DATASHEET

Dew point meter TPK21

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

The TPK 21 pressure dew point monitor is used as a transmitter with display for fast and uncomplicated humidity and dew point humidity and dew point measurement, as well as for pressure or temperature monitoring, for example, and supplies a freely provides a freely configurable 4...20 mA or 0...10 V output signal for the correspondingly set channel.

Two independent potential-free contacts are provided for pre-alarm and main alarm for the dew point as well as two independent potential-free alarm signals 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 meets the latest "INDUSTRY 4.0 ready" standard.

The TPK 21 is equipped with adjustable alarm management as standard. Both the visual and audible alarms can be triggered using the optional flashing light with acknowledgeable buzzer via a standard cable connection. buzzer via a 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.

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), measuring errors caused by excessive moisture or dirt 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 exported as a csv file format via Excel by the customer. This means that the measured values can be stored and retrieved at low cost for billing purposes or for audits.

With the integrated USB interface, any necessary software update is possible at any time.

With the TPK 21, you get pressure dew point monitoring of the highest precision, state-of-the-art technology and unique features that are unparalleled 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
Print area:	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	oC, oF
Relative system pressure	bar, psi
absolute system pressure	bar, psi
Ambient pressure	bar, psi
Gas temperature	oC, oF
ppm volume	ppm V
relative humidity	% r.F.,%r.H.
absolute humidity	g, Kg
ppm Mass	ppm W
Molecular mixture	ppm

Humidity sensor element:	Capacitive polymer sensor
Analog output (active):	4...20 mA oder 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 (bei 0....+20oC tpd)
Power supply:	230V AC / max 20V (power supply unit included) (device: 24 V DC/5W ± 5%)

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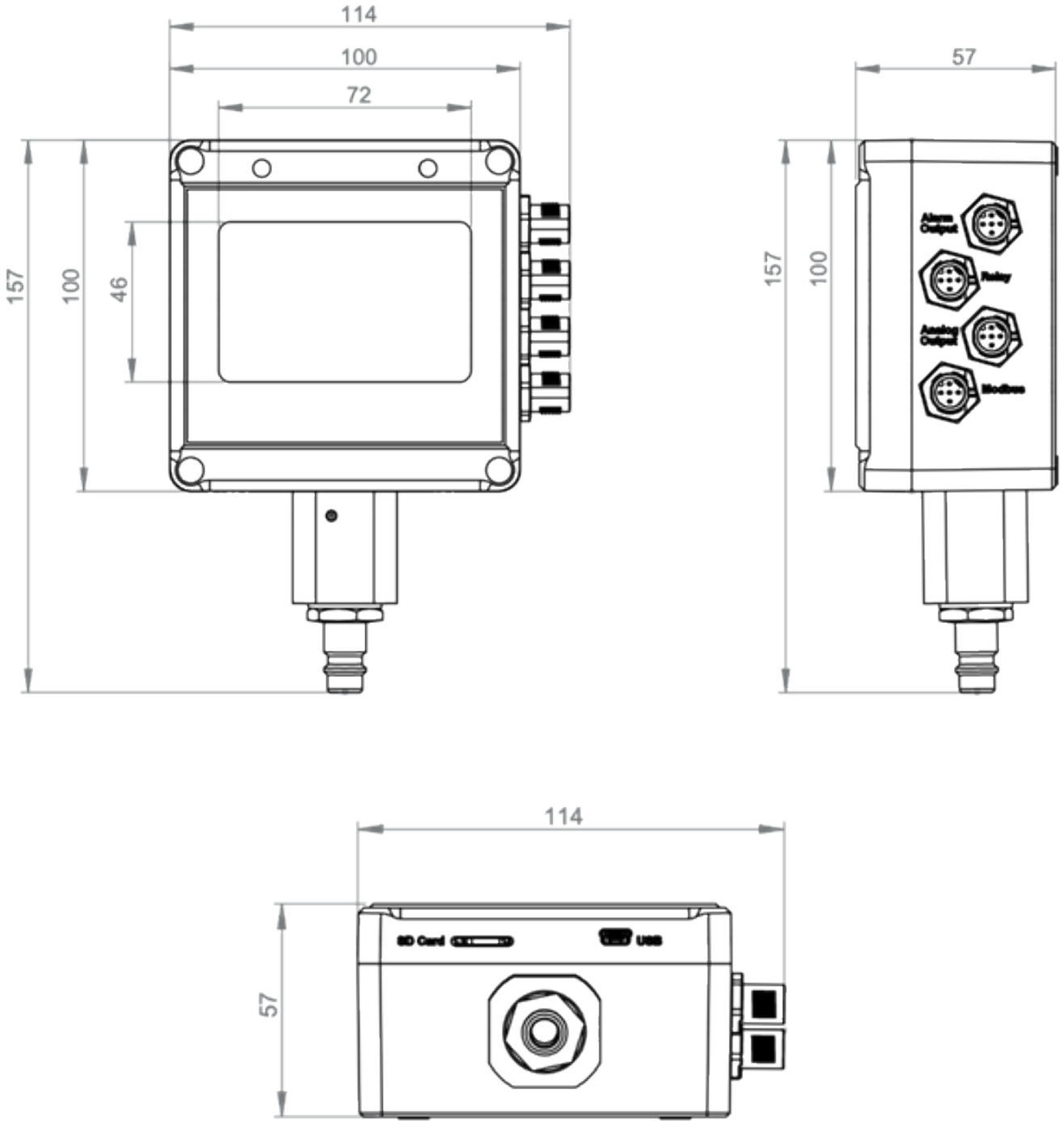
Technical data:

Operating temperature:	-20oC ... 50°C (sensor head)
Sample gas temperature:	-20oC ... 50°C
Protection class:	Housing and plug IP 54
Mechanical connection:	3/8" internal thread, supplied with plug for quick-release coupling, SW 27
Electrical connection:	M12 plug
Material measuring chamber: (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)

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

Dimensions:

114
100
72
157
100
46
57
157
100

Alarm Output
Relay
Analog Output
Modbus

114
57
SD Card
USB

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
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
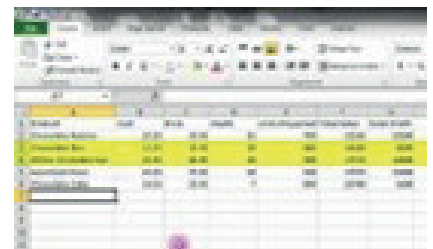
External relay box for potential-free relays

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 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