

DATASHEET

Dew point measuring device TPK21 PT





Completely ready-to-connect pressure dew point measuring device for portable use

The **TPK 21 portable** pressure dew point monitor with integrated, rechargeable battery is the ideal device for any service technician or user who wants to carry out uncomplicated on-site humidity and dew point measurement as well as pressure and temperature measurement and monitoring. In the handy little case, the values can be read in advance on the clear LCD display or forwarded accordingly using the freely configurable 4...20 mA or 0..10 V analog output signal.

Two potential-free contacts for pre-alarm or main alarm as well as two potential-free alarm signals for for a further adjustable measured value (e.g. pressure/temperature) are provided. Thanks to an RS 485 MODBUS interface (customizable), the device has a digital interface and thus complies with the latest "INDUSTRY 4" standard. latest "INDUSTRY 4.0 ready" standard.

The **TPK 21 portable** is equipped with adjustable alarm management as standard. Both the visual and audible alarms can be easily activated using the optional flashing light with an acknowledgeable buzzer via a standard cable connection with an M12 plug. standard cable connection with M 12 plug.

The sophisticated software makes it easy to simulate measured values. It is also possible a "RELAY TEST" as well as a "RESET" to factory settings is possible at any time via the display. This makes commissioning and a function test extremely easy and saves the service technician valuable time on site. valuable time on site. Thanks to the permanently integrated measuring chamber, the measuring device can be integrated into the pipe system either directly via a standard NW 7.2 compressed air coupling or using an optional PTFE hose. be integrated. All signals are provided internally and can be easily tapped via the M12 connectors integrated in the device and the optionally available cables.

As the high-quality polymer sensor is auto-calibrated as standard when the device is commissioned (can be switched off), measurement errors due to excessive moisture or dirt ingress are reduced to a minimum.

The device is also equipped with a data logging system. The data is converted and recorded on an SD card and can be read out by the customer as a csv file format via Excel. This means that the measured values can be conveniently stored and retrieved for billing purposes or for audits.

With the integrated USB interface, any necessary software updates are possible at any time.

With the **TPK 21 portable**, you get a pressure dew point monitor with the highest precision, state-of-the-art technology and unique features that is unrivaled on the market.



Completely ready-to-connect dew point measuring device, with integrated measuring chamber incl. mains cable

Technical data:

calibrated measuring range:	-20...+20°Ctp	
Pressure range:	0 ... 16 bar	
Measuring medium:	clean, oil-free compressed air, free from aggressive, corrosive, corrosive, toxic, flammable and oxidizing components	
Output / display values:	Pressure dew point	°C, °F
	Relative system pressure	bar, psi
	Absolute system pressure	bar, psi
	Ambient pressure	bar, psi
	Gas temperature	°C, °F
	ppm Volume	ppm V
	relative humidity	% r.H., %r.H.
	absolute humidity	g, Kg
	ppm Mass	ppm W
	Molecular mixture	ppm
Sensor element humidity:	capacitive polymer sensor	
Analog output (active):	4...20 mA or 0...10 V (current or voltage signal adjustable) Output freely configurable	
2 alarm thresholds:	pre-alarm and main alarm, adjustable	
4 x relay output:	potential-separated NO contact (DC/AC 40V/100mA) Switching polarity adjustable via menu for each relay channel upper and lower limit value adjustable	
RS485 interface:	with SENCOM and MODBUS protocol (customizable)	
Accuracy:	± 1K dtp (at 0...+20°C tpd)	



Completely ready-to-connect pressure dew point measuring device, with integrated measuring chamber incl. mains cable

Technical data:

Operating temperature:	-20°C ... 50°C (Sensorkopf)
Sample gas temperature:	-20°C ... 50°C
Protection class:	Gehäuse und Stecker IP 54
Mechanical connection:	by means of 2m PTFE hose (6 mm) with coupling plug for compressed air coupling NW 7.2
Electrical connection:	M12 plug
Measuring chamber material: (wetted parts)	Stainless steel 1.4404
Flushing loss via measuring chamber:	60 l/h
Display:	LCD, monochrome, touchscreen
Dimensions:	210 x 167 x 90 mm (l x w x h)
Weight: approx.	900 g (without power supply unit)
Case material:	Die-cast, front film polyester, ABS
Languages:	German, English, French adjustable via display
Industry 4.0:	ready
Data logging:	SD card, 32 GB (ring memory)
Battery life:	approx. 4 hours of continuous operation
Power supply:	for continuous operation and rechargeable battery included. 230V AC / max 20V (device: 24 V DC/5W ± 5%)

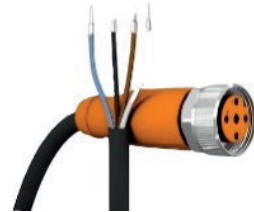


Completely ready-to-connect pressure dew point measuring device, with integrated measuring chamber incl.mains cable

optional accessories:

Sensor/actuator cable, 5-pin, PUR halogen-free, black-grey RAL 7021

one side straight M12 socket, other side free cable end - length 3.0 m
one side straight M12 socket, other side free cable end - length 10.0 m



Sensor/actuator cable, 5-pin, PUR halogen-free, black-grey RAL 7021

one side straight M12 socket, other side straight M12 coupling - length 3 m
one side straight M12 socket, other side straight M12 coupling - length 10.0 m



Indicator light with acoustic signal transmitter with acknowledgement button

For all dew point measuring devices of the TPK series, yellow flashing loud piezo signal transmitter, with wall bracket, 10m fixed connection cable connected with 5-pin M12 plug, A-coded



External relay box for potential-free relays

Relay box with 4 relays, for controlling power consumers, 4 relays 8A/230V with changeover contact. Supplied with power supply unit.

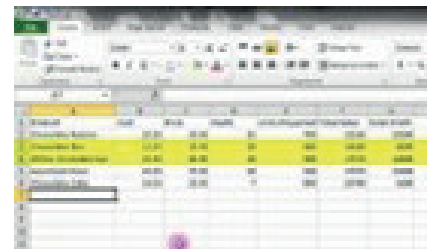
The TPK series has potential-free 30 V outputs. Should external units (e.g. electric ball valve) with a power supply of power supply of 220 V via the dew point measuring device this relay box must be used, which transforms the potential-free output into the correct voltage



Excel macro

The measuring device logs the measured data on the internal SD card and makes it available in csv format.

In order to simplify time-consuming formatting and conversion work, this macro offers a simple way of displaying data in tables, from reading in the SD card to simple way of displaying data in tabular form.



Stylos pen

Suitable for TPK series (1 stylus included as standard)
Replacement stylus for easier operation of the display

