



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEx TUR 25.0033X</b>	Page 1 of 5	<a href="#">Certificate history:</a>
Status:	<b>Current</b>	Issue No: 0	
Date of Issue:	2025-07-03		
Applicant:	<b>Engler Mess- und Steuertechnik GmbH &amp; Co. KG</b> Lange Str. 151 Heroldstatt 72535 <b>Germany</b>		
Equipment:	<b>Floating Switch UniEx *</b>		
Optional accessory:			
Type of Protection:	<b>Ex ia</b>		
Marking:	Ex ia IIC T3...T6 Ga/Gb and/or Ex ia IIIC T**C Da/- and/or Ex ia IIIC T**C Da		

Approved for issue on behalf of the IECEx  
Certification Body:

**Dipl. -Ing. Klauspeter Graffi**

Position:

**Head of Certification Body**

Signature:  
(for printed version)

Date:  
(for printed version)

2025-07-03

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**TUV Rheinland Industrie Service GmbH**  
**Am Grauen Stein**  
**51105 Cologne**  
**Germany**





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Manufacturer: **Engler Mess- und Steuertechnik GmbH & Co. KG**  
Lange Str. 151  
Heroldstatt 72535  
Germany

Manufacturing  
locations: **Engler Mess- und Steuertechnik  
GmbH & Co. KG**  
Lange Str. 151  
Heroldstatt 72535  
Germany

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

[IEC 60079-26:2014](#) Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga  
Edition:3.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/TUR/ExTR25.0033/00](#)

Quality Assessment Report:

[DE/TUR/QAR25.0009/00](#)



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**EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

see attachment

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

see attachment



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**Equipment (continued):**

see attachment



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**Additional information:**  
see attachment

**Annex:**

[15\\_DE-IECEx\\_TUR\\_25.0033\\_X\\_00\\_Attachment.pdf](#)



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Revision 0

Attachment to Certificate IECEX TUR 25.0033 X

**Device:** Floating Switch  
**Type:** UniEx.SS x.\*.x.x.x.x.x.x.\*.x.\*; UniEx.M x.\*.x.x.x.x.x.x.\*.x.x.\*;  
UniEx.ANM x.\*.x.x.x.x.\* and UniEx.T x.\*.x.x.\*.x.\*  
(details refer to Technical Data section)

**Manufacturer:** Engler Mess- und Steuertechnik GmbH & Co. KG

**Address:** Lange Str. 151; 72535 Heroldstatt; Germany

**General product information:**

The float switches of the UniEx.\* series are used for intrinsically safe measurement of the level and temperature of liquid media in containers. They are designed to be used with a single intrinsic safe circuit.

A potted circuit board is installed in a tubular metal construction. Depending on the version, individual reed contacts for limit value monitoring or a reed contact / resistor chain for continuous level detection are installed on this circuit board.

The float switches can optionally be equipped with bi-metal switches or Pt100 / Pt1000 (type L 220) resistors for temperature limit monitoring or continuous temperature measurement of the medium.

The electrical connection of the versions with resistance sensors is optionally available in two-, three- or four-wire technology.

Limit values or level measurement values are transmitted to the intrinsically safe circuit by means of a float (or several floats) with built-in magnets that actuate the reed contact(s).

**Type Code**

**Object and Type**

Float switch	UniEx.SS x.*.x.x.x.x.x.x.AK.x.* UniEx.M x.*.x.x.x.x.x.x.AK.x.x.* UniEx.ANM x.*.x.x.x.AK.x.x.* UniEx.T x.*.x.AK.x.* UniEx.SS x.*.x.x.x.x.x.x.AS.x.* UniEx.M x.*.x.x.x.x.x.x.AS.x.x.* UniEx.ANM x.*.x.x.x.AS.x.x.* UniEx.T x.*.x.AS.x.*	Ex ia IIC T3...T6 Ga/Gb Ex ia IIIC T*°C Da/- (* see operating instructions)
	UniEx.SSx.*.x.x.x.x.x.x.AGN.x.* UniEx.SSx.*.x.x.x.x.x.x.AGA.x.BT18* UniEx.SSx.*.x.x.x.x.x.x.AGC.x.BT18* UniEx.M x.*.x.x.x.x.x.x.AGN.x.x.* UniEx.ANM x.*.x.x.x.AGN.x.x.* UniEx.T x.*.x.x.AGN.x.*	Ex ia IIC T3...T6 Ga/Gb



