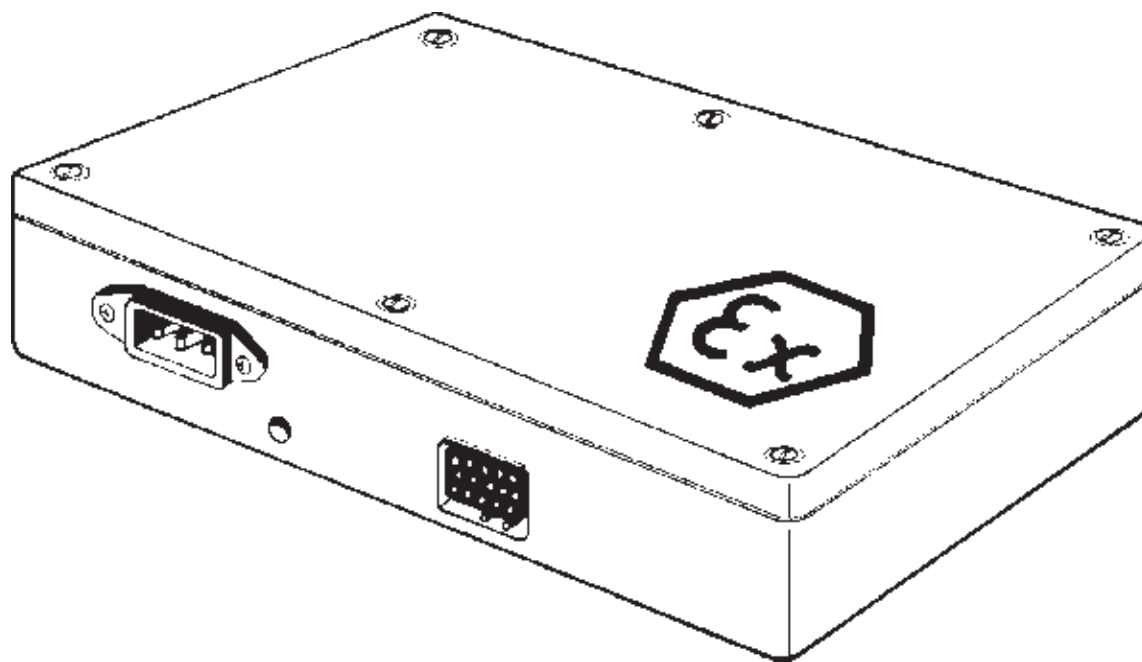


# Installation Information

## Interface Adapter SMx-CLRS1

for METTLER TOLEDO  
intrinsically safe  
SMx precision scales



**METTLER TOLEDO**

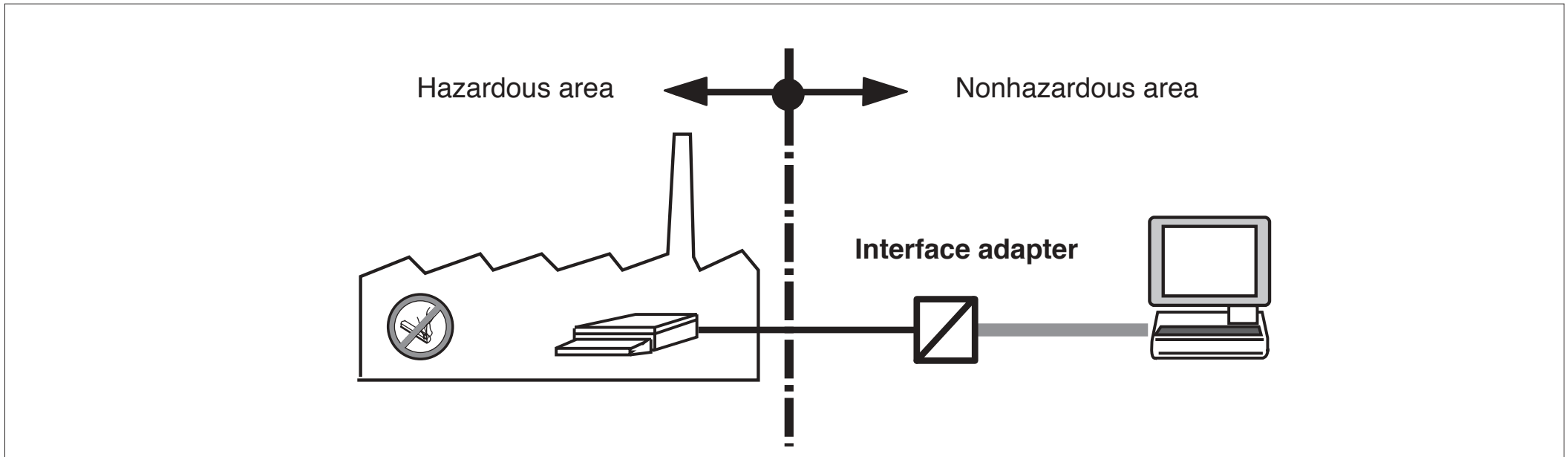


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## 1. General

### 1.1 Separation of intrinsically safe and nonintrinsically safe instruments



The **interface adapter** allows the attachment of nonintrinsically safe peripheral instruments in the nonhazardous area to intrinsically safe scales of the SMx series in the hazardous area.

The interface adapter lowers the energy of the signals and prevents the incursion of hazardous voltages into the hazardous area.

**The interface adapter itself must never be installed in the hazardous area.**

## 1.2 Documents for the installation

### Operating instructions of the SMx scale

The attachment of the data cable of the interface adapter is shown in the section “Operation: Control elements and connections”.

