



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 12ATEX1357** Issue: **4**

4 Equipment: **Digital No Flow Timer (DNFT)**

5 Applicant: **Terra Metrics Inc, dba Whitlock Instruments**

6 Address: **1300 North Texas Avenue
Odessa, TX
US 79761**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012

EN 60079-1:2007

EN 60079-18:2009

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2G

Ex d mb IIC T5 Gb

Ta = -40°C to +55°C

Signed: M Halliwell

Title: Director of Operations



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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The DNFT (Digital No Flow Timer) is an electronic monitoring device used to monitor cycles within Progressive In-line Lubrication systems. It comprises an encapsulated PCB mounted within an aluminium (Type 6061) case which is either coated with epoxy paint or anodized.

The DNFT mounts directly to a divider valve and has a spring-loaded magnetic piston exposed to the flow of lubricant. At the peak of the lubrication cycle, the piston is forced back, against the spring, into the body of the unit. A reed switch mounted on a circuit board within the unit senses the proximity of the magnetic piston through the material of the unit's housing, and initiates a signal to a microprocessor. The microprocessor counts lubrication cycles and provides an LED and optional LCD display to the user. If the microprocessor does not detect a lubrication cycle within a pre-programmed time period, an output signal is generated by transistors located on the circuit board. The transistors are rated to provide an open or closed signal to an outside power source rated up to 240 V d.c. at 2.5 VA max. The reed switch is rated to provide an open or closed signal to an outside power source rated up to 200 V d.c. at 2.5 VA max.

The DNFT range comprises of the following models:

Model	Supply	LED	LCD	PCB	Dimensions
DNFT LED	3.6 V battery	Yes	No	Yes	102mm (L) x 51mm (W) x 32mm (D)
DNFT LED 24V	24 V d.c. external	Yes	No	Yes	102mm (L) x 51mm (W) x 32mm (D)
DNFT PRG	3.6 V battery	Yes	Yes	Yes	102mm (L) x 51mm (W) x 32mm (D)
DNFT PRG 24V	24 V d.c. external	Yes	Yes	Yes	102mm (L) x 51mm (W) x 32mm (D)
DNFT LCC	3.6 V battery	Yes	Yes	Yes	102mm (L) x 51mm (W) x 32mm (D)
DNFT LCC 24V	24 V d.c. external	Yes	Yes	Yes	102mm (L) x 51mm (W) x 32mm (D)
DNFT PRX	N/A	No	No	No	86mm (L) x 29mm (W) x 29mm (D)

Design options:

- Battery powered versions utilise a flameproof battery chamber. The battery may be replaced by the user. Only replacement batteries supplied by Terra Metrics, part number 000505 shall be fitted, in accordance with the user instructions.
- DNFT LCC has a fixed alarm time and the DNFT PRG has a programmable alarm time.
- An optional proximity switch PRX output.

Variation 1 - This variation introduced the following change:

- The introduction of a distributor, 'Ariel'; the corresponding, alternative model names are listed below:

Original name	Alternative name
DNFT LED	A-10753 (3 minute alarm); A-10772 (45 Second alarm)
DNFT LED 24V	A-20514
DNFT PRG	A-10754
DNFT PRG 24V	A-20513
DNFT PRX	A-18255

Variation 2 - This variation introduced the following change:

- Integrate updated label drawings with new Notified Body number.

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Variation 3 - This variation introduced the following change:

- i. Update the nameplate drawings to include a missing "b" in the ratings.
- ii. Addition of "Approved" signature/name in the revision history section of the drawings.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	24 January 2014	R29549A/00	The release of the prime certificate.
1	09 November 2015	R70029780A	The introduction of Variation 1.
2	15 October 2019	1500	This Issue covers the following changes: <ul style="list-style-type: none">• Transfer of certificate Sira 12ATEX1357 from Sira Certification Service to CSA Group Netherlands B.V..• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. (In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)
3	12 May 2020	R80041142A	The introduction of Variation 2.
4	20 June 2022	R80124700A	The introduction of Variation 3.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

None

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF MANUFACTURE

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

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- 17.3 The encapsulated parts of the apparatus shall be subjected to a visual inspection as described in EN 60079-18:2009 Clause 9.1. No damage of the compound shall be evident, such as cracks, exposure of the encapsulated parts, flaking, inadmissible shrinkage, discoloration, swelling, decomposition or softening.
- 17.4 The dielectric strength test according to EN 60079-18:2009 Clause 8.2.4 shall be applied for at least 1 second, the test voltage shall be 2100 Vdc. Alternatively, 1.2x test voltage may be applied and maintained for at least 100ms.

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Certificate Annexe



Certificate Number: Sira 12ATEX1357
 Equipment: Digital No Flow Timer (DNFT)
 Applicant: Terra Metrics Inc, dba Whitlock Instruments

Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
LBL_506/507	1 of 1	1.6	17 Jan 14	DNFT LED Label Universal 506/507
LBL_PRG_518/519	1 of 1	1.6	17 Jan 14	DNFT PRG Label Universal 518/519
LBL_524/525	1 of 1	1.7	17 Jan 14	DNFT LED Label_24V Universal 524/525
LBL_526/527	1 of 1	1.7	17 Jan 14	DNFT PRG 24V Label Universal 526/527
LBL_209	1 of 1	1.6	17 Jan 14	DNFT PRX LABEL
000072	1 of 1	1.1	17 Jan 14	072-M DNFT CASE 506/507/518/519
000072_24V	1 of 1	1.1	17 Jan 14	072-M 24V DNFT CASE 524/525/526/527
000071	1 of 1	1.1	17 Jan 14	071-M DNFT PRX CASE 169/170/171/172
60079-18_DNFT	1 of 1	1.0	17 Jan 14	Figure 1 Dimensions 60079-18 DNFT
60079-18_DNFT_24V	1 of 1	1.0	17 Jan 14	Figure 1 Dimensions 60079-18 DNFT_24V
SCH_506/507	1 of 1	1.1	17 Jan 14	DNFT LED Schematic_CAD
SCH_524/525	1 of 1	1.2	17 Jan 14	DNFT LED_24V Schematic_CAD
SCH_518/519	1 of 1	1.1	17 Jan 14	DNFT PRG Schematic_CAD
SCH_526/527	1 of 1	1.2	17 Jan 14	DNFT PRG_24V Schematic_CAD
FP_071_PRX	1 of 1	1.1	17 Jan 14	Flamepath DWG PRX
FP_072_24V_DNFT	1 of 1	1.1	17 Jan 14	Flamepath DWG 24V_DNFT
FP_072_DNFT	1 of 1	1.1	17 Jan 14	Flamepath DWG DNFT
ES_DWG	1 of 1	1.1	17 Jan 14	Encapsulation Schematic
ES_TV_DWG	1 of 1	1.0	17 Jan 14	Encapsulation Schematic Top View
DNFT_SV_DWG	1 of 1	1.1	17 Jan 14	LED/LCD Side View DWG
GAD-DNFT-LED	1 to 4	1.0	17 Jan 14	General Assembly Drawing - LED
GAD-DNFT-LED 24V	1 to 4	1.0	17 Jan 14	General Assembly Drawing – LED 24V
GAD-DNFT-PRG	1 to 4	1.0	17 Jan 14	General Assembly Drawing - PRG
GAD-DNFT-PRG 24V	1 to 4	1.0	17 Jan 14	General Assembly Drawing – PRG 24V
GAD-DNFT-PRX	1 to 4	1.0	17 Jan 14	General Assembly Drawing – PRX
LBL_BATT_505	1 of 1	1.0	17 Jan 14	DNFT Battery Label IEC 60079-0 ED.6

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
LBL_A-10754	1 of 1	1.1	31 Oct 15	Private Label – Ariel Corp A-10754
LBL_A-10753	1 of 1	1.1	31 Oct 15	Private Label – Ariel Corp A-10753
LBL_A-20513	1 of 1	1.1	31 Oct 15	Private Label – Ariel Corp A-20513
LBL_A-20154	1 of 1	1.1	31 Oct 15	Private Label – Ariel Corp A-20514
LBL_A-10772	1 of 1	1.1	31 Oct 15	Private Label – Ariel Corp A-10772
LBL_A-18255	1 of 1	1.1	31 Oct 15	Private Label – Ariel Corp A-18255

Issue 2 - No new drawings were introduced.

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
LBL_506/507	1 of 1	1.7	30 Apr 20	DNFT LED Label Universal 506/507
LBL_524/525	1 of 1	1.8	30 Apr 20	DNFT LED Label_24V Universal 524/525
LBL_PRG_518/519	1 of 1	1.7	30 Apr 20	DNFT PRG Label Universal 518/519
LBL_526/527	1 of 1	1.8	30 Apr 20	DNFT PRG Label_24V Universal 526/527
LBL_209	1 of 1	1.7	30 Apr 20	DNFT PRX Label
LBL_A-10754	1 of 1	1.2	30 Apr 20	Private Label – Ariel Corp A-10754
LBL_A-10753	1 of 1	1.2	30 Apr 20	Private Label – Ariel Corp A-10753
LBL_A- 20513	1 of 1	1.2	30 Apr 20	Private Label – Ariel Corp A-20513

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Certificate Annexe



Certificate Number: Sira 12ATEX1357
Equipment: Digital No Flow Timer (DNFT)
Applicant: Terra Metrics Inc, dba Whitlock Instruments

Drawing	Sheets	Rev.	Date (Stamp)	Title
LBL_A-20514	1 of 1	1.2	30 Apr 20	Private Label – Ariel Corp A-20514
LBL_A-10772	1 of 1	1.2	30 Apr 20	Private Label – Ariel Corp A-10772
LBL_A-18255	1 of 1	1.2	30 Apr 20	Private Label – Ariel Corp A-18255

Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
LBL_506/507	1 of 1	1.8	04 May 22	DNFT Label Universal 506/507
LBL_524/525	1 of 1	1.9	04 May 22	DNFT LED Label_24V Universal 524/525
LBL_PRG_518/519	1 of 1	1.8	04 May 22	DNFT PRG Label Universal 518/519
LBL_526/527	1 of 1	1.9	04 May 22	DNFT PRG Label_24V Universal 526/527
LBL_209	1 of 1	1.8	04 May 22	DNFT PRX Label
LBL_A-10754	1 of 1	1.3	04 May 22	Private Label – Ariel Corp A-10754
LBL_A-10753	1 of 1	1.3	04 May 22	Private Label – Ariel Corp A-10753
LBL_A-20513	1 of 1	1.3	04 May 22	Private Label – Ariel Corp A-20513
LBL_A-20514	1 of 1	1.3	04 May 22	Private Label – Ariel Corp A-20514
LBL_A-10772	1 of 1	1.3	04 May 22	Private Label – Ariel Corp A-10772
LBL_A-18255	1 of 1	1.3	04 May 22	Private Label – Ariel Corp A-18255

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