

SFLini.txt:

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# Speedlimit (deadband) default value (0.0001666667) for display of Speed and
Flowrate,
A "SpeedLimit","0.0001666667"
# Number of consecutive unipolar readings to limit the Online indication of Flowrate,
B "FlowCountLimit","3"
# Exponential Moving Average Filter (Enable = 1),
C "EMAFEnable","1"
# EMAF Constant (a) - The degree of weighting decrease is expressed as a constant
smoothing factor a,
# a number between 0 and 1,
# The smoothing factor may be expressed as a percentage,
# so a value of 10% is equivalent to (a) = 0.1,
# A higher (a) discounts older observations faster,
D "EMAFConstant","0.10"
# EMAF Calculating Interval (mS),
E "EMAFCalcInterval","12000"
# Force Calculation Time (S),
# If no calculation has been triggered then force calculation at this time,
F "ForceCalcTime","30"
# Skip Calculation Time (S),
# Skip all calculations up until this time,
G "SkipCalcTime","25"
```

Notes:

- A) 0.0001666667 m/second equals to approx 1 cm/minute
- B) Used in clsOnline - GetTankData3 for online to LoadMaster
- C) C, D & E is used for FlowRate(FR), Exponential Moving Average (EMA)
http://en.wikipedia.org/wiki/Moving_average#Exponential_moving_average

$$\text{EMA_FRnew} = \text{EMA_FRold} + \alpha * (\text{FRnew} - \text{EMA_FRold})$$
 The degree of weighting decrease is expressed as a constant smoothing factor
- D) α , a number between 0 and 1. The smoothing factor may be expressed as a percentage, so a value of 10% is equivalent to $\alpha = 0.1$. A higher α discounts older observations faster. Alternatively, α may be expressed in terms of N time periods, where $\alpha = 2/(N+1)$. For example, $N = 19$ is equivalent to $\alpha = 0.1$. The half-life of the weights (the interval over which the weights decrease by a factor of two) is approximately $N/2.8854$ (within 1% if $N > 5$).
- E) The observation at a time period t is designated Y_t , and the value of the EMA at any time period t is designated S_t .
- F) Used to ensure that calculation is done at least at this interval, DAUType = -1
- G) Used to ensure that "all" sensors are up-to-date before calculating.