

TSI® FMS 5 SOFTWARE HOW TO CONFIGURE AEROTRAK®+ REMOTE PARTICLE COUNTER INSTANT ALARM

TECHNICAL BULLETIN-TCC-174 (US) (9/6/2019) Rev A

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Description

This procedure explains how to configure an Instant Alarm using the AeroTrak®+ Remote Particle Counters [both with pump (6000 Series) and without pump (7000 Series)] in FMS 5.

This procedure introduces a new type of alarm so to differentiate it we will refer to the current sample period related alarm as "normal" and the new alarm as Instant Alarm. Even though it is a new alarm type it is still bounded by the same alarm threshold as the "normal" alarm.

The instructions and examples explained herein are using the FMS pharmaceutical screen layout.



Prerequisites

- This procedure is only valid for FMS 5.5.1 or above with use of all AeroTrak+ Remote Particle Counters.
- Prior to configuring an Instant Alarm Sample Point for an AeroTrak+ Remote Particle Counter, instruments must be configured according to technical bulletin TCC-165—How to Configure AeroTrak+ Remote Particle Counters.
- Windows[®] Firewall Inbound Rule is set to allow TCP on port 3603.

Assumptions

- The reader has configured an AeroTrak+ Remote instrument on their FMS system using technical bulletin TCC-165—How to Configure AeroTrak+ Remote Particle Counters in FMS and it is running successfully. The counts per ft³ sample point created there will be used in the following instructions.
- FMS Sample Points Description:

Unit Name:	U_A_PLUS_RWP_6301
Sample point Name (ft ³):	A_PLUS_RWP_6301
Sample point Name (Instant Alarm):	A_PLUS_RWP_6301_IA
Sample Interval:	60
Upper Level Alarm Value (ft ³):	10
Instant Alarm Buffer Size:	60

Configuration of an Instant Alarm Sample Point

Modifying an Existing AeroTrak+ Configuration in FMS

1. From the FMS Client.

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					Alarm Group Status
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Node	Date/Time	Source	Туре	Message	
Local	2019-09-05 12:42:10	Local	Ok	Monitor Has Connected SV1864 from 192.168.200.10	Statistics Sample Status Tag Status A Name Value

- 2. Go to **Configure Node**.
- 3. Expand Monitor Summary.
- 4. Expand **Configure Devices**.
- 5. Click AeroTrak+ Devices.
- 6. Select one of the devices listed and then select **Configure**.



- 8. Select the **Send Upper** Alarm properties to the device option.
- 9. Click the **Save** button.

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- 10. From the **Sample Point Recipe** tab of the ft³ sample point.
- 11. Set an **Upper Alarm** limit of 10.
- 12. Click the **Save** button.

Properties Alarm Properties Sample Point A_PLUS_RWP_6201 Alarm Delay Recipe List Default Image: Control Control Control Class/Standard Preferred Tag 0.3 Image: Control Class/Standard Additional Tag None Image: Control Class/Standard Image: Control Class/Standard Image: Control Class/Standard Sample Point's Recipe List Image: Control Class/Standard Image: Control Class/Standard Image: Control Class/Standard Image: Control Class/Standard Image: Control Class/Standard	imple Point Settings Sample Point	Recipe				
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0.3 0.5 0.7 Mean Crowding 0		SPC Properties				
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Trend Limit 0 0 0 Lower Control 0 0 0		Alarm Limit	0	0	0	0 🗆
Lower Control 0 0 0 0		Trend Limit	0	0	0	0 🗆
		Lower Control	0	0	0	0
Upper Control 0 0 0 0		Upper Control	0	0	0	0

- 13. From the **Sample Point Settings** tab.
- 14. Change the **Sample Point Name**.
- 15. Change the Data type to **InstantAlarm(Counts).**
- 16. The **Receive Instant** Alarm from the device option should be selected by default.
- 17. The **Buffer Size** default is 60.
- 18. Click the **green plus sign** to add the new sample point.

