

NEW FEATURE

FS10 Field Quick Setup Mode*

This feature permits field setting the critical zero and span parameters of the FS10A with a single push of the button and throttling the process flow over the desired range to capture the low and high ends. All defaults applicable to a low flow indication/alarm application apply along with a trip-point default setting at 30% of span.

To activate the Quick Setup Mode (QSM), simply press and hold for at least 10 seconds:

“ - ” button, for process fluids that are gases or very low flow liquid hydrocarbons

“ + ” button, for process fluids that are liquids or high velocity gases (+50% sensor excitation).

The first three and last three LEDs will alternately flash to acknowledge entry into the Quick Setup Mode. The FS10A is now cued to remember the lowest and highest flow signal it sees while in this mode. Pressing either button momentarily exits into the normal operating mode and saves the detected limits as the zero and span. LED's 1 and 10 and corresponding trip point LED will alternately flash (3 sec), indicating zero and span have been properly set.

A minimum span setting 0.05% is required to save new parameters. If minimum span is not reached during QSM, the first two, middle two and last two LEDs will flash; indicating an error (3 sec) and resume last operation without saving new parameters.

Recommendations

Gas applications

The high flow limit or span setting is normally the most difficult to stabilize in a gas application, therefore simulating the desired high flow rate at normal process conditions and allowing it to stabilize before entering into the QSM is recommended. Using in-line valves or other throttling means, establish the desired full scale flow rate and allow system to stabilize. Now enter into the QSM (FS10 immediately captures this high flow signal) and then slowly throttle the flow down until the zero flow setting is reached (i.e. valve closed, no flow). Allow to stabilize, then momentarily press either button to save parameters and return to normal operating mode with the new scaled operating range established.

Liquid applications

To optimize the performance of the FS10A in liquids, it is critical to establish a stable zero setting under a packed line (full) condition. It is recommended the FS10A be operating and allowed to come to equilibrium with a downstream valve closed and the line completely filled with the process fluid and no flow. At this point, enter into the QSM (FS10 immediately captures this low flow signal), and then slowly open the downstream valve to allow flow up to the maximum span desired. Momentarily press either button to save parameters and return to normal operating mode with the new scaled operating range established.

In some cases the high liquid flow signal will saturate before reaching the high flow that is simulated, but the FS10A will save the highest value it is capable of sensing in that application and use it as the high end limit.

Trip point

By factory default, the trip-point is set to 30% of the established span when using the Quick Setup Mode. This may be changed in the field using the standard button commands (refer to Functions 1 and 2 under Normal set-up and operation using the button interface in the operating manual). Alternatively, the QSM factory trip-point default of 30% of span may be changed in the field using the PC interface program before entering into the QSM. Selecting the factory setup option at order will also permit designating an alternative customer desired default value at the factory. Note, this value is always a % of the established span and alters any previous trip point that may have been attained on a previous setup.

Note, the 4-20mA output and relay trip will continue to operate at the previously set range while in the Quick Setup Mode

Summary

1. Activate QSM: Press “-” button (gas) or “+” button (liquid) minimum 10 seconds (LEDs will acknowledge entry into QSM).
2. Throttle flow valve to simulate zero and full scale flow.
3. Press either button momentarily to save parameter values and exit into normal operating mode.

* FS10A with Firmware version 4.0 or greater

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