Installation and operating instructions





Lange Strasse 151 72535 Heroldstatt-Sontheim Germany Telefon: +49 (0)7389-90920 Telefax : +49 (0)7389-909240 Homepage: <u>www.engler-msr.de</u> E-Mail: info@engler-msr.de



About us

Congratulations and thank you for choosing Engler and purchasing one of our products. Since 1973, we at Engler have stood for cross-industry skill and innovation in level, temperature and pressure measurement technology.

We develop, produce and sell float switches, temperature sensors, temperature display and analysis devices, as well as control equipment. We offer customers a one-stop shop for everything they need, all in proven German quality.

Our products are used in various industrial applications such as, from water treatment, food and medicine to hydraulics and lubrication systems. In short, wherever customers need to monitor temperatures or fill levels in containers for various fluids.

The UniEx device series is our response to the increasing and increasingly important demand for devices in Zone 0, 1 and 2 explosive areas.

UniExSS – float switch with optional temperature measurement UniExM – mini float switch with optional temperature measurement UniExT – temperature switch and sensor UniExANM – analogue level measurement system

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Introduction

These installation and operating instructions will help you correctly install, operate and service the device.

They expand on the device description and must be observed at all times.

Not observing the installation and operating instructions is grossly negligent and risks damage to persons and objects for which Engler will accept no liability.

Read these instructions carefully and in full before installing and commissioning the device.

Special versions and applications are only mentioned briefly in this document, and are described separately.

All devices are checked carefully before delivery to ensure safety and functionality.

Check the device for potential damage before installing it. Do not use any defective or damaged devices.

Please contact Engler if you detect any defects. Please provide us with a description of the fault, along with the device type, production date and, if necessary, the serial number.

The guarantee shall not be valid in the event of repairs that were carried out without the explicit authorisation of Engler. In the event of a complaint, please first contact Engler to receive a complaint number and further information about the procedure.

You can find information about how to configure and operate the Engler UniExSS, UniExM, UniExANM and UniExT device groups in the respective instruction documents and data sheets.

The ATEX certification for the Engler UniExSS, UniExM, UniExANM and UniExT device groups can be found in the EC type examination certificate BVS 15 ATEX E 086 X according to Directive 94/9/EC, and was carried out by the notified body (inspection body) DEKRA EXAM.

Intended use

Float switches may only be used to monitor the fill level of fluid media in open or pressurised containers. The medium must not display any highly adherent contamination or coarse components, and must not crystallise.

Ensure that the float switch can move freely on the guide tube at all times.

The device works according to the Archimedes buoyancy principle. The buoyancy of the float switch depends on the medium's density and must therefore be designed for the fluid to be measured. (A density of 1 for water is standard)

Ensure that any components that come into contact with the medium, such as the guide tube and float switch, have a degree of chemical resistance that is suitable for the medium. Please refer to the technical data for the permitted temperatures and pressures. Please contact Engler if you are unsure of the medium compatibility. You must obtain advance written approval from Engler should you wish to use the device in a medium for which it is not intended and authorised by Engler. This may damage the device, resulting in the voiding of any warranty or guarantee claims.

Functional principle:

The float switch contains a magnet, whose magnetic field switches the reed contacts in the guide tube according to the fill level height. Depending on the reed contact used, this operates a floating NC, NO or changeover function.

The device can also be fitted with a temperature switch that opens or closes the circuit once the specific nominal temperature is reached.

Measuremant in container:

If installed on a tank, protect the guide tube against mechanical forces that could arise while filling, draining or stirring.

<u>Measurement in displacement or bypass</u> <u>vessel:</u>

If it is not possible to install the device from above, for example if there is an agitator inside the container, there is a bypass vessel for side mounting.





