



Powering utility applications with  
Open Standards  
Including IP and 802.15.4/Zigbee



## WebGate® BPL – DS2 iRIS IP Interface Integrated with the Sensus™ iCON™ Residential Meter

WebGate

**BPL - DS2**



For utilities deploying DS2 compliant Broadband Over Powerline networks as part of Advanced Metering Infrastructure (AMI) projects, the WebGate BPL DS2 iRIS IP Interface is a 'Plug and Play' solution that provides an always-on, true two-way connection to the electric meter.

The WebGate BPL DS2 enables not only traditional electric metering applications, such as automated retrieval of kWh consumption, billing and interval data, and tamper detection, but also offers a wide range of options targeted at other utility applications. Remote service disconnect and reconnect, connectivity to water and gas meters by short-hop wireless solutions, and the ability to communicate to home-area-network (HAN) devices such as thermostats and load control are all supported by the WebGate BPL DS2 AMI solution

All functionality is seamlessly handled over the DS2 network by muNet's WebBot™ Central Control Web-based software. Billing data can be easily transferred to legacy systems.

## WebGate BPL – DS2 iRIS IP Interface

- Integrated under the glass of the Sensus iCON meter
- Acquires time stamped interval metering data
- Stores data in non-volatile memory
- Transfers data via TCP/IP (HTTP) and XML protocols over DS2 Networks
- Full two-way communication capability
- Instant on-demand reading capability
- Demand information
- Optional features (consult factory for additional details)
  - Records data from water and gas meters via wireless links
  - Controls a 200 Amp power disconnect switch (consult factory)
  - Collects voltage measurements
  - Enables demand-side management via ZigBee based Thermostat and relay control

## Metrology

### Family of Sensus iCON residential meters

- Accuracy exceeds ANSI C12.20 (Class 0.2)
- kWh energy measurement, net metering, voltage monitoring
- Inversion proof
- ANSI compliance in performance and design



## WebGate BPL – DS2 iRIS IP Interface

### WebGate iRIS IP Interface Specifications

Data Storage: > 24 hours * 15 minute reads	Web Interface: Standard Web queries; XML replies	
IP Addressing: Static, DHCP	Clock: Real-time, no backup, Time Server (SNTP,RFC868) Synchronized	
Encryption: AES 128-Bit (optional)	Operating Temperature: -40C / +85C	

### DS2

**Standards:** IEEE.802.3, IEEE 802.3u, 802.1 P, 802.1 Q  
**DataRate:** 10/100BaseT Fast Ethernet  
**LEDs:** Power  
 Powerline: Link, Activity  
 Ethernet: Link,  
**Frequency Band:** 2 MHz – 34 M  
**Transmit Power:** -58 dBm/Hz  
**EMI:** FCC Part 15 compliant

Additional Information about DS2 can be found at:  
<http://www.ds2.es>

### Optional Features and Companion Products\*

#### 200 Amp Disconnect Switch Control

- Current: 200A rating
- Relay type: Latching
- Options: Power reset button, LED

#### Voltage Sensor - Metrology Based

- Type: Recent, Maximum, Minimum, Average
- Range: 2S Meter: 192 -- 288 volts  
 12S Meter: 96 – 144 volts
- Accuracy: +/- 2%

#### Wireless Water and Gas Meter Link

- RF Option: Datamatic® FIREFLY®

#### muNet TotalAccess Load Management and In Home Customer Care Connections

Full range of features to engage utility customers and improve operational efficiencies

#### Thermostat

- Dimensions : 5.5" W x 3.75" H x 1.1" D
- Power: 24 VAC
- Programming: 5-1-1 programming  
 Heating and cooling

#### Customer Messaging

Use with 200 Amp Disconnect for "Pre-Pay" systems  
 Add to Thermostat for Curtailment notifications

#### Discrete Switches for In House Loads

- 240 VAC at 20 Amp Max In Conduit
- 120 VAC at 5 Amp Max Plug In

### Metrology Specifications

#### Power Requirements

- Voltage Rating: 2S 240V, 12S 120V
- Frequency: 60 Hz

#### Accuracy

- Exceeds Accuracy Class 0.2

#### Burden

- Power Supply < 0.8 watts/7.9VA @ 240VAC
- Voltage Circuit per phase: 0.03 watts @ 240VAC
- Current circuit per phase 0.1 milliohms Typical @ 25°C

#### LCD Display

- Six-digit liquid crystal display; Data digit height: 0.4
- Simulated mechanical disk emulation
- Power flow indicator
- kWh display with segment check option

#### Operating Environment

- Temperature: -40° to +85°C
- Humidity: 0% to 95% non-condensing
- Transient / Surge Suppression:  
 EN61000-4-4:1995 & EN61000-4-5:1995,  
 exceed voltage and current surge requirements  
 per Category 4

#### Complies with Industry Standards

- ANSI C12.1 – 2001, ANSI C12.10 – 1997,
- ANSI C37.90.1 – 1989
- FCC Part 15

#### Characteristic Data

- Starting Watts: 5
- Temperature Rise Specifications:  
 Meets ANSI C12.1 Section 4.7.2.9

#### Models

Service	Class	Form
3-wire	200, 320	2S
3-wire	200	12S

Call about other Forms

#### Tamper Detection Options

- If meter is reversed in socket, energy is added
- Tamper message can alternate with kWh reading

### Product Examples

#### WebGate – Meter



#### WebGate – Meter with 200 Amp Disconnect



#### Thermostat with Optional Messaging



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