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	UniEx.SSx.*.*.x.x.x.x.x.x.AGU.x.* UniEx.SSx.*.*.x.x.x.x.x.x.x.x.AGA.x.BT18* UniEx.SSx.*.*.x.x.x.x.x.x.x.x.AGC.x.BT18* UniEx.M x.*.*.x.x.x.x.x.x.AGU.x.x.* UniEx.ANM x.*.*.x.x.x.x.AGU.x.x.* UniEx.T x.*.*.AGU.x.*	Ex ia IIC T3...T6 Ga/Gb Ex ia IIIC T*°C Da (* see operating instructions)
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In the complete designation, the '\*\*' is replaced by letters and numbers to identify the type.

Type	x	*	x	x	x	x	x	x	*	x	*	*
UniEx.SS	Not ex-relevant	a	Not ex-relevant						b	Not ex-relevant	d	c

- a Diameter of the sliding tube**  
12 = 12 mm
- b Process connection version**  
 AK = Version with cable  
 AS = Version with plug  
 AGU = Version with terminals + unpainted connection housing  
 AGN = Version with terminals + painted connection housing  
 AGA, AGC = Version with ceramic terminals+ Painted housing  
 AGB, AGD = Version with ceramic terminals+ unpainted housing
- c Temperature switch / temperature sensor**  
 T60O = Normally closed contact (60 °C)  
 T60S = Normally open contact (60 °C)  
 Up to T180S / T180O in 5 °C steps  
 Pt100 = Pt100 2-wire  
 Pt103 = Pt100 3-wire  
 Pt104 = Pt100 4-wire  
 Pt1000 = Pt1000 2-wire  
 Pt1003 = Pt1000 3-wire  
 Pt1004 = Pt1000 4-wire
- d Operating temperature**  
BT18= Service temperature -40 °C to 180 °C

Type	x	*	x	x	x	x	x	*	x	X	*
UniEx.M	Not ex-relevant	a	Not ex-relevant						b	Not ex-relevant	c

- a Diameter of the sliding tube**  
8 = 8 mm
- b Electrical connection**  
 AK = Version with cable  
 AS = Version with plug  
 AGU = Version with terminals+ unpainted connection housing  
 AGN = Version with terminals + painted connection housing
- c Temperature switch / temperature sensor**  
 T60O = Normally closed contact (60 °C)  
 T60S = Normally open contact (60 °C)  
 T65O = Normally closed contact (65 °C)  
 T65S = normally open contact (65°C)  
 T70O = Normally closed contact (70 °C)  
 T70S = Normally open contact (70 °C)  
 T75O = Normally closed contact (75 °C)  
 T75S = Normally open contact (75 °C)  
 T85O = Normally closed contact (85 °C)  
 T85S = Normally open contact (85 °C)  
 Pt100 = Pt100 2wire  
 Pt103 = Pt100 3wire  
 Pt104 = Pt100 4wire  
 Pt1000 = Pt1000 2wire  
 Pt1003 = Pt1000 3wire



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Pt1004 = Pt1000 4wire

Type	x	*	x	x	*	x	X	*
UniEx.ANM	Not ex-relevant	a	Not ex-relevant		b	Not ex-relevant		c

- a Diameter of the sliding tube**  
8 = 8 mm  
12 = 12 mm
- b Electrical connection**  
AK = Version with cable  
AS = Version with plug  
AGU = Version with terminals+ unpainted connection housing  
AGN = Version with terminals + painted connection housing
- c Temperature switch / temperature sensor**  
Pt100 = Pt100 2wire  
Pt103 = Pt100 3wire  
Pt104 = Pt100 4wire  
Pt1000 = Pt1000 2wire  
Pt1003 = Pt1000 3wire  
Pt1004 = Pt1000 4wire

