

Technical Data

Measurement range	Water/HC	-40 °C...+30 °C*
		$\Delta T \leq 60 \text{ °C}$
Absolute error	Water/HC	$\pm 0.5 \text{ °C} \dots 1.0 \text{ °C}$
Dew point measurement cycle duration		10...15 min
Sample gas volume flow rate		0.3...1 L/min
Ambient temperature		-10 °C...+50 °C
Pressure measurement range		$\leq 160 \text{ bar}^{**}$
Housing protection type		IP 56
Explosion-proof rating	ATEX: GOST R: TC TR EX:	Ex d IIA T5 1 Ex d IIB+H2 T5 1 Ex d IIB T5 X
Interface		RS 485 ModBus 4-20 mA
Dimensions		207 mm x 112 mm x 235 mm
Weight (without accessories)		6.5 kg

* Supplemental cooling is necessary when measuring dew points < -30° C

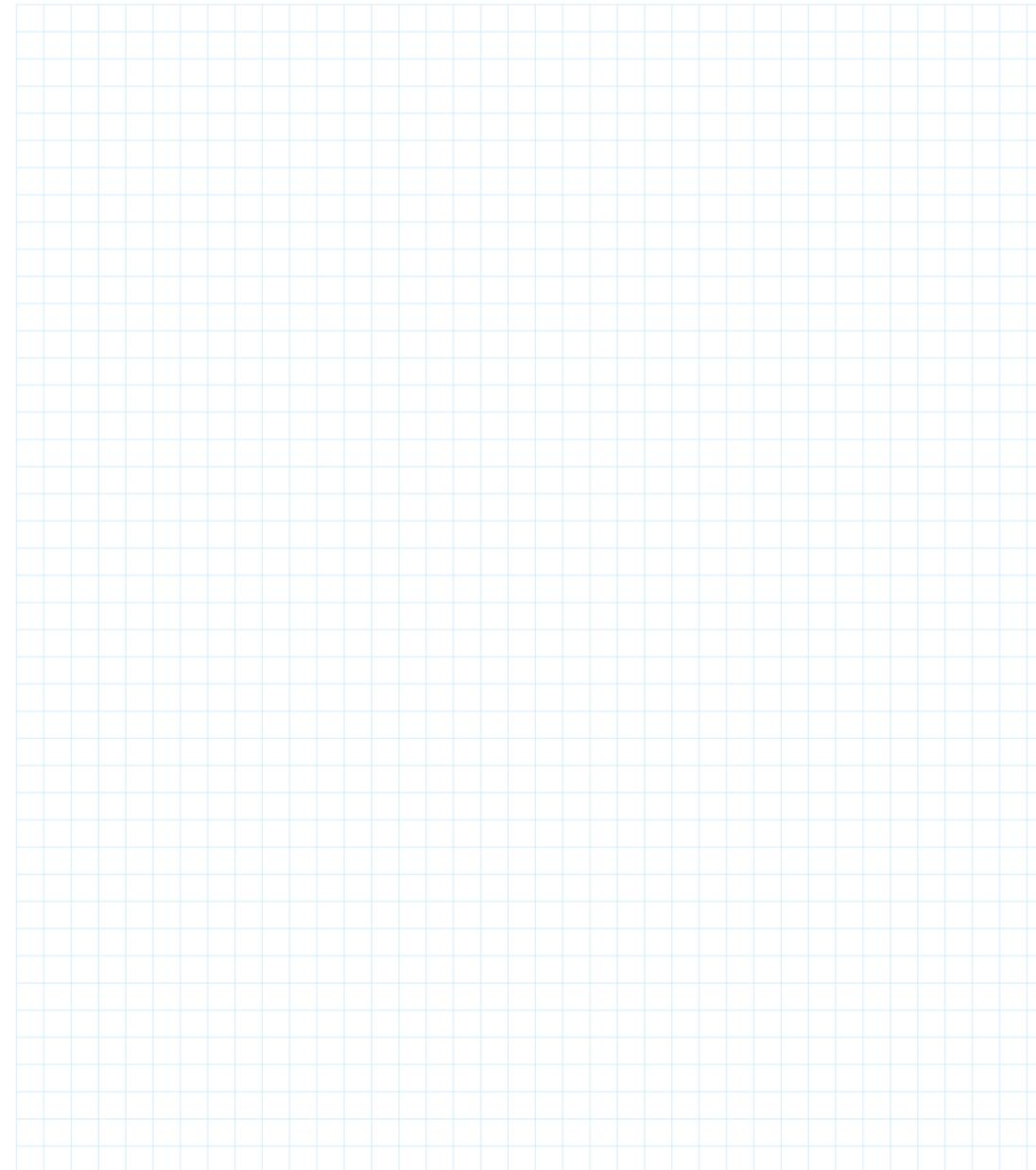
** Not including accessories (such as gas sample hoses)

