

# bf1systems 1SYSTEM TPMS User Guide

## 1 Modifications

Date	Modifications	Author	Version	Modified Sheets	Approved		
					By	Date	Signed
05/02/2021	New Document	WL	1_00				

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### 3 System Contents

The TPMS system consists of four ECU's (with integrated Antenna), one of which is mounted in each wheel arch, the wheel sensors are mounted into the wheel. Wheel sensor data is communicated via the ECU over the vehicles' CAN bus.

A full vehicle system includes;

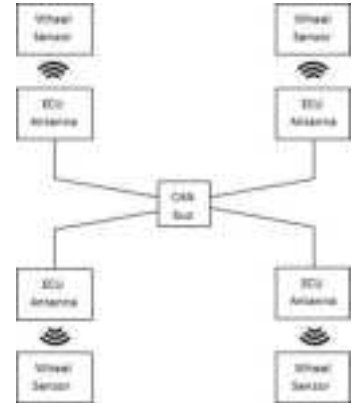
- 4x 1SYSTEM Wheel Sensors
- 4x 1SYSTEM ECU Antennas

Please note.

- Tyre valves are sold and available to purchase separately and are not included as part of the wheel sensor supplied.

Supporting documentation;

- CAN Protocol, Pinout and dbc file



### 4 Features and User Manual

The features and the content of the user manual may change, please contact bf1systems for the latest version.

### 5 Warranty

Please refer to the terms and conditions of sale.

### 6 Technical Specification\*

ECU:

Supply: 6.5 – 18 VDC (limited to Maximum 3A)

Transmission Power: 1mW

Frequency: 2.4GHz – 2.48GHz

Operating Temperature: 0°C to 105°C

Ingress Protection: IP6K7

Sensor:

Supply: Built-in battery 3V coin cell

Transmission Power: 1mW

Frequency: 2.4GHz – 2.48GHz

Operating Temperature: 15°C to 125°C

\*Please refer to the product datasheet for further details.

## 7 Installation

The system components should be securely fastened in place, see below;

### ECU:

Fastener: M6 Cap Head with plain washer

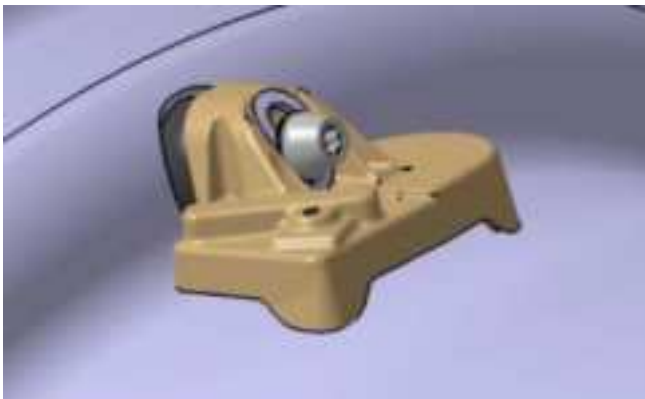
Torque: 5Nm Max



### Sensor\*:

Fastener: Valve kit

Torque: 4.5Nm Max



\*Please refer to the product installation guide for further details.

## 8 Regulatory Information

### Europe


- DECLARATION OF  CONFORMITY

The 1SYSTEM TPMS complies with current European directives.

The declarations of conformity of the various parts of the kit can be found at the end of this document.

### USA

-  STATEMENT


The device complies with Part 15 of the  rules. Operation is subject to the following two conditions;

- (1) It must not cause interference and
- (2) The device must accept any radio-electric interference suffered, even if the interference is likely to compromise its use.

- CAUTIONS

Modifications not authorised by the manufacturer may void the user's authority to operate these devices.

- RF EXPOSURE STATEMENT

This equipment complies with the  RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

### Australia

- DECLARATION OF  CONFORMITY

## Europe



## EU Declaration of Conformity

In Accordance with Directive 2014/53/EU (RED)

We, **bf1systems Ltd,**  
Technical Centre, Owen Road, Diss, Norfolk, IP22 4ER, United Kingdom,

declare under our sole liability, that the following product,

Model Type ref	Description	Part Number
TP24G1WE	1SYSTEM TPMS Wheel Sensor	F1-XXX-1800-XXX Series

is in conformity with the essential requirements of Article 3 of the RED (2014/53/EU), if used for its intended purpose.

The product described above has been tested and found to be in conformity with the standards and normative documents:

- Health and Safety requirements contained in Article 3.1a
  - EN 62479:2010
  - IEC 62368-1:2014 (Second Edition)
- Protection requirements with respect to electromagnetic compatibility Article 3.1b
  - ETSI EN 301 489-17 V3.2.2 (2019-12) (Draft)
  - EN 61326-1:2013
- Means of the efficient use of the radio frequency spectrum Article 3.2
  - ETSI EN 300 328 V2.3.2 (2019-07)

Signed for and on behalf of bf1systems Ltd,

Place of issue: Diss, UK  
Date of issue: 2020-12-18

Name:	Matt Norton	Signature: 
Position:	Operations Director	
Name:	Martyn Bensley	Signature: 
Position:	Technical Product Manager	

This declaration will no longer be valid if any unauthorized modifications are made to the product including the alteration in any form to the software with the prior written approval of bf1systems Ltd.

