VolleyBoast
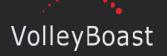
VoBo SL

LoRaWAN® Single Channel Endpoint

The VoBo SL™ is a cost-effective, autonomous bridge between a single wired transmitter and a LoRaWAN® network. The VoBo SL is battery powered with a lifetime of 3+ years. The VoBo SL is hazardous area certified (pending) and comes in 3 models to support different types of transmitters. With its small size, light weight, and internal antenna, the VoBo SL is easy to install and may be mounted either directly to the transmitter through a standard conduit fitting, affixed to flat surface, or pole mounted. The VoBo SL can be configured through serial connection or over the air with downlinks.

Model A - Single Analog Input
Supports single 4-20mA, 0-5Vdc, or 0-10Vdc
Input Type jumper configurable
Supplies 4 to 24Vdc to power transmitter

Model H - 4-20mA Input with HART®
Supports Wired HART® devices
Reads device and dynamic variables

Model M - Millivolt Level Input
Supports resistance bridge type sensors
Ratiometric measurements
Supplies 5 or 10Vdc to power transmitter

VoBoSync* Enabled
Time synchronized data collection
Optional feature available for all VoBo SL models

LoRa Alliance Member

Features

- Compact size
- Cost-effective
- 1 Analog Input
- Model H supports HART®
- Reports in engineering units
- Wake Up Input
- Battery Powered
- Data Logging
- Analytics Plug-In Capable
- LoRaWAN® Compliant
- Available with VoBoSync*
- Class 1, Division 2 (Pending)
- IP66 / NEMA 4X

*Patent Pending

Specifications

Input / Output

Analog Inputs	1 channel
Transmitter Wiring	2, 3, or 4 wire
Compatible Transmitters	
Model A	4-20mA, 0-5 and 0-10V
Model H	4-20mA, with HART®
Model M	mV resistance bridge
Input Impedance	
Model A and H, 4-20mA	250 ohm
Model A, 0-5V	50 Kohm
Model A, 0-10V	37.5 Kohm
Model M	TBD
Measurement Resolution	16 bit
Measurement Units	Engineering units or ADC counts
Measurement Numerical Format	FP32
Digital Interrupt (WKUP)	1 input
Configuration Port	RS-232

Radio

Protocol	LoRaWAN® 1.0.4
Antenna	Internal
Range	Up to 6 miles LOS
Frequency	ISM band, US 915 MHz
Data Encryption	AES 128
FCC/IC Conformance	FCC ID: AU792U13A16858 IC:125A-0055
Compatibility	Backward compatible with LoRaWAN® compliant devices

Power

Battery Size	LSH20 (D size)
Battery Type	Li-SOCl$_2$
Battery Access	User replaceable
Battery Voltage	3.6 V nominal
Battery Capacity	13.0 Ah nominal
Battery Life*	3+ years
Voltage Supply to Terminal	4 to 24 Vdc
Current Supply to Terminal	TBD
Sleep Current	TBD

*Battery life based on 30 min. cycle time @70 °F

Functionality

Data Logging	Sensor data, events, configuration changes
Data Logging Capacity	~5000 sensor payloads
Data Logging Access	Serial or downlink/uplink
Operation Modes	Online* / Offline**
Sample Cycle Time	1 to 2880 minutes***
Wakeup by External Magnet	Yes
Heartbeat Cycle	24 hours
Heartbeat Data	Battery voltage, signal strength, node status

*Transmits on LoRaWAN® plus local data logging

**Local data logging only

***On demand when digital interrupt (WKUP) is triggered

Physical

Enclosure Material	Polycarbonate
Enclosure Dimensions*	6.25" x 3.5" x 2.38"
Cord Grip Holes**	1 hole, 0.875" diameter
Cord Grip Capacity	0.095 to 0.29" diameter
Input Terminals	24 to 12 AWG
Weight	1.1 lbs
Cover Fasteners	Captive, 316 stainless

* Excluding cord grips

** Will accommodate a 1/2" conduit fitting

Environmental

Temperature	-40 to 80 °C
NRTL Listed	TBD
Certified Use	Class I, Division 2 (Pending) IP66 / NEMA 4X

Mounting

Direct Mount Spacing	5.75 x 3.0"
Optional Mounts*	Rubber mounting feet Pole mount

* Contact Volley Boast for available mounts

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