Installation, commissioning and operation

Engler ATEX devices are designed to operate safely and according to the latest state of the art. They meet the required specifications and EC directives. Residual risks remain, however. Using the ATEX devices incorrectly or not in line with the intended use can indirectly lead to hazards, such as an overflow of medium caused by incorrect installation or setting. As a result, only trained and instructed specialists who are authorised by the company operating the plant may perform installation, electrical connection, commissioning, operation and maintenance on these measuring systems. The specialist personnel must have read and understood the operating instructions and must follow the information contained within. Repairs and alterations may only be carried out on the device if the operating instructions expressly permit them or if Engler grants express authorisation. Engler shall accept no liability for damages caused by non-observance of instructions.

Operational safety

Always ensure operational and process safety while performing parametrisation, testing and maintenance work on the device. Alternative monitoring measures may be necessary.

Explosive safety

Observe the relevant national standards and regulations when using the float switches in explosive areas. Engler ATEX devices are delivered with separate ATEX documents that expand upon these operating instructions. Always observe the installation specifications, connection values and safety information contained in these documents.

- Ensure that specialist personnel are suitably trained.
- Observe the metrological and safety requirements of the measurement points.
- The operating company is responsible for correct installation and operation.

Type plate for ATEX device

The type plate contains the following technical data:



Informationen auf dem Typschild eines UniEx-Schwimmerschalters

Product overview

The product overview helps identify the alphanumerical order code (see type plate: order code).

Float switch type: UniExSS

Typ UniEx.SS	х	*	х	х	х	х	х	х	*	х	*
	Not EX relevant	а	Not EX relevant						b	Not EX relevant	С

a Guide tube diameter

12 = 12mm

b Process connection configuration

AK = with cable

AS = with connector

AGU = with terminal + unpainted connection housing

AGN = with terminal + painted connection housing

AGA, AGC =with ceramic terminals + painted connection housing

AGB, AGD = with ceramic terminals + unpainted connection housing

c Temperature switch / sensor

T60O = NC (60 °C) T60S = NO (60 °C) Up to T180S / T180O available 5° steps Pt102 = PT100 2wire Pt103 = PT100 3wire Pt104 = PT100 4wire Pt1002 = PT1000 2wire

Pt1003 = PT1000 3wire

Pt1004 = PT1000 4wire

Float switch type: UniExM

X X	х	*	Х	х	х	х	х	*	х	х	*
Type Officx.ivi	Not EX relevant	а	not Ex	releva	nt			b	not Ex rele	evant	С

a Guide tube diameter

8 = 8mm

b Electrical connection

AK = with cable

AS = with connector

AGU = with terminals + unpainted connection housing

AGN = with terminals + painted connection housing

c Temperatur switch / sensor

T60O = NC (60 °C)

- T60S = NO (60 °C)
- T65O = NC (65 °C)
- $T65S = NO (65^{\circ}C)$

T700 = NC (70 °C) T70S = NO (70 °C) T750 = NC (75 °C) T75S = NO (75 °C) T850 = NC (85 °C) T85S = NO (85 °C) Pt102 = PT100 2wire Pt103 = PT100 3 wire Pt104 = PT100 4 wire Pt1003 = PT1000 wire Pt1004 = PT1000 wire

Float switch type: UniExANM

Type UniEx.ANM	х	*	х	х	*	x	x	*
	not Ex relevant	а	not Ex relevar	b	not Ex relev	vant	С	

a Guide tube diameter

8 = 8mm; 12 = 12mm;

b Electrical connection

AK = with cable

AS = with connector

AGU = with terminals + unpainted connection housing

AGN = with terminals + painted connection housing

c Temperature sensor

Pt102 = PT100 2wire

Pt103 = PT100 3 wire

- Pt104 = PT100 4 wire
- Pt1002 = PT1000 2 wire
- Pt1003 = PT1000 3 wire
- Pt1004 = PT1000 4 wire

