EXHIBIT 19A – USER'S MANUAL – HOST 1 – WASP2

See Attached
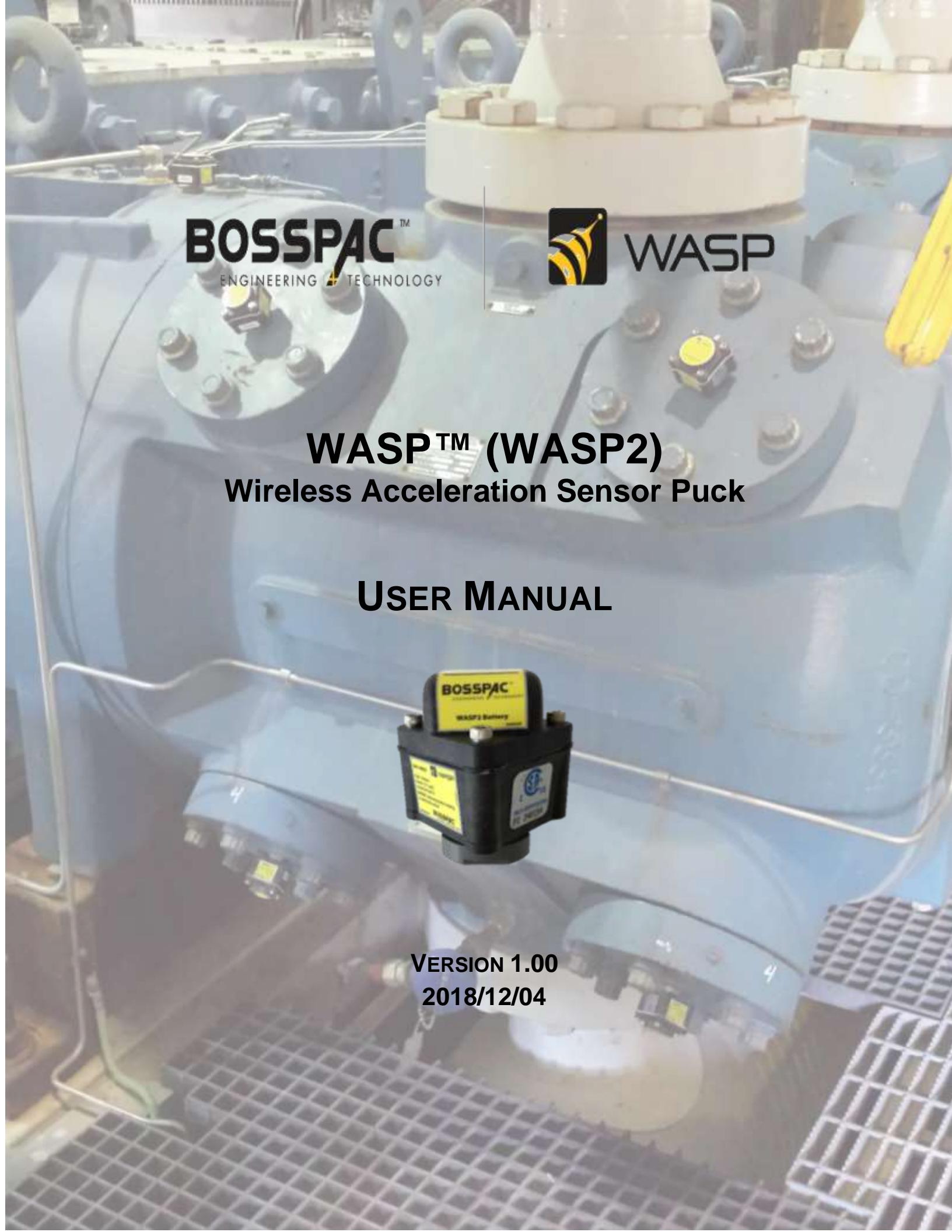
WASP™ (WASP2)
Wireless Acceleration Sensor Puck

USER MANUAL

VERSION 1.00
2018/12/04

WASP™ **is a registered trademark owned by**
BossPac Engineering & Technology

WASP™ **is a PATENT PENDING technology owned by**
BossPac Engineering & Technology

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WARNING

READ THIS MANUAL BEFORE OPERATING THIS DEVICE.

MISE EN GARDE

LISEZ LE MANUEL AVANT UTILISATER

WARNING

TO PREVENT EQUIPMENT FAILURE, AND/OR DAMAGE, AND/OR PERSONAL INJURY, REGULAR CALIBRATION AND INSPECTION OF THIS DEVICE IS REQUIRED.

