1 EU - Type Examination Certificate

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

3 Certificate Number: ExVeritas 22 ATEX 1489 X Issue: 0

4 Equipment: Angle Sensor type OPF

5 Manufacturer: Tempress A/S

6 Address: Soenderskovvej 10
8362 Hoerning
Denmark

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

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:

Ex II 1 G Ex ia IIC T6 Ga

DANAK
PROD Reg.No. 7044
Member of EA MLA

On behalf of ExVeritas

ExVeritas OFFICIAL SIGNATORY

Peter Lauritzen
Managing Director

Schedule

13 Description of Equipment or Protective System

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:

Issue 0

Number	Date	Issue	Description
30.1.161	2013-09-06	C	2-leder SMD OPF-ny var.
30.2.261	2013-07-04	C	Stykliste 2-leder elektronikdel, ny var. Rest
30.2.263	2013-07-04	D	Print m- komp. OPF-SMD Atex
30.1.262	2013-09-13	C	EMC print for OPF
30.2.262	2013-09-16	E	EMC-print stykliste
30.1.143	2013-07-04	B	Lyshoved
30.2.143	2013-07-04	C	Stykliste Lyshoved
001320-B	2013-07-03	B	Samlingstegning isometrisk OPF med snit og angivelse af opstøbning
13.1.140	01-12-22	I	OPFEX ATEX, Brugsanvisning, Installation Guide
40.1.141	29-01-14	F	Etikette OPFEX4-2-P

15 Conditions of Certification

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.

Schedule

15.2 Conditions for Use
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.