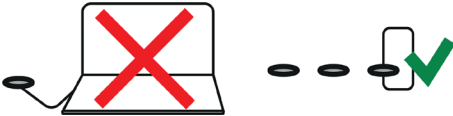


In-head transmitter for Pt100/Pt1000 APAQ-C130

Article number: 809700 1001

The APAQ C130 RTD for Pt100 and Pt1000 measuring elements is a head transmitter for installation in resistance thermometers with connection heads in DIN B or larger. The well thought-out product design leaves sufficient space for mounting. It is optimally designed for use in plant and machine construction and is characterized by high accuracy, reliability long-term stability and its robust product design. The transmitter is extremely insensitive to external influences such as vibration and EMC interference. Installation and commissioning are particularly user-friendly. For example, parameterization can be carried out wirelessly, conveniently and easily via the cell phone app using NFC technology. The monitoring functions such as sensor break monitoring, sensor short-circuit and measuring range monitoring can also be activated via this.



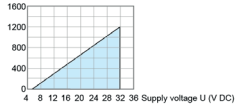
Special features	
Inputs and outputs	Parametrization
Input: Pt100, Pt1000 as 2-, 3- and 4-wire Output: 4 to 20 mA, temperature linear	Configuration - wireless via NFC technology Free App for Iphone, Android & Huawei Parameterization templates for fast mass configuration
Accuracy and Long-term stability	
Accuracy: Max. $\pm 0,15K$ or $\pm 0,15\%$ of span Long-term stability max Drift of $\pm 0.05^{\circ}C$ or $\pm 0.05\%$ of span / year	
Design	Alarm function
Robust - vibration and shock resistant design Compact - housing only 10,5mm high Suitable for connection heads in DIN B or larger Large center hole for easier mounting	configurable via app Sensor break monitoring Sensor short circuit Measuring range monitoring

Input In-head transmitter for Pt100/Pt1000 APAQ-C130				
Resistance sensors				
Measuring element	Norm	Maximum configurable measuring range	Min. Span	Accuracy
Pt100	IEC 60751 $\alpha=0,00385$	-200 °C to +850 °C -328 °F to +1562 °F	20 °C 36 °F	$\pm 0,15^{\circ}C$ $\pm 0,15\%$ ¹⁾
Pt1000	IEC 60751 $\alpha=0,00385$	-200 °C to +850 °C -328 °F to +1562 °F	20 °C 36 °F	$\pm 0,15^{\circ}C$ $\pm 0,15\%$ ¹⁾
Temperature influence of 20 °C / 68 °F Max. of $\pm 0.015^{\circ}C$ / °C or $\pm 0.015\%$ of span / °C Max. of $\pm 0.015^{\circ}F$ / °F or $\pm 0.008\%$ of span / °F ¹⁾ of span				
Connection type		2-, 3- and 4-Wire		
Sensor current		$\leq 0,5$ mA		
Resistivity		50 Ω / Wire		

General information about the input	
Zero adjustment	Within measuring range

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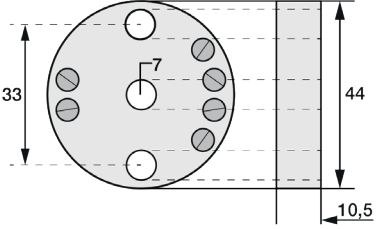


Output		
Output type	analog, temperature linear for RTD	Output load diagram Standard version $R_{load}(Ω) = (U-6)/0.022$ 
Output signal (mA)	4 to 20	
Parametrization / Scaling	Configurable via NFC	
Load	818 Ω at 24 VDC	
Connection type	2-wire	

Time response	
Closing time / Update time (Inor)	~150 - 300
Heating period	The specified accuracy is reached after max. 4 minutes
Signal attenuation / Adjustable output filtering (Inor)	0,4 to 26 adjustable via App
Measuring cycle	< 1

Sensor monitoring & sensor error	
Sensor break / Short circuit	Upscale (≥ 21.0 mA) or Downscale (≤ 3.6 mA)
Sensor failure effects (Inor)	according to NAMUR NE43

Accuracy and stability	
Influence of the sensor cable	
RTD and resistance (2-wire)	Compensation for 0 to 100 Ω loop resistance
RTD and resistance (3-wire)	Negligible, with equal wire resistance
RTD and resistance (4-wire)	Negligible
Further data	
Supply voltage influence	Negligible
Long-term drift	± 0.05 % of span per year

Type		
Dimensions	See drawing	
Material Flammability	PC/ABS + PA, V0/HB, RoHS compliant	
Mounting	DIN B-head or larger, DIN rail (with mounting kit)	
Connection	Single wires, max. 1,5 mm², AWG 24 to 12	
Weight	32	
General data		All dimensions in mm
Isolation	none	
Supply Voltage (VDC)	8 to 32, polarity protected	

