

TECH NOTE

TN-111 – Understanding The Flow Switch Bypass

Some ERECTA SWITCH flow switch configurations include a bypass port. Understanding when and how to use the bypass is essential to correct installation and reliable operation.

The bypass port allows a controlled amount of fluid to flow around the piston sensor element. When the bypass is open, a minimum flow is maintained past the piston even when the main line flow drops below the switch trip point. This prevents nuisance tripping in applications where minor flow fluctuations are normal.

When the bypass is closed (port plugged), the switch responds to the full differential between flowing and no-flow conditions. This setting provides maximum sensitivity and the lowest trip-point flow rate.

In most Series 5 flow switch applications the bypass port should be plugged unless the application specifically requires reduced sensitivity to flow fluctuations. When in doubt, start with the bypass closed and open it only if nuisance tripping is observed in service.

Field Adjustment

The bypass is adjusted using the 10-700-BP bypass plug supplied with the switch. Plug = maximum sensitivity (closed). Plug removed = reduced sensitivity (open bypass). Intermediate positions are not recommended as the plug may work loose in service.