Schwimmerschalter Typ: UniExT

Typ UniEx.T	х	*	х	*	х	*
	not Ex relevant	а	not Ex relevant	b	not Ex relevant	С

a Guide tube diameter

8 = 8mm; 12 = 12mm

b Electrical connection

С

- AK = with cable AS = with connector AGU = with terminals + unpainted connection housing AGN = with terminals + painted connection housing **Temperatur switch / sensor** T600 = NC (60 °C) T60S = NO (60 °C) T650 = NC (65 °C) T65S = NO (65 °C) T700 = NC (70 °C) T70S = NO (70 °C) T750 = NC (75 °C) T75S = NO (75 °C) T850 = NC (85 °C)
 - T85S = NO (85 °C) Pt102 = Pt100 2 wire
 - Pt103 = PT100 3 wire
 - Pt104 = PT100 4 wire
 - Pt1002 = PT1000 2 wire
 - Pt1003 = PT1000 3 wire
 - Pt1004 = PT1000 4 wire

Application in the ex zone

The ATEX devices are classified as "simple" electrical equipment as per EN 60079-0:2012 para. 12.2. This is because they have no energy sources or stores of their own, and there is clear information about the device's pressure and heating limits (-20°C \leq T \leq +60°C and 80 kPa to 110 kPa/0.8 bar to 1.1 bar).

All Engler ATEX devices correspond to the Ex i "intrinsically safe" ignition protection type according to EN 60079-11. They must be switched and operated from a certified intrinsically safe circuit, e.g. from an associated piece of electrical equipment (so-called Ex barrier) that is installed in the "safe area".

You may only use explosion-proof devices that are explicitly marked as devices in the corresponding ex zones in the explosive area. Engler devices in the UniExSS, UniExM, UniExANM and UniExT device groups are suitable for use in explosive areas.

Without electrical accessories (Zone 2)

In the basic version, the devices are simple electrical equipment without ignition sources or energy stores of their own. They meet the requirements of DIN EN 13463-1 and can be used in Zone 2/22 explosive areas.

As the device has no energy sources of its own that could lead to an increase in temperature, the maximum surface temperature is based on the medium temperature.

Ensure regular cleaning if using in areas at risk of dust explosions, in order to prevent deposits.

In ex area Zone 1 and 0 Identification:

Type:

UniEx.SS x. *.x.x.x.x.x.AK.x.* UniEx.M x. *.x.x.x.AK.x.x.* UniEx.ANM x. *.x.x.AK.x.x.* UniEx.T x. *.x.AK.x.* UniEx.SS x. *.x.x.x.x.AS.x.* UniEx.M x. *.x.x.x.AS.x.x.* UniEx.ANM x. *.x.x.AS.x.x.* UniEx.T x. *.x.AS.x.*



II 1/2 G Ex ia IIC T3...T6 Ga/Gb II 1/- D Ex ia IIIC T* °C Da

Туре

UniEx.SS x. *.x.x.x.x.x.AGN.x. * UniEx.SS x. *.x.x.x.x.x.AGA.x.BT18* UniEx.SS x. *.x.x.x.x.x.AGC.x. BT18* UniEx.M x. *.x.x.x.x.AGN.x.x.* UniEx.ANM x. *.x.AGN.x.x.* UniEx.T x. *.x.AGN.x.* € II 1/2 G Ex ia IIC T3...T6 Ga/Gb

Туре

UniEx.SS x. *. *. x. x. x. x. AGU.x. * UniEx.SS x. *. x. x. x. x. x. AGB.x. BT18* UniEx.SS x. *. x. x. x. x. AGD.x. BT18* UniEx.SS x. *. x. x. x. x. AGD.x. BT18* UniEx.M x. *. *. x. x. AGU.x. * UniEx.M x. *. *. x. x. AGU.x. * UniEx.ANM x. *. *. x. x. AGU.x. * UniEx.ANM x. *. *. x. AGU.x. * UniEx.T x. *. *. AGU.x. * UniEx.T x. *. *. AGE.x. * (i) 1/2 G Ex ia IIC T3...T6 Ga/Gb (i) 1 D Ex ia IIIC T* °C Da

Parameters:

