

#### Detect & Monitor

Key Fault Gases & Moisture  
dissolved in dielectric liquid

### Dissolved Gases Are Indicative Of Developing Faults In Electrical Apparatus Dissolved Gas Monitoring Is An Essential Part of Preventive Programs

#### Applications

TransPRO® KGX3 Series enhanced transformer on-line dissolved gas monitor is capable of continuous monitoring of dissolved  $H_2$ ,  $C_2H_2$ , CO and moisture in oil individually and in real-time. With proven technology, no spare parts and maintenance-free, this product is designed for on-line incipient fault detection for oil-filled HV equipments in cost-effective way.

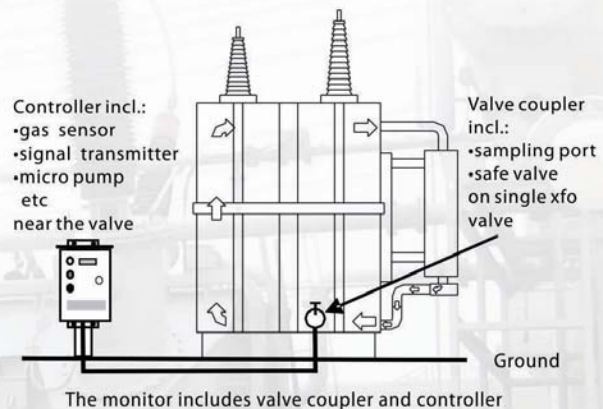
#### Features

##### 1. Multi-gas monitoring

Incorporating ASENSOR's core technology, the sensor encompasses multiple selective gas probes that enable monitoring of  $H_2$  (incipient fault gas),  $C_2H_2$  (dangerous fault gas), CO (indicator of aging solid insulation) and moisture individually and simultaneously.

##### 2. Easy & Flexible installation

The unit can be installed basically on valves of any type while preventing dead oil (e.g. non straight-thru; having small ID or excessively long pipe; restricted mounting space or strong vibration).



#### Technology

Integrating with our multiple patents related to **vacuum-resistant composite oil/gas separation membrane**, efficient **fuel cell gas diffusive electrode**, and **sensor self-test and diagnostics**, the fuel cell based KG3100H dissolved gas sensor is the first of its kind in the world.

KGX3 series has 2 mode available, as shown in back page. More information can be found at our website.

# TransPRO® KGX3 Series

## Enhanced Transformer On-Line Dissolved Gas & Moisture Monitor

### General

<b>Description of instrument</b>	Continuous, on-line intelligent dissolved gas monitor with enhanced oil recirculation
<b>Instrument components</b>	KG3100H gas sensor and an intelligent transmitter in a stainless steel enclosure, a recirculating oil sampler with a micro-pump and a Windows based Host software. A moisture sensor is also integrated in KGX3W model.
<b>Applications</b>	Detection of failure conditions in oil-filled HV electrical equipment through monitoring of fault-related key gases and moisture in insulating oil.

### Sensor Analytical Specifications

Model		KGX3	KGX3W
Reading	Selective reading of H <sub>2</sub> /CO/C <sub>2</sub> H <sub>2</sub>	•	•
	Moisture in oil (RH%)		•
Accuracy	H <sub>2</sub> ± 10% reading or ± 20µL/L CO ± 10% reading or ± 20µL/L C <sub>2</sub> H <sub>2</sub> ± 10% reading or ± 3µL/L	•	•
	RH%: ±2RH%		•
Range	H <sub>2</sub> : 0~1000µL/L, CO: 0~2000µL/L, C <sub>2</sub> H <sub>2</sub> : 0~200µL/L	•	•
	0~100RH% and 0~100µg/g absolute water content		•
Limit of detection	H <sub>2</sub> : 10µL/L, CO: 20µL/L, C <sub>2</sub> H <sub>2</sub> : 3µL/L (99% confidence)	•	•
	RH%: ±2RH%		•
Response time in oil	≤60min to 80% of step change	•	•
Oil pressure at the sensor (from 0.7MPa to absolute vacuum allowed)		•	•

### Oil Sampler

<b>Sampling head</b>	Directly fitted to a single transformer valve to force oil re-circulation
<b>Purge port</b>	Allow to remove air, as well as sample oil by glass syringe fitted with Luer stopcock for laboratory DGA
<b>Micro oil pump</b>	PTFE material as wetted part, driven by state-of-the-art brushless DC motor.
<b>Pipe</b>	Use copper or PTFE pipe to link oil sampler and controller, standard one way pipe length is 4m. A self-regulating heat cable is attached to the pipe.

### Controller

<b>Hardware and firmware</b>	Microprocessor, watchdog and real-time clock with embedded firmware
<b>Comm./Network</b>	Standard RS-485 port allows for daisy-chaining of multiple transmitters RS485/232 or RS485/TCP-IP, selectable when ordering
<b>Front panel</b>	Alarm indicator: Normal, Gas Hi, and Gas Hi-Hi. Gas Reading: LED rotating display.
<b>Alarm relays</b>	Normal, Gas Hi and Gas Hi-Hi, synchronized to front panel indicator.
<b>Power supply</b>	220VAC/50Hz ± 15%, 500 VA Max. 120VAC/60Hz also available
<b>Dim.&amp; Weight</b>	Stainless steel enclosure, W 381mm×H 610mm×D 246 mm, ≤20 kgs
<b>Host PC Software</b>	Support networking, Windows 2003/2008/XP/Win 7

### Environmental Test

<b>Outdoor protection</b>	IEC60529, IP55
<b>Vibration</b>	IEC68-2-6
<b>High &amp; Low temp</b>	IEC68-2-1 /IEC68-2-2, 60°C & -40°C
<b>EMC</b>	IEC61000-4-2 / 4 / 5 / 8, Grade 4
<b>Other</b>	CE Mark, RoHS

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