Type	x	*	x	*	X	*
UniEx.T	Not ex-relevant	a	Not ex-relevant	b	Not ex-relevant	c

- a Diameter of the sliding tube**  
8 = 8 mm  
12 = 12 mm
- b Electrical connection**  
AK = Version with cable  
AS = Version with plug  
AGU = Version with terminals+ unpainted connection housing  
AGN = Version with terminals + painted connection housing
- c Temperature switch / temperature sensor**  
T60O = Normally closed contact (60 °C)  
T60S = Normally open contact (60 °C)  
T65O = Normally closed contact (65 °C)  
T65S = normally open contact (65 °C)  
T70O = Normally closed contact (70 °C)  
T70S = Normally open contact (70 °C)  
T75O = Normally closed contact (75 °C)  
T75S = Normally open contact (75 °C)  
T85O = Normally closed contact (85 °C)  
T85S = Normally open contact (85 °C)  
Pt100 = Pt100 2wire  
Pt103 = Pt100 3wire  
Pt104 = Pt100 4wire  
Pt1000 = Pt1000 2wire  
Pt1003 = Pt1000 3wire  
Pt1004 = Pt1000 4wire





## Technical data

### Variant type for use in areas with EPL Da requirements

UniEx.SS x.\*.x.x.x.x.x.AGU.x.\*  
 UniEx.SS x.\*.x.x.x.x.x.x.AGB.x. BT18\*  
 UniEx.SS x.\*.x.x.x.x.x.x.AGD.x. BT18\*  
 UniEx.SS x.\*.x.x.x.x.x.x.AGE.x.\*  
 UniEx.M x.\*.x.x.x.x.x.AGU.x.x.\*  
 UniEx.M x.\*.x.x.x.x.x.AGE.x.x.\*  
 UniEx.ANM x.\*.x.x.AGU.x.x.\*  
 UniEx.ANM x.\*.x.x.AGE.x.x.\*  
 UniEx.T x.\*.x.AGU.x.\*  
 UniEx.T x.\*.x.AGE.x.\*

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

Maximum input voltage	U <sub>i</sub>	DC 30 V
Maximum input current	I <sub>i</sub>	100 mA
For UniEx.ANM x.*.x.x.x.x.x.*		
Maximum input power	P <sub>i</sub>	62,5 mW
For other types		
Maximum input power	P <sub>i</sub>	According to the following table
Effective internal capacitance	C <sub>i</sub>	Negligible
Effective internal inductance	L <sub>i</sub>	Negligible

Power P <sub>i</sub>	Ambient temperature T <sub>a</sub> 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 °C	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

\*\*) max. surface temperature T at the measuring tip must not exceed the operating temperature of the Pt100 / Pt1000 type TO92 resistor (up to 150 °C).

Variants with temperature switch.

Maximum input voltage	U <sub>i</sub>	DC 30 V
Maximum input current	I <sub>i</sub>	100 mA
For UniEx.ANM x.*.x.x.x.x.x.*		
Maximum input power	P <sub>i</sub>	62,5 mW
For other types		
Maximum input power	P <sub>i</sub>	According to the following table
Effective internal capacitance	C <sub>i</sub>	Negligible
Effective internal inductance	L <sub>i</sub>	Negligible

Power P <sub>i</sub>	Ambient temperature T <sub>a</sub> 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 °C	Process temperature + 10 K
650 mW	- 20 °C to + 70 °C	75 °C	Process temperature + 10 K
550 mW	- 20 °C to + 100 °C	105 °C	Process temperature + 10 K

\*\*) max. surface temperature T at the measuring tip must not exceed the operating temperature of the Pt100 / Pt1000 type TO92 resistor (up to 150 °C).



**Variant type for use in areas with EPL Ga/Gb requirements**

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

**Variants with 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

For UniEx.ANM x.\*.x.x.x.x.\*

Maximum input power  $P_i$  62,5 mW

For other types

Maximum input power  $P_i$  According to the following table

Effective internal capacitance  $C_i$  Capacitance of the fixed wire

Effective internal inductance  $L_i$  Inductance of the fixed wire

For type UniEx.SS x.\*.x.x.x.x.x.AK.x.\*, Type UniEx.M x.\*.x.x.x.x.x.AK.x.x.\*, Type UniEx.ANM x.\*.x.x.AK.x.x.\* and Type UniEx.T x.\*.x.AK.x.\* the following values shall be used.

capacitance  $C_c$  160 pF/m

inductance  $L_c$  0,7  $\mu$ H/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	$P_i = 750 \text{ mW}^*)$
T3**)	118
T4	103
T5	73
T6	53

)\* Total when using two PT100 or PT1000 resistor

\*\*) operating temperature of the Pt100 / Pt1000 type TO92 resistor (up to 150 °C).

