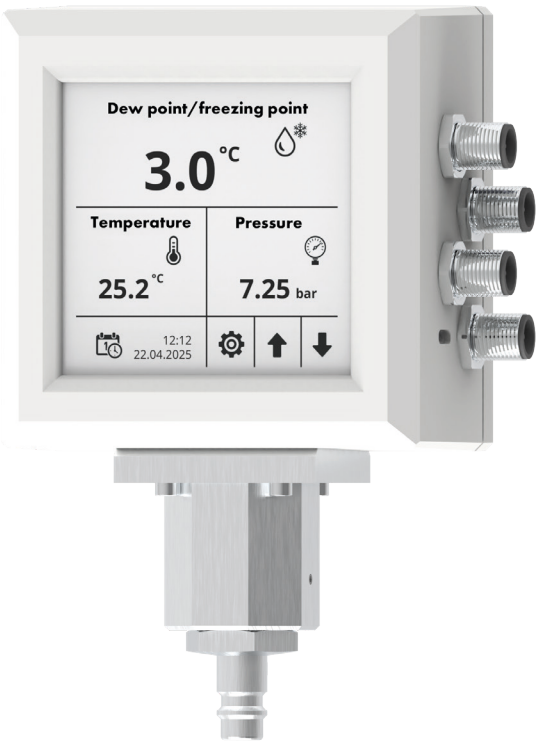
DATASHEET

Dew point measuring device TPK25



TPK25 – Intelligent plug & play system for dew point, temperature, and pressure measurement with integrated measuring chamber, including 3 m power supply unit

The TPK25 measures dew point, temperature, and pressure in a single device, setting new standards in efficiency and ease of use. At the heart of the system is the pre-calibrated, field-replaceable Plug & Play sensor measuring chamber. When the device needs to be recalibrated, a pre-calibrated sensor measuring chamber is sent to the customer and can be replaced on site with four screws. The used measuring chamber is then returned to Pro Air. This eliminates the need for a second service appointment and eliminates downtime.

With well over 100 million data records that can be stored on the internal memory, the TPK25 is ideal for use in quality assurance processes, verification and ISO 8573 audits. The integrated data logger records all internal measured values as required, as well as an additional external 4...20 mA signal, which can be displayed, recorded, and transmitted via the freely assignable sensor input.

The WiFi interface enables direct transmission of all measurement data to the Econet cloud. Alternatively, an optional GSM module with integrated IoT eSIM is available for stand-alone locations. This allows all measured values to be monitored, archived, and analyzed via the cloud regardless of location—including remote maintenance and alarm management.

For smaller systems without central building management technology, the TPK25 is additionally equipped with an optionally activatable master function. This allows connected Modbus slaves to be fully managed, their data to be displayed on the device, stored, transferred to the cloud, and even relay states to be triggered—all without additional control components.

With its capacitive touchscreen, robust IP65 housing, state-of-the-art interfaces (Modbus RTU, USB-C, WiFi) and full integration into digital maintenance concepts via the Econet cloud, the TPK25 offers a future-proof platform for continuous monitoring of compressed air quality – precise and user-friendly.

Included in the standard scope of supply: in delivery: TPK25, measuring chamber (stainless steel 1.4404), power supply unit with 3 m cable, plug for quick-release coupling 7,2

Completely ready-to-connect dew point measuring device with integrated measuring chamber, including power cable

Technical data:

calibrated measuring range:	-20...+20°C Td	
pressure range:	0 ... 16 bar	
measuring medium:	Air and other non-corrosive gases	
Output / display values:	Pressure dew point	°C, °F, K
	Relative system pressure	bar, psi, kPa
	Gas temperature	°C, °F, K
	ppm Volume	ppm V
	Relative humidity	% r.F.,%r.H.
	Absolute humidity	g/m³
Humidity sensor element:	capacitive polymer sensor	
Accuracy:	± 1°C Td (0 ... 20°C Td) ± 2°C Td (-20 ... 0°C Td)	
Temperature sensor element:	PT1000	
Accuracy:	± 0,2°C	
Pressure sensor element:	piezoresistive MEMS pressure sensor	
Accuray:	0,5 % FS	
Plug & Play measuring chamber:	**Can be replaced on site, recalibrated, and ready for immediate use**	
Analog output (active)	4...20 mA Output freely configurable	
RS485 infercafe:	Modbus RTU as standard	
Alarm values:	An alarm can be freely configured for each measured value (including external 4-20 mA input).	
4 x Relay output:	independent, galvanically isolated normally open contacts (24 V DC/ 100mA) Switching polarity adjustable via menu for each relay channel Upper and lower limit values adjustable	
Power supply:	230V AC / max 20V (power supply included) (Device: 24 V DC/5W ± 5%)	

