

Menu System

Press ↓ or ↑

Press ALTER

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Cards Fitted

- Manifold_hzv
- Manifold_hzv
- Manifold_hzv
- Card 6
- Empty
- Empty
- Relay
- Empty

Display information about the cards fitted, either descriptive or reference number examples listed below

Fitted to slot 1A Channel 1 Frequency uses the UV curves

Fitted to slot 1B Channel 2 Frequency uses the UV curves

Fitted to slot 1C Channel 3 Frequency uses the UV curves

Fitted to slot 2A PT100 analogue card with 4-20mA output

Fitted to slot 2B

Fitted to slot 2C

Fitted to slot 3A Relay card fitted

Fitted to slot 3B

Fitted to slot 3C

Fitted to slot 4A

Fitted to slot 4B

Fitted to slot 4C

Fitted to slot 5A

Fitted to slot 5B

Fitted to slot 5C

Setup Auto

- 1↑² 1000 Hz
- 2↑³ 800 Hz
- 3↓² 1000 Hz
- 2↑¹ 1000 Hz

The frequency trip points at which the relay will energise to change the valve for a new turbine

The frequency trip point of channel 1 (smallest meter) to channel 2 (medium meter)

The frequency trip point of channel 2 (medium meter) to channel 3 (largest meter)

The frequency trip point of channel 3 (largest meter) to channel 2 (medium meter)

The frequency trip point of channel 2 (medium meter) to channel 1 (smallest meter)

Setup Comms

- BAUD 19200
- READ ONLY
- ID = a
- RS485 Fast
- Comms Fast

Communication setup for RS232 or RS485 module

Use ALTER to rotate to 9600 and 1200, use ↓ or ↑ to advance to next comm. setup

Default read mode, use ↓ or ↑ to advance to next comm. setup

ID of unit use ALTER to change a through z, use ↓ or ↑ to advance to next comm. setup

Response speed of RS485 RX to TX change use ALTER to change to medium or slow, use ↓ or ↑ to advance to next comm. setup

Char delay of Comms use ALTER to change to medium or slow, use ↓ or ↑ to advance to next comm. setup

Edit Curve¹

- c¹⁰¹ 120.34 fv
- c¹⁰¹ 210.37 kf

Edit the linearization curve of channel 1

Curve¹ point⁰¹ Frequency divided by Viscosity (fv) value displayed for editing or viewing

Curve¹ point⁰¹ Kfactor (pulses per engineering unit)

The curve data will consist of many points, consult the manual for the exact potential number of points (32 for UV curves)

Ch¹ SETUP

- Cal Temp¹
- Alpha¹
- Time Base¹
- Up Date Time¹
- Frq Cut Off¹
- Vol Cut Off¹

Basic parameter setup of Frequency Channel

CalT¹ 22.0 °C Calibration temperature if using the Strouhal and Roshkoe calculation for expansion of turbine and housing

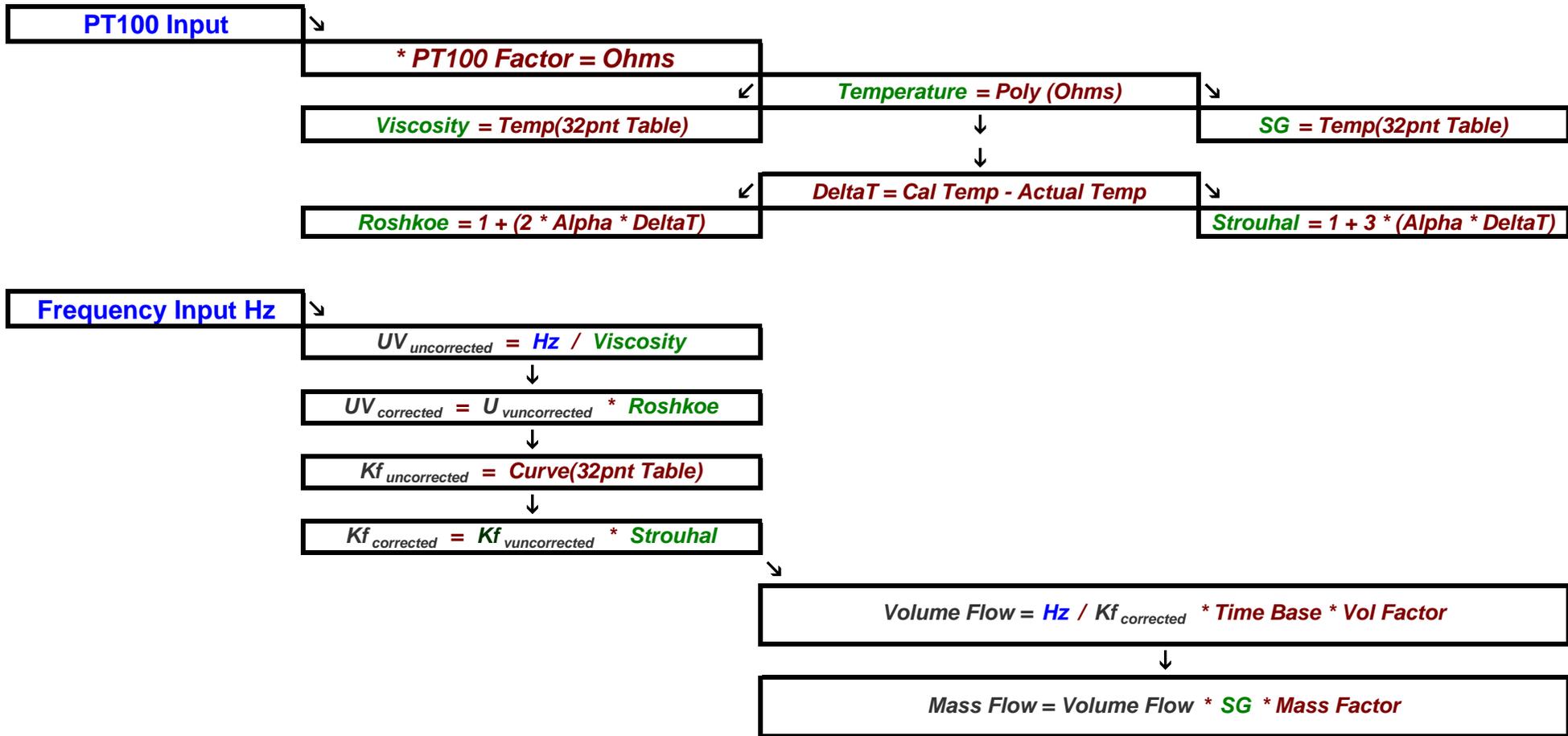
alpha¹ 2.0⁰⁵ Typical alpha value for Strouhal and Roshkoe calculation. Leave at zero to disable this compensation. (default = 0)