Sample Point Settings Sample Po	int Recipe
Sample Point List	Sample Point Information
5	Sample Point Name * A_PLUS_RWP_6201_IA
Name	Data Type InstantAlarm(Counts) -
A_PLUS_RWP_6201	Input Index Counts -
	Display Settings
	Display Units Counts -
	Decimal Places 0
	Comments
	Additional Comments
	Graph Settings
	✓ Use Logarithmic Scales
	Report Settings
	Calculate MKT
	Alarm Settings
	Send Upper Alarm properties to the device
	Receive Instant Alarm from the device Buffer Size 60 -

NEW ALARM SETTINGS	
Receive Instant Alarm from the device	When used in conjunction with Upper Alarm settings on the Sample Point Recipe tab, you can setup the instrument to generate Instant Alarm data and send it to FMS.
Buffer Size	This is the size of the Rolling Buffer used by the instrument to generate an Instant Alarm. See the Instrument manual (P/N 6012577) for a description.

- 19. From the **Sample Point Recipe** tab of the new Instant Alarm sample point. Ensure that the Sample Point name is the name used for the Instant Alarm sample point.
- 20. Observe the **Upper** Alarm limit is set and is un-editable. In this case, it was converted from ft^3 to counts on a 0.1 CFM instrument and 60-second sample period.

ample Point Settings Sample Point Recip	e				
Properties	Alarm Properties				
Sample Point A_PLUS_RWP_6201_IA	1				
Recipe List Default -	Alarm Delay				
Preferred Tag 0.3	0 ‡ OI	ut of 0 🌻 S	Samples 🗌 Re	etriggerable Al	arms
Additional Tag None		03	0.5	0.7	
✓ Disable Acknowledge ☐ Hide	Upper Alarm	0	☑ 1	0	0
✓ Enabled ✓ Fileable	Upper Warning	0		0	0
Sample Point's Recipe List	Lower Warning	0	0	0	0
	Lower Alarm	0	0	0	0
Name	•				Þ
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	Classification				
	SPC Properties				
		0.3	0.5	0.7	
	Mean Crowding	0	0	0	0 🗌
	Alarm Limit	0	0	0	0 []
	Trend Limit	0	0	0	0 🗆
	Lower Control	0	0	0	0
	Upper Control	0	0	0	0
	4				Þ

IMPORTANT NOTE

It is possible to select the **Send Upper Alarm properties to the device** option on the Instant Alarm sample point instead of the ft³ sample point. In fact, you do not have to have the ft³ sample point at all. In this case, the Upper Alarm threshold would be editable for the Instant Alarm Sample Point.

21. Select **OK**, the Configure screen will close. You will see your new sample point listed.

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Client Node Windows Help								
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Configured							Units Status	Ø
SV1864								
Configuration								
Monitor Summary	Serial Number	IP / Port S	Sample Points	Status	LED	Configure		WD 6204
 Configure Devices 	020102	A_PLU	JS_RWP_6201_IA	AWFLING	OFF	Create	U_A_PLUS_R	WP_0201
Communications						Disable		
Units						Enable		
Sample Points						LED	Alarm Group Stat	us 🛛
Recipes						ALL LED OFF		
Alarm Groups Actions						Delete		
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2019-09-05								
Local 13:08:46	Local Ok	Monitor Has Connected SV	1864 from 192.168.20	0.10				
							2019	-09-05 13:11:06

- 22. From the AeroTrak+ Devices screen, select **OK** then **Save** and finally **Yes** to reboot.
- 23. After monitoring node is restarted, the sample point displays on the screen and the instrument will start sampling.

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Local	13:08:46	Local	Ok	Monitor Has Connected SV1	864 from 192.168.200.10				
								2019	-09-05 13:12:15

Receiving an Instant Alarm

After new data is received from the Unit, the Instant Alarm sample point will change to an Ok state (green). This new data need not be Instant Alarm data but the Instant Alarm sample point will still reflect the state of the Unit at this time. The Instant Alarm sample point will only receive Instant Alarm data.

