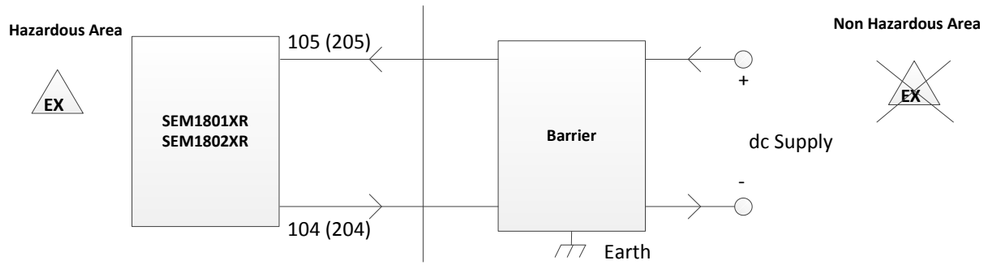
4. Install assembly

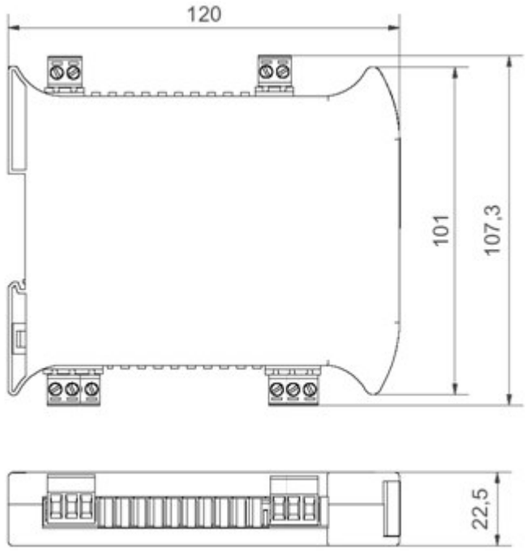
Care must be taken to ensure the SEM1801XR SEM1802XR is located to ensure the ambient temperature does not exceed the specified operating temperature as specified in the "TEMPERATURE CLASS" table.

5. Wire (4 to 20) mA Loop

Ensure all other aspects of the installation comply with the requirements of this document, paying particular attention to the loop barrier. The (4 to 20) mA loop is connected as follows:-



Mechanical Detail



User instruction for SEM1801XR SEM1802XR electrical apparatus for use in explosion-hazardous area. Important, read and understand this document before any installation.

ATEX Instructions

For safe installation of the SEM1801XR SEM1802XR in hazardous areas the following instructions must be observed. The transmitter must be installed by competent personnel, who are familiar with national and international laws, directives and standards that apply to their region. For installation in European Economic Area (EEA) member countries users must follow requirements for electrical equipment for use in potentially explosive atmospheres, e.g. EN60079_14 & EN60079_17. This instruction sheet describes installation, which conforms with BS EN60079_14 & BS EN60079-17. Important - Particular attention must be paid to the section titled "Special conditions for safe use", failure to comply to this requirement will result in an unsafe system.
The SEM1801XR SEM1802XR has been issued with a EC-type examination certificate, confirming compliance with European ATEX directive 94/9/EC for the following specification :-

Product Information

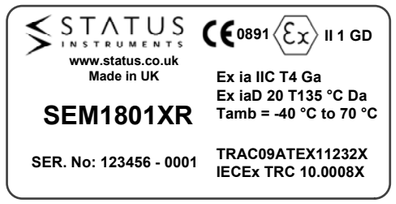
Following Information is printed on the product label

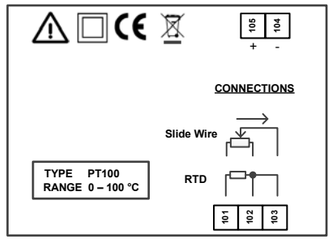
Manufacturer	Status Instruments Ltd
Type Numbers	SEM1801XR, SEM1802XR
Certificate Ref	TRAC09ATEX11232X IECEx TRC 10.0008X

