

## AST 10 Series

“-50...+200°C Measuring Range, 15-1000 mm Immersion Length, Analog or RTD Output”



- Selectable measuring range from -50 to +200 °C (For temperatures above 200 °C, [click for AST 20 series with cooler which can measure up to 650 °C](#))
- Resistant up to 300Bar (for higher pressures please ask)
- Immersion length options ranging from 15 mm to 1000 mm
- 0-20 mA, 4-20mA, 0-5V, 0-10V, 1-5V analog output or RTD (PT100, PT1000) output options
- G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 etc. process connection options
- 304 stainless steel housing
- Easy installation and use

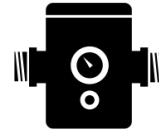
The AST 10 series temperature transmitter is designed for precise temperature measurement of liquid and gaseous media in the range of -50 to +200 °C.

The detection principle is based on the variation of the electrical resistance of the conductor with temperature. The resistance signal receiving from the RTD element is converted into various analog output signals (4-20 mA, 0-10V etc.) and integrated into automation systems.

It has a wide range of user-selectable specifications such as measuring range, process connection type, immersion length, output signal, connector type etc.

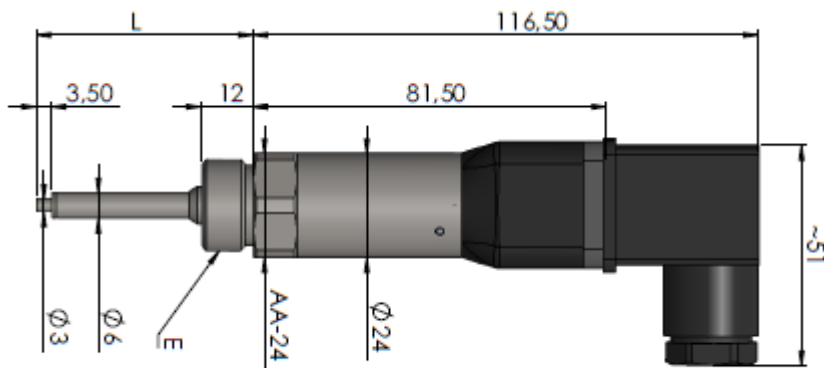
## APPLICATIONS

- Machines
- Tanks
- Boilers
- Gas and liquid fluids
- Surface temp. measurement
- Ambient temp. measurement

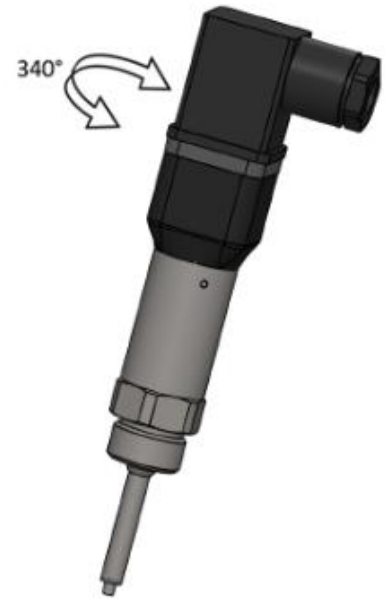


## MECHANICAL DIMENSIONS (mm)

### DIN43650-A CONNECTOR



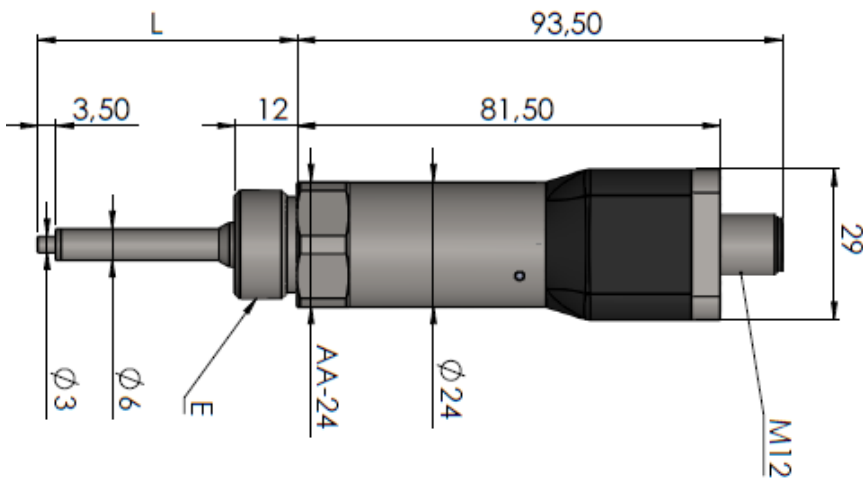
The rotation angle of the connector is maximum 340°.