MISE EN GARDE

POUR PRÈVENIR LE DOMMAGE À L'EQUIPMENT, ET/AU AUX PERSON, LA CÀLIBRATION ET L'INSPECTION REGULIER EST ŔEQUIS.

WARNING - EXPLOSION HAZARD

SUBSTITUTION OF COMPONENTS MAY IMPAIR
SUITABILITY FOR CLASS 1, DIVISION 2

AVERTISSEMENT – RISQUE D'EXPLOSION

LA SUBSTITUTION DECOMPOSANTS RENDRE CE MATÉRIEL
INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE 1,
DIVISION 2

WARNING - EXPLOSION HAZARD

DO NOT REMOVE BATTERIES UNLESS
AREA IS KNOWN TO BE NON-HAZARDOUS.

AVERTISSEMENT - RISQUE D'EXPLOSION

AFIN D'ÉVITER TOUT RISQUE D'EXPLOSION, S'ASSURER QUE
L'EMPLACEMENT EST DÉSIGNÉ NON DANGEREUX AVANT
CHANGER LA BATTERIE.

Table of Contents

1. Introduction

1.1. WASP2 Sensor Inroduction

This Operations Manual provides basic information on how to operate the
WASP™ Wireless Acceleration Sensor Puck (WASP2)

This manual covers the following topics:

- Installation of WASP™
- Assembling of WASP™
- Placement of WASP™
- Optional Thermal Calibration of WASP™
- Troubleshooting

2. Installation

2.1. Included In The Package

Each sensor puck is shipped complete with the WASP2 Vibration and Temperature Sensor Assembly, a WASP2 Battery Cap Assembly, a Gasket, and mounting screws to secure the top cap.

The BossPac WASP™ and WASP2 sensor pucks use an attached magnet base for mounting to equipment. Optional mounting methods are available, (stud mount, pipe clamp, epoxy).

2.2. Assembling Of Wireless Sensor Pucks

2.1.1 Battery Installation

Each sensor puck is shipped with a WASP2 Battery Cap Assembly containing a battery circuit board. The Battery Cap Assembly contains a non-removable long-lasting lithium battery.

WARNING – USE ONLY WITH REPLACEABLE BATTERY BOSSPAC EA00029X

WARNING – EXPLOSION HAZARD. DO NOT REMOVE BATTERIES UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.

AVERTISSEMENT – RISQUE D'EXPLOSION. AFIN D'ÉVITER TOUT RISQUÉ D'EXPLOSION, S'ASSURER QUE L'EMPLACEMENT EST DÉSIGNÉ NON DANGEREUX AVANT CHANGER LA BATTERIE.

To turn on and activate each sensor puck you must carefully attach the battery cap assembly to the sensor unit. Place gasket (see section 2.1.2) and plug the connector on the battery assembly into the corresponding socket on the sensor puck housing. Figure 1.

It is important the battery board is properly mated to the WASP™ Sensor connector. An incorrectly mated connection may result in intermittent/inconsistent power, or complete loss of power to the Sensor. A loose connection may also cause damage to the connector pins as well.

Once the connection is made the WASP™ device performs a power-on self test (POST). The sensor is now detectable by any BossPac NEST receiver within the working radius.

Figure 1: Install WASP™ Battery Board

2.1.2 Gasket and Cap Installation

Each sensor comes with a gasket. Place gasket onto battery cap or housing prior to connecting battery. The gasket is required to maintain an IP54 rating between the housing and the top cap battery assembly.

There is no specific orientation required for the top cap, however it is important the power connector wire maintains a reasonable bend radius and is not pinched during assembly. A simple ¼ turn of the cap may be all is needed to ensure the wire lays securely in the housing. The top cap is secured/retained by four 8-32 stainless steel screws.

WARNING – DO NOT REMOVE THE FOUR SCREWS ON THE BOTTOM OF THE DEVICE

2.1.3 WASP™ LED Error Indicator

Should the POST (Power On Self Test) fail, the device locks up and flashes the LED in a discernible pattern to help diagnose the source of the problem. See the section at the end of this manual on troubleshooting for details on the LED flash codes.