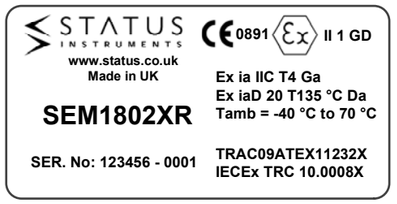
Zones

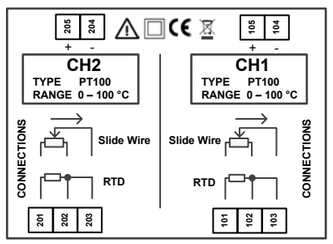
Area Classification		Zone Criteria for Application Atmosphere
Gases	Dusts	
Zone 0	Zone 20	Present continuously or for long periods (> 1000 hrs per annum)
Zone 1	Zone 21	Likely to occur in normal operation occasionally (> 10 to < 1000 hrs per annum)
Zone 2	Zone 22	Unlikely to occur in normal operation (> 10 hrs per annum)

Classification









Working Parameters

	TERMINALS		TERMINALS SEM1802XR	
	104,105	101,102,103	204,205	201,202,203
Ui	30 V	1.5 V	30 V	1.5 V
Ii	100 mA	-	100 mA	-
Pi	750 mW	-	750 mW	-
Ci	0	1.5 uF	0	1.5 uF
Li	0	0	0	0
Uo	-	5 V	-	5 V
Io	-	2 mA	-	2 mA
Po	-	65 mW	-	65 mW

Additional Information

EMC	BS EN 61326-1 (Sensor wires max 3 metres to comply.)
Enclosure	Grey with Blue Terminals

STATUS INSTRUMENTS

Special conditions for safe use

1. For gas applications, the SEM1801XR &SEM1802XR temperature transmitters must be mounted in a metallic enclosure rated for IP54 or an Atex/IECEx approved enclosure rated for IP54 and located in an area where the enclosure will not be subject to impact or friction.

2. For dust applications, the SEM1801XR and SEM1802XR temperature transmitters must be mounted in a suitably ATEX or IECEx certified enclosure appropriate for the zone of end use.

3. The equipment shall only be configured by means of the USB connection outside the hazardous area.

4. If the equipment is mounted in an enclosure with separate IS circuits, appropriate segregation shall be provided in accordance with IEC 60079-11 Clause 6.2.1.

5. Only suitable for connection to RTD temperature sensors or slide wire resistance devices or a simple apparatus. They shall conform to the requirements for simple apparatus as defined in IEC 60079-11 Clause 5.7 and shall pass a dielectric strength test in accordance with IEC 60079-11 Clause 6.3.12.

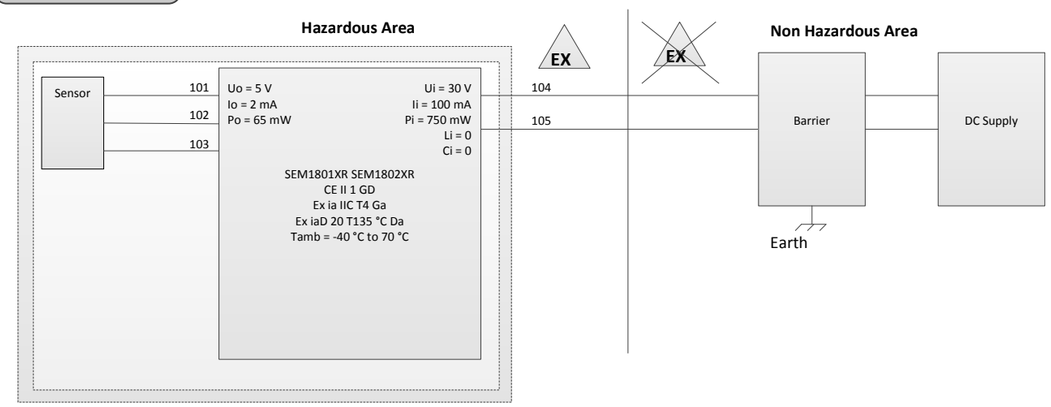
6. The ambient temperature range of the enclosure will limit the permitted ambient range of the overall equipment. Refer to enclosure certification.

