




## Data sheet

# UniEx-Temperature switch / temperature sensor

## Type: UniEx.T...

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

To be operated in  
intrinsically safe circuits  
- Type of protection Ex i

Temperature switches and temperature sensors with ATEX approval are suitable for use in explosive atmosphere.

UniEx.T temperature switches measure temperature using a bimetallic switch.

PT100 and PT1000 temperature sensors are platinum resistors manufactured according to DIN EN 60751 - class B.

They are designed in 2-, 3- and 4-wire technology.

UniEx.T temperature measuring devices are manufactured according to customer specifications and are therefore used in the most diverse applications.

**Our devices of the UniExT series may only be operated in connection with an EX barrier / switch amplifier**

### Features:

- ATEX approval
- Several electrical connections, process connections and materials are available
- Low susceptibility to faults ensures high process safety
- High measuring accuracy

### Applications:

- Temperature measurement in many liquid, gas and pasty media
- Monitoring of processes
- Fields of application: chemical, petrochemical, mechanical engineering, shipbuilding industry, offshore facilities, energy plants ...

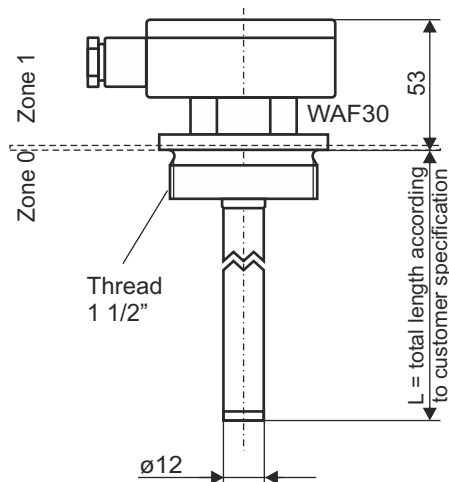
### Safety note:

- The temperature measuring device may only be operated with certified intrinsically safe circuits with the permissible maximum values.
- The device must be included in the periodic test of the container pressure.
- The device must be electrically connected to the equipotential bonding system of the plant.

### Electrical connection in the housing\*

e.g.

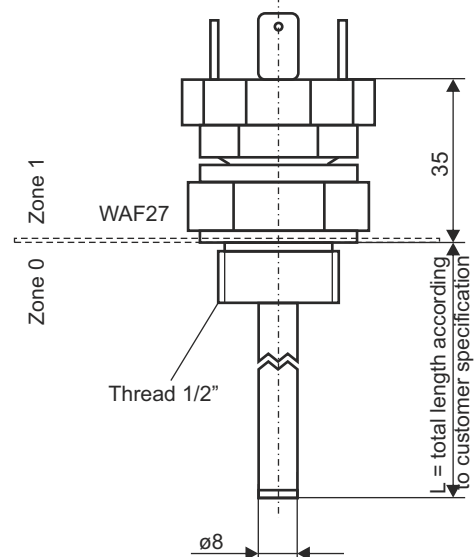
UniExT.E12.x.AGN.200.T750  
UniExT.E12.x.AGU.200.PT103  
UniExT.E12.x.AGE.200.PT103



### Plug-type connector 3 pole + PE according to DIN EN 175301-803\*

e.g.

UniExT.E8.x.AS03.212.T650






Dimensions in mm.

\*Further connection on page 3

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**Order key**

UniExT. E12. 200. AGN. 200. T600

**Type UniExT**

Material tube  
Stainless steel tube ø8 -- E8  
Stainless steel tube ø12 -- E12

Length of tube L in mm e.g. 200mm

**Electrical connection** *see table 1*  
Alu housing painted (II 1/2 G Ex ia IIC T3...T6 Ga/Gb) --- AGN  
Alu housing unpainted  
(II 1 D Ex ia IIIC T\*°C Da und II 1/2 G Ex ia IIC T3...T6 Ga/Gb) --- AGU  
Stainless steel housing 1.4571  
(II 1 D Ex ia IIIC T\*°C Da und II 1/2 G Ex ia IIC T3...T6 Ga/Gb) --- AGE

