1 **TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **CSANe 20ATEX3137X** Issue: **0**

4 Equipment: **Interface Unit Faa-bccdefghijklmnopqrsssss**

5 Applicant: **SICK Engineering GmbH**

6 Address: Bergener Ring 27
01458 Ottendorf-Okrilla
Germany

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., certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 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 IEC 60079-0:2018 EN 60079-7:2015 EN 60079-11:2012

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 Type Examination Certificate relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured. 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:

Ex II 3G
Ex ec ia IIC T4 Gc
Ta: -40°C to *°C
*See condition of manufacturer for maximum ambient temperature range.

Project Number 80046405

Signed: J A May

Title: Director of Operations

CSA Group Netherlands B.V.
Utrechtseweg 310, Building B42,
6812AR, Netherlands

13 **DESCRIPTION OF EQUIPMENT**

The Interface Unit is a device for recording, processing and transferring of measuring values. The Interface Unit is intended to use in classified hazardous areas with potential explosive atmospheres.

The Interface unit is a metallic enclosure with electronic circuits fitted within the enclosure. A keypad with LCD screen is accessible from external to the enclosure. The keypad is protected by a non-metallic cover. The enclosure has a provision of mechanical latch that can only be opened by a tool. The Interface unit comes in two different electrical input range (12-24VDC or 90-253VAC) and two different ambient range (-40°C to 60°C and -40°C to 65°C). The AC variant is identical to the DC variant, except additional AC/DC power supply that provides 24VDC output.

The equipment nomenclature is as below:

Faa-bccdefghijklmnopqrsssss

aa= Special using (Not-safety related)

b= Ex Approval
A - ATEX, IECEx
C- CSA (NEC/CEC)

cc= Ex classification
NC – ATEX/IECEx certification marking
CN – NEC/CEC certification marking

d = Enclosure material (S-Stainless steel, H-High grade stainless steel))
e = Housing Painting (Non-safety related)

f= Cable entries
A – 5*M20*1,5; 1*M25*1,5
B – 5*1/2" NPT; 1* 3/4" NPT
C – 8*M20*1,5; 1*M25*1,5
D – 8*1/2" NPT; 1* 3/4" NPT
* May be any other alphanumeric characters for lower number of cable entries.

g= Display (1-DOT Matrix Display)
h= Terminal block
S- Screw Clamp
F- Spring Clamp
i= Tropicalization (Non-safety related)
j= Ambient temperature range
S= -40C to 60C
E= -40C to 65C
X= Customized within the limits of S and E

k= Input power
1= 115-230VAC
2= 12-24VDC

l= Mainboard (Non-safety related)
m= Analog Module Type 1 (Numeric 1 to 3 describes number of modules and N= no modules)

n= Analog Module Type 2 (Numeric 1 to 3 describes number of modules and N= no modules)
o= Digital Module Type 1 (Numeric 1 to 3 describes number of modules and N= no modules)
p= Interface module (F= Foundation Filedbus and N=None)
q= Extension module 1 (N=None, reserved for future updates)
r= Extension module 2 (N=None, reserved for future updates)
sssss= Type key extention (Not-safety related - in maximum 5 alphanumeric characters or Blank)

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	05 October 2020	R80046405A	The release of the prime certificate.

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

15.1 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.

15.2 All cable entries shall be plugged by cable glands or plugs certified for minimum Ex ec IIC with ambient temperature range of -40°C to 65°C (or -40°C to 60°C for 60°C variant).

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 Certificates.

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

17.3 The ambient temperature range -40°C to 60°C or -40°C to 65°C. It depends on the various modules used in interface units and the manufacturer shall therefore assemble their products in accordance with the details below.

a. The modules must be inserted starting from the left or slot 1 and filling up accordingly to the right.
b. If a Foundation Fieldbus module is installed, it is plugged into the rightmost slot. The adjacent left slot of a Foundation Fieldbus module must be kept free.
c. According to the following ranking levels, different module types are installed together, therefore the modules with the highest-ranking level are inserted first and then according to the ranking level.

