

## Honeywell Analytics Asia Pacific Co., Ltd.

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Wireless Certification Agency and Relevant National Officer

c.c.

UL Verification Services Inc. (formerly UL CCS)

Certification Division

47173 Benicia Street

Fremont, CA 94538, USA

To whom it may concern:

Honeywell Analytics Asia Pacific Co., Ltd. is applying the wireless certificate of gas detector, whose product name is BW Ultra. In this letter, I would like to explain the EMC and Wireless test samples and the engineering rationale for the samples.

### Introduction to BW Ultra



BW Ultra is a portable multi-gas detector for use in hazardous location. Maximum 5 sensors are possible and O<sub>2</sub>, CO, H<sub>2</sub>S and LEL sensors are default while 5th sensor is various per customer's selection. BW Ultra is designed to operate with the lithium-ion battery pack and the specific charging adaptor is only available. BW Ultra is featured with Bluetooth Low Energy so that user can use a designated mobile application.

### Hardware Configuration of BW Ultra

BW Ultra consists of two PCBs – battery PCB and main PCB. These two PCBs are always identical to the all models of BW Ultra.

## Gas Sensor Description

BW Ultra can accommodate the maximum 5 sensors. Followings are description of 5 sensors:

- 1st – 4th sensors are fixed to O<sub>2</sub>, CO, H<sub>2</sub>S and flammable sensors
- 5th sensor is optional and various sensors are possible:
  - 1) Electrochemical sensor: toxic gas such as SO<sub>2</sub>, NH<sub>3</sub>, H<sub>2</sub>, Cl<sub>2</sub>, NO<sub>2</sub>, HCN, NO and etc.
  - 2) Photo ionization detector sensor: VOC (Volatile organic compound) gas
  - 3) Infrared sensor: CO<sub>2</sub> and flammable gas

## Rationale of EMC and Wireless Test Sample

Since the only difference that can impact on the validity of EMC and Wireless test is the optional 5<sup>th</sup> sensor, Honeywell picked up the 3 types of representative test samples as below:

1. 4 gas (O<sub>2</sub>, CO, H<sub>2</sub>S and flammable sensors) + 5<sup>th</sup> sensor (Electrochemical sensor: SO<sub>2</sub>)
2. 4 gas (O<sub>2</sub>, CO, H<sub>2</sub>S and flammable sensors) + 5<sup>th</sup> sensor (Photo ionization detector sensor: VOC)
3. 4 gas (O<sub>2</sub>, CO, H<sub>2</sub>S and flammable sensors) + 5<sup>th</sup> sensor (Infrared sensor: CO<sub>2</sub>)

Above 3 types of test samples can represent all possible configuration of BW Ultra in EMC and Wireless test.

Sincerely Yours,



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