The following apply to II 1/2 G Ex ia IIC T3...T6 Ga/Gb and II 1/- D Ex ia IIIC T\*°C Da  
plug-type connector 3pole + PE DIN --- AS03  
plug-type connector M12 4pole --- AS04  
plug-type connector M12 5pole --- AS05  
plug-type connector M12 6pole --- AS06  
plug-type connector M12 8pole --- AS07  
sheathed cable (length in mm) --- AK, e.g. AK2500 = cable length 2500mm

**Process connections** *see table 1*

- 200 > 1 1/2" thread, DIN 3852 Form A, stainless steel 1.4301
- 205 > standard flange OD74 PCD60, stainless steel 1.4571
- 207 > 1/2" thread stainless steel 1.4571(only in combination with AK)
- 208 > 3/8" thread stainless steel 1.4571(only in combination with AK)
- 210 > 1" thread stainless steel 1.4301
- 211 > 3/8" thread stainless steel 1.4571
- 212 > 1/2" thread stainless steel 1.4571
- 213 > M20x1,5 thread stainless steel 1.4571
- 214 > 1/4" thread stainless steel 1.4571(only in connection with AK)

further process connections on demand

Temperature switch:  
60°C n.c. /n.o. contact --- T600/T60S  
65°C n.c. /n.o. contact --- T650/T65S  
70°C n.c. /n.o. contact --- T700/T70S  
75°C n.c. /n.o. contact --- T750/T75S  
80°C n.c. /n.o. contact --- T800/T80S  
85°C n.c. /n.o. contact --- T850/T85S

Temperature sensor PT100 / PT1000  
PT100 2 wire --- PT100  
PT100 3 wire --- PT103  
PT100 4 wire --- PT104  
PT1000 2 wire --- PT1000  
PT1000 3 wire --- PT1003  
PT1000 4 wire --- PT1004

further designs on demand

Table 1	Electrical connection								
Process connections	AS03	AS04	AS05	AS06	AS07	AGN	AGU	AGE	AK
200	X	X	X	X	X	X	X	X	X
205	X	X	X	X	X	X	X	X	X
207									X
208									X
210	X	X	X	X	X	X	X	X	X
211	X	X	X	X	X	X	X	X	X
212	X	X	X	X	X	X	X	X	X
213	X	X	X	X	X	X	X	X	X
214									X

