

UK Type Examination Certificate CML 21UKEX1126X Issue 3

United Kingdom Conformity Assessment

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **Flow monitor, B3000X and TF3000X series models: B30X, B30Z, B30W, B30Y, TF30X, TF30Z, TF30W, TF30Y**
- 3 Manufacturer **Badger Meter Inc.,**
- 4 Address **8635 Washington Avenue, Racine,
Wisconsin 53406,
United State of America**

- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

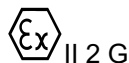
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018

EN 60079-1:2014

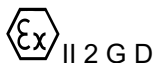
EN 60079-31:2014

- 10 The equipment shall be marked with the following:



Ex db IIC T4 Gb

Ta = -30°C to +70°C



Ex tb IIIC T135°C Db

Ta = -30°C to +70°C



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11 Description

The equipment is a digital signal processing flow monitor. It is housed inside a flameproof aluminium enclosure with a glass window. Cable entry is by means of conduit opening size 3/4" NPT.

Equipment is rated 30VDC, 25mA maximum.

Nomenclature

The equipment model number format is a30bc-dd with the following options:

- a = Product Brand (B=Blancett, TF = Tech Flow)
- b = Model
 - X = Base Explosion proof
 - Z = Advanced Explosion proof
 - W = Base/Loop Power only
 - Y = Advanced/Loop Power Only
- c = Mount
 - R = remote
- dd = units of measure
- CS = Customer Selectable
- Nn = other custom configuration parameters

Components covered by Ex Certificates issued to older editions of standards

Component	Certificate Numbers	Standards Applied	Differences Considered?
Enclosure	Sira 08ATEX1325U Iss 05	EN 60079-0:2012+A1:2013 EN 60079-1:2014 EN 60079-31:2014	Yes

Variation 1

This variation introduces the following modifications:

- i. Update of related ATEX reference

Variation 2

This variation introduces the following modifications:

- i. Introduction of a new electronic component onto the PCB.

Variation 3

This variation introduces the following modifications:

- i. Updated certification Drawing B300107.
- ii. To introduce and replace the current Ex 'd' enclosure type "HAWK 8100PD-07" with a new Ex-component enclosure type "HAWK EX500-AL-07-BL"



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12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	30 Jun 2021	R13839A/00	Issue of the prime certificate.
1	29 Mar 2022	R15071A/00	The introduction of variation 1.
2	23 Mar 2023	R16322A/00	The introduction of variation 2.
3	02 Oct 2023	R16703A/00	The introduction of variation 3.

Note: Drawings that describe the equipment are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.
- ii. If the enclosure is epoxy-coated, then it may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure the equipment is not installed in a location where it may be subjected to external conditions which may cause a build-up of electrostatic charges. Additionally, cleaning of the equipment should be done only with a damp cloth.

14 Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. The equipment must be installed in accordance with EN 60079-14 and a suitable conduit seal be installed within 18 inches (458mm) of the enclosure.
- ii. If the enclosure is epoxy-coated, then it may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure the equipment is not installed in a location where it may be subjected to external conditions which may cause a build-up of electrostatic charges. Additionally, cleaning of the equipment should be done only with a damp cloth.
- iii. Flameproof joints are not intended to be repaired. Contact the Ex-component manufacturer for any repair or replacement.
- iv. All entry closure devices shall be suitably certified as "Ex d", "Ex t" and "IP66/68" as applicable. Suitable thread sealing compound (non-setting, non-insulating, non-corrosive, not solvent based, suitable for the ambient rating) must be used at the NPT conduit entries to achieve the IPx8 rating while maintaining the Ex protection concept.
- v. All entry closure devices must be suitably certified as "Ex d", "Ex t" and "IP66/68" as applicable.

Certificate Annex

Certificate Number CML 21UKEX1126X
Equipment Flow monitor, B3000X and TF3000X series models:
B30X, B30Z, B30W, B30Y, TF30X, TF30Z, TF30W, TF30Y
Manufacturer Badger Meter Inc.



The following documents describe the equipment defined in this certificate:

Issue 0

For drawings describing the equipment, refer to attached certificate TRAC 12ATEX0017X. In addition to the drawings listed on TRAC 12ATEX0017X, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
B300114	1 of 1	J	30 Jun 2021	DECAL, MODEL/SERIAL NO.; MODEL B3000 EXP. PROOF; ATEX

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
B300118	1 of 1	E2	29 Mar 2022	B3000; Explosion Proof; Basic, Remote Mount
B300119	1 of 1	E2	29 Mar 2022	B3000; Explosion Proof; Advanced, Remote Mount
B300119-VOL	1 of 1	A1	29 Mar 2022	B3000; Explosion Proof; Advanced, Remote Mount; VOLUME
B300107	1 of 1	C1	29 Mar 2022	Enclosure, Instrument; Explosion Proof B3000
B300013	1 of 1	E	29 Mar 2022	B3000 XP Monitor CPU Board
B300028	1 of 1	D3	29 Mar 2022	Battery, 3.6VDC D-Cell W/ Leads & Molex Connector
B300114	1 of 1	L 7	29 Mar 2022	Decal, Model/Serial No.; B3000 EXP. Proof
B300108	1 of 1	C 2	29 Mar 2022	Cover Plate; Explosion Proof B3000
B300109	1 of 1	B1	29 Mar 2022	Label, Terminals; B3000 Basic XP Monitor
B300110	1 of 1	B1	29 Mar 2022	Label, Terminals; B3000 Advanced XP Monitor
B300149	1 of 1	C2	29 Mar 2022	B3000; Explosion Proof; Basic; Loop Power, Remote Mount
B300150	1 of 1	C2	29 Mar 2022	B3000; Explosion Proof; Adv.; Loop Power, Remote Mount
B300155	1 of 1	1	29 Mar 2022	Overlay, B3000 Explosion proof TECH-FLO

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Issue 2

Drawing No	Sheets	Rev	Approved date	Title
B300013	1 to 3	1 issue A	23 Mar 2023	B3000 XP Monitor CPU Board

Issue 3

Drawing No	Sheets	Rev	Approved date	Title
B300107	1 of 1	D	02/10/2023	ENCLOSURE, INSTRUMENT; EXPLOSIONPROOF B3000
B300119-VOL	1 of 1	A	02/10/2023	B3000 Explosion Proof Remove Mount Volume