General Specifications

Model SX42
2-electrode Conductivity Sensors
for High Temperature

GS 12D07J03-01EN-P

■ Overview

These high temperature conductivity sensors have a stainless-steel body and a ceramic insulation, especially designed to withstand high temperatures (up to 250°C) and pressures (up to 40 bar). A special treatment of the electrodes ensures optimal resistance against polarization.

The flanged model has an integral connection box, the threaded models are provided with an Amphenol connector to fit the Yokogawa WU40 cable or Variopin connector to fit with Yokogawa WU10/WE10-cable.

All sensors have a pre-calibrated cell constant and a built-in temperature element for automatic temperature compensation. Sensors with the Variopin connector are equipped with an ID-chip in which calibration information is stored for easy setup when connected to a SENCOM Smart Adapter model SA11-C1. For metal sensors a 3.1 material certificate is included. The sensors are certified for hazardous area when connected to a certified intrinsically safe Yokogawa analyzer, model SC202S or FLXA-series or a certified intrinsically safe circuit with defined output parameters

The combination of the sensor plug and cable is watertight and can handle temperatures up to 100°C. The aluminium connection box of the flanged types has been selected to have easy connection with high temperature cabling.

■ Features

- High temperature and pressure ratings
- Built-in temperature resistor: Pt1000
- Fast temperature response
- Plug and cable form a watertight connection to
- IP67
- Flange model type with integral connection box
- Threaded models equipped with standardized
- connections 1” NPT or R1
- Compatible with new SENCOM smart adapter
- SA11 (VarioPin version)
- Certified for hazardous area
- Optimal resistance against polarization

GS 12D07J03-01EN-P

3rd Edition

■ 1. General Specifications

1.1 Measuring method

Principle of measurement	: Contact conductivity 2-electrode system

1.2 Measuring element

Electrodes	: Stainless steel inner and outer electrodes
Temperature sensor	: Pt1000

1.3 Materials

Wetted parts

Sensor Body	: Stainless Steel AISI 316L
Electrodes	: Stainless Steel,AISI 316L
Insulation	: Ceramic (aluminium oxide)
Sealing	: GYLON® Style 3500 PTFE with Silica

Non-wetted parts

Connector Amphenol	
Contacts	: gold plated
Insulation	: Polyamide
Connector Variopin	
Contacts	: gold plated
Material	: Nickel-plated brass
Insulation	: PEEK, UL94-V0
Terminal box flanged models	
Housing	: Aluminum
Connector	: Ceramic

1.4 Functional specifications (at 25 °C)

Temperature element	: Pt1000 to IEC 751
Nominal Cell Constant (C.C.)	: SX42-SX24 : 0.1 cm^{-1} SX42-SX34 : 0.01 cm^{-1}

Note: The temperature sensor included in the sensor is designed for process compensation and for indication. It is NOT designed for process temperature control.

1.5 Dynamic specifications

Response time temp. (t_{90})	: SX42-S.24-.. : t_{90} < 3 min. SX42-S.34-.. : t_{90} < 3 min.

1.6 Operating range

Conductivity range* at actual process temperature	: 1 µS x C.C. – 200 mS x C.C. - See Figure 1

* measurement range dependent on input range analyzer.

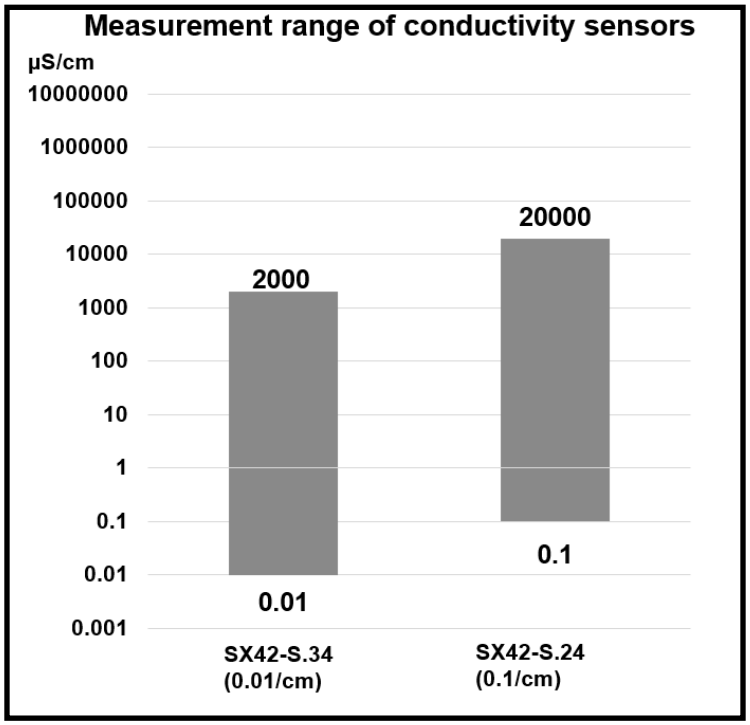


Figure 1: Measuring range of conductivity sensors section

Temperature @ 1 Bar (14.5 PSIG) :

Threaded models (-BS, NS)	: 0 °C to 200 °C (32 °F to 392 °F)
Threaded models (-BV, NV)	: 0 °C to 125 °C (32 °F to 257 °F)
Flanged models	: 0 °C to 250 °C (32 °F to 482 °F)

Pressure @ 25 °C for all models

Over pressure*	: 0 to 40 barg (0 to 580 PSIG)
Under pressure*	: 0 to 0.5 barng (0 to 7 PSIG)

Pressure @ Tmax. °C for models

	Over pressure	Under pressure
-BS, -NS, -BV, -NV, -AF, -DF	0 to 40 barg (0 to 580 PSIG)	0 to 0.5 barng (0 to 7 PSIG)
-EF	0 to 30 barg (0 to 435 PSIG)	0 to 0.5 barng (0 to 7 PSIG)

* Unit definition: barg = bar gauge, over pressure against atmosphere.
barng = under pressure against atmosphere