VatriantsUniEx.SS x.*.*.x.x.x.x.AGU.x.*
UniEx.SS x.*.x.x.x.x.AGB.x. BT18*
UniEx.SS x.*.x.x.x.x.AGD.x. BT18*
UniEx.SS x.*.x.x.x.AGD.x. BT18*
UniEx.SS x.*.x.x.x.AGU.x.*
UniEx.M x.*.*.x.x.AGU.x.x.*
UniEx.ANM x.*.*.x.x.AGU.x.x.*
UniEx.ANM x.*.*.x.x.AGU.x.x.*
UniEx.T x.*.*.AGU.x.*
UniEx.T x.*.*.AGU.x.*
For use in areas with category 1D requirements.

Variants with a PT100 or PT1000 resistor 2-wire, 3-wire, 4-wire measuring circuit.

Maximum input voltage	U_i	DC 30 V
Maximum input current	I_i	100 mA

Maximum input power	Pi
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Effective internal capacitance C_i Effective internal inductance L_i According to the following table Negligible Negligible

Power P _i	Ambient temperature T _a at connection head	max. surface temperature T at connection head	max. surface temperature T at measuring tip
750 mW)*	- 20 °C to + 40 °C	45 ℃	Process temperature + 27 K
650 mW)*	- 20 °C to + 70 °C	75 °C	Process temperature + 23 K
550 mW)*	- 20 °C to + 100 °C	105 °C	Process temperature + 20 K

)* Total when using two PT100 or two PT1000 resistors

Variants with temperature switch

Maximum input voltage	U_i
Maximum input current	I_i
Maximum input power	P_i
Effective internal capacitance	<i>Ci</i>
Effective internal inductance	Li

DC 30 V 100mA According to the following table Negligible Negligible

Power P _i	Ambient temperature range T _a at connection head	max. surface temperature T at connection head	max. surface temperature T at measuring tip
750 mW	- 20 °C bis + 40 °C	45 ℃	Process temperature + 10 K
650 mW	- 20 °C bis + 70 °C	75 °C	Process temperature + 10 K
550 mW	- 20 °C bis + 100 °C	105 °C	Process temperature + 10 K

Variants

UniEx.SS x.*.x.x.x.x.x.AK.x.*, UniEx.M x.*.x.x.x.x.AK.x.x.*, UniEx.ANM x.*.x.x.AK.x.x.*, UniEx.T x.*.x.AK.x.*, UniEx.SS x.*.x.x.x.x.x.AS.x.*,

