from 3 to 2.
 - 4 = TSP
 - 3 = PM 10
 - 2 = PM2.5
 - 1 = PM1.0
- When the confirmation message appear, click **Save**.

Step 5 — Remove old cyclone

The screenshot shows the 'Configure Instrument' app for 'DS-VIRTUAL-02'. The 'Sensors' tab is active, displaying a list of active sensors: 'PM2.5' and 'PM10'. The 'PM10' sensor has a red circle around it with a small 'X' icon next to its name, indicating it is the target for removal. Other tabs visible include 'System', 'Communications', and 'PLC'.

- Return to the **Configure** app.
- Wait a few minutes until the previous cyclone appears offline.
- Remove the old cyclone from the **Active Sensors** list by hovering over the sensor name and clicking the cross that displays.
- Click **Save** when the confirmation message appears.

Step 6 — Record in journal

The screenshot shows the 'Air Quality Monitor (AQM65 04082015-437)' journal entry. The entry is titled 'User entry | Cloud user - John Wagner'. The journal entry contains the following text:

1. Site Inspection: No new local emission sources
Instrument in good condition
No obstructions to monitoring equipment

2. Instrument inspection: Cooling fan operational
PM and gas inlet secure
Instrument has been running at stable

3. Equipment:
Aeroqual Gas dilution calibrator: Aircal 1000
Aeroqual Ozone calibrator: AQM O3Cal
Aeroqual Flow meter: AQM R7

4. Gas cylinders:
CO 1000 ppm in Air (expiry March)
SO2 20 ppm in Air (expiry December)
NO2 20 ppm in Air (expiry November)

4. Flow rate check: Expected flow rate = 0.450 ml per min,
Measured flow rate = 0.452 ml per min
Main inlet flow rate OK, individual module flow rates were not measured.

5. Open door and change gas inlet filter

6. Zero calibration
All modules passed zero calibration, all modules were stable and all offsets were within acceptable limits.

7. Span Calibration
CO @ 10.00 ppm Module response was 8.95 ppm gain adjustment to 1.15 pass
SO2 @ 0.2 ppm Module response was 0.210 ppm gain adjustment to 0.92 pass
NO2 @ 0.2 ppm Module response was 0.090 ppm gain adjustment to 2.10 pass (module may need replacing soon contact A

8 Pack up. Next scheduled calibration 3 months from now. June 2017.

- [Record the results of this service activity in the monitor's journal.](#)
- [Exit service mode.](#)

For further support, contact [Technical Support](#).