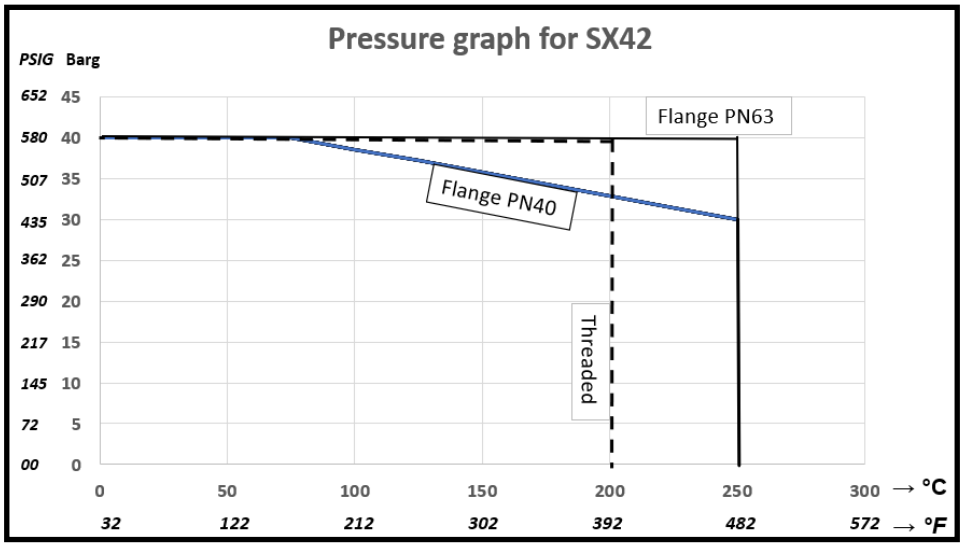


Figure 2: Pressure vs Temperature

Cable length:

Threaded models (-BS,-NS) : max. 60 meter with WU40 cable in combination with WF10 cable and BA10 junction box

Threaded models (-BV,-NV)

- Variopin connector connected to FLXA analyzer. : max. 60 meter with WU10-V-D/WE10 (possibly in combination with WF10 cable and BA10 junction box)

- Variopin connector connected to : 3 meter WE10 cable (as option) combined with SA11 Smart Adapter SA11 Smart Adapter Smart Adapter directly connected to the analyzer using a WU11 cable up to 100 meters or Connected to a BA11 connection box using WU11 cable up to 100 m. The BA11 connection box is connected to the analyzer using a WU11 cable up to 100m

Flanged models : max. 60 meter with customer specified high temperature cable

1.7 Shipping details

Package size (LxWxH) : Threaded models 300 x 100 x 75 mm (11.8 x 3.9 x 3.0 inch)
Flanged models 480 x 275 x 235mm (18.9 x 10.8 x 9.3 inch)

Package weight (max.) : Threaded models 0.5 to 0.7 kg (1.1 to 1.5 lbs)
Flanged models 5.7 to 6.0 kg (12.6 to 13.2 lbs)

1.8 Environmental conditions

Storage temperature : -30 ºC to +50 ºC (-22 ºF to +122 ºF)
Ingress Protection Type Amphenol connector : IP65 (conform IEC 60529)
Ingress Protection Type Variopin connector : IP67 (conform IEC 60529)

1.9 Regulatory compliance

Table 1: Regulatory compliances

Item	Description, Approval, Certification
ATEX (EU, UK)	ATEX approval: DEKRA 14ATEX0074 X CE 0344 Ex II 1 G Ex ia IIC T2…T6 Ga Applied standards: • EN IEC 60079-0 • EN 60079-11
IECEx	IECEx approval: IECEx DEK 14.0032X Ex ia IIC T2…T6 Ga Applied standards: • IEC 60079-0 • IEC 60079-11
FM (Canada)	FM approval Canada: FM20CA0062X IS SI CL I, DIV 1, GP ABCD, T2…T6 CL I, ZN 0, Ex ia IIC, T2…T6 Ga Control Drawing: D&E 2020-024-A51 Applied standards: • CAN/CSA-C22.2 No. 60079-0 • CAN/CSA-C22.2 No. 60079-11 • CAN/CSA-C22.2 No. 61010-1
FM (United States)	FM approval United States: FM20US0123X IS CL I, DIV 1, GP ABCD, T2…T6 CL I, ZN 0, AEx ia IIC, T2…T6 Ga Control Drawing: D&E 2020-024-A50 Applied standards: • FM Class 3600 • FM Class 3610 • FM Class 3810 • ANSI/ISA 60079-0 • ANSI/ISA 60079-11 • ANSI/ISA 61010-1
NEPSI (China)	NEPSI approval: GYJ21.2892X Ex ia IIC T2…T6 Ga Applied standards: • GB 3836.1 • GB 3836.4 • GB 3836.20
PESO (India)	PESO approval: PESO approval is based on ATEX approval DEKRA 14ATEX0074 X, issue 2 – 29.11.2019 Equipment reference numbers: P512759/1 Applied standards: • EN IEC 60079-0 • EN 60079-11
TS (Taiwan)	TS approval: TS Safety Label is based on IECEx approval IECEx DEK 14.0032X Identification Number: TD04000C Applied standards: • IEC 60079-0 • IEC 60079-11

Item	Description, Approval, Certification
EACEx (Russia)	EAC Ex certificate: RU C-NL.AA87.B.00754 0Ex ia IIC T6…T2 Ga X Applied standards: • GOST 31610.0 (IEC 60079-0) • GOST 31610.11 (IEC 60079-11) • GOST IEC 60079-14