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UniEx.M x.*.x.x.x.AS.x.x.*,
UniEx.ANM x.*.x.AS.x.x.*,
UniEx.T x.*.x.AS.x.*,
UniEx.SS x.*.*.x.x.x.AGU.x.*
UniEx.SS x.*.x.x.x.AGA.x. BT18*
UniEx.SS x.*.x.x.x.x.AGC.x. BT18*
UniEx.M x.*.*.x.x.AGU.x.x.*
UniEx.ANM x.*.*.x.X.AGU.x.x.*
UniEx.T x.*.*.AGU.x.*
For use in areas with category 1/2G requirements
```

Variants with PT100 or PT1000 resistor

2-wire, 3-wire, 4-wire or 2x2-wire, 2x3-wire, 2x4-wire measuring circuit

U_i	DC	30 V
I _i	100 mA	
P_i	According	to the following table
C_i	Capacitanc	e of the fixed wire
Li	Inductance	of the fixed wire
	U _i I _i P _i C _i L _i	UiDCIi100 mAPiAccordingCiCapacitandLiInductance

The following applies to the type UniEx.SS x.*.x.x.x.x.x.AK.x.*, Type UniEx.M x.*.x.x.x.X.AK.x.*, Type UniEx.ANM x.*.x.X.AK.x.x.* aand Type UniEx.T x.*.x.AK.x.*variants

Capacitance	C _c	160	pF/m
Inductance	L _c	0,7	μH/m

Ambient temperature range of the connection head or connection wire: -20 °C to +70°C for temperature class T3 and T4 -20 °C to +55°C for temperature class T5 -20 °C to +40°C for temperature class T6

Permitted process temperature in °C, depending on the maximum input power P_i and the temperature class:

Temperature class	$P_i = 750 \ mW^*$)
T3	118
T4	103
T5	73
Т6	53

)* Total when using two PT100 or PT1000 resistor

Take suitable measures, e.g. through the choice of tube length, to ensure that the temperature of the connection head or connection wire is decoupled from the process temperature.

Variants with temperature switch

Maximum input voltag	ge	U_i	DC	30 V
Maximum input curre	nt	I_i		100 mA
Maximum input powe	r	P_i		According to the following table
Effective internal capa	citance	C_i		Capacitance of the fixed wire
Effective internal induc	ctance	Li		Inductance of the fixed wire
The following applies	to the typ	be Ur	niEx.SS 2	x.*.x.x.x.x.x.x.AK.x.*, Type UniEx.M
x.*.x.x.x.x.x.AK.x.x.*,	Type U	niEx	.ANM x	.*.x.x.AK.x.x.* and Type UniEx.T
x.*.x.AK.x.*variants/				
Capacitance	Cc		160	pF/m
Inductance	L _c		0,7 μŀ	l/m

Ambient temperature range of the connection head or connection wire: -20 °C to +70°C for temperature class T3 and T4 -20 °C to +55°C for temperature class T5 -20 °C to +40°C for temperature class T6

Permitted process temperature in °C, depending on the maximum input power Pi and the temperature class:

Temperature class	Pi = 800 mW
T3	116
T4	102
T5	72
T6	52

Variants type UniEx.SS x.*.x.x.x.x.x.AK.x.*, Type UniEx.M x.*.x.x.x.AK.x.x.*, Type UniEx.ANM x.*.x.x.AK.x.x.*, Type UniEx.T x.*.x.AK.x.*, Type UniEx.SS x.*.x.x.x.AS.x.*, Type UniEx.M x.*.x.x.x.AS.x.x.*, Type UniEx.ANM x.*.x.x.AS.x.x.* and Type UniEx.T x.*.x.AS.x.*, for use in areas with category 1/- D-requirements

Variants with a PT100 or PT1000 resistor

2-wire, 3- wire, 4- wire or 2x2- wire, 2x3- wire, 2x4- wire measuring circuit

Maximum input voltage	U_i	DC	30	V
Maximum input current	I_i		100	mA
Maximum input power	P_i	According to the following table		ing table

Power P _i	Ambient temperature range T _a at connection head	Max. surface temperature T at connection head	Max. surface temperature T at measuring tip
750 mW)*	- 20 °C to + 40 °C	45 ℃	Process temperature + 27 K
650 mW)*	- 20 °C to + 70 °C	75 °C	Process temperature + 23 K
550 mW)*	- 20 °C to + 100 °C	105 °C	Process temperature + 20 K

)* Total when using two PT100 or two PT1000 resistors

As the fixed wire is outside the explosive area, there are no values for effective internal capacitance C_i and effective internal inductance L_i .

Variants with one temperature switch				
Maximum input voltage	U_i	DC	30	V
Maximum input current	I_i		100	mA
Maximum input power	P_i	Accord	ling to the followi	ng table

Power P _i	Ambient temperature range T_a at connection head	Max. surface temperature T at connection head	Max. surface temperature T at measuring tip
750 mW	- 20 °C + 40 °C	45 ℃	Process temperature + 10 K
650 mW	- 20 °C to + 70 °C	75 ℃	Process temperature + 10 K
550 mW	- 20 °C to + 100 °C	105 °C	Process temperature + 10 K

As the fixed wire is outside the explosive area, there are no values for effective internal capacitance Ci and effective internal inductance Li.

The requirement for a separating wall between Zone 0 and Zone 1, as specified in DIN EN 60079-26, is fulfilled by welding the process connection and guide tube, and completely encapsulating the device. This provides effective and compliant separation between EPL "Ga" (Zone 0) and EPL "Gb" (Zone 1).

