

Certificate:80037012Master Contract:601366Project:80037012Date Issued:March 23, 2020Issued To:Balluff GmbH<br/>Schurwaldstrasse 9<br/>Neuhausen a.d.F., Baden-Württemberg 73765Schurwaldstrasse 9<br/>Neuhausen a.d.F., Baden-Württemberg 73765

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Germany

Issued by: María Gomes Maria Gomes

#### **PRODUCTS**

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT Intrinsically Safe, Entity - For Hazardous Locations CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - Certified to US Standards

[A/Ex ia Ga] IIC [A/Ex ia Da] IIIC Associated Apparatus connects to Class I, Division 1, Groups A, B, C, and D; Class II, Division 1, Groups E, F, and G; Class III, Division 1

The evaluation unit type BAE SA-XE-\*\*\*-XR-SA39 is designed for transferring electric signals from an intrinsic safe control circuit into a non-intrinsic safe relay circuit. The control circuit delivers a limited energy to an ignition protected intrinsically safe sensor for use in potentially explosive areas. The current based signal from the sensor is evaluated by the device and turned into a switching signal.

The BAE SA-XE-\*\*\*-XR-SA39 is designed for installation and operation outside the potentially explosive areas. Evaluation unit type BAE SA-XE-\*\*\*-XR-SA39 is designed for intrinsically safe sensors with 2-wire connection.

#### Electrical Data:

Power supply circuit (Um):	Terminals 15, 16
Control circuit (Uo, Io, Po):	2-wire sensors: Terminals 1 (+), 2 (-)
	Linear output characteristic



**Certificate:** 80037012 **Project:** 80037012 Master Contract:601366 Date Issued: March 23, 2020

Type BAE SA-XE-051-XR-SA39:	Um = 30VDC, Uo = 9.6V, Io = 10.1mA, Po = 24.24mW (IIC) Co = 0.84uF, Lo = 5mH (IIB) Co = 3.4uF, Lo = 20mH (IIA) Co = 4.9uF, Lo = 20mH
Type BAE SA-XE-052-XR-SA39:	Um = 126VAC, Uo = 9.6V, Io = 10.1mA, Po = 24.24mW (IIC) Co = 0.84uF, Lo = 5mH (IIB) Co = 3.4uF, Lo = 20mH (IIA) Co = 4.9uF, Lo = 20mH
Type BAE SA-XE-053-XR-SA39:	Um = 252VAC, Uo = 9.6V, Io = 10.1mA, Po = 24.24mW (IIC) Co = 0.84uF, Lo = 5mH (IIB) Co = 3.4uF, Lo = 20mH (IIA) Co = 4.9uF, Lo = 20mH

The Ex i control circuit of BAE SA-XE-\*\*\*-XR-SA39 is galvanically isolated from the non-intrinsic safe relay circuit up to a peak voltage of 375V.

The Ex i control circuit of BAE SA-XE-052-XR-SA39, BAE SA-XE-053-XR-SA39 is galvanically isolated from the non-intrinsic safe power supply circuit up to a peak voltage of 375V.

The Ex i control circuit of BAE SA-XE-051-XR-SA39 is galvanically isolated from the non-intrinsic safe power supply circuit up to a peak voltage of 30V.

Relay contact: Terminals 9, 10, 12 (Max. values, to be connected to devices in non-hazardous locations) Voltage: 250VAC / 24VDC / 60VDC Current: 4A / 4A / 0.8A

#### Ambient temperature:

Ta: -20 Deg. C to +60 Deg. C

# Notes:

- 1. The above model is permanently connected, Pollution Degree 2, Overvoltage Category II.
- 2. Mode of operation: Continuous.
- 3. Environmental Conditions: -20 Deg. C to +60 Deg. C, 2000 m max.

# **APPLICABLE REQUIREMENTS**

CAN/CSA C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
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## **Certificate:** 80037012 **Project:** 80037012

## Master Contract:601366 Date Issued: March 23, 2020

CAN/CSA-C22.2 No. 60079-0:15	Explosive Atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-11:14	Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety "i"
ANSI/UL 61010-1 3rd Edition	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
ANSI/UL 60079-0:13	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-11:13	Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"

# MARKINGS

Each unit shall bear all the required markings identified in the applicable certification report(s). Note: The Listee's name and/or CSA file number shall replace the submittor's equivalent information (where applicable).