

iTRANS•2

FIXED GAS DETECTOR

- Detection of Explosive Gases, Toxic Gases, or Oxygen
- Non-Intrusive Calibration
- Smart Sensors
- HART Communication Protocol **(NEW)**
- MODBUS Communication
- Programmable Relays
- Dual Gas Sensing



CERTIFICATIONS



IECEX



HART
COMMUNICATION PROTOCOL

The Fixed Gas Detection Experts

www.oldhamgas.com

APPLICATIONS

- Oil and Gas Industry
- Offshore Drilling
- Utilities and Power
- Petrochemical Industry
- Municipal Water and Waste Treatment
- Food and Beverage Production



IR SENSOR

The infrared sensor provides detection of explosive gases (methane, butane, propane, ethylene, hexane, etc.) in more severe environmental conditions, where the presence of poisons could harm the use of a catalytic cell. It also detects methane from 0 to 100% volume for biogas applications. CO₂ can be monitored as well in different ranges.

VERSATILE

The **iTRANS-2** can be configured to meet nearly any application through its state-of-the art features and options.

- Explosion-proof
- HART (optional)
- RS-485 Modbus (optional)
- Stainless Steel Enclosure (optional)
- Programmable Relays (optional)
- 3-wire, 4-wire Installations
- Dual Gas Sensing (optional)
- Remote Sensing (optional)
- Large Sensor Offering – Electrochemical, Catalytic and Infrared

EASY TO USE

- Smart Sensor
- Non-Intrusive Calibration
- Dual-channel split-screen LED display

OTHER FEATURES AND BENEFITS

Dual Gas Sensing

The **iTRANS-2** can detect and display up to two gases on certain models. Both gas sensors may be mounted directly to the transmitter, or may be mounted remotely.

Wide Sensor Offering

The **iTRANS-2** supports Electrochemical, Catalytic Bead and Infrared sensors. The **iTRANS-2** is available for most common industrial gases, allowing of standardization for your gas detection equipment.

Smart Sensors

The **iTRANS-2**'s smart sensors come factory pre-calibrated and automatically send sensor information, such as sensor life, to the transmitter. A sensor life indicator is displayed immediately after each calibration.

Dual-channel split-screen LED display

For optimum visibility in dark places.

Non-Intrusive Calibration

The **iTRANS-2**'s non-intrusive interface keys operate with a simple magnetic wand and allow for full transmitter configuration and calibration without opening the unit's explosion-proof housing.

Programmable Relays

The microprocessor-controlled transmitters are capable of independent operation or multi-point system configuration. With optional on-board relays, the monitor has the added ability of stand-alone operation, activating alarms, horns or fans, and can also shut down a system without the need to wire back to a central control panel.

Multiple Wiring Options

The **iTRANS-2** can be configured to meet almost any installation application. Common configurations include:
3-Wire (4-20mA) Models - Allow for full utilization of the **iTRANS-2**'s features and options and can be used with all of the **iTRANS-2**'s sensors.

4-Wire (Digital ModBus) Models - Allow for full utilization of the **iTRANS-2**'s features and options and can be used with all of the **iTRANS-2**'s sensors.

HART™ Communication Protocol

With the optional HART Communication Protocol, the **iTRANS-2** offers remote diagnostics, set-up or calibration by superimposing a high-frequency current across the industry standard 4-20mA analog line.

Stainless Steel Enclosure

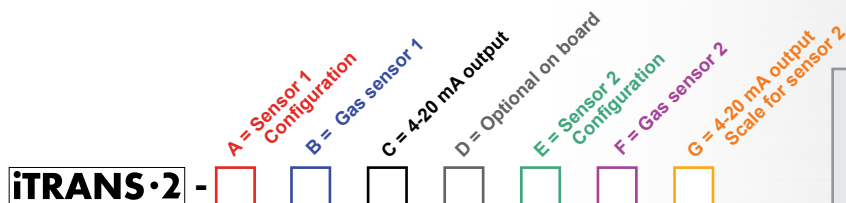
An optional stainless steel enclosure for corrosive environments.

ORDERING INFORMATION

iTRANS-2 offers a wide variety of sensor configurations and relay options for maximum flexibility and affordability. Use the following guide to select the options that best fit your monitoring needs and applications. Oldham recommends that a fixed system application survey be completed to help provide the most accurate assessment of your equipment requirements.

iTRANS-2 Base Part Number: **iTRANS-2**-ABCDEFGH (sensor options listed below) Magnetic calibration tool, and calibration cup are standard items with all **iTRANS-2** monitors.

Questions? Visit us at www.oldhamgas.com



Example: iTRANS-2 -1C21241

An **iTRANS-2** with an on-board LEL (4-20 mA scale 0-100) and remote mount H2S (4-20 mA scale 0-500) with optional relays and Modbus RTU