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## Europe



## EU Declaration of Conformity

In Accordance with Directive 2014/53/EU (RED)

We, **bf1systems Ltd,**  
**Technical Centre, Owen Road, Diss, Norfolk, IP22 4ER, United Kingdom.**

declare under our sole liability, that the following product,

Model Type ref	Description	Part Number
BF24G1EC	1SYSTEM ECU Lite (Type G1)	F1-XXX-1799-XXX Series

is in conformity with the essential requirements of Article 3 of the RED (2014/53/EU), if used for its intended purpose.

The product described above has been tested and found to be in conformity with the standards and normative documents:

1. Health and Safety requirements contained in Article 3.1a
  - EN 62479:2010
  - IEC 62368-1:2014 (Second Edition)
2. Protection requirements with respect to electromagnetic compatibility Article 3.1b
  - ETSI EN 301 489-17 V3.2.2 (2019-12) (Draft)
  - EN 61326-1:2013
3. Means of the efficient use of the radio frequency spectrum Article 3.2
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Registered in England No. 1402236 · VAT Registration No. GB 751 284032

[www.bf1systems.com](http://www.bf1systems.com)



## Australia

BCPL 80x0\_2020-01

## Supplier's declaration of conformity



As required by the following Notices:

- Radiocommunications (Compliance Labelling - Devices) Notice 2014 made under section 182 of the Radiocommunications Act 1992;
- Radiocommunications Labelling (Electromagnetic Compatibility) Notice 2017 made under section 182 of the Radiocommunications Act 1992;
- Radiocommunications (Compliance Labelling - Electromagnetic Radiation) Notice 2014 made under section 182 of the Radiocommunications Act 1992; and
- Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2015 made under section 407 of the Telecommunications Act 1997.

**Instructions for completion**

Do not return this form to the ACMA. The completed form must be retained by the supplier as part of the documentation required for the compliance records and must be made available for inspection by the ACMA when requested.

**Supplier's details**

Company Name (or acronym):

Braco Compliance Pty Ltd

RCM Responsible Supplier number:

E304

Street Address (Australia):

Unit 308, 469-481 High St

Northcote, VIC 3070

OR

ACMA RSN

84156023504

**Product details**

Product description – brand name, type, current model, lot, batch or serial number (if available), software/firmware version (if applicable)



1SYSTEM Tyre Pressure Monitoring System (TPMS), comprising  
Model 1SYSTEM ECU Lite and Model 1SYSTEM TPMS Wheel Sensor.

**Compliance – applicable standards and other supporting documents**

Evidence of compliance with applicable standards may be demonstrated by test reports, endorsed/credited test reports, certification/competent body statements. Having had regard to these documents, I am satisfied the above mentioned product complies with the requirements of the relevant ACMA Standards made under the Radiocommunications Act 1992 and the Telecommunications Act 1997.

List the details of the documents the above statement was made, including the standard title, number and, if applicable, number of the test report/endorsed test report or certification/competent body statement.

Radiocommunications (Electromagnetic Compatibility) Standard 2017, refer Element Materials Technology Warwick Ltd. EN 61326-1:2013 test report No. TRA-049589-35-00C dated 3 October 2020.

Radiocommunications (Short Range Devices) Standard 2014, refer Element Materials Technology Warwick Ltd. ETSI EN 300 328 v2.2.2 test report Nos. TRA-049589-47-00C dated 5 October 2020 and TRA-049589-47-01B dated 30 September 2020.

Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2014, refer Element Materials Technology Warwick Ltd. EN 62479:2010 certificate No. TRA-049589-47-02B dated 30 September 2020.

**Declaration**

I hereby declare that:

1. I am authorised to make this declaration on behalf of the Company mentioned above,
2. the contents of this form are true and correct, and
3. the product mentioned above complies with the applicable above mentioned standards and all products supplied under this declaration will be identical to the product identified above.

Note: Under section 137.1 of the Criminal Code Act 1995, it is an offence to knowingly provide false or misleading information to a Commonwealth entity.

Penalty: 12 months imprisonment

Bruce Maile

Director

18 December 2020

The Privacy Act 1988 (the Privacy Act) imposes obligations on the ACMA in relation to the collection, security, quality, access, use and disclosure of personal information. These obligations are included in the Australian Privacy Principles.

The ACMA may only collect personal information if it is reasonably necessary for, or directly related to, one or more of the ACMA's functions or activities.

The purpose of collecting the personal information in this form is to ensure the supplier is identified in the 'Declaration of Conformity'. If the Declaration of Conformity is not completed and the requested information is not provided, a compliance label cannot be applied.

Further information on the Privacy Act and the ACMA's Privacy Policy is available at [www.acma.gov.au/privacy-policy](http://www.acma.gov.au/privacy-policy). The Privacy Policy contains details about how you may access personal information about you that is held by the ACMA, and seek the correction of such information. It also explains how you may request about a breach of the Privacy Act and how we will deal with such a complaint.

If you have any questions in this regard, please contact the ACMA's privacy contact officer on telephone or 1300 258 887 or by email at [privacy@acma.gov.au](mailto:privacy@acma.gov.au)

A2066 form – C02

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