| Ref: FAQ0431 | Version: 1.0 |
|---|---|
| Title – Logger Secondary channels | |
| Made By: AB 18/02/18 | (Issue 1) |

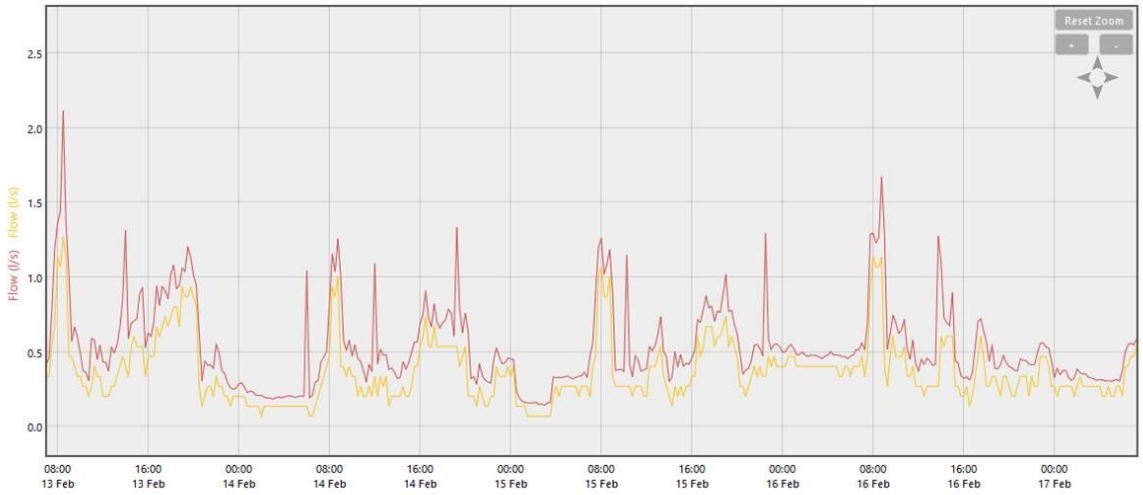
# Data logger Secondary channels explained

If we look at a logger monitoring flow in a water main, normally the logger is connected to a meter which outputs pulses each one being counted by the logger and averaged over the sample period which is usually 15 minutes. This does not allow you to understand what is happening within the 15 minute period. If you set the sample rate at 1 minute you would know what was happening with more definition but generate 15 x the amount of data.

So, to get around this you can set a secondary channel to log the minimum flows (or maximum) that the logger read over the period. The secondary channel might have a sample rate set at 1 min (in ML2 and LX2 you can now set secondary channels like transient loggers at rates down to 25 readings a second (25Hz)). With a secondary channel set at sample period one minute and log period 15 minutes, the logger will count all pulses every minute and then every 15 minutes it will average the flow over the 15 minutes (primary channel) but will also log the min (or Max) values seen during the period (Secondary Channel). See the graph below – the red graph is the average flow over 15 min, the yellow graph is the minimum flow seen by the secondary channel.

The use of secondary channels by the water industry is to help them to smooth out flow, and identify what causes the min (or max) flows in the system. Erratic flow with swings from min to max flow can be a cause of damaged pipes, valves etc.

Secondary channels can be set on most of the loggers primary channels for various system investigations .




| Site | Name | Channel Type | Units | Max | Min | Avg | Meter |
|---|---|---|---|---|---|---|---|
| XA064_15 XA064_15-REDFORD BKS-Nevis Infantry Domestic Inlet (15m)<br>Device Type: Multilog, Last Call In: 22-Feb-2018 13:01 | | C1 Pressure (m) | m | 57.600 | 55.100 | 56.497 | - |
| | | C2 Flow (l/s) | l/s | 3.038 | 0.100 | 0.568 | 105.841 |
| | | C6 Flow (l/s) | l/s | 1.733 | 0.000 | 0.377 | - |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Setting Secondary channels using IDT
Read the logger

## Document History:

| Edition | Date of Issue | Modification | Notes |
|---|---|---|---|
| 1st | 18/02/18 | Release | |
| | | | |


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