

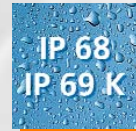


# Temperature measurement without calibration – now with Profibus PA.



## Temperature transmitter with Profibus PA profile 3.01 or 4...20 mA output.

- Integrated drift monitoring, diagnostic and backup function.
- Including free 5-point calibration certificate.
- Precision of 0.2 K at -10...100 °C and 0.3 K at -25...-10 / 100...150 °C.
- Increased process safety due to self-monitoring.
- Cost savings due to elimination of calibration.



### No more calibration

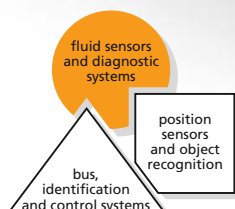
The use of two different sensor elements which monitor each other in the process ensures that a developing sensor drift is immediately detected and reliably diagnosed. This increases process safety and machine uptime since calibration intervals can be adapted. Furthermore, if one element fails, the process continues with the second measuring element (backup function).

### Profibus PA or 4...20 mA output

The TAP series complements the tried-and-tested and calibration-free TAD temperature sensors (4...20 mA). TAP transmitters communicate via the established bus system Profibus PA. The unit supports the Profibus PA profile 3.01 "Temperature Transmitter" including the extension for "Installation and Maintenance" and an optimised diagnostic function for drift monitoring.



TAD temperature transmitters in hygienic applications for CIP and SIP



Electrical design	Process connection	Rod length [mm]	Response time T05 / T09 [s]	Operating voltage [V DC]	Protection rating	Order no.
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**TAP, Profibus PA profile 3.01, electrically separated, GSD file on supplied CD**

Profibus PA	Aseptoflex thread	40	6 / 13	9...32	IP 68 / IP 69K	<b>TAP961</b>
Profibus PA	Aseptoflex thread	100	6 / 13	9...32	IP 68 / IP 69K	<b>TAP161</b>

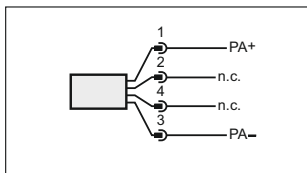
**Programming options:** Parameter setting to Profibus PA profile temperature transmitter, version 3.01; I&M parameter, drift and diagnostic functions

**TAD transmitter 4...20 mA**

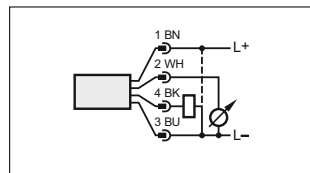
4...20 mA (scalable)	Aseptoflex thread	40	6 / 13	20...32	IP 67 / IP 69K	<b>TAD961</b>
4...20 mA (scalable)	Aseptoflex thread	100	6 / 13	20...32	IP 67 / IP 69K	<b>TAD161</b>
4...20 mA (scalable)	G 1/2 male	33	3 / 6	15...32	IP 68 / IP 69K	<b>TAD991*</b>
4...20 mA (scalable)	G 1/2 male	87.5	3 / 6	15...32	IP 68 / IP 69K	<b>TAD191*</b>

**Programming options:** Threshold for drift warning / alarm; fail-safe; display unit; scaling of the analogue output; redundancy switching; performance diagnostic output; output logic; normally open / normally closed

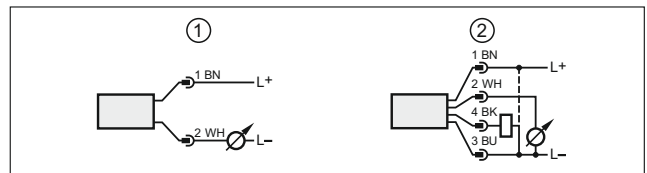
**Wiring**



Wiring TAP



Wiring TAD



\*TAD991 / TAD191 with optimised response time  
1) 2-wire operating, 2) 3-wire operating

**Accessories**



Type	Description	Order no.
	Aseptoflex adapter* clamp 1" - 1.5" (DN25-40)	<b>E33001</b>
	Aseptoflex adapter* clamp 2" (DN50)	<b>E33002</b>
	Welding adapter Ø 50 mm high-grade stainless steel (316S12) / O-ring: FPM	<b>E30052</b>
	Adapter G 1/2 female - clamp 1" - 1.5"	<b>E33401</b>
	Adapter G 1/2 female - clamp 2"	<b>E33402</b>
	Welding adapter ball, G 1/2	<b>E30055</b>
	Hygienic thermowell, G 1/2 male thread for types TAD191 and TA343x	<b>E30393</b>
	Welding thermowell for types TAD191 and TA343x	<b>E30403</b>

\* other Aseptoflex adapters available

**Other technical data**

Self-monitoring temperature sensor for liquids and gases		
Measuring range	[°C]	-25...150
Perm. overload pressure	[bar]	50
<b>Accuracy</b> Process value, drift monitoring		
(-10...100 °C)	[°C]	± 0.2
(-25...-10 / 100...150 °C)	[°C]	± 0.3
Resolution	[°C]	< 0.05
Measuring element	Pt1000 / NTC, thermally coupled	
Materials (wetted parts)	high-grade stainless steel (316S12)	
Surface characteristics	Ra: < 0.6	
Connection	M12 connector, Gold-plated contacts	

**Connectors and splitter boxes**

Type	Description	Order no.
	M12 socket, 5 m orange, PVC cable	<b>EVT001</b>
	M12 socket, 5 m orange, PVC cable	<b>EVT004</b>