SCHEDULE

TYPE EXAMINATION CERTIFICATE **CSANe 20ATEX3137X**
Issue 0

Ranking Level	Module
1	Analog Module Type 1
2	Analog Module Type 2
3	Digital Module Type 1
4	Foundation Fieldbus

d. For 60°C variant: The sum of the plugged modules "Analog Type 1" plus "Analog Type 2" plus "Digital Type 1" must not exceed 4.
e. For 65°C variant: The devices variant with an ambient temperature range of up to 65°C are limited to a sum of 3 I/O-modules with only one Analog Type 1 or Analog Type 2 module at a time.

Module	Maximum number of modules allowed for temperature range -	
	-40°C to +60°C	-40°C to +65°C
Analog Module Type 1	3	1
Analog Module Type 2	2	1
Digital Module Type 1	3	1
Foundation Fieldbus	1	1

Certificate Annexe

Certificate Number: **CSANe 20ATEX3137X**

Equipment: **Interface Unit Faa-bccdefghijklmnopqrsssss**

Applicant: **SICK Engineering GmbH**

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
9288472	1 of 1	00	27 Jul 2020	Enclosure Zone 2/Div 2
9298377	1 of 1	00	27 Jul 2020	Electronic Cover
9305731	1 of 1	15I7	27 Jul 2020	Cover, Gasket
9305744	1 of 1	00	27 Jul 2020	Protect Cover
E215326	1 of 1	0.3	27 Jul 2020	Ex- Concept DC
E215327	1 of 1	0.1	27 Jul 2020	Overview-Interface unit
E215329	1 to 2	3	27 Jul 2020	Interface Unit Zone 2/ Div 2- Explanation Enclosure
E215336	1 to 29	14	13 Aug 2020	Interface Unit Zone 2/ Div 2- Technical Description
E224156	1 to 7	11	04 Aug 2020	BOM Critical Components FLIO
E227474	1 of 1	0.5	27 Jul 2020	Ex- Concept AC
E235738	1 of 1	00	27 Jul 2020	BOM of unpotted small components
9285494	1 of 1	00	27 Jul 2020	Cable, FL BUC/BUC, 0.340M
9298853	1 of 1	00	27 Jul 2020	Cable Harness 24V
9298845	1 of 1	00	27 Jul 2020	Cable Harness 230V CERT
9286321	1 to 2	00	27 Jul 2020	PCBA Analog 2AI 2AO 2HART CERT
9289202	1 to 4	00	27 Jul 2020	SCH- Analog 2AI 2AO 2HART CERT
9287177	1 to 2	00	27 Jul 2020	PCBA-Digital 2DO 4FO 2DI 1Encoder Cert
9287177	1 to 2	13F9	27 Jul 2020	PCBA-Digital 2DO 4FO 2DI 1Encoder Cert
9289201	1 of 1	00	27 Jul 2020	SCH-Digital 2DO 4FO 2DI 1Encoder Cert
9233371	1 of 1	A	27 Jul 2020	Display Keypad
9227572	1 of 1	1.2.0	27 Jul 2020	EK-Display (Schematics)
9179354	1 to 2	1.2.0	27 Jul 2020	EK-Display (PCBA)
9179354	1 to 3	1.2.0	27 Jul 2020	EK-Display (PCB Layout)
9286913	1 of 1	00	27 Jul 2020	PCBA-FF FBK-3 H1 CERT
9289200	1 of 1	00	27 Jul 2020	SCH-FF FBK-3 H1 CERT
9287225	1 of 1	00	27 Jul 2020	PCBA- Ex Barrier Display Cert
9287225	1 of 1	138P	27 Jul 2020	PCBA- Ex Barrier Display Cert
9287226	1 of 1	00	27 Jul 2020	SCH- Ex Barrier Display Cert
9294763	1 of 1	00	27 Jul 2020	PCBD- Ex Barrier Display Cert
9303148	1 of 1	00	27 Jul 2020	PCBD- Ex Barrier Display Cert
9288149	1 of 1	115E	27 Jul 2020	PCBA- Ex Main Board Cert
9288149	1 of 1	138P	27 Jul 2020	PCBA- Ex Main Board Cert
9289072	1 to 5	115E	27 Jul 2020	SCH- Main Board
9289072	1 to 5	138P	27 Jul 2020	SCH- Main Board
9286743	1 of 1	00	27 Jul 2020	PCBA-NETZTEIL Cert
9286743	1 of 1	138O	27 Jul 2020	PCBA-POWER SUPPLY CERT
9286744	1 of 1	15D5	27 Jul 2020	SCH-Power Supply Cert

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