



Ref: FAQ0100

Version: 1.0

Title – Pressure Transient set up

Made By: AB 20/09/17

(Issue 2)

Typical set up for a Pressure transient logger

This guide details a typical Pressure Transient configuration with explanations of what the settings do.

Set the Start time and date for the test you want to perform.

A sample interval of 30 seconds is typical

A standard log interval of 15 minutes is typical

The above settings mean that during normal conditions (i.e. no transient event) the logger will log the average of readings every 30 seconds every 15 minutes

Select the Fast logging option for Transient use

Set the sample frequency as required - 100Hz is the fastest but generates very large amounts of data – do you need this level of sampling – if not use a lower frequency

If you select 'Recording on trigger condition with continuous recording to SD card' the 100Hz recording will only start when the trigger level is exceeded

Device on COM9

Logger

Type: FW-138-002 V4.07 (Waiting)

ID: PTLOG

Serial No: 9988765

Tel No: +44108000012345

Logger Time: 21 Sep 2017 09:44 23

Logging Channels

1 Pressure1, Multiplier: 0.1, Ave

2 Pressure1, Multiplier: 0.1, Min

Logging Parameters

Start logging immediately

Last Restart Time: 21 Sep 2017 10:00 00

Last Stop Time: 01 Jan 1970 00:00 01

Sample Interval: 00:00 30

Log data at specified time interval: 00:15 00

Daylight Saving Settings

Fast Logging

Logging at greater than 1 Hz (Transient)

Settings

Sample Frequency (samples/sec): 25 Hz

Recording Mode

☐ Record at specific times of the day

☒ Record on trigger condition with continuous recording to SD card

Copy Device

Read Device

GPRS Test



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For simple Upper and Lower trigger conditions set these levels – they should be 10% outside the normal pressures seen in the main recorded over at least 1 week. This will ensure false Transient triggers are not recorded.

For complex triggers tick the box Use Complex triggers and see instructions below.

Once the transient is detected this setting defines the 100Hz recording period - in this case 5 seconds before the transient and for a duration of 30 seconds

Select either 'stop fast recordings when memory full' or 'overwrite oldest files when memory full'

The GPRS set up is as you would normally use for a Radcom GPRS data logger so is not detailed here.

Device on COM9

Recording Trigger Conditions

☒ Low level trigger value 0.00

☒ High level trigger value 52.00

☐ Use complex triggers

Include 5 seconds of data prior to event

Duration of each recording 30 seconds

Stop fast recordings when memory full

Data Substitution

☐ Enable data substitution

Time(s) Data Is Sent

☒ Logger has 7.2v external battery pack connected. (Required for call frequency mode)

Call in	Type	Mode	Freq hh:mm
On	UDP (HWM)	Freq	00:30

Days Of Week To Send Data

Data Destination

Alarms

Alarm Call Options

Restart Test Call

UTC Time

Setup Device ☒ Restart

Stop Device

Copy Device

Read Device

GPRS Test

Once complete Select the Set up logger button to upload the configuration to the logger



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Complex Triggers

The Trigger settings define the parameters which would trigger the transient recording at 100Hz

Set Condition 1 to be the upper and lower trigger conditions

If the pressure exceeds 75 then the 100Hz transient recording starts
If the pressure goes below zero then the 100Hz transient recording starts

If you hover your mouse over the alarm options you will get an explanation of each

Alarms

Cond 1 Cond 2 Cond 3 Cond 4 Cond 5 Cond 6

☐ Profile Alarms

☒ Lower Lower level 0

☒ Upper Upper level 75

☐ Minimum Night Flow

☐ Rate of Change

☐ Dif>

☐ Dif<

☐ Out Band

☐ In Band

Chan No 1

Persistence 1 out of 1

Hysteresis 1.00

Hysteresis

Best explained with an example.

If the alarm is set to 50 and the pressure goes 48>49>50 the alarm is triggered and when the pressure drops to 49.9 the alarm clear is sent. However if you set a Hysteresis value of 1 then the alarm clear will not be sent until the pressure reduces below 49. In this instance if the pressure went down to 49.5 and then back up to 51 no new alarm would be sent. So this provides a reduction of the number of alarms sent when the measured value is oscillating around a point.

A Hysteresis of 2 would mean no alarm clear until it reaches below 48 – again if the pressure dropped to 48.4 and then went back up to 51 no repeat alarm nor alarm clear would be triggered.

Persistence

Persistence is the number of times 'N' that an active alarm condition is satisfied during the last 'R' samples before the alarm is reported.

N=R means the active alarm condition must be satisfied during the last R samples (e.g at a sample rate of 15 minutes then in 30 minutes R=2)

1 out of 1 will report an alarm as soon as the condition occurs

2 out of 2 will report an alarm if the condition occurs for two consecutive readings

3 out of 3 will report an alarm if the condition occurs for 3 consecutive readings

N<R means the active alarm condition must be satisfied in any N out of R samples:

1 out of 4 will report an alarm if the condition occurs once in any 4 consecutive readings.

2 out of 4 will report an alarm if the condition occurs twice in any 4 consecutive readings.

Document History:

Edition	Date of Issue	Modification	Notes
1st	17/07/15	Release	
2nd		Updated for IDT changes	