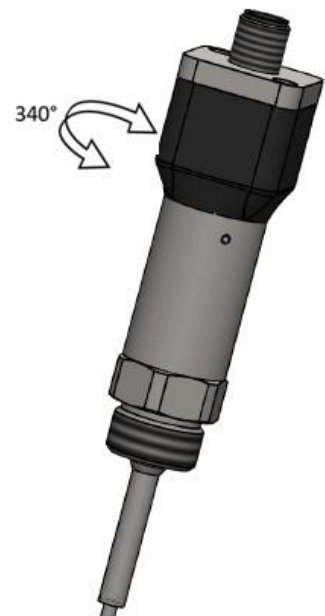
- E** : Process connection
- L** : Immersion length
- ØD** : Immersion diameter

\* For dimensions, see Technical specifications

### M12 CONNECTOR



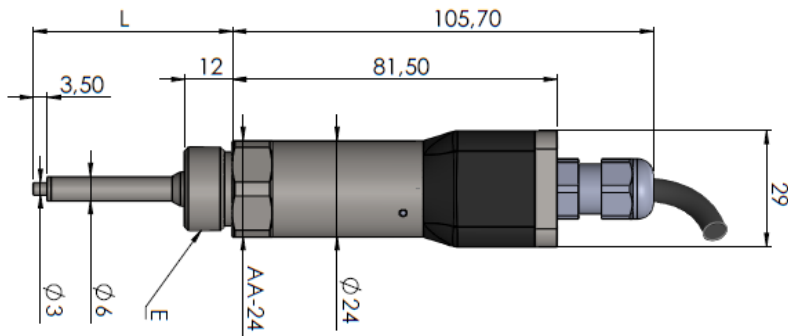
The rotation angle of the connector is maximum 340°.



- E** : Process connection
- L** : Immersion length
- ØD** : Immersion diameter

\* For dimensions, see Technical specifications

## CABLE



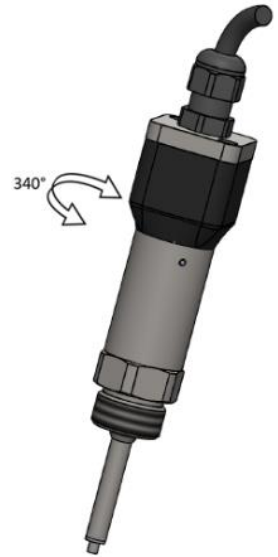
**E** : Process connection

**L** : Immersion length

**ØD** : Immersion diameter

\* For dimensions, see Technical specifications

The rotation angle of the connector is maximum 340°.



## TECHNICAL SPECIFICATIONS

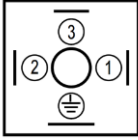
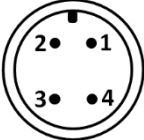


<b>Sensor</b>	PT100, PT1000 (Class A EN60751)				
<b>Measuring range</b>	-50 ... +200 °C / -58 ... +392 °F (Optional others)				
<b>Max. working pressure</b>	300 Bar (for higher pressures please ask)				
<b>Response time</b>	2 sn				
<b>Output</b>	2 wire 4-20mA std.	3 wire 4-20mA, 0-20mA	0-5V, 1-5V	0-10V	3 wire RTD, 4 wire RTD
<b>Load</b>	250Ω	250Ω	≥2.5K	≥5K	-
<b>Supply voltage</b>	7-32VDC	16-30VDC	12-30VDC	16-30VDC	-
<b>Current consumption</b>	2 wire : ≤20 mA @24VDC 3 wire : <30 mA @24VDC				
<b>Reverse polarity protection</b>	Yes				
<b>Short circuit protection</b>	Yes				
<b>Overload protection</b>	Yes				
<b>Electrical connection</b>	DIN 43650-A, M12 Connector, Cable				
<b>Process Connection (E)</b>	G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 (Optional others)				
<b>Immersion length (L)</b>	Optional between 15 mm ... 1000 mm				
<b>Immersion Diameter (D)</b>	8mm 6mm				
<b>Material</b>	304 Stainless steel				
<b>Operating Temp.</b>	-40°C ... +85°C				
<b>Storage Temp.</b>	-40°C ... +85°C				
<b>Protection Class</b>	IP 65				

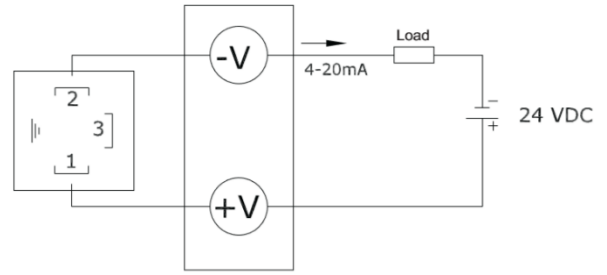
## TEMPERATURE SENSOR TOLERANCE TABLE (Class A EN60751)

TEMPERATURE (°C)	±°C	±OHM
-200	1.3	0.56
-100	0.8	0.32
0	0.3	0.12
100	0.8	0.30
200	1.3	0.48
300	1.8	0.64
400	2.3	0.79
500	2.8	0.93
600	3.3	1.06
650	3.6	1.13

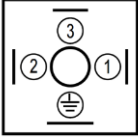
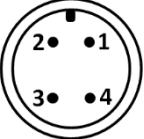