■ 2. Dimensional drawings

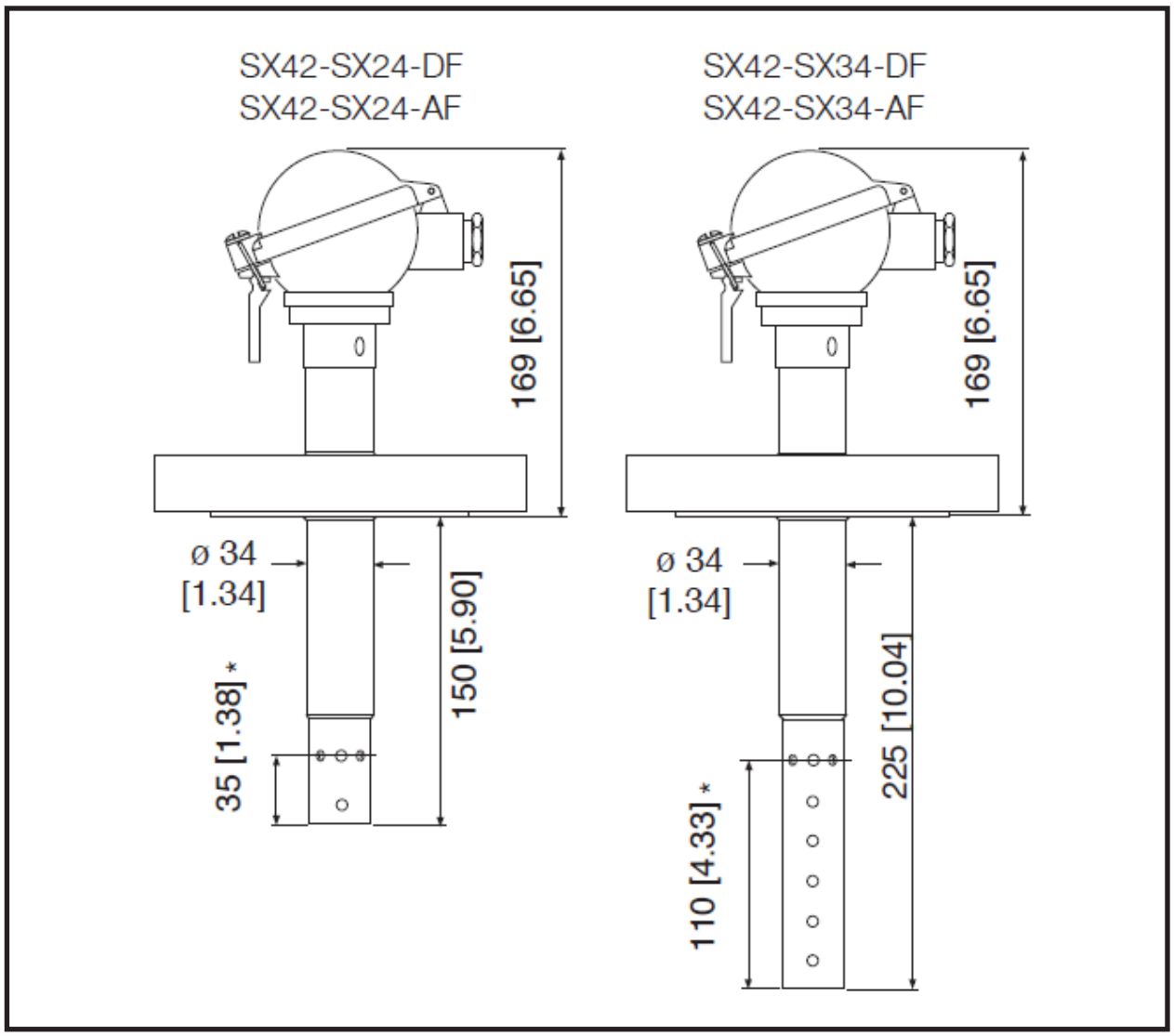


Figure 3: Dimensions SX42 flanged models - dimensions in mm [inches]
*minimum submersion depth