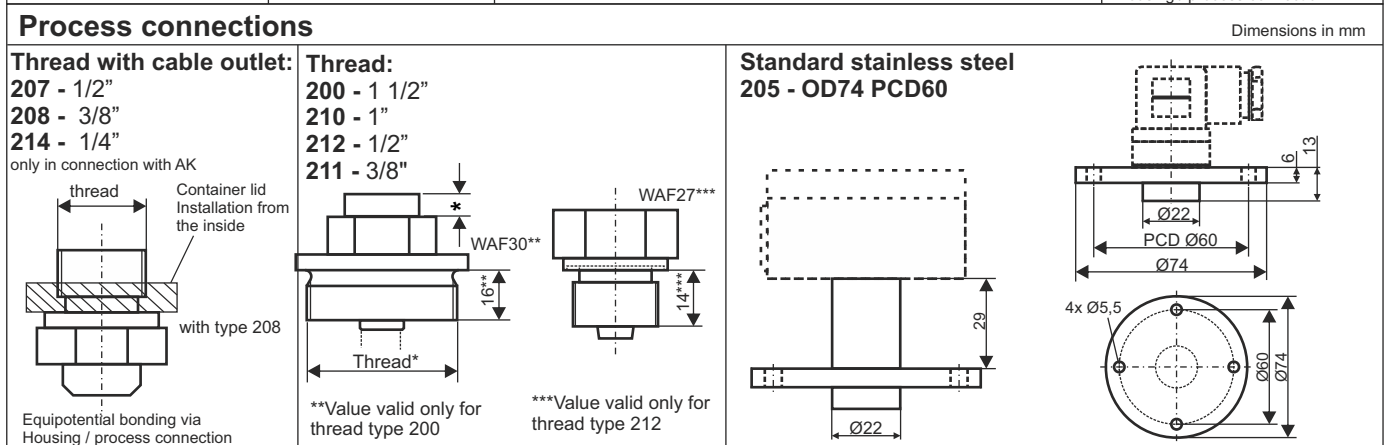
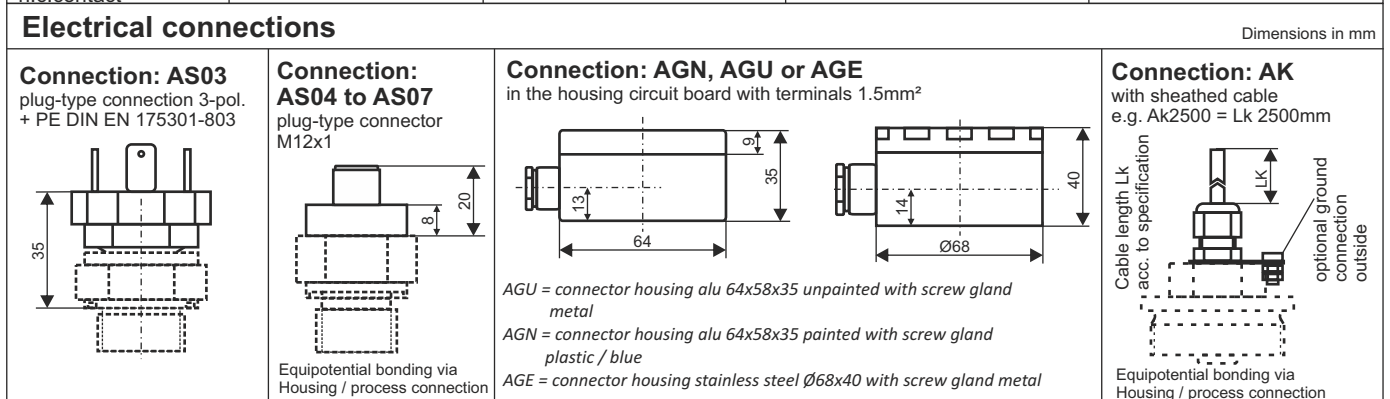
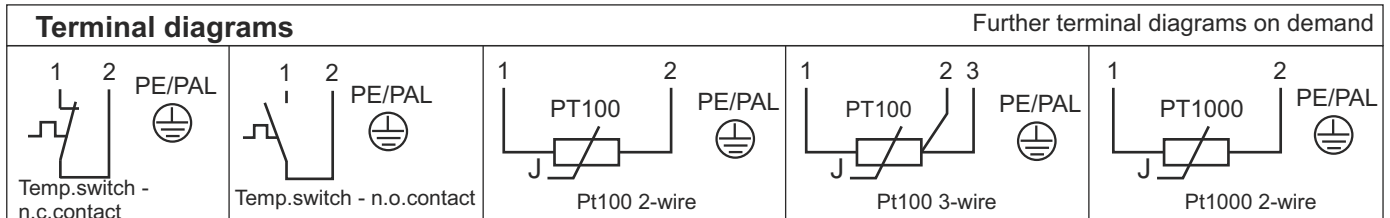
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<b>Technical data</b>	
Connection:	see electrical connections above, further electrical connections on demand
Process connection:	see respective design, customised mounting on demand
Tube:	Ø8mm, Ø12mm, length acc. spec., material stainless steel 1.4571, further materials on demand
Operating temperature:	-20°C to 105°C in medium, -20°C to 70°C above mounting
Pressure:	max. 6bar
Protection rating:	IP65
<b>Temperature switch e.g. T60S</b>	
Temperature switch:	bi-metal
Switching function:	normally closed/ normally open contact
Accuracy:	±5°C, smaller tolerances on demand reset-temperature = temperatur switching point - 30°C±15°C
Number of contacts:	max. 2 temperature switch
Switching capacity:	30V / 100mA - <b>to be operated in intrinsically safe circuits - type of protection Ex i!</b>
<b>Temperature sensor e.g. PT103, PT1000</b>	
Temperature sensor:	Platinum resistor PT100 / PT1000 according DIN EN 60751, class B
Nominal resistance:	PT100: 100 Ohm; PT1000: 1000 Ohm
Temperature coefficient:	0,00385
Tolerance class:	DIN EN 60751, class B
Self-heating:	PT100: 0,4 K/mW; PT1000: 0,2 K/mW
Long-termstability after >1000h at 150°C:	R0 Drift < 0,02 %

Subject to change