### Technical specifications and accessories

The specifications bulletin “Technical specifications and accessories” is enclosed with this installation information. It contains:

- the national installation plan with directions
- the certificates of conformity
- the order numbers of the accessories

### Bidirectional data interface of the PM scales

To attach a peripheral instrument, e.g. a computer, the operating instructions “Bidirectional data interface of the PM scales” are needed. These describe the required cables and the software aspects.

## 1.3 Cautionary note

### Technical aspects

The interface adapter must be installed only in the nonhazardous area!

The galvanic separation between the intrinsically safe circuits and the nonintrinsically safe circuits is designed for nominal voltages with a peak value up to 375 V.

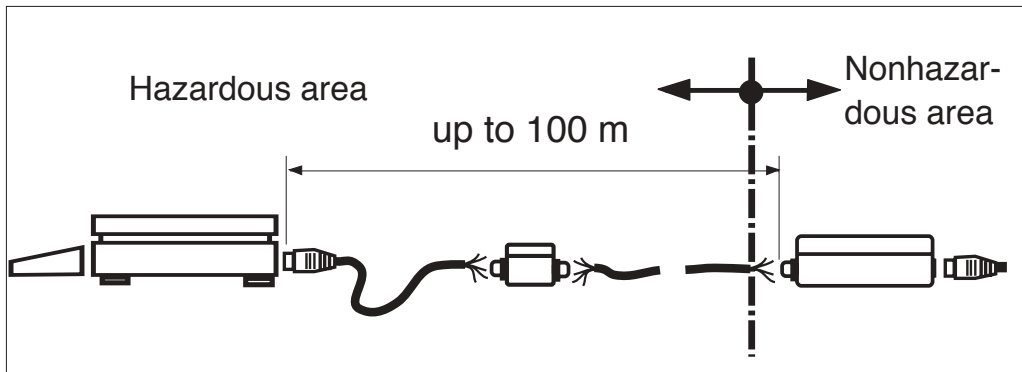
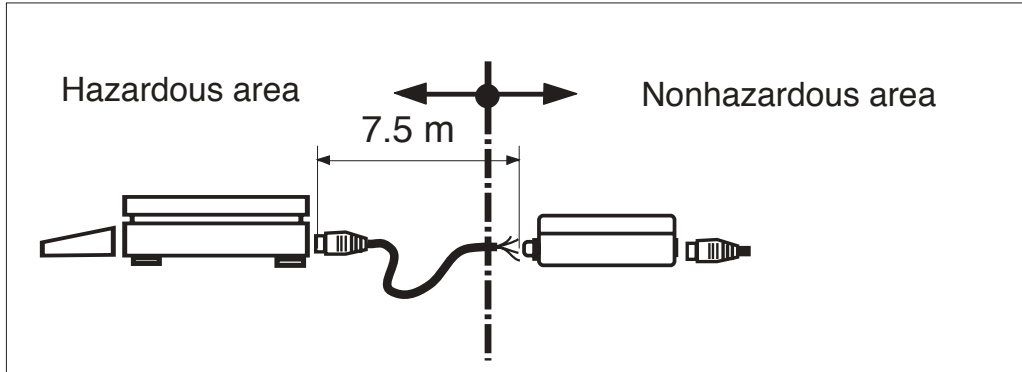
The maximum values for the intrinsically safe circuits are:  
 $C \leq 1 \mu\text{F}$ ,  $L \leq 3 \text{ mH}$