Product features



- Fundamental and proven method of dew point measurement
- Measurement technology based on the reflectivity of a condensation mirror
- Lightweight and compact
- No separate control unit — control input by means of a magnetic key
- Intelligent mirror cleaning mode — the mirror's surface is scanned after each measurement cycle and cleaning is automatically based on the current condition of the mirror
- No calibration necessary
- No drift
- Greatest possible degree of flexibility thanks to three different deliverable versions and modular construction
- Intuitive operation
- Dew point registration system with two independent channels, thus providing a clear distinction between water and hydrocarbon dew points
- Data transfer interfaces
- Maintenance can be performed without interrupting pipeline gas flow
- Low maintenance requirements

Notes



Please note: Product development and improvement are ongoing, therefore product data and specifications may be altered without prior notification.

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Cong Prima 2M



Dew point for everyone

The **Cong Prima 2M** is an automatic through-flow hygrometer. Moreover, it is the most compact and economical solution in the industry.

The concept for this dew point transducer (DPT) is based on the fundamental principle of direct measurement.

A condensation mirror is employed for the purpose of measuring the dew points of both water (dpW) and hydrocarbons (dpHC). The CP 2M establishes dew point by monitoring alterations in the mirror's reflectivity associated with the accumulation of condensates due to changes in temperature and pressure. Using laser interferometry, the analyzer can register a condensation film as thin as 10 nm.

The Cong Prima 2M can be set to automatically measure the dpW or dpHC, as desired. The unit can also be easily adapted to taking measurements for the purpose of monitoring operational processes.

The CP 2M's monobloc construction is comprised of a sensor cell, an electronic unit, and an explosion-proof housing. The analyzer can be fitted with either an analogue (4 – 20mA) or a digital (RS 485 – Modbus) data interface.

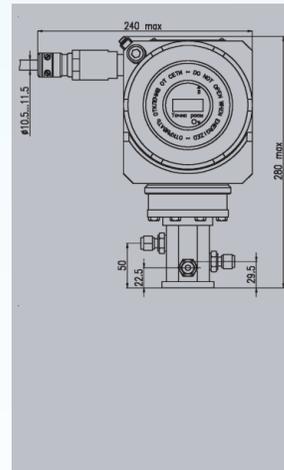
The robust design of the analyzer's measurement chamber corresponds to the strict requirements for a dew point measuring device in an aggressive gas environment. The unit is controlled by means of magnetic "buttons" that are operated using a special key (included with delivery).

The Cong Prima 2M dew point analyzer is available in three different versions, making it possible to perfectly tailor the unit to your individual requirements.

CP 2M – Measurement module (MM)

The measurement module version of the CP 2M is primarily intended for gas analysis in laboratory and industrial settings, where the gaseous mixture is characterized by a high degree of purity.

In addition, the design of the unit makes it suitable for mounting in already installed measurement systems as a dew point transducer.



The CP2M is designed for use in systems that are based on the through-flow principle.