Ambient conditions				
Ambient Temperatur	Storage	-40 °C to +85 °C -40 °F to +185 °F	Operating	-40 °C to +85 °C -40 °F to +185 °F
Humidity	0 to 98 (non-condensing)			
Protection	Housing IP65		Anschlussklemmen IP00	
Vibration	according to IEC 60068-2-6, Test Fc, 10bis2000 Hz, 10 g			
Shock	according to IEC-60068-2-27, test Ea			
Environmental influences	according to IEC 60068-2-31:2008, Test Ec			

EMC	
Standard	Directive: 2014/30/EU Harmonized standards: EN 61326-1, EN 61326-2-3
Immunity performance	ESD, radiated EMC fields, magnetic fields: Criterion A Burst, conducted RF: Criteria A Overvoltage: standard deviation 1% of span

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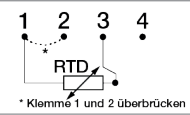
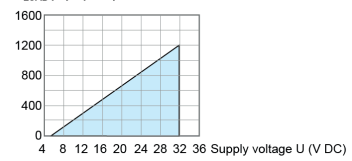
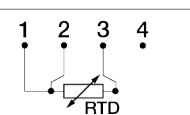
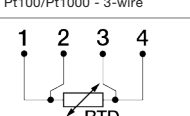
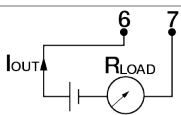
Factory configuration (if not ordered otherwise)			
Input	Pt100, 3-wire, 0 °C to 100 °C	Output (mA)	4 to 20
Sensor control	Upscale (≥21.0 mA)		

Delivery

Transmitter, Instruction manual, individually packed in PE bag

Matching accessories		
Picture	Designation	Order no.
	DIN rail power supply	On request
	Table power supply	On request
	Connection head mounting set	On request
	DIN rail adapter and screws (10 pcs.)	On request

Commissioning

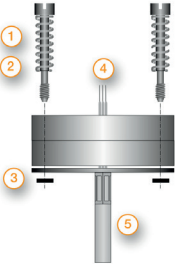

Input	Output
<div><p>Pt100/Pt1000 - 2-wire</p></div>	<div><p>Output load diagram</p><p>Standard version</p><p>$R_{LOAD}(\Omega) = (U-6)/0.022$</p><p>Supply voltage U (V DC)</p></div>
<div><p>Pt100/Pt1000 - 3-wire</p></div>	Supply voltage V DC
<div><p>Pt100/Pt1000 - 4-wire</p></div>	<div></div>




Mounting

You can mount the APAQ C130 head transmitter in DIN B (or larger) connection heads or on the rail. Mounting is easy because you can easily pull out the sensor cable or the insertion tube through the large center hole Ø 7 mm. The electrical connection is made according to the wiring diagram. We offer mounting material for the installation of the transmitter as accessories. Depending on your requirements, you will find kits for head mounting and top hat rail mounting.

Important: To prevent measuring errors, the connecting screws for fastening the connecting cable must be tightened firmly.

	<p>Mounting to a connection head</p> <p>(1) M4 screw (2) spring (3) Lock washer (4) Wires from measuring insert (5) MI cable</p>	
		<p>Mounting on the rail</p> <p>(1) Place the transmitter on the mounting clip. (2) Press the transmitter until it snaps firmly onto the clip (3) Now you can clip one end of the mounting clip onto the rail at an angle. (4) Then please clip the other end of the clip onto the rail as well. (5) You can detach the transmitter from the rail if you press the hook on the fastening clip with the screwdriver and lift the clip out of the rail at the same time.</p>

Configuration | Parametrization

 <p>Massenparametrierung & Einstellungs-Templates</p>	<p>Configuration procedure</p> <p>Launch the app by clicking on the App icon or holding your mobile device against the transmitter on the part of the device where NFC is located (only possible with Android). Click on "Read Configuration" and hold your mobile device against the transmitter as explained in the first section.</p> <p>In the app you can edit the following:</p> <p>Sensor type and number of wire circuits Measuring range Upscale or Downscale sensor control TAG-number Password settings</p> <p>In the configuration window you can enter and change the parameters. The selected configuration is transferred to the transmitter by clicking the "Send to transmitter" button. After the transfer is completed, the transmitter uses the new parameters.</p>
<p>Before making a configuration of APAQ C130TC you need to do following:</p> <p>Make sure that you have a mobile device with NFC communication activated.</p> <p>Download the app INOR Connect to your mobile device.</p> <p>Required versions:</p> <p>iOS: iOS 13 or later and Iphone 7 or later Android: Android 4.4 or later</p>	

