

1 EU - Type Examination Certificate

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

3 Certificate Number: ExVeritas 22ATEX1454X Issue: 0

4 Equipment: Intrinsically Safe Flow Sensor DLS-00X

5 Manufacturer: Hohner Automation Ltd.

6 Address: Units 14-16, Whitegate Industrial Estate, Wrexham LL13 8UG, UK

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

8 ExVeritas, Notified Body number 2804 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:

EN ISO 80079-36: 2016

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment shall include the following:

 II 1 G Ex h IIC T4 Ga

T_a = -20°C to +60°C

On behalf of ExVeritas



Peter Lauritzen
Managing Director

This certificate may only be reproduced in its entirety and without any change, schedule included.

The status of this certificate can be verified at www.exveritas.com
For help or assistance relating to this certificate, contact info@exveritas.com.
ExVeritas ApS, Severinsmindevej 6, 4420 Regstrup, Denmark.
ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.

Schedule

13 Description of Equipment or Protective System

The DLS-00X has two different mechanical build options (Build A and B). Both builds are fitted with any suitably certified intrinsically safe encoder (Ex ia IIC T4 Ga -20C to +60C).

DLS-00x is a sensing device comprised of an intrinsically safe encoder fitted to a rotating shaft that has an arm attached, which is kept under tension via a spring contained in a round spring housing fitted on the opposite side of the main block. The shaft and spring housing are stainless steel. This rotating assembly is fitted onto a main block, which is cast or machined from solid stainless steel and rotates via bushings. The entire assembly is bolted to a base plate made of stainless steel. This base plate has various mounting holes for fastening to a closed pipe return line or an open trough return line. A paddle is attached to the arm in order to allow it to move with the drilling fluids, thus rotating the encoder shaft.

The device produces an electrical signal directly proportional to the height of a liquid (usually drilling fluid or mud) flowing through a closed or open trough pipe or conduit. As the mud level increases beyond the lowest point of the paddle plate component of the flow line sensor, the entire arm (wherein the plate is connected) is deflected upwards. As the arm is pivoted on a main shaft, the deflection causes an angular movement of the shaft. Finally, with the encoder mounted on this shaft, this angular displacement (or partial rotation) is translated into an electronic signal. The arm and shaft has a maximum angular displacement of 90 degrees and thus the encoder is specified to have its full span (20 mA) equivalent to a full 90 degree turn.

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R4248/A/1	14 th Dec 2022	0	Initial issue of the Prime Certificate

14.2 Compliance Drawings:

Title:	Drawing No:	Rev. Level:	Date:
Assembly for DLS Flow Sensor – Build A	EX-AS-DLS-001-03	3.0	21 st October 2022
Assembly for DLS Flow Sensor – Build B	EX-AS-DLS-002-01	1.0	21 st September 2022
Flow Sensor DLS-00X Markings	EX-LB-DLS-001-01	1	14 th November 2022
DLS-00X Bill of Material - Build A	EX-BOM-DLS-001-02	2.0	14 th November 2022
DLS-00X Bill of Material – Build B	EX-BOM-DLS-002-01	1.0	14 th November 2022
Dragon Flowline Sensor Control Drawing	EX-CON-DLS-02	1.2	21 st Nov 2022

15 Conditions of Certification

15.1 Special Conditions for Safe Use

- It is the user's responsibility to ensure that the equipment is connected to earth appropriately.
- It is the responsibility of the user to ensure that any encoder certification special conditions are complied with.
- It is the responsibility of the user to maintain the integrity and effectiveness of the bushing for this equipment; refer to maintenance instructions in the User's Manual.
- At regular intervals and as specified by the manufacturer, appropriate maintenance / cleaning cycles shall be carried out to ensure dust/debris deposits do not accumulate between moving parts of the equipment.
- User repair – only Hohner supplied parts are to be used, contact manufacturer for spares.

15.2 Conditions for Use (Routine tests)

None

16 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.

Certificate: ExVeritas 22ATEX1454X

Issue 0

This certificate may only be reproduced in its entirety and without any change, schedule included.

For help or assistance relating to this certificate, contact info@exveritas.com.

ExVeritas ApS, Severinsmindevej 6, 4420 Regstrup, Denmark.

ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.