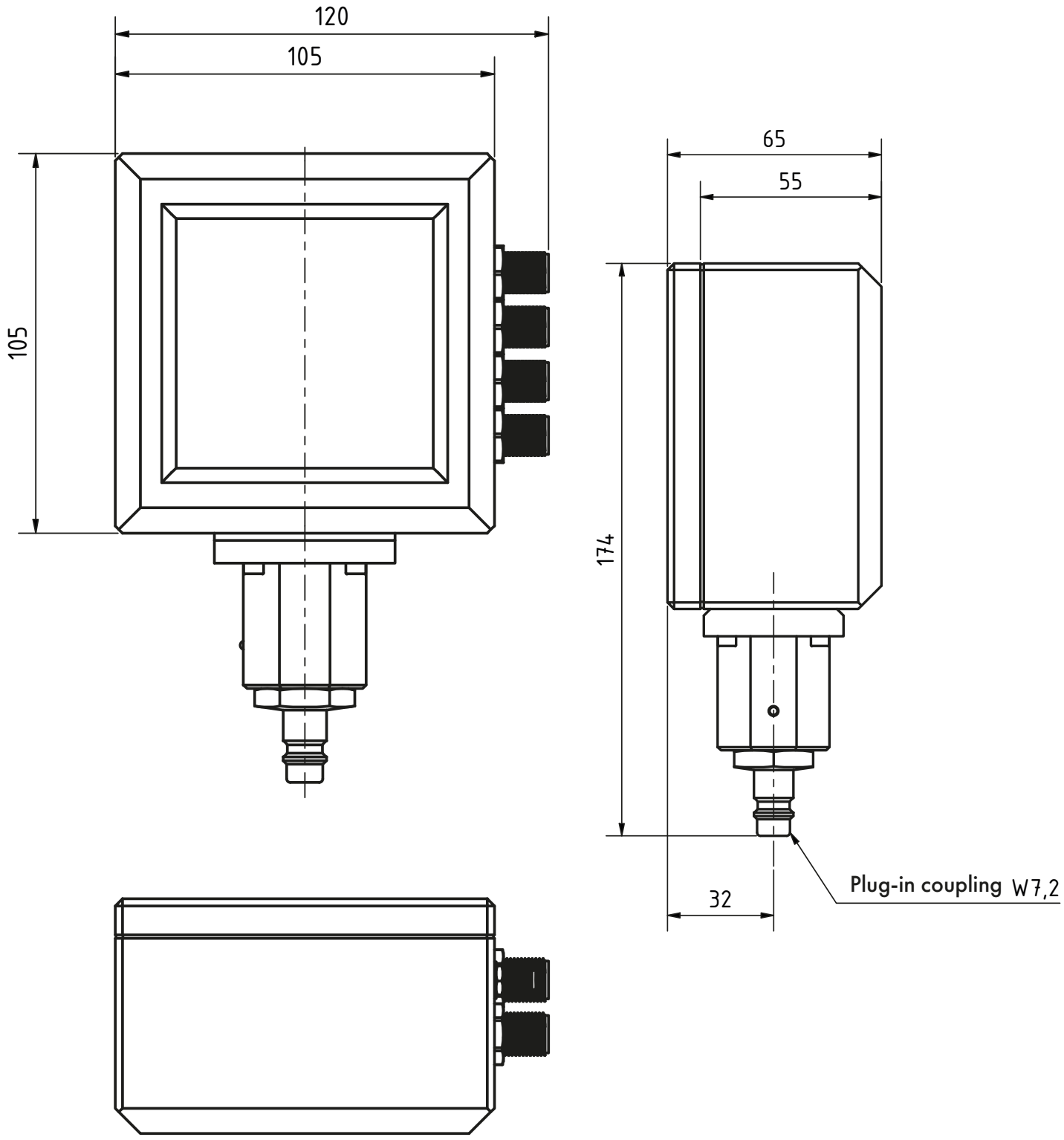
Completely ready-to-connect pressure dew point measuring device with integrated measuring chamber, including power cable

Technical data:

Operating temperature:	-20°C ... 50°C
Protection class:	IP65
Mechanical connection:	1/2“ internal thread, plug vor quick.release coupling included, SW 7,2
Electrical connection:	M12 - plug, power supply unit with 3 m cable included
Material measuring chamber:	Stainless steel1.4404
Purge loss via measuring chamber:	60 l/h
Display:	TFT capacitive touchscreen
Dimensions:	175 x 120 x 65 mm (h x b x t)
Weight:	approx. 500 g (without power supply unit)
Housing material:	polycarbonate
Languages:	German, English Adjustable via display
Industry 4.0:	Data transfer via WiFi directly to the Econet cloud
GSM module (optional):	Data transmission via GSM module (IoT e-sim) directly to the Econet Cloud
Data logging:	over 100 million measured values on internal memory, readable via WiFi or USB-C
Screen logger:	6 internal measured values + 1 external 4...20mA signal can be dis displayed
Master function (optional):	as a Modbus master, all data can be recorded, displayed on the screen, logged, sent to Econet, and relays can be switched.

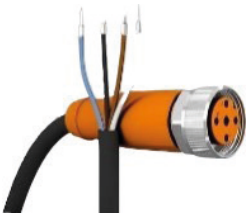
Completely ready-to-connect pressure dew point measuring device with integrated measuring chamber, including power cable

Dimensions:



Completely ready-to-connect pressure dew point measuring device with integrated measuring chamber, including power cable

optional accessories:



Sensor/actuator cable, 5-pin, PUR halogen-free, black-gray 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-gray 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

Signal lamp with acoustic signal device and acknowledgment button

Signal lamp with flashing light and loud piezo signal generator, equipped with an acknowledgment button, including wall bracket, connection via an M12 connector (cable available separately).

External relay box for potential free relay

Relay box with 4 relays for controlling power consumers,4 relays with changeover contact. Delivery includes power supply unit.

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