

# Pipe Lines

A SCADA-focused Newsletter from Data Flow Systems  
Issue 1, 2022



## TCU/PMA Resistor Change

DFS has made a change to the resistors used in the TCU/Phase Monitor Adaptor (PMA) kit for 480V applications. The modification to the resistors in the kit results in enhanced accuracy and improved toughness of the PMA inputs.

This adjustment improves the hardiness of the PMA inputs because all three legs have resistors in series in front of them. In addition to scaling the high voltage down to the PMA, these resistors also perform a secondary purpose: they create a low-pass filter for the internal capacitor in the PMA. This filter helps the TCU keep out high-voltage transients which improves the accuracy of the circuit and provides a measure of passive protection.

All TCU800s are currently calibrated for the new, 480V kit. When replacing an existing kit, recalibration, while not actually required, may be implemented to provide the utmost in accuracy.

**DFS  
Recognized  
by  
AWWA/FS**



The American Water Works Association/Florida Section recognized Data Flow Systems' efforts and contributions at the recent AWWA/FS Fall



## A Rejuvenation Project

In January 1984, the City of Naples, Florida chose DFS to provide a radio telemetry system. This month we have been contracted by Naples to upgrade and update that same 38-year-old system.

When Data Flow Systems' founders ventured into the telemetry business, the industry had reaped several well-earned criticisms. Besides being expensive, unreliable, and operationally complicated, big-name manufacturers were known to abandon system designs after a few years, leaving their customers with no option except to carry on without manufacturer's support, or invest in a new system. Utilities could only expect their systems to last about seven years.

DFS opted to buck that trend. We decided that our system had to be rugged enough to last for decades in severe weather and climate conditions. We could ease users' systems into higher capabilities by offering software upgrades without charging. Most importantly, the basic system had to be designed to allow for years of technical improvements and proficiencies without forcing the customer to change the rudiments of their system. We determined that all our new or improved products would be backward-compatible so that mature systems could take advantage of newer technologies.

The City of Naples' 38-year-old system provided a vigorous test of our backward-compatible concept. Their current system has used much of the initial equipment and has run on the original system architecture for nearly four decades.

We found that the city's 125 stainless RTU enclosures were still very serviceable, but the old-style backplanes had to be replaced. The enclosure dimensions were not compatible with our current RTUs, so we custom-designed a backplane with up-to-date features that will fit their existing enclosures.

DFS will work with City of Naples' personnel to install the new backplanes, new TIM radio modules, Power Supply Modules, Digital and Analog Monitor and Control Modules and all appropriate surge protection and suppression.

There is no reason why the City of Naples cannot maintain and utilize their system for another 40 years. It reinforces the validity of our obsolescence-proof design and underscores another clear reality: DFS' efforts have produced a SCADA system that has a lower, long-term

Conference.

A plaque, designating DFS as a "Premier Sponsor," was presented to DFS Business Development Manager, Tom Hogeland, who is a chairperson of the Utilities Systems Symposium. DFS was acknowledged in recognition of our support of AWWA/FS, as well as the considerable volunteer hours offered by our personnel.

cost of ownership than any other supplier -- ever.

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**DFS will be exhibiting at:**

Florida Water Resources Conference  
Ocean Center Hilton Hotel  
Daytona Beach, Florida  
April 24 - 27, 2022

Texas Municipal Utilities Association  
Leadership and Management Conference  
Texas A&M Hotel, College Station, Texas  
April 27 - 29, 2022



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