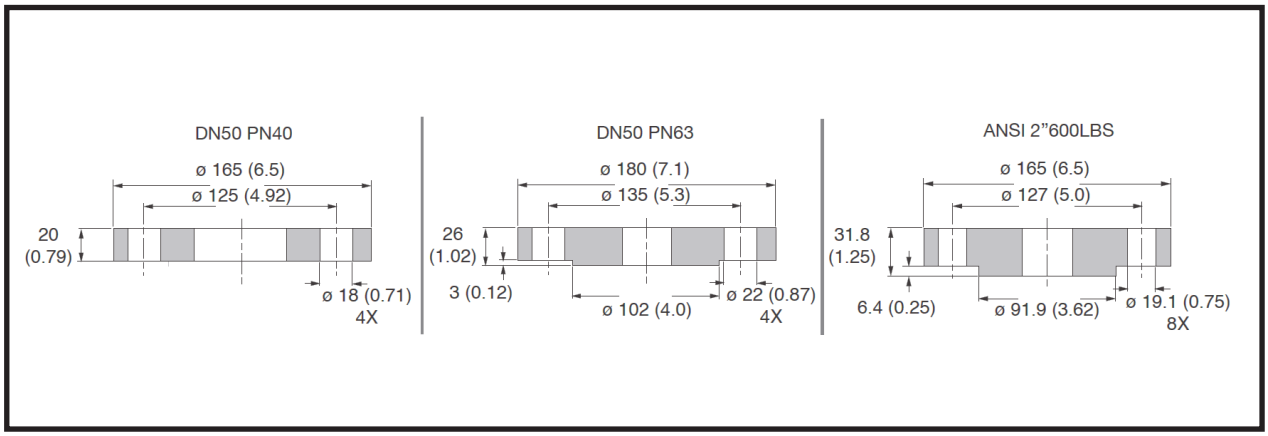


Figure 4: Dimensions flanges

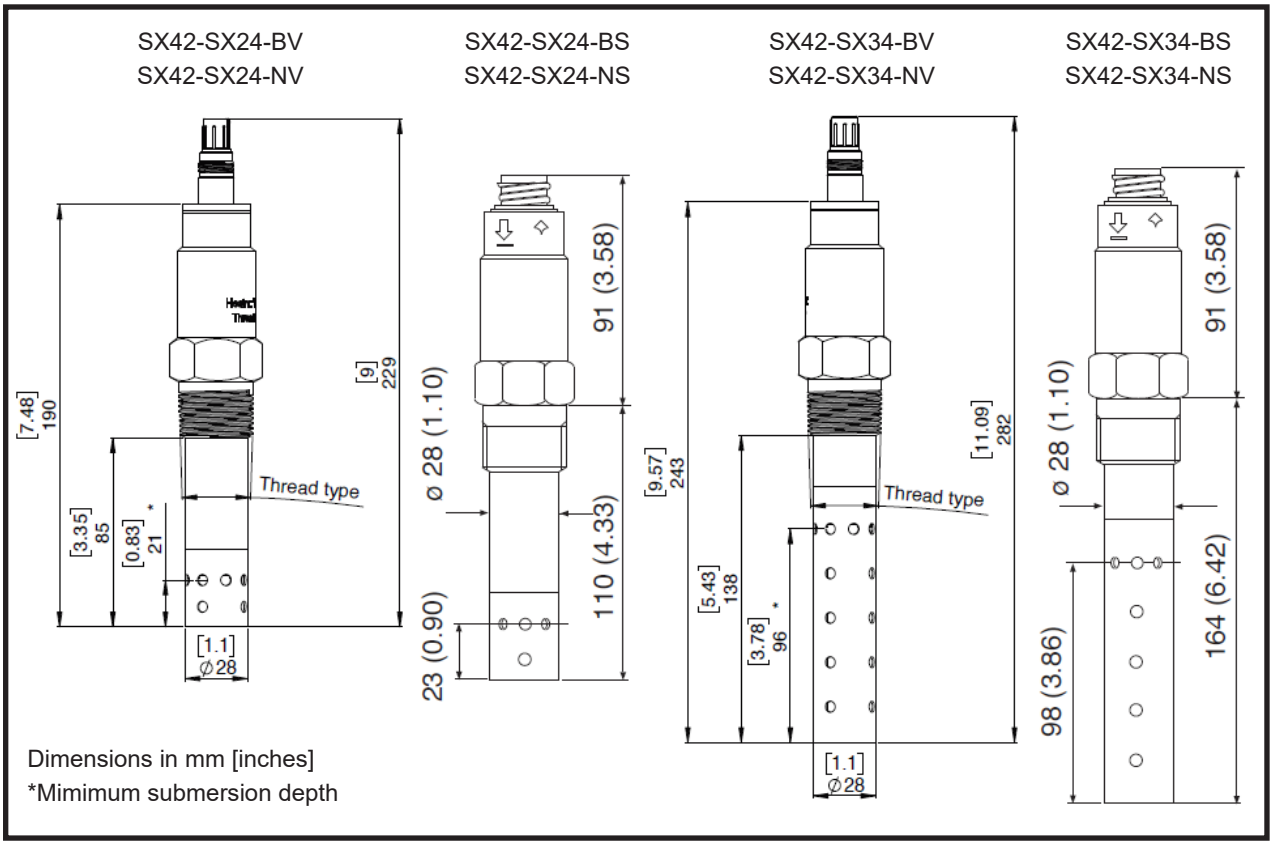


Figure 5: Dimensions SX42 threaded models

■ 3. Model and Suffix Codes

Table 2: Model and suffix codes for SX42

Model	Suffix Code	Option Code	Description
SX42*			High temperature conductivity sensor with Pt1000 sensor, IS for ATEX/IECEx/FM-US/FM-CAN
Cell Constant	-SX24		Cell constant 0.1/cm
	-SX34		Cell constant 0.01/cm
Process Connection	-BS		ISO 7/1-R1 screw thread, plug-socket conn.
	-BV		ISO 7/1-R1 screw thread, VarioPin conn. with SENCOM ID-chip
	-NS		1-11½ NPT screw thread, plug-socket conn.
	-NV		1-11½ NPT screw thread, Vario Pin conn. with SENCOM ID-chip
	-DF		DN50-PN63 EN flange
	-EF		DN50-PN40 EN flange
	-AF		2” 600 LBS ANSI flange
Style	*A		Always *A style
Option			N/A

***Note**: Certificate according to EN 10024 is standard and delivered with this sensor

■ Addendum 1: Available models

MS-code
SX42-SX34-DF*A
SX42-SX34-AF*A
SX42-SX24-DF*A
SX42-SX24-AF*A
SX42-SX34-BS*A
SX42-SX34-NS*A
SX42-SX24-BS*A
SX42-SX24-NS*A
SX42-SX34-BV*A
SX42-SX34-NV*A
SX42-SX24-BV*A
SX42-SX24-NV*A
SX42-SX34-EF*A
SX42-SX24-EF*A

■ Addendum 2: Control drawings

FM-United States

Applying standards	: FM Class 3600 FM Class 3610 FM Class 3810 ANSI/ISA 60079-0 ANSI/ISA 60079-11
Certificate no.*	: FM20US0123X IS CL I, DIV 1, GP ABCD, T2…T6 CL I, ZN 0, AEx ia IIC, T2…T6 Ga Control Drawing: D&E 2020-024-A50
Electrical data	: See Note 1
Specific conditions of use	: See Control Drawing D&E 2020-024-A50. Temperature classes for SX42 models are defined T2…T6, see Note 1.

Note 1 : Intrinsically safe, entity, for Class I, Division 1, Groups A, B, C and D;
Class I, Zone 0, AEx ia IIC, Ga (entity) for hazardous (classified) locations when installed per control drawing D&E 2020-024-A50.
Maximum sensor input parameters:
Ui= 14.4 V; Ii= 116.5 mA; Pi= 0.3424 W; Li= 0 mH
Ci= 0 nF (BS, NS and *F type) or Ci=0.4 nF (BV and NV type).

Ambient temperature:
-30°C to +40°C for temperature class T6,
-30°C to +95°C for temperature class T5,
-30°C to +125°C for temperature class T4 (BV and NV type),
-30°C to +130°C for temperature class T4 (BS, NS and *F types),
-30°C to +125°C for temperature class T3 (BV and NV type),
-30°C to +165°C for temperature class T3 (BS, NS and *F types),
-30°C to +125°C for temperature class T2 (BV and NV type),
-30°C to +275°C for temperature class T2 (BS, NS and *F types).

When the sensor has been connected to non intrinsically safe equipment which exceeds the restrictions regarding the sensor input circuits, the sensor is not suitable anymore for intrinsically safe use.

