

**COMING
SOON!**

POWER LINE CARRIER PRODUCTS

UPLC3

Universal Power Line Carrier

Third Generation Power Line Carrier for Protective Relay Applications

The UPLC3 is the next leap in the evolution of Power Line Carriers in the industry. It includes a completely reimagined transceiver board with a robust pluggable processor with significantly increased capacity for future feature expansions. We've specifically designed the UPLC3 with you in mind to be more user friendly with a completely redesigned web browser interface and front panel to access more TX and RX level information. Cybersecurity capabilities have been enhanced with the addition of HTTPS. The UPLC3 also has the ability to easily reset passwords to the default if the password is forgotten.



Ease of Use

We've added several features to enhance the ease of use. For DCB mode, there is now an RX auto calibration mode that turns on the remote TX for you, eliminating the need for a person to be on the opposite end of the line. This one-person auto-calibration is compatible with legacy UPLC-1Is at the opposite end of the line. We have simplified the retrieval of the distant unit's settings report file via the power line utilizing the DCB mode.

For SOEs, the nuisance events that occur during a short burst of events have been greatly reduced while allowing for greater data capture with increased storage capacity. This additional data will be easier to analyze due to the events having keyword search ability.

To enhance user confidence, the recording of RX levels accuracy has been significantly increased for events. Additional ease of analysis is possible due to the TX reflected power being recorded along with the RX levels during checkback tests.

FEATURES AND BENEFITS

| | |
|---|---|
| 1 | New, faster user friendly interface via web browser |
| 2 | Fully "over the line" compatible with all older AMETEK PLCs |
| 3 | Updated interface for cybersecurity with HTTPS |
| 4 | Pluggable processor for future flexibility |
| 5 | Simplified one-person RX auto-calibration |
| 6 | Improved SOE handling with more than double the events of previous models |
| 7 | More TX/RX information on front display, web page and report file |
| 8 | Substation automation ready with IEC61850 edition 2 |

Compatibility

Utilizing current infrastructure while adding new capabilities is important to AMETEK Power Instruments, that is why we have maintained end-to-end compatibility with all previous generation power line carrier sets. This enables you to have a UPLC-II, UPLC or TC/TCF-10B at the opposite end of the line, even for checkback testing. For easy upgrades and retrofitting, the UPLC3 is still housed in the same chassis as the UPLC-II. The physical design changes from the UPLC-II to UPLC3 include a new front door, transceiver board and front display board.

Example of the new and improved web browser interface

AMETEK POWER INSTRUMENTS Universal Power Line Carrier Mon, 26 Feb 2024 23:17:15 NO IRIG
 Substation Y Line X Logout
 US1NEM9AF53 FW Ver: 00.01.14 Home Settings Calibrate SOE Log Checkback DNP3 Admin Download s [Super User]

Home Watts/Volts dBm

Status

| Transmitter (TX) | | Receiver (RX) | |
|--------------------|-------------|----------------|--------|
| TX Level | 40 dBm | RX Level | 42 dBm |
| TX Keyed State | Start Keyed | RX State | Block |
| TX Reflected Power | 0% | RX Fade Margin | 15 dB |

Alarms

✔ - Healthy,
 🔔 - Fail/Alarm,
 ● - Module Not Present

| General Alarm | Power Supply | | Power Amp | | Checkback Test | |
|---------------|--------------|-----------|-----------|-----------|----------------|-------------|
| | Main | Redundant | Main | Redundant | Major Alarm | Minor Alarm |
| | ✔ | ● | ✔ | ● | ✔ | ✔ |

TX/RX Settings

| Transmitter (TX) | | Receiver (RX) | |
|--|------------|----------------|------------|
| TX Frequency | 250.00 kHz | RX Frequency | 250.00 kHz |
| | | RX Bandwidth | 1200 Hz |
| TX Power Per Amp (LL Test / Carrier Start) | 1.0/10.0 W | RX Sensitivity | 15.9 dBm |
| TX Reflected Power Alarm | 15 % | RX Fade Alarm | 10 dB |
| | | RX Fade Margin | 15 dB |

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UPLC3 Release

The planned release for UPLC3 is September 2024. We have a limited number of UPLC3 loaner boards available now for lab testing. An online unit is available for those wanting to login and test drive the new user interface. Please contact Tony Bell at tony.bell@ametek.com if testing is required or you desire a time slot for accessing the online unit.

WORLD HEADQUARTERS
 255 North Union Street
 Rochester, NY 14605
 Toll Free: +1.800.950.6686
 Tel: +585.263.7700
 Fax: +585.454.7805

EUROPEAN HEADQUARTERS
 UK
 +44.770.280.9377
power.sales@ametek.com

ASIA PACIFIC HEADQUARTERS
 Singapore
 +65.6484.2388
sales@ametekasia.com

AMETEK INSTRUMENTS INDIA PVT. LTD.
 Bengaluru
 +91.80.6782.3252
power.sales@ametek.com

WEBSITE
www.ametekpower.com
EMAIL
pi.marketing@ametek.com



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