REDZ
SMART COMMUNICATION

redz-sc.com hi@redz-sc.com

BSB Series Broadband Power Line (BPL) Switches

with 1, 4 or 7 × 10/100Base-T(x) Ports and BPL (Broadband Power Line) Link

Main Features

- Supports up to 7 × 10 / 100Base - T (X) ports + 1 × BPL link
- Options for wide range 3 phase AC Power Input 110V–240V/50-60Hz or 9-36V DC Power Input
- Options for Phase to Phase or Phase to Neutral connections on data input
- Supports Full / Half-Duplex, auto MDI / MDI-X on each port
- Wide operating temperature range from -40 to 85 °C
- Rugged Metal IP-40 housing design
- DIN-Rail mounting
- Supports up to 30Mbps PHY rate on BPL with Up to 10 hops and 1000 nodes
- Up to 432 sub-carriers from 2 to 28MHz analog bandwidth
- Rupport LDPC-C FEC with 128-bit AES core
- Plug and play with Master/Slave selection via switch

Technical Specifications

Technology

Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-T(X) IEEE 802.3x Flow Control
Mac Table	1K MAC address entry
Processing	Store-and-Forward
Memory	448K bits packet buffer memory
Auto Power Saving Mode	Automatically enters this mode if no cable link is established.

BPL (Broadband Powerline) Technology

PHY Data Rate	Up to 240 MHz
MAC Layer Protocol	CSMA/CA
Modulation Technology	OFDM-432
VLAN	IEEE802.1q / IEEE802.1p / IEEE802.3d

Interface & Indicators

Power indicator	Power LED
10 / 100 TX RJ45	Activity LEDs
LEDs	• BPL Activity • BPL Link • Master Indication **LED ON:** Master **LED OFF:** Slave
Master / Slave Switch for BPL	Selection for BPL whether to operate as Master or Slave

Power And Data Inputs

Power and Data Input Options	PN Model: Phase to neutral model (Standart Model). That version gets power from terminal pins 1 and 2 from phase and neutral. It can also transmit data from that pins 1 and 2 and other pins usage is optional (Ex: Master can be connected to all phases and slaves can be connected to relevant phases) PP Model: Phase to phase model. That version also gets power from terminal pins 1 and 2 from phase and neutral. Data transmission only done through terminal pins 3 and 4. AC Phase to phase connection can be done to data transmission pins for better performance. If phase to phase connection is not used then phase and neutral can still be connected for data transmission for terminal pins 3 and 4 for PP Model.
Power Input Range Options	Powering up device is only done over Terminal pins 1 and 2. AC Model: Device can be powered up with AC input, this option is available in both PN and PP models. It accepts, 110V–240V/50-60Hz. Power Input can also be used for data transmission. DC Model: Device can be powered up with 9-36V DC power. Data transmission only done through terminal pins 3 and 4. This model can be used if DC power source will be used in the field and only available with PP model.

Physical & Environmental Characteristics

Enclosure	Metal, IP 40
Dimensions	43 × 95 × 124 (w × d × h) mm
Weight	382 gr
Storage Temperature	– 65 to 150 °C
Operating Temperature	– 40 to 85 °C
Operating Humidity	5% to 95% Non-condensing

Ordering Information

BSB612 - PN - AC: Industrial Unmanaged Ethernet Switch, 1 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, 3 Phase AC Power Input, 110V–240V/50-60Hz, Phase to Neutral Connection on Data Terminals

BSB612 - PP - AC: Industrial Unmanaged Ethernet Switch, 1 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, AC Power Input 110V–240V/50-60Hz, Phase to Neutral and Phase to Phase Connection on Data Terminals

BSB612 - PP - DC: Industrial Unmanaged Ethernet Switch, 1 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, 9-36V DC Power Input, Phase to Neutral and Phase to Phase Connection on Data Terminals

BSB615 - PN - AC: Industrial Unmanaged Ethernet Switch, 4 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, 3 Phase AC Power Input, 110V–240V/50-60Hz, Phase to Neutral Connection on Data Terminals

BSB615 - PP - AC: Industrial Unmanaged Ethernet Switch, 4 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, AC Power Input 110V–240V/50-60Hz, Phase to Neutral and Phase to Phase Connection on Data Terminals

BSB615 - PP - DC: Industrial Unmanaged Ethernet Switch, 4 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, 9-36V DC Power Input, Phase to Neutral and Phase to Phase Connection on Data Terminals

BSB618 - PN - AC: Industrial Unmanaged Ethernet Switch, 7 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, 3 Phase AC Power Input, 110V–240V/50-60Hz, Phase to Neutral Connection on Data Terminals

BSB618 - PP - AC: Industrial Unmanaged Ethernet Switch, 7 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, AC Power Input 110V–240V/50-60Hz, Phase to Neutral and Phase to Phase Connection on Data Terminals

BSB618 - PP - DC: Industrial Unmanaged Ethernet Switch, 7 x 10/100 T(x) ETH ports + 1 x BPL (Broadband Power Line) Link, 9-36V DC Power Input, Phase to Neutral and Phase to Phase Connection on Data Terminals

Product Selection

Model	9 – 36V DC Power Input	110 V – 240 V / 50 – 60 Hz AC Power Input	Phase to Phase or Phase to Neutral Connection on Data Terminals	Phase to Neutral Connection on Data Terminals (Up to 3 Phases Connection)	7 × 10/100 T(x) ETH ports	4 × 10/100 T(x) ETH ports	1 × 10/100 T(x) ETH ports	BPL (Broadband Power Line) Link
BSB612 - PN - AC		●		●			●	●
BSB612 - PP - AC		●	●				●	●
BSB612 - PP - DC	●		●				●	●
BSB615 - PN - AC		●		●		●		●
BSB615 - PP - AC		●	●			●		●
BSB615 - PP - DC	●		●			●		●
BSB618 - PN - AC		●		●	●			●
BSB618 - PP - AC		●	●		●			●
BSB618 - PP - DC	●		●		●			●