Maintenance

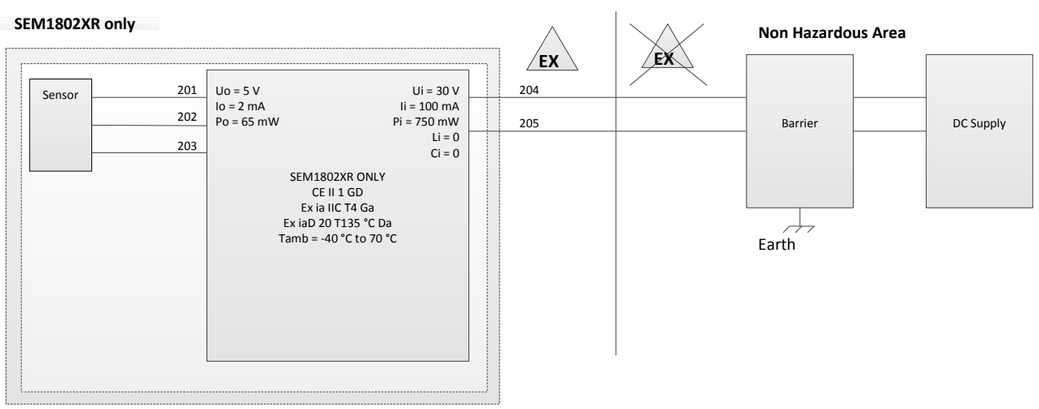
The appropriate regulations concerning maintenance, repair and testing must be observed. In particular, all parts on which explosion protection depends must be checked during maintenance. The transmitter must never be configured in the hazardous area, the device must be removed and taken to a non hazardous area for configuration.
The enclosure used to house the device must be cleaned regularly to prevent build up of excessive dust layers.
The apparatus contains no user serviceable adjustable, replaceable parts. No attempt should be made to repair a device, all units must be returned to the manufacturer for repair or replacement. Attempted service or replacement of parts may invalidate the explosive protection features of the SEM1801XR,SEM1802XR.

Electrical Detail

REFER TO CONDITIONS FOR SAFE USE



SEM1802XR only



Sensor wires must be isolated from earth breakdown voltage 500 V dc

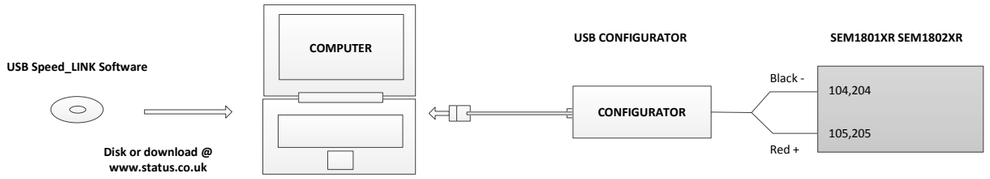
Installation

REFER TO CONDITIONS FOR SAFE USE

For SEM1801XR and SEM1802XR specification please refer to product data sheet. Installation is normally performed in the following order.

1. Configuration
2. Mount Transmitter onto rail
3. Wire Sensor
4. Install Assembly
5. Wire (4 to 20) mA Loop

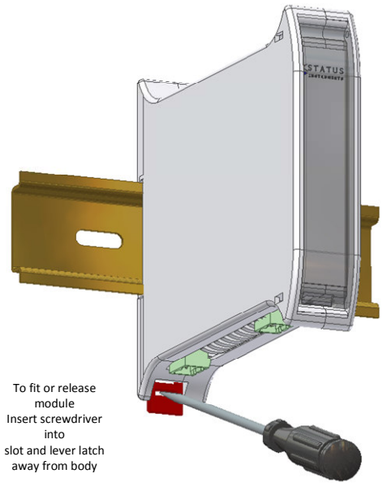
1. Configuration



Follow the instructions provided by software menus, refer to SEM1801XR SEM1802XR data sheet for list of configurable parameters. Factory default PT100 range (0 to 100) °C upscale burnout

2. Mount Transmitter

The device must be installed with adequate protection from moisture and corrosive atmospheres. Refer to "special conditions for safe use" section of this user guide for information on enclosure IP rating. Observe the "special conditions for safe use " instruction.



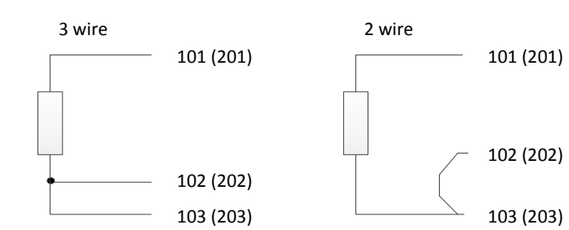
Enclosure

Style	DIN Rail Mount
Material	Blend PC/ABS self extinguishing
Terminals	Screw terminal
Cable	2.5 mm Max
Colour	Grey terminals Blue

3. Wire sensor.

Sensor connections are as follows, to maintain BS EN61326 compliance sensor wires must be less than 3 metres. All sensor connections must be isolated from ground.

Sensor RTD or Resistance 10 Ω to 10 KΩ



Slide Wire (1 to 100) Kohm