

2 Safety instructions

2.1 Important Information

This unit may only be used if:

- the product is being used under the conditions described in the operating- and installation instructions, used according to the nameplate and for applications for which it is intended. any unauthorized modifications to the device will void the warranty provided by Bühler Technologies GmbH,
- the limits in the data sheet and the instructions must be observed,
- the temperature switch is being operated on an intrinsically-safe circuit,
- the controller itself is installed outside the explosive area,
- the handle including O-ring are installed at a suitable ambient temperature range and filter (where applicable),
- monitoring equipment / protection devices must be connected correctly,
- service and repairs not described in these instructions is performed by Bühler Technologies GmbH,
- using genuine replacement parts.

Regulation IEC/EN 60079-14 must be observed when erecting electrical systems in explosive areas.

Additional national regulations pertaining to initial operation, operation, maintenance, repairs and disposal must be observed.

These operating instructions are a part of the equipment. The manufacturer reserves the right to change performance-, specification- or technical data without prior notice. Please keep these instructions for future reference.

Signal words for warnings

DANGER	Signal word for an imminent danger with high risk, resulting in severe injuries or death if not avoided.
WARNING	Signal word for a hazardous situation with medium risk, possibly resulting in severe injuries or death if not avoided.
CAUTION	Signal word for a hazardous situation with low risk, resulting in damaged to the device or the property or minor or medium injuries if not avoided.
NOTICE	Signal word for important information to the product.

Warning signs

These instructions include the following warnings:

	General warning sign		General mandatory sign
	Voltage warning		Unplug from mains
	Warning not to inhale toxic gases		Wear respiratory equipment
	Warning of corrosive substances		Wear a safety mask
	Warning of explosion hazard		Wear gloves

2.2 General Hazard Warnings

The maximum surface temperatures of the probes also vary based on operating conditions (steam temperature, sample gas inlet temperature, ambient temperature, fluid flow rate). When used in **explosive areas, also particularly note** the related hazard warnings.

The device may only be installed by qualified specialist personnel who are familiar with the safety requirements and associated risks. In addition, through their professional training, they possess knowledge of the relevant standards and regulations.

Be sure to observe the safety regulations relevant to the installation location and the generally accepted rules of technology. Prevent malfunctions and thereby avoid personal injury and damage to property.

The operator of the system must ensure that:

- Safety instructions and operating manuals are available and observed,
- the respective national accident prevention regulations are observed,
- the permissible data and operational conditions are maintained,
- protective devices are used and the required maintenance is performed,
- the device is disposed of according to the law,
- valid national installation regulations are observed,

Maintenance, Repair

Please note during maintenance and repairs:

- Repairs to the unit must be performed by Bühler authorised personnel.
- Only perform conversion-, maintenance or installation work described in these operating and installation instructions.
- Always use genuine spare parts.
- Do not install damaged or defective spare part. If necessary, visually inspect prior to installation to determine any obvious damage to the spare parts.

Always observe the applicable safety and operating regulations in the respective country of use when performing any type of maintenance.

NOTICE



Accessories may limit critical operating parameters of the base unit

Adding accessories may limit critical operating parameters. Ambient temperatures, zone classifications, explosion groups, temperature classes or chemical resistances of accessories may vary from the base unit. Always include all technical data in the operating instructions and data sheets of all components in the safety assessment.

NOTICE



When used in explosive areas

Regulation IEC/EN 60079-14 must be observed when erecting electrical systems in explosive areas. Additional national regulations pertaining to initial operation, operation, maintenance, repairs and disposal must be observed.

DANGER



Electrical voltage

Electrocution hazard.

- a) Disconnect the device from power supply.
- b) Make sure that the equipment cannot be reconnected to mains unintentionally.
- c) The device must be opened by trained staff only.
- d) Regard correct mains voltage.



DANGER**Toxic, corrosive gas/condensate**

Sample gas/condensate may be hazardous to health.

- a) If necessary, ensure a safe gas/condensate discharge.
- b) Always disconnect the gas supply when performing maintenance or repairs.
- c) Protect yourself from toxic/corrosive gasses/condensate when performing maintenance. Wear appropriate protective equipment.

**DANGER****Explosion hazard**

Life and explosion risk may result from gas leakage due to improper use.

- a) Use the devices only as described in this manual.
- b) Regard the process conditions.
- c) Check tubes and hoses for leakage.

DANGER**Danger to life and explosion during installation and maintenance**

The unit must not be worked on (assembly, installation, maintenance) in explosive atmospheres.

DANGER**Use in explosive areas**

Flammable gasses could ignite or explode. Avoid the following hazard sources:

Application area!

Never operate the gas probe outside the specifications. Extracting gases or gas mixtures which are also explosive in the absence of air is prohibited.

Electrostatic charge (sparking)!

The equipment may only be used where normal operating conditions do not frequently produce flammable, electrostatic discharge.

Always clean plastic housing parts and decals with a damp cloth.

Sparking!

Protect the M3 connectors from external blows.

Flame propagation!

If the process holds a risk of flame propagation, install a flame arrestor.

Adiabatic compression (explosion hazard)

Adiabatic compression may cause high gas temperatures during blowback. **Never blowback if gases are explosive. Only use nitrogen (inert gas) to blowback flammable gas.**

2.3 Special conditions for safe use

The temperature switch must be operated intrinsically safe. See parameters in chapter "Connecting the Temperature Switch".

2.4 Ambient Temperature range of the equipment

The ambient temperature range may be limited based on the version. Please note the Ambient temperature ranges under "Technical Data".