

DATASHEET

Dew point meter TPK41





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

The **TPK 41** pressure dew point monitor is used as a transmitter with display for fast and uncomplicated humidity and dew point measurement, as well as for pressure or temperature monitoring, for example, and provides a freely configurable 4...20 mA or 0..10 V output signal for the dew point corresponding to -40...+20°Ctp.

Two potential-free contacts are provided for pre-alarm or main alarm for the dew point as well as two potential-free alarm signals for a further adjustable measured value (e.g. pressure/temperature).

Thanks to an RS 485 MODBUS interface (customizable), the device has a digital interface and thus meets the latest "INDUSTRY 4.0 ready" standard.

The **TPK 41** is equipped with adjustable alarm management as standard.

The visual and audible alarms can be easily displayed using the optional flashing light with acknowledgeable buzzer via a standard cable connection with M 12 plug.

The sophisticated software makes it easy to simulate measured values. A "RELAY TEST" as well as a "RESET" to factory settings is also 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.

Due to the permanently integrated measuring chamber, the measuring device can either be integrated directly into the piping system via a standard NW 7.2 compressed air coupling or using an optional PTFE hose.

All signals are provided internally and can be easily tapped via the M 12 connectors integrated in the device and the optionally available cables.

As the high-quality polymer sensor is auto-calibrated every 13 hours as standard (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 update is possible at any time.

With the **TPK 41**, you get a pressure dew point monitor of the highest precision, state-of-the-art technology and unique features that is unparalleled on the market.



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Technical data

calibrated measuring range:	-40...+20°Ctp
Pressure range:	0 ... 16 bar
Measuring medium:	clean, oil-free compressed air, free from aggressive, corrosive, caustic, 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:	independent potential-separated NO contact (DC/AC 40V/100mA) Switching polarity adjustable via menu Upper and lower limit value adjustable for each relay channel
RS485 interface:	with SENCOM and MODBUS protocol (customizable)
Accuracy:	± 1K dtp (at 0...+20°C tpd)
Power supply:	230V AC / max 20VA (power supply unit included) (device: 24 V DC/5W ± 5%)



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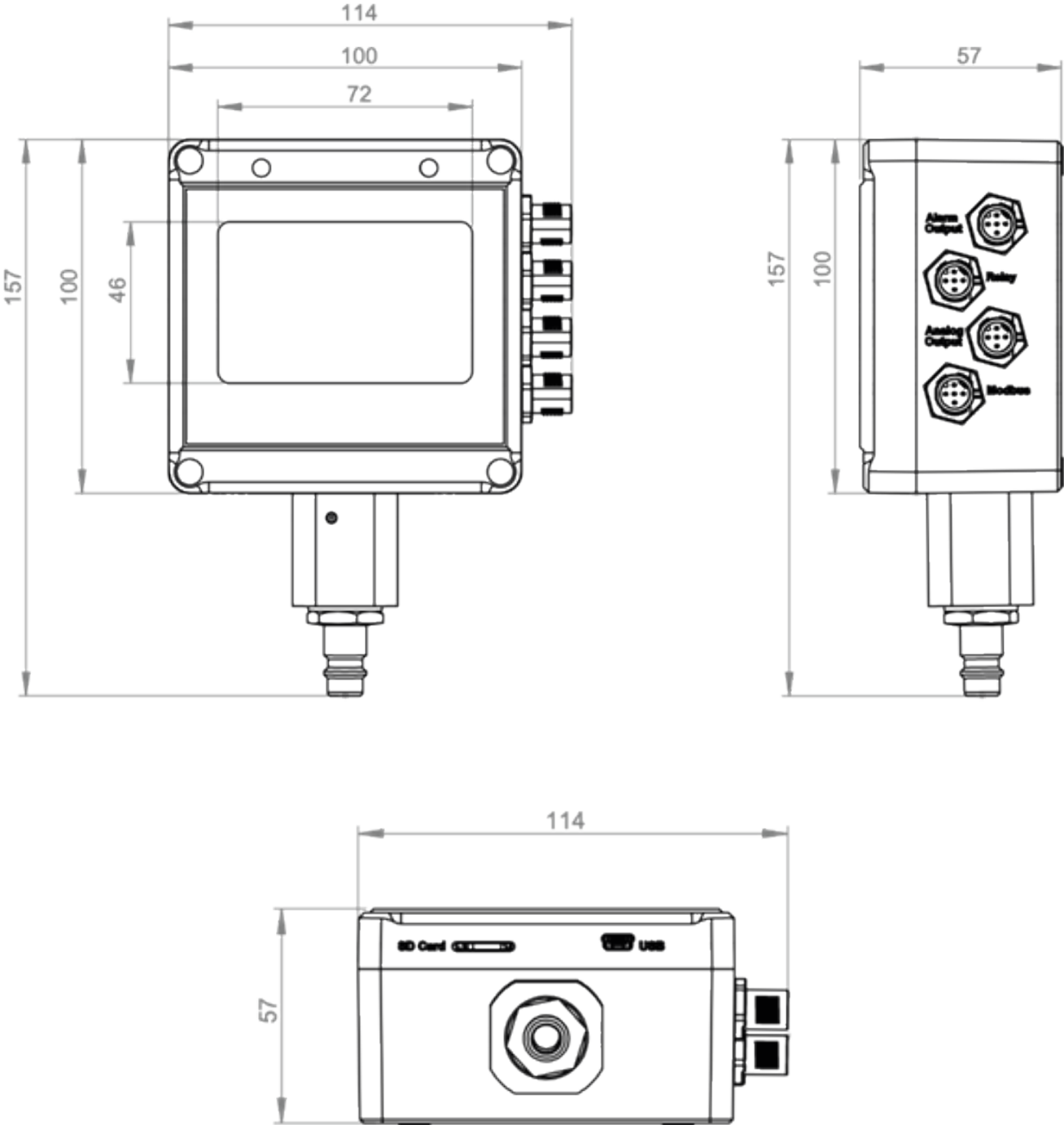
Technical data:

Operating temperature:	-20°C ... 50°C (sensor head)
Sample gas temperature:	-20°C ... 50°C
Protection class:	Housing and plug IP 54
Mechanical connection:	3/8" female thread, supplied with plug for quick-release coupling, SW 27
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:	160 x 101 x 59 mm (h x w x d)
Weight:	approx. 600 g (without power supply unit)
Housing material:	ABS plastic
Languages:	German, English, French Adjustable via display
Industry 4.0:	ready
Data logging:	SD card, 32 GB (ring memory)



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Dimensions:





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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 light
Loud piezo signaling device, with wall bracket, 10 m 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.

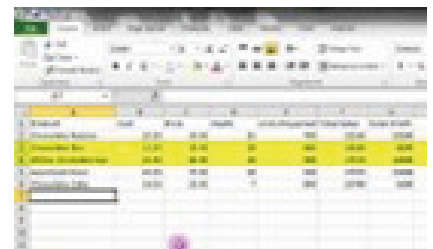
The TPK series has potential-free 30 V outputs. Should external units
(e.g. electric ball valve) with a voltage supply of power supply of 220 V via the
dew point measuring device dew point meter, this relay box must be used,
which transforms the potential-free output into the correct voltage.



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