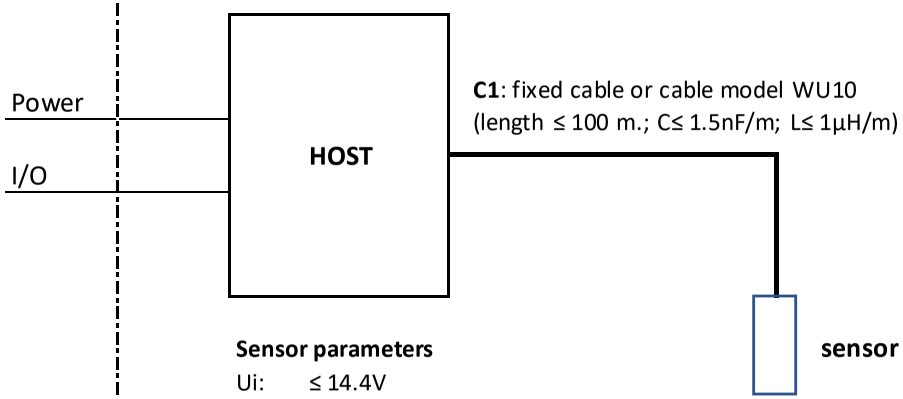
* Certification is subject to change, due to new regulations or changes in the product itself.
When a certificate is updated, a new revision under the same certificate number is created with a new date.
- FM-United States:
FM20US0123X (effective from 03-2021)

Non-hazardous Location

Hazardous Location

IS CL I, DIV 1, GP ABCD T2 /T3 / T4 / T5 / T6
CL I, ZN 0, AEx ia IIC, T2…T6 Ga
Ta 275°C / 165°C / 130°C / 95°C / 40°C

Remark: For sensors with connector (including ID-chip) Ta is limited to 125°C for T2, T3 and T4



Sensor parameters

Ui: ≤ 14.4V
Ii: ≤ 116.5mA
Pi: ≤ 342.4mW
Ci: ≤ 0nF for sensor models with connector (without ID-chip)
≤ 0.4nF for sensor models with connector (including ID-chip)
≤ 150nF for sensor models with permanent cable
Remark:
Sensor Ci (in case of an integral cable the Ci includes the capacitance of the cable) shall not exceed the Co of the HOST.
Li: ≤ 0mH for sensor models with connector (without ID-chip)
≤ 0mH for sensor models with connector (including ID-chip)
≤ 0.1mH for sensor models with permanent cable
Remark:
Sensor Li (in case of an integral cable the Li includes the inductance of the cable) shall not exceed the Lo of the HOST.

Remarks:

1. No revision to this drawing without prior approval of FM.

2. Installation must be in accordance with the National Electrical Code (ANSI/NFPA 70), ANSI/ISA-RP12.06.01, and relevant local codes.

3. The sensor shall be installed to a certified intrinsically safe HOST with the following maximum values: Uo= 14.4 V, Io = 116.5 mA, Po = 342.4 mW.

4. The sensor does not provide isolation from earth. Installers shall take necessary measures to prevent the possibility of sparking resulting from differing earth potentials between the sensors and interconnecting equipment. This can be realized for example by selecting interconnecting equipment which provides input-to-output and input-to-earth isolation up to 500 V rms.

5. Sensor Model code:

Model	Suffix Codes	Option Codes
SX42	-abcd-efgh	/i

abcd	Cell Constant:	Four alphanumeric character (A to Z, 0 to 9 or a hyphen)
ef	Connection type:	BS ISO7/1-R1 screw thread + connector without ID-chip BV ISO 7/1-R1 screw thread + connector with ID-chip NS NPT screw thread + connector without ID-chip NV NPT screw thread + connector with ID-chip AF 2-inch 600 LBS ANSI flange + terminal block DF DN50-PN63 EN flange + terminal block EF DN50-PN40 EN flange + terminal block
g	Spare code:	Any one character
h	Style code:	A
i	Option code:	Up to ten alphanumeric characters (A to Z, 0 to 9 or hyphen)

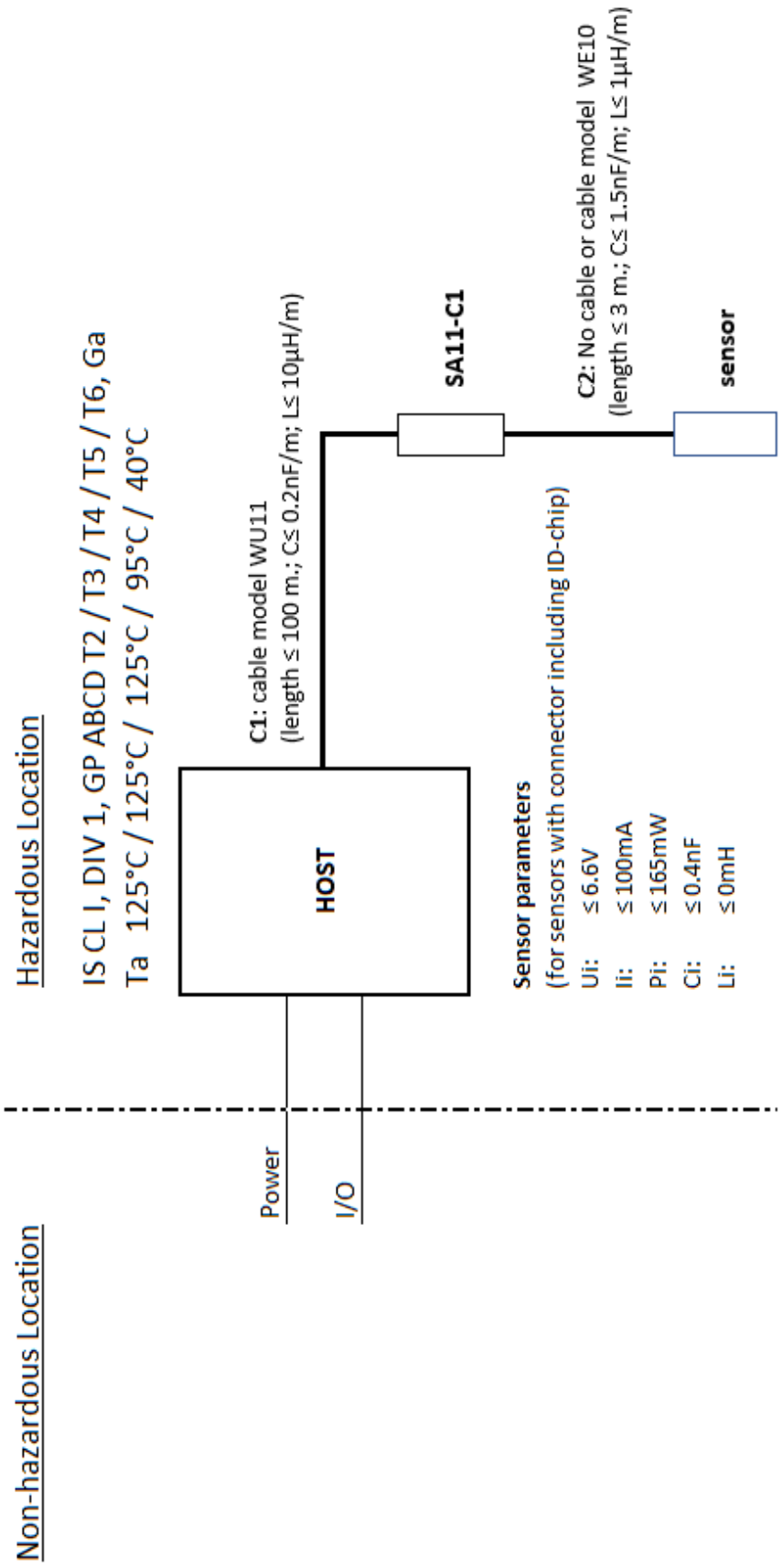
6. WARNING - POTENTIONAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

