FEATURES

- 120V 15A
- UL Certification
- ZigBee Pro
- 128 bit AES Security
- 20dBm RF Power
- Surge Protected
- 0C to 40C

DESCRIPTION

The IS-201 is a smart socket which meters plug load energy usage and provides device on/off capability. It works with other InteliSockets™ to form a secure wireless mesh network for control and reporting of data. Each network has an InteliGateway™ base station providing connectivity to the Ibis InteliNetwork™, a cloud-based data collection and analysis application. InteliSockets can be configured to operate on any of the 15 ZigBee channels. In addition, the hive (PANID) has over 4000 possible settings, preventing nearby systems from interfering with each other.

PERFORMANCE

Parameter	Symbol	Min	Typ	Max	Units
Input Voltage (RMS)	V_{IN}	108	120	132	V
Input Frequency			60		Hz
Output Current (RMS)	I_{OUT}			15	A
Output Power	P_{OUT}			1800	W
Power Consumption			1		W
Reporting Interval		1	15	255	s
Accuracy (Energy)				0.5	%
Accuracy (Voltage)				2	%
Accuracy (Interval)				1	ms
Resolution			1		W-s
RF Range			50		m
RF Transmit Power		0		20	dBm
Sockets per Network				120	
ZigBee Channels		11		25	
ZigBee Hive		0x3000		0x3FFF	
Size			4.1 x 2.2 x 1.7		inches

COMPLIANCE

Agency	File
UL916 – Energy Management Equipment	E470522
ZigBee Profile (Ibis Automation)	0x114B
FCC	2AECN200

ENVIRONMENTAL

Parameter	Symbol	Min	Typ	Max	Units
Operating Temperature	T_O	0	25	40	C
Storage Temperature	T_S	-40		100	C
Relative Humidity	RH	0		95	%

InteliSockets are for indoor use only.

PROTOCOL

InteliSockets use the Ibis custom ZigBee profile for commands, acknowledgements, and reporting of data. Refer to the V2 Protocol documentation for details.

DATA

InteliSockets report data typically every 15 seconds. Each report packet is comprised of socket type, ZigBee channel, ZigBee hive (PANID), interval (seconds), voltage (RMS), frequency (Hz), energy (watt-seconds), and power factor (fraction). From these data we can calculate instantaneous power (watts) and current (amps).

$$Power = \frac{Energy}{Interval}$$

$$Current = \frac{Power}{(Voltage) \cdot (Factor)}$$

The InteliGateway appends additional information (IP, timestamp, location, etc.) before uploading to the InteliNetwork. This allows any socket in the world to be located and addressed individually.

PUSHBUTTON

The small pushbutton on the side provides addition control features. First and foremost, it is a manual override for turning the outlet on and off (toggle). If pressed for at least two seconds, it causes a reboot of the socket. Finally, if the pushbutton is pressed while plugging in the socket, a factory reset is performed causing the socket to revert back to factory default settings. This is a useful feature for maintenance purposes.

LED

The LED on the front indicates the state of the socket. When red the outlet is off; green is outlet is on. If LED is blinking, the socket has not yet associated with a mesh network. During a reboot, the LED will flash yellow for a second.

FCC

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

To satisfy RF exposure requirements, this device and its antenna must operate with a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.