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2019-09-05 Local C				
13:08:46				
		3 [👌	Close	2019-09-05 13:19:41

Once an alarm level event occurs on the instrument, FMS will receive Instant Alarm messages. These will likely occur in advance of the "normal" alarm.

Units Status 🛛		
U_A_PLUS_RWP_6201		
Alarm Group Status		
Oatabase_Status		
Statistics		
Sample Status Tag Status Al		
Name Value		
Last Warning none		
Last Alarm 2019-09-05 1		
Last Ack. none		
Enabled True		
Ack.State No acknowled Failures 0		
2019-09-05 13:26:46		

The Instant Alarm may also end earlier than the "normal" alarm.

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SV1864	2019-09-05 13:27:37	A_PLUS	Ok	2019-09-05 13:26:37 - A_PL Time in Alarm: 0:01:00; [0.5] I	message 2019-09-05 13:26:37 - A_PLUS_RWP_6201_IA Stopped Alarming Time in Alarm: 0:01:00:10.51 Mean: 5 Min: 5 Max: 5					N	Sample Status ame	Tag Status A Value	< ► ▲
SV1864	2019-09-05 13:27:00	A_PLUS	Alarm	2019-09-05 13:27:00 + A_P 0.5 50; UpperAlarm 10;	2019-09-05 13:27:00 + A_PLUS_RWP_6201 Has Started Alarming. 0.5 50; UpperAlarm 10;						Last Failure Last Warning	none none 2019-09-05 1	
SV1864	2019-09-05 13:26:37	A_PLUS	Alarm	2019-09-05 13:26:37 + A_PLUS_RWP_6201_IA Has Started Alarming. 0.5 5; InstantAlarm 1;						Last Reading Last Ack.	2019-09-05 1. none		
Local	2019-09-05 13:08:46	Local	Ok	Monitor Has Connected SV1864 from 192.168.200.10							Recipe Enabled Ack.State Failures	Default True No acknowled 0	I 🗸
Node: SV1864	is in ALARM STA	TE									201	9-09-05 13:27:4	40

The Instant Alarm data is generated every second that the Instant Alarm is active. FMS will show the first Instant Alarm data as **Started Alarming** and the last as **Stopped Alarming** just like the "normal" alarm data.

Ń	Inspect A_PLUS_RWP_6201_	A							_ 0	x	
Data Graph Statistics											
	Date Time	State	Notes	0.3	0.5	0.7	1.0	SerialNumber	Volume		
	2019-09-05 13:27:41	Ok	A_PLUS_RWP_6201_IA Stopped Alarming . Time in Alarm: 0:01:00; [0.5] Mean: 5 Min: 5 Max: 5	0	0	0	0	620102	0.10		
	2019-09-05 13:27:40	Alarm	0.5 5; InstantAlarm 1;	5	5	5	5	620102	0.10		
	2019-09-05 13:27:39	Alarm	0.5 5; InstantAlarm 1;	5	5	5	5	620102	0.10		
	2019-09-05 13:27:38	Alarm	0.5 5; InstantAlarm 1;	5	5	5	5	620102	0.10		
	2019-09-05 13:27:37	Alarm	0.5 5; InstantAlarm 1;	5	5	5	5	620102	0.10		
	2019-09-05 13:27:36	Alarm	0.5 5; InstantAlarm 1;	5	5	5	5	620102	0.10		
	2019-09-05 13:27:35	Alarm	0.5 5; InstantAlarm 1;	5	5	5	5	620102	0.10		
								Close			

IMPORTANT NOTE

Because the Instant Alarm data is not continuous a graph of the Instant Alarm data may not look good.

Troubleshooting

1. If no Instant Alarm messages are being received, please check your firewall settings to be sure that TCP port 3603 can be used.

References—Technical Bulletins

- TCC-165—How to Configure AeroTrak+ Remote Particle Counter in FMS5
- TCC-166—How to Setup AeroTrak+ Remote Particle Counter with Pump (6000 Series) .
- TCC-167—How to Setup AeroTrak+ Remote Particle Counter (7000 Series) •
- AeroTrak+ Remote Particle Counter Operation Manual (P/N 6012577) •

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