## ELECTRICAL CONNECTION

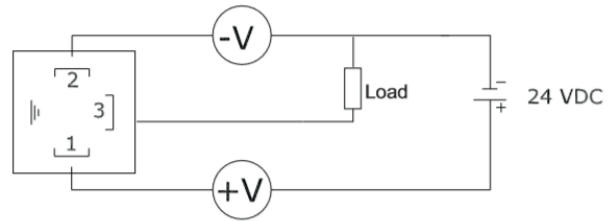
### 2 Wire 4-20mA Connection

							
<b>DIN43650-A</b>	<b>M12 4 pin Male Conn.</b>						
<b>S200 Conn.</b>	<b>S15 Conn.</b>	<b>S17 Conn.</b>	<b>S145 Conn.</b>	<b>Cable Color</b>	<b>Signal</b>		
<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>			<b>Red</b>	<b>+VDC (Supply)</b>
<b>2</b>	<b>3</b>	<b>2</b>	<b>4</b>			<b>Black</b>	<b>4-20mA</b>

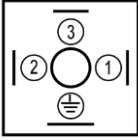
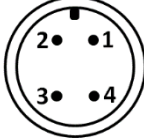

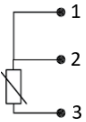
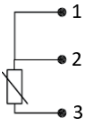
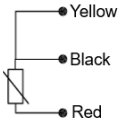
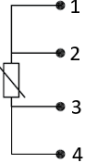
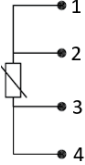
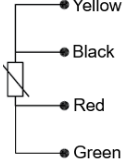


### 3 Wire 0-5V, 0-10V, 1-5V, 4-20mA, 0-20mA Connection

							
<b>DIN43650-A</b>	<b>M12 4 pin Male Conn.</b>						
<b>S200 Conn.</b>	<b>S15 Conn.</b>	<b>S17 Conn.</b>	<b>S145 Conn.</b>	<b>Cable Color</b>	<b>Signal</b>		
<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>			<b>Red</b>	<b>+VDC (Supply)</b>
<b>2</b>	<b>3</b>	<b>2</b>	<b>3</b>			<b>Black</b>	<b>GND</b>
<b>3</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Yellow</b>	<b>0-5V, 0-10V, 1-5V,</b>		



### RTD (1xPT100 & 1xPT1000) Connection

			
	<b>DIN43650-A Connector</b>	<b>M12 4 Pin Male Connector</b>	<b>Cable</b>
<b>3-Wire</b>			
<b>4-Wire</b>			

## ORDER CODE

<b>1-Model</b>				
AST10				
<b>2- Temperature Range</b>				
T1: 0...+100 °C	T3: 0...+150 °C	T5: -20...+150 °C	T7: -50...+50 °C	T9: -50...+150 °C
T2: 0...+120 °C	T4: 0...+200 °C	T6: -40...+120 °C	T8: -50...+100 °C	T10: -50...+200 °C
Selectable from -50 to +200 °C (Ask for others)				
<b>3- Immersion Length</b>				
015: 15mm	160: 160mm	350: 350mm	550: 550mm	750: 750mm
025: 25mm	200: 200mm	400: 400mm	600: 600mm	800: 800mm
050: 50mm	250: 250mm	450: 450mm	650: 650mm	900: 900mm
100: 100mm	300: 300mm	500: 500mm	700: 700mm	1000: 1000mm
*We do not recommend using small immersion lengths for air or gas temperature measurements, as the body absorbs heat due to the measurement probe being very close to the sensor body.				
<b>4- Immersion Pipe Diameter</b>				
8: 8mm				
6: 6mm				
<b>5- Pressure Type</b>				
Y: High Pressure (For pressures higher than 300 bar)				
D: Low Pressure (For pressures up to 0...300 bar)				
<b>6- Sensor Type</b>				
PT100 (available in analog or RTD output model)				
PT1000 (available in only RTD output model)				
<b>7- Output Signal</b>				
V : 0-10VDC	A: 4-20mA (2-wire)			
V1: 0-5VDC	A0: 0-20mA (3-wire)		RTD3 : 1xPT100 or 1xPT1000 (3- wire)	
V5 : 1-5VDC	A7: 4-20mA (3-wire)		RTD4 : 1xPT100 or 1xPT1000 (4- wire)	
<b>8- Process Connection</b>				
G1/4 : G1/4	NPT1/2 : NPT1/2			
G1/2 : G1/2	M14 : M14x1			
NPT1/4 : NPT1/4	M20 : M20X1,5			
* Optional others				
<b>9- Electrical Connection</b>				
S200 : DIN43650-A	S17 : M12 4 pin male connector (std)		1M : 1 meters cable	
* Optional others				
S145 : M12 4 pin male connector				
<b>10- Body Material</b>				
E304 : 304 Stainless Steel				
* Optional others				

**Sample Order Code:** AST10 T3 015 8 Y PT100 V G1/4 S200 E304

## BY PRODUCTS



### EPA Series Measurement and Control Devices

[48x48mm model EPA 100](#)

[74x74mm model EPA 200](#)

[96x48mm model EPA 300](#)



### [EPD 11 Plug-in Intelligent LCD Display with Alarm For Transmitters](#)