

HygroScan: Moisture Analyzers



Our priorities

- Performance
- Reliability
- Flexibility
- Convenience
- Cost-efficiency

Support & Service:

BACS provides various ways of warranty and support programs including factory & end-user side training, phone & web assistance and customizable solutions for wide range of applications.

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HygroScan is a series of **analyzers** designed for fast, reliable and accurate measurement of the water vapor content and water dew point in gases.

Modifications of moisture Analyzers

- ✓ **HygroScan-S** – stationary process analyzer
- ✓ **Transmitters:**
 - **HygroScan-T PRO**
 - **HygroScan-T Light**
 - **HygroScan-T Micro**
- ✓ **HygroScan-P** - portable moisture analyzer

Applications

- ✓ Water dew point analysis in natural gas
- ✓ Control of drying process during LNG production
- ✓ Determination of moisture concentration in compressed natural gas (CNG) for vehicles
- ✓ Analysis of water content in refinery and petrochemical gases



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Main Features

- ✓ Sorption-capacitive sensor with high sensitivity (measuring range from -70°C DP or 2 ppm)
- ✓ Continuous measurement with fast response
- ✓ Measurement at the process pressure up to 250 bar
- ✓ Integrated pressure sensor for moisture content calculation
- ✓ Explosion protection for all modifications
- ✓ No calibration is required during operation of the analyzer
- ✓ No auxiliary gases required
- ✓ Reliable construction with no maintenance required
- ✓ Cost efficient solution

HygroScan-S



HygroScan-S – reliable and precise stationary process moisture analyzer with wide variety of additional options and opportunities

Benefits

- ✓ Continuous or intermittent analysis mode thanks to optional internal high-pressure solenoid valve
- ✓ Up to 2 sample streams can be analyzed by turns
- ✓ Internal data storage and variety of output interfaces
- ✓ Integrated software and power supply unit
- ✓ Wide operation ambient temperature range
- ✓ Easy maintenance with low service cost

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HygroScan-T



HygroScan Transmitter is created for on-line analysis with the same performance capabilities as stationary version.

Benefits

- ✓ Automated continuous operation
- ✓ Data are being transmitted to DCS
- ✓ LCD and control button for simple usage (for PRO only)
- ✓ Compact size and easy mounting
- ✓ Low life cost. The unit doesn't require regular technical maintenance
- ✓ Low power consumption

HygroScan-P



Portable analyzer provides efficiency and reliability of stationary **HygroScan-S** in compact casing.

The analyzer is designed to measure water vapor content and water dew point in the field conditions in gases including natural gas.

Benefits

- ✓ Mobile moisture analysis in gas
- ✓ Long time of autonomous work on built-in battery even in cold conditions
- ✓ Explosion and IP protection
- ✓ Easy to handle and service
- ✓ Neither auxiliary gases nor external sample preparation required
- ✓ Compact size and light weight

Technical characteristics

Parameter	HygroScan-S	HygroScan-T			HygroScan-P
		PRO	Light	Micro	
Operation principle	Sorption-capacitive				
Number of analyzed streams	Up to 2	1			
Operation mode	Automatic Continuous / Periodic	Automatic Continuous	Manual	Manual Periodic	
Pressure sensor	+	Option	Option	-	Option
Explosion protection	1 Ex d IIC T6 Gb				1 Ex mb IIC T6 Gb X
Ingress protection	IP66				IP65
Power consumption	65W	45W	10W	5W	20W
Interfaces	RS 232/485, Ethernet, 4-20mA, GSM/GPRS	RS 485, 4-20mA, 4-20mA+HART	RS 485 or 4-20 mA		RS 232
Analyzed sample	Gaseous				
Sample gas pressure	Up to 25 MPa				
Sample gas flow rate	0,5-5,0 SLM				
Ambient temperature	-40 ... +50°C		-10 ... +50°C		-40 ... +50°C
Dimensions, mm (L×W×H)	380×200×360	180×280×260	180×125×240	85×50×230	420×330×165
Weight, kg	25	3,5	2	0,6	9
Life time, years	no less than 10				

Metrological characteristics

Water dew point measuring range	-70 ... +20°C
Water dew point accuracy [*]	±1°C between -30 and +20°C
	±2°C between -70 and -30°C
Moisture concentration measuring range	2 ... 17 000 ppm

^{*}Maximum additional absolute uncertainty of water dew point measurement in the whole working range of gas pressure and temperature is ± 1°C.

Custom solutions

We are able to design a custom analytical solution for your specific application. For more information please don't hesitate to contact us.

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