CP 2M – Pipeline module (PM)

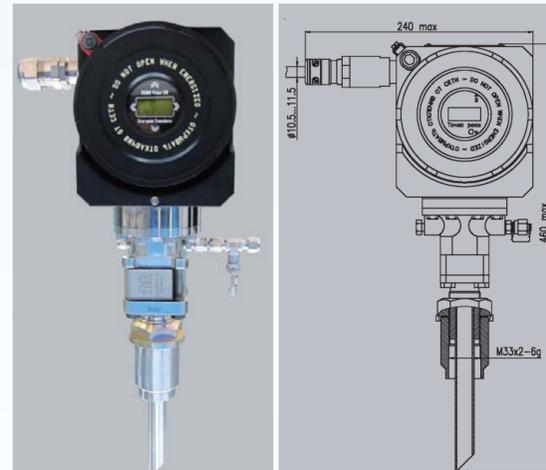
Uncomplicated, fast, and direct is the motto here: the CP 2M measurement module is combined with an insertable sampling device. This insertable unit makes it possible to mount the analyzer directly onto the gas pipeline (min. \varnothing 200 mm).

The advantages of such a solution speak for themselves.

The pipeline module boasts a compact design and is ideal for installation sites that require a space-saving and attractive solution. This combined unit is equally well-suited to indoor (closed room) and outdoor applications.

This module is appropriate for installation at gas transport, gas reduction, and gas regulation facilities, as well as a variety of other facilities where the gas composition has no liquid impurities.

The insertable sampling device ensures that the gas sample is free from mechanical contaminants. The integrated shutoff valve allows the user to remove the analyzer unit without interrupting the gas flow in the pipeline.



The CP2M is designed to be easily mounted directly on the pipeline.

SGA + CP 2M – Universal system (US)

Comprised of the Cong Prima 2M dew point analyzer and the SGA 003 gas preparation system, the innovative approach of this combined unit sets a whole new standard in the field of dew point measurement.

For the first time, one system provides a universal solution for all of the usual challenges faced in the gas industry in terms of accurate dew point measurement.

For example, a given pressure may be stipulated by law, contract or for some other reason. The SGA + CP 2M universal system makes it easy to take dew point measurements at virtually any pressure (including working pressure) up to 160 bar.

A number of patented new developments make a reliable analysis of the gas sample possible, even under the most difficult conditions in which mechanical and aerosol contaminants would have previously rendered dew point measurements all but useless. At the same time, this unit uses neither membrane filters nor any other elements that are subject to wear. Such components are a weak point in any system, due to the unpredictability of wear incurred

during operation. A clogged membrane, for example, can lead to distortions or even alterations of the gas sample's properties. With the SGA + CP 2M universal system, this issue is simply avoided.

This technology provides the foundation for our consistently high standards when it comes to providing you with reliable dew point measurement processes.

The underlying concept of the SGA is to make it possible for the dew point analyzer to easily measure the dew point of water (dpW) at the operating pressure and the dew point of hydrocarbons (dpHC) at reduced pressures – for example 27 bar.

In addition, in order to make the system easier for the operator to use, it offers preprogrammed modes for measuring the dew points of water and hydrocarbons.

Another feature of this solution is the system's modular construction. Among other things, this approach provides the user with the option of easily mounting and connecting a portable Hygrovision analyzer as a reference instrument.

Like to know what's going on in your gas sample? By installing a portable Hygrovision unit as a reference hygrometer, you will always be able to use its visualization system to see into the very heart of the measurement process. In this way you can gain a clear understanding of exactly what is taking place in the gas sample. The addition of a Hygrovision analyzer also makes possible continuous comparative measurements to confirm the dew point results of your CP 2M. Alternatively, it makes possible simultaneous measurement of the dew points of both water and hydrocarbons. The SGA system incorporates a foldout mounting arm and explosion protected gas connections for the easy integration of a Hygrovision unit into the gas delivery system. Thus the portable analyzer can be used for spot-checking or long-term reference. Naturally, the Hygrovision unit also provides for data transfer via Modbus RS-485 or IR-Port.

Due to its modular construction, the SGA + CP 2M system can, if necessary, be adjusted to meet constantly changing requirements. In this way it offers the greatest degree of flexibility while constantly maintaining the highest standards of accuracy and reliability

