

# WHY UPGRADE?

## AN EVOLUTION IN PROTECTION TECHNOLOGY

Although they all make phone calls, new cell phones are released with a host of useful features. This is also true for devices providing distribution protection.

### Why did you upgrade protective relays in the first place?

- ◆ Digital Technology
- ◆ Self-Diagnostics
- ◆ Oscillography
- ◆ Sequence of Events
- ◆ Communications
- ◆ Application Flexibility

### Why would you want to upgrade now?

- ◆ NERC CIP Compliance
- ◆ Cyber Security, including IEEE 1686
- ◆ Power Quality Monitoring (Sag, Swell, THD, SST)
- ◆ 100 Disturbance Fault Records of up to 128 samples per cycle and up to 480 cycles each
- ◆ Data Logging for >2 Years at 5 min. intervals (user adjustable)
- ◆ 5,000 Sequence of Events Records with PQ Viewer (ITIC Curve)
- ◆ True multi-user, multi-protocol Ethernet ports
- ◆ Custom Mappable DNP 3.0
- ◆ IPSCOM S-7600: Uncomplicated Software for Complex Applications



# Advanced Distribution Protection and Recloser Control Upgrade Solutions

## Protection & Control

- ◆ Over 25 Protection Elements for optimal protection of Power Distribution Systems
- ◆ Settings Wizard
- ◆ Comprehensive I/O Matrix provides visual confirmation of enabled functions and selected outputs
- ◆ Four user programmable Inputs and Outputs, expandable to twelve
- ◆ User programmable front-panel LEDs and pushbuttons

## Monitoring

- ◆ Power Quality Monitoring up to the 63rd Harmonic including THD
- ◆ PQ Viewer (ITIC Curve)
- ◆ Sags, Swell and Sub-Synchronous Transient Detection
- ◆ Advanced Data Logging and Load Profile Recorder
- ◆ 5,000 Sequence of Events Records with PQ Viewer (ITIC Curve)
- ◆ 100 DFR quality Records with adjustable sampling rate up to 128 s/c

## Automation/Communications

- ◆ Front panel USB and SD Card ports for local programming and data transfer
- ◆ One or two optional serial ports (TIA-232, TIA-485 or Serial Fiber)
- ◆ Optional single or dual Ethernet ports with simultaneous multi-user and multi-protocol support
- ◆ Protocols supported include:
  - ◆ MODBUS, DNP3.0 and SmartP2P
  - ◆ Optional: IEC61850, IEC60870-5-104 or 2179
- ◆ Comprehensive Cyber Security tools for NERC CIP Compliance
- ◆ IEEE 1686 Compliant
- ◆ Customizable DNP Mapping

## IPScom®: Uncomplicated Software for Complex Power System Applications

- ◆ Integrated Metering, DFR and PQ Visualization Tools
- ◆ Search and filtering tools for analysis of SoE, DFR and PQ records
- ◆ IPSlogic Programmable Logic

## Flexibility

- ◆ Fast and easy retrofitting for most popular relays in existing cutouts using Beckwith's Adapter Panel Technology™