pH sensors containing accessible plastic parts and/or external conductive parts, must be installed and used in such a way, that dangers of ignition due to hazardous electrostatic charges cannot occur, especially in the case that the process medium is non-conductive.

WARNING - POTENTIONAL IGNITION HAZARD – SEE INSTRUCTIONS

Contact Conductivity sensors containing light metals, must be installed and used in such a way that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.

Control drawing: D&E 2020-024-A50 (part 2)



Remarks:

1. No revision to this drawing without prior approval of FM.

2. Installation must be in accordance with the National Electrical Code (ANSI/NFPA 70), ANSI/ISA-RP12.06.01, and relevant local codes.

3. The sensor shall be installed to a certified intrinsically safe Smart Adapter, model SA11-C1, with the following maximum values: Uo= 6.6 V, Io = 100 mA, Po = 165 mW.

4. The Installers shall take necessary measures to prevent the possibility of sparking resulting from differing earth potentials between the sensors and interconnecting equipment. The sensor itself does not provide 500 V rms isolation from earth, the interconnecting equipment Model SA11-C1 Smart Adapter however provides this required isolation.

5. Sensor Model code:

Model	Suffix Codes	Option Codes
SX42	-abcd-efgh	/i

abcd	Cell Constant:	Four alphanumeric character (A to Z, 0 to 9 or a hyphen)
ef	Connection type:	BV ISO 7/1-R1 screw thread + connector with ID-chip
		NV NPT screw thread + connector with ID-chip
g	Spare code:	Any one character
h	Style code:	A
i	Option code:	Up to ten alphanumeric characters
		(A to Z, 0 to 9 or hyphen)

6. WARNING - POTENTIONAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS

pH sensors containing accessible plastic parts and/or external conductive parts, must be installed and used in such a way, that dangers of ignition due to hazardous electrostatic charges cannot occur, especially in the case that the process medium is non-conductive.

WARNING - POTENTIONAL IGNITION HAZARD - SEE INSTRUCTIONS

Contact Conductivity sensors containing light metals, must be installed and used in such a way that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded

FM-Canada

Applying standards : CAN/CSA-C22.2 No. 60079-0
CAN/CSA-C22.2 No. 60079-11

Certificate no.* : FM20CA0062X
: :IS CL I, DIV 1, GP ABCD, T2…T6
:CL I, ZN 0, Ex ia IIC, T2…T6 Ga
:Control Drawing: D&E 2020-024-A51

Electrical data : See Note 2

Specific conditions : See Control Drawing D&E 2020-024-A51.
of use Temperature classes for SX42 models are defined
T2…T6, see Note 2.

Note 2 : Intrinsically safe, entity, for Class I, Division 1, Groups A, B, C and D;
Class I, Zone 0, Ex ia IIC, Ga (entity) for hazardous (classified) locations
When installed per control drawing D&E 2020-024-A51.
Maximum sensor input parameters:
Ui= 14.4 V; Ii= 116.5 mA; Pi= 0.3424 W; Li= 0 mH;
Ci= 0 nF (BS, NS and *F type) or Ci= 0.4 nF (BV and NV type).

Ambient temperature:
-30°C to +40°C for temperature class T6,
-30°C to +95°C for temperature class T5,
-30°C to +125°C for temperature class T4 (BV and NV type),
-30°C to +130°C for temperature class T4 (BS, NS and *F types),
-30°C to +125°C for temperature class T3 (BV and NV type),
-30°C to +165°C for temperature class T3 (BS, NS and *F types),
-30°C to +125°C for temperature class T2 (BV and NV type),
-30°C to +275°C for temperature class T2 (BS, NS and *F types).

When the sensor has been connected to non intrinsically safe equipment which exceeds the restrictions regarding the sensor input circuits, the sensor is not suitable anymore for intrinsically safe use.

