

# Instructions

for

## Barrier Unit

(Enclosure type A-2)



Document Number: 30003-MA-Ex-001 Rev.01

## Revision history

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Revision	Date	Details or purpose of revision	Made by	Checked by	Approved by
01	14.04.2020	Document established	ED	TG	TG

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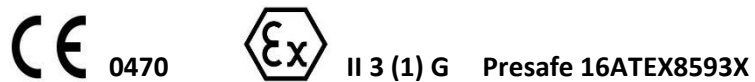
## 1. General

The instructions given in Scheduled documents 48030-MA-Ex-001 and 48001-MA-Ex-703 applies. These instructions cover the use of Enclosure type A-2 (Equipment type: Barrier Unit) as a replacement for Enclosure A in the above referred instructions.

### Barrier Module

Placed inside the Barrier Unit with a degree of protection  $\geq$  IP54 and Ambient temperature tolerance  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ . The Barrier Unit is manufactured and certified as an Ex-Equipment by Sentech AS.

### 1.1 Environmental conditions for which Barrier Unit is suitable

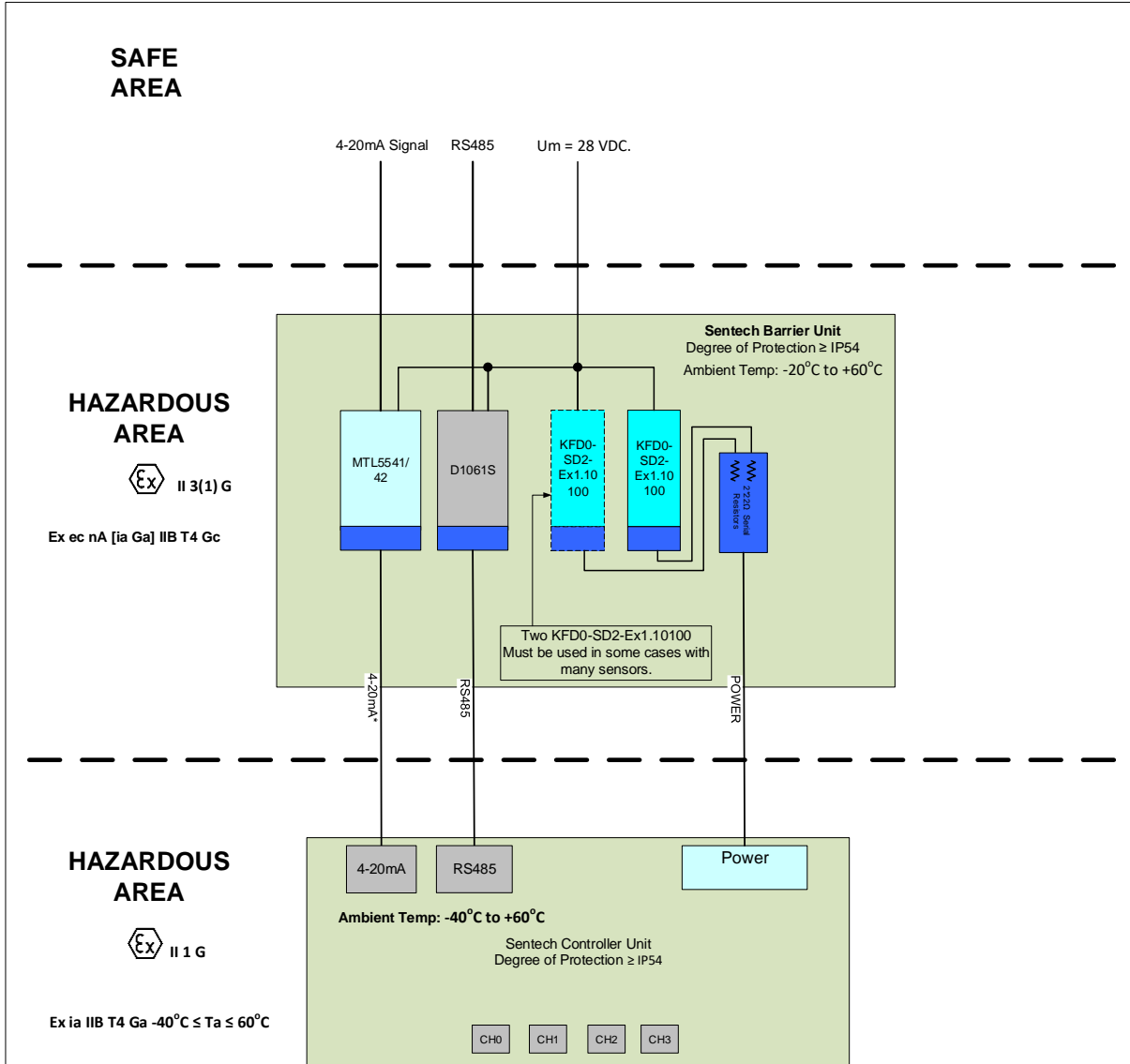


Type of Protection: **Ex ec nA [ia Ga] IIB T4 Gc**



**IECEX PRE 14.0004X**

1.1.1 Ambient Conditions and IP Rating for instruments with Barrier Unit



See instruction 48001-MA-Ex-703 or 48030-MA-Ex-001 for further details.

