

## FEATURES

- 120V 15A
- UL Certification
- ZigBee Pro
- 17dBm RF Power
- Surge Protected
- RoHS Compliant



## DESCRIPTION

The IS-301 is a smart socket which meters plug load energy usage and provides device on/off capability. It works with other IntelliSockets™ to form a secure wireless mesh network for control and reporting of data. Each network is anchored by an IntelliGateway™ base station providing connectivity to the IntelliNetwork™, a cloud-based data collection and analysis application.

## PERFORMANCE

Parameter	Symbol	Min	Typ	Max	Units
Input Voltage (RMS)	V <sub>IN</sub>	108	120	132	V
Input Frequency			60		Hz
Output Current (RMS)	I <sub>OUT</sub>			15	A
Output Power	P <sub>OUT</sub>			1800	W
Power Consumption			1		W
Reporting Interval		1	15	255	s
Accuracy (Energy)				0.5	%
Accuracy (Voltage)				1	%
Accuracy (Interval)				1	ms
Resolution			1		W-s
RF Range			50		m
RF Transmit Power			17		dBm
Sockets per Network				120	
ZigBee Channels		11		26*	
ZigBee Hive		0x3000		0x3FFF	
Size		3.0 x 1.5 x 1.4			inches

\* Channel 26 limited to 3dBm

## COMPLIANCE

Agency	File
UL916 – Energy Management Equipment	
ZigBee Profile (Plover)	0x114B
FCC	

## ENVIRONMENTAL

Parameter	Symbol	Min	Typ	Max	Units
Operating Temperature	T <sub>O</sub>	0	25	40	C
Storage Temperature	T <sub>S</sub>	-40		100	C
Relative Humidity	RH	0		95	%

IntelliSockets are for indoor use only.

## PROTOCOL

IntelliSockets use Ibis' custom Plover profile for commands, acknowledgements, and reporting of data.

## DATA

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

## ***PUSHBUTTON***

The illuminated pushbutton provides additional control features. First and foremost, it is a manual override for turning the outlet on (green) and off (red). If pressed and held for at least three seconds it causes a reboot of the socket. If held in for ten seconds (two reboots) it reverts back into factory mode settings. This is a useful feature for maintenance purposes or when a socket gets moved from one location to another. A blinking backlight indicates the socket has not associated with a mesh network yet.

## ***FCC***

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.