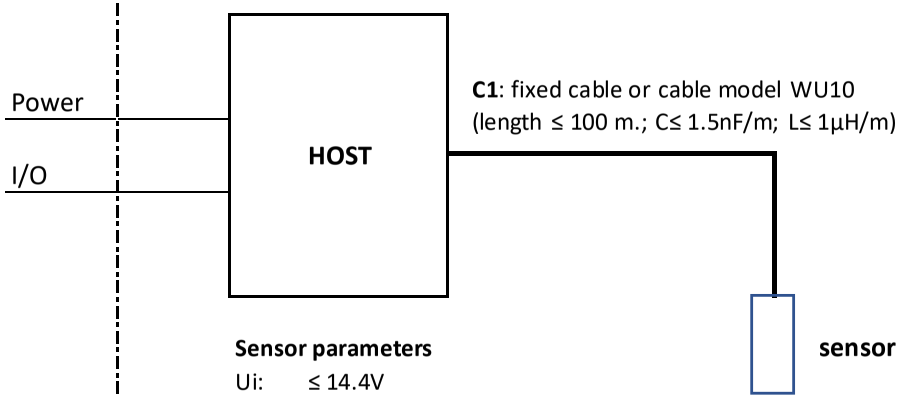
* Certification is subject to change, due to new regulations or changes in the product itself.
When a certificate is updated, a new revision under the same certificate number is created with a new date.
- FM-Canada:
FM20CA0062X (effective from 03-2021)

Non-hazardous Location

Hazardous Location

IS, SI, CL I, DIV 1, GP ABCD T2 /T3 / T4 / T5 / T6
CL I, ZN 0, Ex ia IIC, T2…T6 Ga
Ta 275°C / 165°C / 130°C / 95°C / 40°C

Remark: For sensors with connector (including ID-chip) Ta is limited to 125°C for T2, T3 and T4



Sensor parameters

Ui: ≤ 14.4V
Ii: ≤ 116.5mA
Pi: ≤ 342.4mW
Ci: ≤ 0nF for sensor models with connector (without ID-chip)
≤ 0.4nF for sensor models with connector (including ID-chip)
≤ 150nF for sensor models with permanent cable
Remark:
Sensor Ci (in case of an integral cable the Ci includes the capacitance of the cable) shall not exceed the Co of the HOST.
Li: ≤ 0mH for sensor models with connector (without ID-chip)
≤ 0mH for sensor models with connector (including ID-chip)
≤ 0.1mH for sensor models with permanent cable
Remark:
Sensor Li (in case of an integral cable the Li includes the inductance of the cable) shall not exceed the Lo of the HOST.

Remarks:

1. No revision to this drawing without prior approval of FM.
2. Installation must be in accordance with the National Electrical Code (CEC) CSA22.1 and relevant local codes.
3. The sensor shall be installed to a certified intrinsically safe HOST with the following maximum values: Uo= 14.4 V, Io = 116.5 mA, Po = 342.4 mW.
4. The sensor does not provide isolation from earth. Installers shall take necessary measures to prevent the possibility of sparking resulting from differing earth potentials between the sensors and interconnecting equipment. This can be realized for example by selecting interconnecting equipment which provides input-to-output and input-to-earth isolation up to 500 V rms.
5. Sensor Model code:

Model	Suffix Codes	Option Codes
SX42	-abcd-efgh	/i

abcd	Cell Constant:	Four alphanumeric character (A to Z, 0 to 9 or a hyphen)
ef	Connection type:	BS ISO7/1-R1 screw thread + connector without ID-chip
		BV ISO 7/1-R1 screw thread + connector with ID-chip
		NS NPT screw thread + connector without ID-chip
		NV NPT screw thread + connector with ID-chip
		AF 2-inch 600 LBS ANSI flange + terminal block
		DF DN50-PN63 EN flange + terminal block
		EF DN50-PN40 EN flange + terminal block
g	Spare code:	Any one character
h	Style code:	A
i	Option code:	Up to ten alphanumeric characters
		(A to Z, 0 to 9 or hyphen)

6. WARNING - POTENTIONAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

pH sensors containing accessible plastic parts and/or external conductive parts, must be installed and used in such a way, that dangers of ignition due to hazardous electrostatic charges cannot occur, especially in the case that the process medium is non-conductive.

AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES – VOIR LES INSTRUCTIONS

Les sondes de conductivité de contact contenant des pièces en plastique accessibles et / ou des pièces conductrices externes doivent être installées et utilisées de manière à éviter tout risque d'inflammation dû à des charges électrostatiques dangereuses, en particulier dans le cas où le fluide de procédé n'est pas conducteur.