TB¹ 60.sec Time to instruct the Totaliser that the rate is in minutes, use 1 for seconds and 3600 for hours

UD¹ 0.5sec This instructs the frequency channel to update the nearest rising edge after the update time, must be less than the Freq. Cut Off

CO¹ 2.0sec This is the time the unit will wait for pulses before making the Frequency Zero, must be greater than update

	VC¹ 5.0l/m	Where the actual volume flow falls below this value it will be displayed as zero
Mass Cut Off¹	MC¹ 3.0kgm	Where the actual mass flow falls below this value it will be displayed as zero
Vol Factor¹	Vfac¹ 1.0	Multiplier used after the frequency has been processed to volume flow rate the multiplied by this factor
Mass Factor¹	Mfac¹ 1.0	Multiplier used after the frequency has been processed to mass flow rate the multiplied by this factor
DP 2		Use ALTER to rotate to DP 0, DP 1, DP2 and DP 4, use ↓ or ↑ to advance to next Ch Setup
Frq Constant¹	FC¹ 2.0⁻⁰⁷	Frequency adjustment, corrects the accuracy of the crystal for finite calibration. This requires a very stable frequency generator
		The data above for curves and channel setup is repeated for each frequency channel fitted
Clear Totals¹		To reset either or both volume and mass totals to zero
	0=Clear volume	Press 0 to clear the volume total or clear to abort the operation
	0=Clear Mass	Press 0 to clear the mass total or clear to abort the operation
Sort Curve¹		Use to sort the curve data into low frequency or low UV to high, use if data entry does not conform to low (Hz/v) = low point number
	Sort¹ 0 = Yes	Press 0 to sort the curve data and clear to abort the operation
Analog Inputs		Setup of the analogue channels
	PT100 Factor	PT100 factor to convert Analogue to digital bits (0-65535) to Ohms
	Bits 3.804⁻⁰⁴	Typical value for conversion
Set Viscosity		Linearization channel for temperature to viscosity up to 32 points only 1 shown here
	t¹⁰¹ 25.0 °C	Viscosity Curve ¹ point ⁰¹ Temperature shown for viewing or altering
	v¹⁰¹ 15.0 cts	Viscosity Curve ¹ point ⁰¹ viscosity shown for viewing or altering
Set SG		Linearization channel for temperature to Specific Gravity up to 32 points only 1 shown here
	t¹⁰¹ 25.0 °C	SG Curve ¹ point ⁰¹ Temperature shown for viewing or altering
	sg¹⁰¹ 0.9000	SG Curve ¹ point ⁰¹ SG shown for viewing or altering
Setup Aout¹		2 point Linearization channel for the analogue output
	a¹⁰¹ 0.0 l/m	Aout Curve ¹ point ⁰¹ Low analogue output engineering value i.e. flow rate at 4mA
	bits¹⁰¹ 12765	Aout Curve ¹ point ⁰¹ Bits that equates to 4mA through the D to A converter
	a¹⁰² 1000 l/m	Aout Curve ¹ point ⁰² High analogue output engineering value i.e. flow rate at 20mA
	bits¹⁰² 62539	Aout Curve ¹ point ⁰² Bits that equates to 20mA through the D to A converter
Sort vis, SG		Use this to sort viscosity and SG curve to low point = low temperature to high point = high temperature
	0 = Sort Vis	Press 0 to sort the curve data and clear to abort the operation
	0 = Sort SG	Press 0 to sort the curve data and clear to abort the operation



Note all equations are shown in there logical order, for example the final calculation in volume flow is on the right hand side i.e. * vol factor