### Organizational aspects

Special care must be exercised in the handling of intrinsically safe products.

- Installation of the system may be performed only by a qualified electrician and in compliance with the national installation guidelines.
- It is prohibited to make any changes whatsoever to the instrument. Service work and repairs may be performed only by personnel authorized by METTLER TOLEDO.

## 2. Installation



### 2.1 Short or long distance scale - interface adapter

Depending on the distance between the scale and the interface adapter, the connection can be made either directly with the enclosed data cable or with use of an additional length of data cable according to requirements.

Connection with the enclosed data cable.

Extension by means of terminal box and an extra length of data cable.

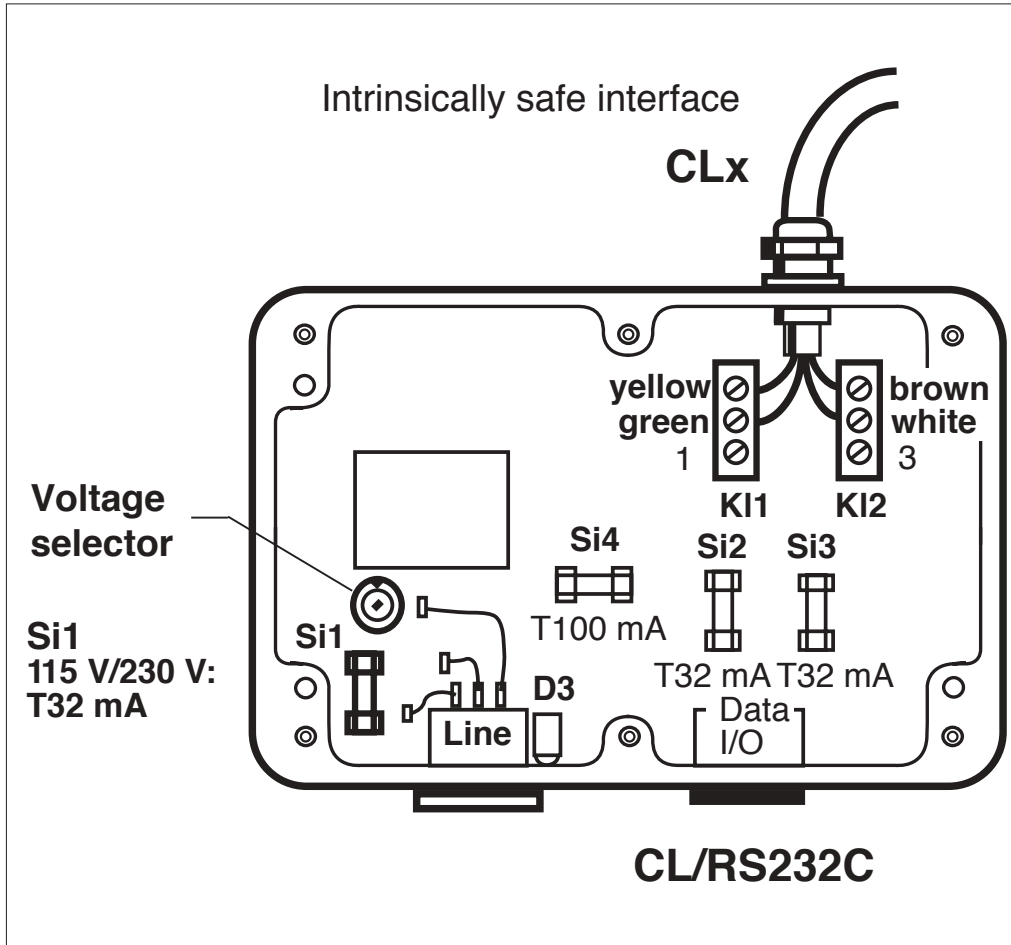
### 2.2 Installation and connection of the interface adapter