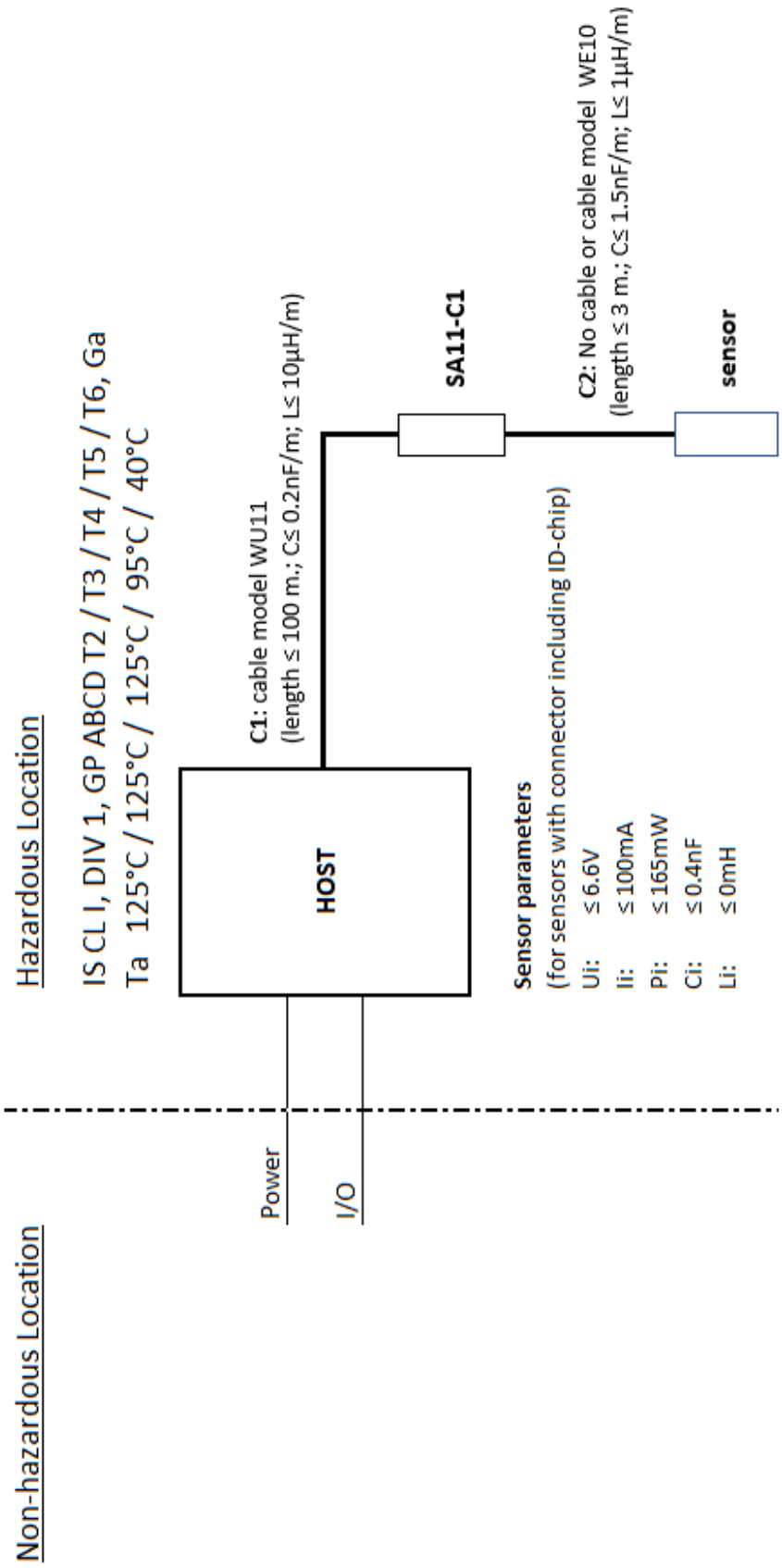
WARNING - POTENTIONAL IGNITION HAZARD – SEE INSTRUCTIONS

Contact Conductivity sensors containing light metals, must be installed and used in such a way that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.

AVERTISSEMENT – RISQUE POTENTIEL D’ALLUMAGE – VOIR LES INSTRUCTIONS

Les capteurs de conductivité de contact contenant des métaux légers doivent être installés et utilisés de telle sorte que, même en cas d'incidents rares, les sources d'allumage dues aux chocs et aux étincelles de friction soient exclues.

Control drawing: D&E 2020-024-A51 (part 2)



Remarks:

1. No revision to this drawing without prior approval of FM.
2. Installation must be in accordance with the National Electrical Code (CEC) CSA22.1 and relevant local codes.
3. The sensor shall be installed to a certified intrinsically safe Smart Adapter, model SA11-C1, with the following maximum values: Uo= 6.6 V, Io = 100 mA, Po = 165 mW.
4. The Installers shall take necessary measures to prevent the possibility of sparking resulting from differing earth potentials between the sensors and interconnecting equipment. The sensor itself does not provide 500 V rms isolation from earth, the interconnecting equipment Model SA11-C1 Smart Adapter however provides this required isolation.
5. Sensor Model code:

Model	Suffix Codes	Option Codes
SX42	-abcd-efgh	/i

abcd	Cell Constant:	Four alphanumeric character (A to Z, 0 to 9 or a hyphen)
ef	Connection type:	BV ISO 7/1-R1 screw thread + connector with ID-chip
		NV NPT screw thread + connector with ID-chip
g	Spare code:	Any one character
h	Style code:	A
i	Option code:	Up to ten alphanumeric characters
		(A to Z, 0 to 9 or hyphen)

6. WARNING- - POTENTIONAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

pH sensors containing accessible plastic parts and/or external conductive parts, must be installed and used in such a way, that dangers of ignition due to hazardous electrostatic charges cannot occur, especially in the case that the process medium is non-conductive.

AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES – VOIR LES INSTRUCTIONS

Les sondes de conductivité de contact contenant des pièces en plastique accessibles et / ou des pièces conductrices externes doivent être installées et utilisées de manière à éviter tout risque d'inflammation dû à des charges électrostatiques dangereuses, en particulier dans le cas où le fluide de procédé n'est pas conducteur.

WARNING - POTENTIONAL IGNITION HAZARD – SEE INSTRUCTIONS

Contact Conductivity sensors containing light metals, must be installed and used in such a way that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.

AVERTISSEMENT – RISQUE POTENTIEL D'ALLUMAGE – VOIR LES INSTRUCTIONS

Les capteurs de conductivité de contact contenant des métaux légers doivent être installés et utilisés de telle sorte que, même en cas d'incidents rares, les sources d'allumage dues aux chocs et aux étincelles de friction soient exclues.

YOKOGAWA ELECTRIC CORPORATION
World Headquarters
9-32, Nakacho 2-chome, Musashino-shi
Tokyo 180-8750
Japan
www.yokogawa.com

YOKOGAWA CORPORATION OF AMERICA
2 Dart Road
Newnan GA 30265
USA
www.yokogawa.com/us

YOKOGAWA EUROPE BV
Euroweg 2
3825 HD AMERSFOORT
The Netherlands
www.yokogawa.com/eu

YOKOGAWA ELECTRIC ASIA Pte. LTD.
5 Bedok South Road
Singapore 469270
Singapore
www.yokogawa.com/sg

YOKOGAWA CHINA CO. LTD.
Room 1801, Tower B, THE PLACE
No.100 Zunyi Road
Changing District, Shanghai, China
www.yokogawa.com/cn

YOKOGAWA MIDDLE EAST B.S.C.(c)
P.O. Box 10070, Manama
Building 577, Road 2516, Busaiteen 225
Muharraq, Bahrain
www.yokogawa.com/bh

Yokogawa has an extensive sales and distribution network.
Please refer to the European website (www.yokogawa.com/eu) to contact your nearest representative.

YOKOGAWA

GS 12D07J03-01EN-P
3rd Edition November 2024
Printed in the Netherlands 01-2411