IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx ETL 21.0054X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2023-08-14

Applicant: **Compressor Products International**
4410 Greenbriar Drive
Stafford
Texas
77477
United States of America

Equipment: **Proflo PF2 lubricant flow monitor**

Optional accessory:

Type of Protection: **Intrinsic Safety 'ia'**

Marking: Ex ia [ia] IIC T4 Ga

-40°C ≤ Ta ≤ +60°C

IECEx ETL 21.0054X

Approved for issue on behalf of the IECEx Certification Body: **Todd L. Relyea**

Position: **Certification Officer**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Intertek
3933 US Route 11 South
Cortland NY 13045-2995
United States of America

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Manufacturer: **Compressor Products International**
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Manufacturing locations: **Compressor Products International**
4410 Greenbriar Drive
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This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

US/ETL/ExTR21.0057/00

Quality Assessment Report:

US/ETL/QAR23.0008/00

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The product covered by this report is a Proflo PF2 lubricant flow monitor.

The Proflo PF2 is used in the oil and gas industry. It is located in the general area of gas compressors and monitors the flow of oil used to lubricate compressor components. A mechanical distribution system, known as a divider block or metering block, distributes the lubricant to the compressor. A magnet assembly installs into this divider block and an internal magnet articulates with the flow of oil. The Proflo PF2 mounts directly to this magnet assembly to track the magnet movement via an internal proximity sensor. The Proflo PF2 can also be mounted remotely, and a separate Reed Switch device (such as the CPI Proflo Captured Switch) can be used to provide an input signal for the movement of the magnet. The Proflo PF2 monitors and tracks the flow of lubricant and communicates the performance of the lubricant system to other equipment. A typical application would use the Alarm Output to shut down the compressor when the lubricant flow rate drops below the desired threshold.

An LCD panel and membrane with touch switches allow the user to configure the device and view data. A 12-pin connector and mating cable are used to connect the inputs and outputs to other equipment. The wired connection circuits are; Alarm Output, 24 VDC Input, Pulsed Input, Modbus, Pulsed Output, and a Ground wire. The device is also capable of Bluetooth communication for software uploads and data downloads.

The product is powered through a single battery cell and barriers. The battery cannot be replaced in Hazardous Location, but it can be replaced in Ordinary Location.

Battery Ratings: Nominal voltage: 3.6V; Peak voltage: 3.9V; Nominal capacity: 2.4Ah; Maximum continuous current: 100mA

External Power, communication, and I/O are provided to the I.S. apparatus through approved barriers from Unspecified apparatus. There are three kinds of I.S. barriers used in the system. The input parameters for the different barrier inputs are as follows:

9-24V input line uses an IS barrier. See entity parameters below:
Ui = 28V Ii = 100mA Pi = 750mW Ci = 0uF Li = 18uH

Alarm Output and Pulsed Output use the same I.S. barrier. See entity parameters below:
Ui = 28V Ii = 50mA Pi = 320mW Ci = 0uF Li = 47.93mH

Modbus uses a different I.S. barrier. See entity parameters below:
Ui = 5.88V Ii = 277mA Pi = 408mW Ci = 0uF Li = 0uH

The Pulsed Input connects to a simple apparatus reed switch. See entity parameters below:
Uo = 5.88V Io = 120uA Po = 175uW Co = 43uF Lo = 1mH

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Do not open the equipment when an explosive atmosphere is present. The battery is not replaceable in a Hazardous Location.
- Only use CPI battery assembly Part No. 650140000095964, which incorporates the Tadiran TL-5903 battery .
- Electrostatic hazard warning. Follow the procedures of the installation site including any procedures or codes applicable to operating equipment in Hazardous Locations. The Proflo PF2 should be earth grounded using the housing grounding connection. The device should also be wiped with a damp cloth prior to contact to eliminate the occurrence of static electricity and potential static induced electrical arcs.
- The aluminum enclosure may produce incendiary sparks if subjected to impact or friction. When installed into an EPL Ga environment the end user shall carry out a risk assessment and shall only install the equipment if the risk of these hazards occurring is negligible
- The Proflo PF2 has three installation options which are all considered fixed installations.

Annex:

104173915DAL-002-Annex for IECEx ETL 21.0054X_1.pdf

Annex to IECEx Certificate of Conformity

Certificate No:	IECEx ETL 21.0054X	Issue No. 00
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
PROFLO PF2, WITHOUT MAGNET OR CABLE	650040000000PF2-ASD	A	07/14/2023
Instruction Manual proflo® PF2	650150000095788-ASD	A	July 2023
BATTERY ASSEMBLY, 3.6V LITHIUM, WITH CONNECTOR	650140000095964-ASD	A	07/14/2023
MAGNET ASSEMBLY	650040000095775X-ASD	A	07/14/2023
PROFLO PF2 CONNECTOR CABLE	6500400PF2CCXXM-ASD	A	07/14/2023
Assy Dwg BOT, PCB, CPI Proflo 2	PCB020-RA-ASSY-BOT	A	03/21/2023
Assy Dwg TOP, PCB, CPI Proflo 2	PCB020-RA-ASSY-TOP	A	03/21/2023
PCB020-SCH-RA	PCB020-SCH-RA	A	03/21/2023
Bill of Materials: 15-1464, Rev A - Assembly PCB, CPI Proflo 2 Main PCB, CPI PN: PCB020	PCB020-RA-BOM	A	03/21/2023
CPI Proflo 2	PCB020-RA-FAB	A	03/21/2023

Note: An * is included before the title of documents that are new or revised.