2.3. Placement Of The WASP™ Pucks

2.3.1 WASP™ Mounting

The sensor pucks can be attached securely to the desired equipment by the magnet base. Optional methods such as stud mount, clamp, or epoxy may be used. The supplied magnets have an effective operating range of -40°C to 185°C (-40°F to 365°F)

WARNING – THE RARE EARTH MAGNET BASE HAS IN EXCESS OF 50 LBS OF FORCE AND CAN CAUSE HARM IF CARE IS NOT TAKEN

2.3.2 WASP™ Sensor Placement

To ensure effective wireless transmission between sensor pucks and receiver it is recommended there is a direct line of sight between the units, (WASP to NEST).

2.3.3 Mounting Surface Preparation

It is recommended the surface be prepared for the installation of the WASP™ sensors.

- It is recommended the sensors are placed on a flat surface, (min. area of 1.50 diameter).
- Ensure the surface is clear of debris and excess paint.
- Check the magnetic base is screwed securely to the stud on the bottom of the WASP™.
- Check the top cap screws are tightened to a maximum of 15 ft. lb or 1.7 N m
- In less than ideal conditions a small amount of SILICON HEAT TRANSFER COMPOUND may be used to facilitate a more efficient heat transfer from the mounting surface into the sensor. It is necessary to only cover the "stud" part of the sensor. This requires only a small amount of compound, approximately ¼" diameter, (or 5 mm dia.), at the center of the magnet base.
- Carefully set the sensor in place. Avoid snapping with the magnet base as it can damage the magnet.

2.4. Optional Thermal Calibration Of WASP™s

To ensure the greatest accuracy of the monitored variables it is optional to do thermal calibration of each WASP™ unit. The process of thermal calibration is as follows:

- Ensure the machinery for which the WASP™ is to be attached is at operating temperature.
- Place the WASP™ units at their desired mounting points using thermal paste. Allow 15 minutes for the temperature to stabilize.
- Using a thermometer gun, record the temperature value on the valve cap at the mounting point of the WASP™ unit.
- At the receiver, adjust the display temperature to match the value of the thermometer gun using the temperature offset function. (See the section on temperature calibration in the "Setting Temperature Warning and Critical Alarm Thresholds" section of the WASP NEST User Manual).

3. Troubleshooting WASP LED Flash Codes

3.1. LED Flash Codes

An LED indicator (light) is mounted on the board located in the sensor housing. The following table contains a brief description of all flash codes reported by the device:

FLASH CODE	DESCRIPTION
1 Flash - Accelerometer Failure	Device cannot communicate with the accelerometer
2 Flashes - Battery Failure	Device battery is either too low or too high. Valid regions are 3.00 V to 4.00 V
3 Flashes - Temperature Sensor Failure	Temperature sensor readings are outside of the acceptable start-up temperature window, from -40 °C to +100 °C
4 Flashes - Radio Failure	Device cannot communicate with the onboard radio
5 Flashes - Regulator Failure	The regulated voltage is outside of the allowable window, yet the MCU is still able to operate. For safety and reliability, the device only accepts regulated voltages between 2.00 and 2.40 V.

3.2. What To Do When An Error Is Reported?

Accelerator Failure (1-Flash)

This is indicative of an electrical failure: either the accelerometer isn't receiving power or the device has lost electrical connectivity between the MCU and the accelerometer. In either event, the device is inoperative. Recommend replacing the WASP unit.

Battery Failure (2-Flash)

Recommend removing and reconnecting the battery as sometimes the power connectors do not mate evenly. If the problem persists, replace the battery board.

Temperature Sensor Failure (3-Flash)

If the device is not powering up in extreme temperatures, this may be indicative of an electrical fault with the RTD. Recommend replacing the WASP unit.

Radio Failure (4-Flash)

Much like an accelerometer failure, this is indicative of an electrical failure. The problem is much more severe in this instance as the device cannot communicate. Recommend replacing the WASP unit.

Regulator Failure (5-Flash)

This is indicative of an electrical failure. Replace the WASP unit.

4. Contact Info

BossPac engineers can be reached at:

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FCC & IC Statements

FCC Class B Part 15
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.

Changes or modifications not expressly approved by BossPac Engineering Technology Inc. may void the user's authority to operate the equipment.

ISED RSP-100 Statement
This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC/IC RF Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this equipment must be installed to provide a separation distance of at least 8 inches (20cm) from all persons.

Cet équipement est conforme à l'exposition aux radiations de FCC et d'Industrie Canada établies pour un environnement non contrôlé. L'antenne (s) utilisé pour cet équipement doit être installé pour fournir une distance d'au moins 20cm à partir de toutes les personnes.