#### Installation

The interface adapter can be positioned horizontally or vertically and screwed in place if needed. Dimensions, see section 3.

#### Connection of the interface adapter

A light blue data cable of length 7.5 m is enclosed with the interface adapter (light blue indicates an intrinsically safe connection). It can be screwed directly to the terminals in the interior.



- Disconnect power connector
- Open cover
- Attach cable as shown in the illustration (do not connect shielding!)
- Before closing the cover, set the correct power supply voltage at the voltage selector

### Connection of the scale

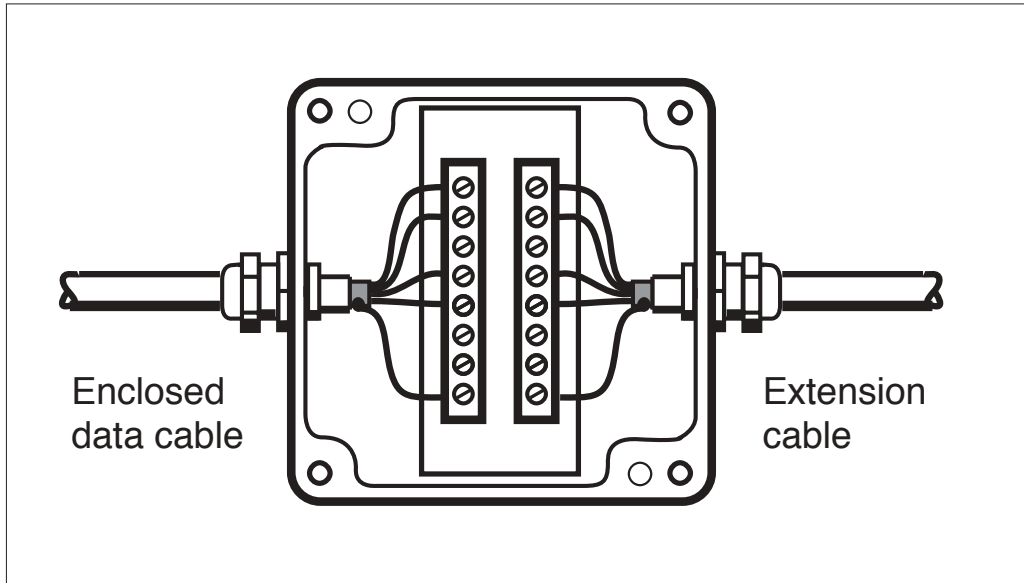
Plug cable into the "DATA I/O" socket at the rear.

### Operation

Pilot lamp **D3** lights up when the interface adapter is connected to the power supply and the power line fuse is not blown.

### Replacement of blown fuses

Only fuses with the ratings specified in the illustration may be used. If fuses other than these are used, there is no longer any guarantee of safety.