Please refer to the device specification, the data sheet and the type examination certificate for information about the permitted temperature ranges and relationships between the temperature class, the permitted ambient temperature and permitted media temperature.

Installation

Only trained specialist personnel may perform installation. Never change the technical properties of the ATEX device.

Install Engler float switches via a flange or thread depending on the respective variant. Ensure that the point of installation is suitable for vertical installation with no more than

 $\pm 30^{\circ}$ deviation from the vertical.

Never install the ATEX device near container filling pipes and agitators, as the medium flows could lead to incorrect measurements and damage the device.

Please ensure sufficient space for removing the device. Take the length of the measuring unit into account here. Observe the limit values for temperature and humidity at the point of installation. Avoid corrosive atmospheres.



High-temperature-compatible ATEX devices in the UniEx.SS

x.**.x.x.x.x.x.AGx.x.* BT18 series must be connected using a corresponding cable that is suitable for the devices' temperature range

If using flanged variants, always use the fastening elements (bolts and nuts) that correspond to the flange. Only use seals that are suitable for the pressure, temperature and media compatibility. The roughness of the flange sealing faces must be suitable for the intended seals.

Remove the float when installing in openings that are smaller than the float's diameter. Mark the position of the collet and the installation direction of the float with "UP" in advance. For type **UniEx** Engler devices, always reinsert the original polyvinylidene fluoride (PVDF) or PTFE washer between the float and the collet below.

To ensure correct installation and operational safety, always check thoroughly for leaks under a simulation of actual process conditions. Perform electrical connection according to the wiring diagram. Observe the technical data. Provide all consumers with an appropriately designed protective circuit in line with VDE/EN. Connect the protective earth and equipotential bonding connection in line with specifications. If the device does not have a separate protective earth or equipotential bonding connection (such as connection 207, 208, 214), equipotential bonding is provided via the metallic housing of the process connection. The operating company is responsible for the conducting connection to the main potential.



Commissioning/function testing

Switch on the supply voltage, fill the container under supervision and check that the switching points are functioning properly.

The functional check can also be performed manually by moving the float. When doing so, ensure that this check does not trigger any unwanted processes!

(A float switch works without current and is potential free)

Make sure to include the Engler ATEX device in any pressure check on the container with the complete system.

Observe the electrical and thermal data of the Engler ATEX devices, as well as the special conditions of the EC type examination certificate.

Power P _i	Ambient temperature range T _a at connection head	Process temperature	T* °C (for the type plate)
750 mW)*	- 20 °C to + 40 °C	180°C	177
650 mW)*	- 20 °C to + 70 °C	180°C	173
550 mW)*	- 20 °C to + 100 °C	180°C	170

For dust applications with a PT100 or PT1000:

For dust applications with a temperature switch

Power P _i	Ambient temperature range T _a at connection head	Process temperature	T* °C (for the type plate)
750 mW)*	- 20 °C to + 40 °C	180°C	160
650 mW)*	- 20 °C to + 70 °C	180°C	160
550 mW)*	- 20 °C to + 100 °C	180°C	160

Maintenance

Engler ATEX devices require no maintenance and suffer no wear when used for the intended purpose. To ensure the float switch is functioning correctly, perform a visual inspection as part of any plant review. The ATEX device may require cleaning.

The reed contacts used in the Engler ATEX device type (UniEx)ANM have a cycle of several million switching cycles. The float is the only moving part of the device. This simple design has ensured that the float switches have worked reliably for many years.

Operation with isolating amplifier

Engler ATEX devices may only be powered and operated using certified, intrinsically safe circuits from associated electrical equipment. The ATEX-certified isolating amplifiers or supply devices, which Engler