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Sentech AS		Scheduled Drawing	
Project Number: 30003	P.O. Number: NIL	Part/Serial Number: PMWCMHTPMHTWCM	
Sentech Document Number: 30003-XT-Ex-001	Customer Document Number: NIL		
Document Title: General Barrier Wiring with Enclosure A-2		Sheet: 1 of 1	Size: A3
Rev 01	Date 25.09.2019	Reason for Issue: Document Established	Author: Erling Delbæk

## 1.2 Barrier Unit Name Plate (Enclosure A-2)

Each Barrier Unit has a unique Name Plate mounted.

Name plate on the Barrier Unit

<b>Sentech AS</b>		Olaf Helsetts Vei 5G 0694 Oslo		Norway Phone: (47)66800880	
<b>Barrier Unit</b>	ATEX Certificate Number <b>Presafe 16ATEX8593X</b>		0470		
Customer specific information (TAGNR etc)	IECEX Certificate Number <b>IECEX PRE 14.0004X</b>		II 3 (1) G		
	Ex code: Ex ec nA [Ia Ga] IIB T4 Gc		Serial no: <yy ww BU nnn>		
	Equipment type: Ex Barrier Unit		Um = 28 VDC		
	Model no: Ex-BU-001		Ingress Protection <IP nn>		

<b>Sentech AS</b>		<b>Scheduled Drawing</b>		
Project Number: 30003	P.O. Number: NIL	Part-/Serial Number: Ex Barrier Unit		
Sentech Document Number: 30003-XX-Ex-001		Customer Document Number: NIL		
Document Title: Ex Barrier Unit Name Plate (Enclosure A-2)				Sheet: 1 of 1
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## 2. Installation

The installation work must be performed according to IEC 60079-14, site and country regulations.

### 2.1 Mechanical installation

The Barrier Unit must be installed according to instructions provided by Sentech AS on delivery, site and country regulations, IEC 60079-14 and these general instructions.

### 2.2 Electrical installation

The Barrier Unit must be installed according to specific instructions provided by Sentech AS on delivery, in addition to site and country regulations and IEC 60079-14.

### 2.2.1 Cables and wires

Only conductors made of copper is allowed and appropriate ferrules must be applied before they are installed in the terminals.

#### 2.2.1.1 Cable C1

Connecting the Sentech Controller Unit (I.S) to the Sentech Barrier Unit.

Must fulfill the requirements given in document *48030-MA-Ex-001* or *48001-MA-Ex-703*

If shielded C1 cable is used in the Barrier Unit, the shield must not be connected to the Controller Unit under any circumstances. No Earth connection allowed to the Controller Unit. If connected in the Barrier Unit, it must be isolated in Controller Unit. Sentech can install approved isolated terminals for this in the Controller Unit before shipment.

#### 2.2.1.2 Cable C2

Connecting the Sentech Barrier Unit to external systems.

Dielectric Strength  $\geq 500V$  AC r.m.s. and Insulation on individual wires  $\geq 0,5mm$ .

Must be according to Country and Site regulations and IEC-60079-14.

Equipotential Bonding Earth required:

- Minimum Wire Cross-sectional area  $\geq 4mm^2$
- Or, Exception for systems installed with cabling not requiring external earth connections (Metallic conduit or armoured cable). Given that all cables are of the types mentioned.

EQUIPOTENTIAL BONDING EARTH MUST ALWAYS BE INSTALLED IN THE BARRIER UNIT (Through Wire, Metallic conduit or armoured cable as mentioned above).

#### 2.2.1.3 Cable glands

Only Ex e or Ex d certified glands are permitted to be used in the enclosure. The holes must be pre-drilled from factory, if any modifications are made on the enclosure by the customer it will invalidate the Ex certification. The Glands must be suited for the type of cable used on site, and the Glands must be installed according to the Gland manufacturers specification. We recommend that the Glands are installed by Sentech AS before shipment.

### **2.2.2 Connecting the Barrier Unit**

Each Barrier Unit has input terminals from a safe area and I.S. Isolated output terminals to the instrument. These are the only connection point for the customer. The rest of the wiring inside the Barrier Unit is done at the factory by Sentech AS. No modification to the pre-wired installation is allowed. See specific project schematics for detailed instructions regarding the connections.





### 3. Maintenance

Must be done according to site and country regulations and IEC 60079-17, by qualified personnel.

Before any service or maintenance (Lid removal) can be performed on the Barrier Unit, the power to the unit must be disconnected.

Make sure that the Cable Glands, enclosure seals, and other relevant sealing units are in such a condition that the Degree of Protection (IP) is upheld.

### 4. Supplier Contact Info



**Sentech AS**  
**Olaf Helsets Vei 5G**  
**N-0694 Oslo**  
**NORWAY**

Phone: +47 66 80 08 80  
Email: [post@sentech.no](mailto:post@sentech.no)

Internet: [www.sentech.no](http://www.sentech.no)