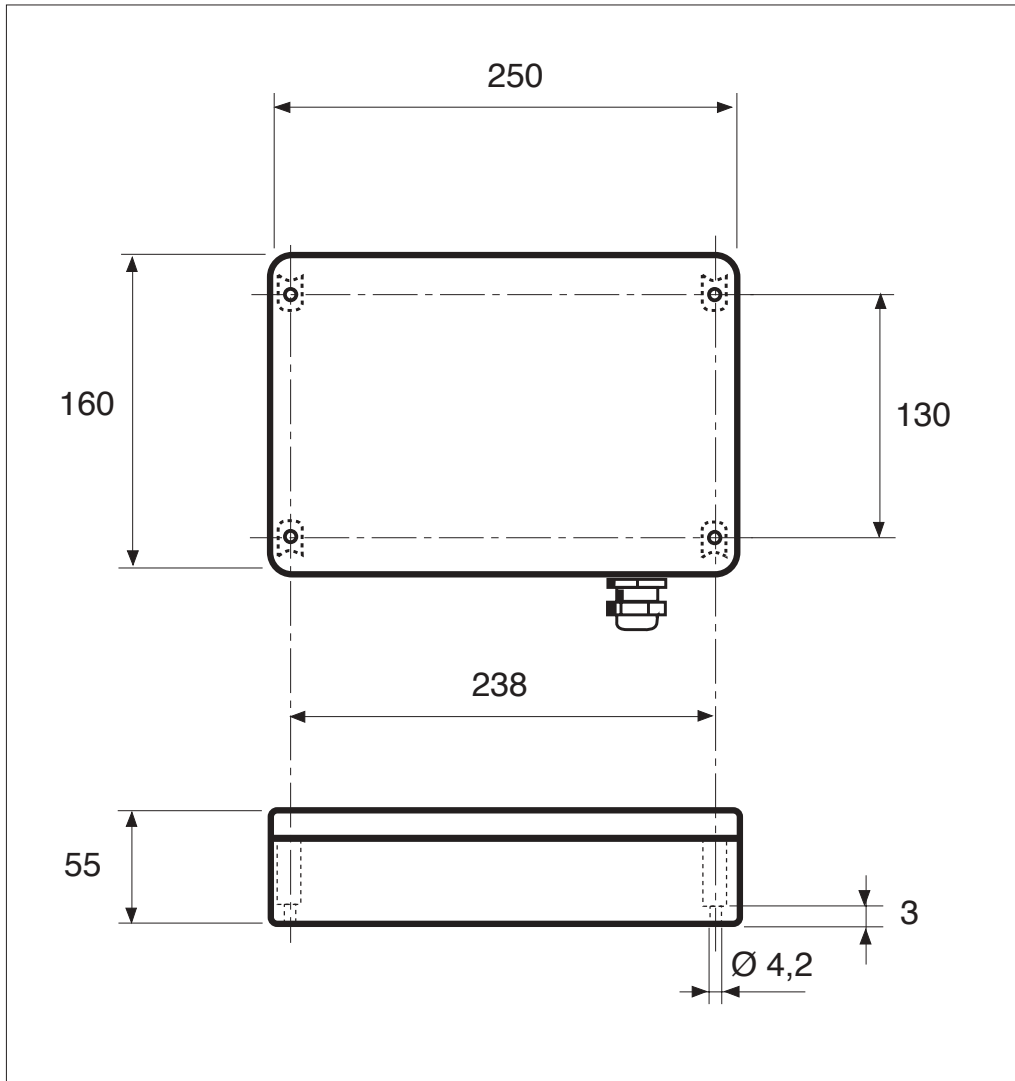
### 2.3 Connection of the terminal box (example)

- Use commercial junction box
- Extension cable in accordance with national installation guidelines (color light blue, 4x0.14 mm<sup>2</sup>, shielded, maximum distance scale – interface adapter 100 m)
- Ensure direct through connection of cable conductors and shielding



### 3. Dimensions (mm)

#### 3.1 Interface adapter







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Subject to technical changes and to the availability  
of the accessories supplied with the instruments.

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