**Variants with temperature switch.**

Maximum input voltage  $U_i$  DC 30 V

Maximum input current  $I_i$  100 mA

For UniEx.ANM x.\*.x.x.x.x.\*

Maximum input power  $P_i$  62,5 mW

For other types

Maximum input power  $P_i$  According to the following table

Effective internal capacitance  $C_i$  Capacitance of the fixed wire

Effective internal inductance  $L_i$  Inductance of the fixed wire



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For type UniEx.SS x.\*.x.x.x.x.x.AK.x.\*, Type UniEx.M x.\*.x.x.x.x.x.AK.x.x.\*, Type UniEx.ANM x.\*.x.x.AK.x.x.\* and Type UniEx.T x.\*.x.AK.x.\* the following values shall be used.

capacitance Cc 160 pF/m  
inductance Lc 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	$P_i = 800 \text{ mW}$
T3**)	116
T4	102
T5	72
T6	52

\*\* ) operating temperature of the Pt100 / Pt1000 type TO92 resistor (up to 150 °C).

**Variants type for use in areas with EPL Da/- requirements (Only measuring rod inside Ex area)**

UniEx.SS x.\*.x.x.x.x.x.AK.x.\*,

UniEx.M x.\*.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.\*,

UniEx.M x.\*.x.x.x.x.x.AS.x.x.\*,

UniEx.ANM x.\*.x.x.AS.x.x.\*

UniEx.T x.\*.x.AS.x.\*,

Variants with 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

For UniEx.ANM x.\*.x.x.x.x.x.\*

Maximum input power  $P_i$  62,5 mW

For other types

Maximum input power  $P_i$  According to the following table

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 °C	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

\*\* ) max. surface temperature  $T$  at the measuring tip must not exceed the operating temperature of the Pt100 / Pt1000 type TO92 resistor (up to 150 °C).

The permanently connected cable is outside the potentially explosive area, therefore no internal effective capacitance  $C_i$  and no internal effective inductance  $L_i$  are to be considered..

Variants with temperature switch.

Maximum input voltage  $U_i$  DC 30 V

Maximum input current  $I_i$  100 mA

For UniEx.ANM x.\*.x.x.x.x.x.\*

Maximum input power  $P_i$  62,5 mW

For other types

Maximum input power  $P_i$  According to the following table



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Power $P_i$	Ambient temperature $T_a$ at connection head	max. surface temperature $T$ at connection head	max. surface temperature $T$ at measuring tip <sup>**</sup> )
750 mW <sup>*)</sup>	- 20 °C to + 40 °C	45 °C	Process temperature + 10 K
650 mW <sup>*)</sup>	- 20 °C to + 70 °C	75 °C	Process temperature + 10 K
550 mW <sup>*)</sup>	- 20 °C to + 100 °C	105 °C	Process temperature + 10 K

<sup>\*\*</sup>) max. surface temperature  $T$  at the measuring tip must not exceed the operating temperature of the Pt100 / Pt1000 type TO92 resistor (up to 150 °C).  
The permanently connected cable is outside the potentially explosive area, therefore no internal effective capacitance  $C_i$  and no internal effective inductance  $L_i$  are to be considered..

**“Specific Conditions of Use” for Ex Equipment:**

- Permissible ambient temperature range / process temperature see specifications.
- Metallic process connection parts have to be earthed and mounted at the mounting location electrostatically conductive ( $< 1 \text{ M}\Omega$ ).
- For the variants with a permanently connected cable the connection cable must be protected against mechanical damage.
- All variants should be used only in combination with liquids that have a conductivity ( $> 100 \text{ pS/m}$ ) and grounded.  
The wall thickness of the float switch is  $0.2 \text{ mm} < t < 1 \text{ mm}$ . The device may not be exposed to environmental conditions which may negatively affect the partition wall