1 UNITED KINGDOM CONFORMITY ASSESSMENT

UK TYPE EXAMINATION CERTIFICATE

2 **Product Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

3 Type Examination Certificate Number: **ExVeritas 22UKEX1490X** Issue: **0**

4 Product: Angle Sensor type OPF

5 Manufacturer: Tempress A/S

6 Address: Soenderskovvej 10
8362 Hoerning
Denmark

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

8 ExVeritas Limited Approved Body number 2585, 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 by UKSI 2019:696), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 **EN 60079-11: 2012**

Except in respect of those requirements listed at section 16 of the schedule to this certificate.

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 TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the equipment shall include the following:

Ex II 1 G Ex ia IIC T6 Ga T_{amb} -20°C to +40°C

UKAS PRODUCT CERTIFICATION
No. 8613

On behalf of ExVeritas

S Clarke CEng MSc FIET
Managing Director

Schedule

13 Description of Product

The Tempress OPF (Opticher Potentiometricher Ferngeber) is an angle sensor designed as a feedback potentiometer in servo systems.

The OPF consist of 2 printed circuit boards and light-head unit comprising rotating transformer and LED assembly and photosensitive resistance track.

Type designations:

OPF/EX4-2 R/L AP

OPF/EX4-2 R/L B P

OPF/EX4-2 R or LAF (X = Angle Value)

OPF/EX4-2 R/L_P

OPF/EX4-2 R or LAF (X = Angle Value)

Only physical difference between types is the mechanical design of the axle.

Intrinsic Safety Parameters:

Ui = 28 V, Ii = 100 mA, Pi = 0,66 W, Ci = 38 nF, Li = 840 uH

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
4133/A/1	15-02-2023	0	Initial issue of the Prime Certificate

14.2 Compliance Drawings:

Title:	Drawing No.:	Rev. Level:	Date:
2-leder SMD OPF-ny var.	30.1.161	C	2013-09-06
Stykliste 2-leder elektronikdel, ny var. Rest	30.2.261	C	2013-07-04
Print m- komp. OPF-SMD Atex	30.2.263	D	2013-07-04
EMC print for OPF	30.1.262	C	2013-09-13
EMC-print stykliste	30.2.262	E	2013-09-16
Lyshoved	30.1.143	B	2013-07-04
Stykliste Lyshoved	30.2.143	C	2013-07-04
Samlingstegning isometrisk OPF med snit og angivelse af opstøbning	001320-B	B	2013-07-03
OPFEX ATEX, Brugsanvisning, Installation Guide	13.1.140	I	01-12-22
Etikette OPFEX4-2-P	40.1.141	F	29-01-14

Schedule

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

- The OPF shall be installed so that ingress protection IP 20 (or greater) is maintained at the connection terminals.
- The sensor shall not be used where the axle is rotated continuously.
- The sensor shall be powered by a certified Intrinsically Safe interface located outside the hazardous area or protected by an appropriate hazardous area protection.
- The sensor does not meet the 500 Volt insulation requirement of EN 60079-11 and shall therefore be powered by an interface providing Galvanic Isolation or, where a Zener Barrier is used, appropriate precautions shall be taken.

15.2 Routine tests

- None

16 Essential Health and Safety Requirements (Regulations Schedule 1)

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 ExVeritas of any modifications to the design of the product described by this schedule.