offers as either a single or multi-channel variant, transmit the signals of the float switch from the explosive areas in Zones 0/1 for gas ex protection and Zones 20/21 for dust ex protection.

The transducers can be sensors as per the NAMUR guidelines or mechanical contacts. The control circuit is monitored for interruption and short circuit.

The intrinsically safe input circuit of an isolating amplifier or supply devices (associated electrical equipment), as certified by a notified body (inspection body) as per directive 94/9/EC, meets DIN EN 60079-11 and has the ignition protection type "Ex ia IIC". It must be safely electrically isolated from the output circuit and the mains network

To ease installation, the devices are designed with screwed and/or removable terminals. Engler offers a variety of isolating amplifiers and/or supply devices for measurements in explosive areas.



Hazard information

- Ensure that the operating pressure and temperature are safeguarded according to the information on the type plate and in the operating instructions.
- In the event of a fault, the switch may carry live voltage on ATEX devices with connection cable without protective earth connection.
- Contact may cause injury or death.
- As a result, always install ATEX devices so that they are connected to the equipotential bonding.
- Never exceed the maximum electrical power for the ATEX device group, as indicated on the type plate and in the operating instructions.
- Exceeding this maximum value may destroy the reed contacts.
- If a greater switching capacity is required, install a contact protection relay to ensure safe operation (for UniEx devices, this only applies to Zone 2. Zone 0 and 1 may only use an Ex barrier).
- In the event of inductive loads, protect the ATEX device via a circuit with RC element or a freewheeling diode (only use information from Engler in this regard).
- When connecting to a process control system with capacitive input, arrange a series protective resistor to limit peak current (only use information from Engler in this regard).
- Never expose magnetic float switches to mechanical loads, vibrations and impacts. Devices for high temperature ranges that have ceramic terminals in particular require protection against vibration.
- Provide fire protection systems. If the ATEX device is damaged by an external fire, it will not be possible to control and monitor the plant.
- IMPORTANT: Non-observance of the hazard information listed above may lead to damage to the ATEX device and therefore malfunctions in the downstream controller. This may result in damage to persons and objects. Non-observance is grossly negligent and Engler will accept no liability for damages that occur as a result.

Storage temperature

The storage temperatures are identical to the ambient temperature limits.

Climate class

Weather-proofed and/or unheated locations, class C as per DIN IEC 654 part 1

CE mark

The float switches meet the legal requirements of the EU directives for the CE mark: EC Ex Directive 94/9/Ec, EC EMC Directive 89/336/EEC, EC Pressure Equipment Directive 97/23/EC.

By applying the CE mark, Engler Steuer- und Messtechnik GmbH&Co.KG confirms conformity with the directives

ATEX sign

The float switches meet the legal requirements of the EU directives for the ATEX sign: DIN EN 60079-0:2014-06 (explosive atmospheres; general requirements) DIN EN 60079-11:2012-06 (ignition protection type: intrinsic safety; Ex i) DIN EN 60079-26:2007-10 (category 1G, for Zone 0) DIN EN 61241-0:2007-08 (dust explosion protection; general requirements)

By applying the 🖾 sign, Engler Steuer- und Messtechnik GmbH&Co.KG confirms conformity with the ATEX directives.

IP protectoin rating

IP 65 (as per DIN EN 60529)

Resistance to impacts and vibrations

Avoid exposing the device to impacts and vibrations, as these can lead to incorrect measurements, malfunctions and damage.

Electromagnetic compatibility

EN 61000-2-2:1999 Immunity industrial area EN 50 081-1, Transient emissions in residential areas EN 55011:1998+A1: 1999 group 1, class B NAMUR recommendation NE 21

Media conditions

The surface of the fluid must be as calm as possible. Ensure that the fluid does not tend towards deposits and adhesions. Observe material resistance in the event of aggressive fluid evaporation. Ensure that the fluid is free of turbulences that could impact the float.

Media temperature limit

The maximum permitted medium temperature is indicated on the type plate and/or the data sheet.

EG type examination from DEKRA-EXAM