A	B	C	D	E	F	G
Sensor 1 Configuration	Gas Sensor 1	4-20 mA Output Scale for Sensor 1	Optional on Board Relays	Sensor 2 Configuration	Sensor 2 Configuration	4-20 mA Output Scale for Sensor 2
1 - Explosion proof / On-Board	1 - CO ●	0 - 0-999	0 - No Relay Modules (Modbus)	0 - No sensor	1 - CO ●	0 - 0-999
2 - Explosion proof / Remote*	2 - NO ●	1 - 0-500	1 - With On-Board Relays (Modbus)	1 - Explosion proof / On-Board**	2 - NO ●	1 - 0-500
3 - Non-hazardous remote / Duct mount*	3 - NH ₃ ●	2 - 0-100	2 - No Relay Module (Hart)	2 - Explosion proof / Remote*	3 - NH ₃ ●	2 - 0-100
4 - Explosion proof / On-Board with Splash Guard	4 - H ₂ S ●	3 - 0-50	3 - With On-Board Relays (Hart)	3 - Non-hazardous remote / Duct mount*	4 - H ₂ S ●	3 - 0-50
5 - Explosion proof / Remote with Splash Guard*	5 - SO ₂ ●	4 - 0-30		4 - Explosion proof / On-Board with Splash Guard**	5 - SO ₂ ●	4 - 0-30
6 - Stainless Steel / On-Board	6 - NO ₂ ●	5 - 0-10		5 - Explosion proof / Remote with Splash Guard*	6 - NO ₂ ●	5 - 0-10
7 - Stainless Steel / Remote*	7 - CL ₂ ●	6 - 0-2		7 - Stainless Steel / Remote*	7 - CL ₂ ●	6 - 0-2
8 - Explosion proof / Dual sensors / Single remote enclosure**	8 - CLO ₂ ●	7 - 0-1		8 - Explosion proof / Dual sensors / Single remote enclosure**	8 - CLO ₂ ●	7 - 0-1
	9 - HCN ●	8 - 0-20			9 - HCN ●	8 - 0-20
	A - O ₂ ●	9 - 0-200			A - O ₂ ●	9 - 0-200
	B - Methane by LEL (catalytic) ◆	A - 0-5.00			B - Methane by LEL (catalytic) ◆	A - 0-5.00
	C - Pentane by LEL (catalytic) ◆	B - 0-0.50			C - Pentane by LEL (catalytic) ◆	B - 0-0.50
	D - CO/null H ₂ ●				D - CO/null H ₂ ●	
	F - HCL ●				F - HCL ●	
	K - PH ₃ ●				K - PH ₃ ●	
	L - H ₂ ●				L - H ₂ ●	
	M - Methane by Vol ▲				M - Methane by Vol ▲	
	N - Methane by LEL ▲				N - Methane by LEL ▲	
	O - Propane ▲				O - Propane ▲	
	P - Propylene ▲				P - Propylene ▲	
	Q - Pentane ▲				Q - Pentane ▲	
	R - Butane ▲				R - Butane ▲	
	S - Ethylene ▲				S - Ethylene ▲	
	T - Ethanol ▲				T - Ethanol ▲	
	U - Hexane ▲				U - Hexane ▲	
	V - CO ₂ (0-5%) ▲				V - CO ₂ (0-5%) ▲	
	W - CO ₂ (0-100%) ▲				W - CO ₂ (0-100%) ▲	
	X - CO ₂ (0-0.5%) ▲				X - CO ₂ (0-0.5%) ▲	

● = electrochemical
▲ = IR
◆ = catalytic

* Remote sensor maximum distance = 200m

** Dual On-Board **iTRANS-2** are CSA certified only.

Consult factory for availability, additional gases, ranges and certification information.

ACCESSORIES	PART NUMBER	IMAGE CODE
By-Pass / Flow-thru Kit	P/N 77014579	a
Splash guard / remote Cal Cup for Toxic, O ₂ , and LEL	P/N 77015303	b
iTRANS-2 Calibration Wand	P/N 77024065	c
iTRANS-2 Splash guard	P/N 77023588	d
iTRANS-2 Calibration Cup	P/N 77023513	e



MEASURING RANGES

Combustible gases	0-100% LEL in 1% increments
Methane (by Vol)	0-100% by Volume in 1% increments
Hydrogen	0-999 ppm in 1 ppm increments
Oxygen	0-30% by Volume in 0.1% increments
Ammonia	0-500 ppm in 1 ppm increments
Carbon Monoxide	0-999 ppm in 1 ppm increments
Hydrogen Sulfide	0-500 ppm in 1 ppm increments
Sulfur Dioxide	0.2-99.9 ppm in 0.1 ppm increments
Hydrogen Cyanide	0.2-30 ppm in 0.1 ppm increments
Hydrogen Chloride	0.2-30 ppm in 0.1 ppm increments
Phosphine	0-1 ppm in 0.01 ppm increments
Nitrogen Dioxide	0.2-99.9 ppm in 0.1 ppm increments
Nitric Oxide	0-999 ppm in 1 ppm increments
Chlorine	0.2-99.9 ppm in 0.1 ppm increments
Chlorine Dioxide	0.02-1 ppm in 0.01 ppm increments
Carbon Dioxide	0-100% by Volume in 1% increments
Carbon Dioxide	0-0.5% by Volume in 0.01% increments
Carbon Dioxide	0-5% by Volume in 0.01% increments

TECHNICAL SPECIFICATIONS

Sensors	Combustible Gases: Catalytic, Infrared Toxic / Oxygen: Electrochemical, Infrared (CO ₂)
Warranty from date of shipment	2 years on electronics 3 years on infrared sensors (CO ₂ and LEL) 2 years on catalytic (LEL), CO and H ₂ S sensors 18 months on O ₂ sensors 12 months on other sensors
Detected Gases	See Ordering Guide
Material	Epoxy Coated Aluminium or 316 Stainless Steel
Display	Dual-channel split-screen LED display (4 digit, 7 segment arrangement per channel) provides simultaneous display of one or two gases.
Input voltage	12-28VDC operating range (24VDC typical)
Power Consumption	150mA@24VDC (Electrochemical sensor) 250mA@24VDC (Combustible gases catalytic) 0.8A peak (single gas) 170mA@24VDC (Combustible gases Infrared) 0.5A peak (single gas) 350mA@24VDC (Combined catalytic/Infrared) 1.2A peak (two gas)
Ingress Protection	NEMA 4X, IP66
Response Time (catalytic methane)	T50: <15 seconds T90: <35 seconds
Humidity Range	10-90% RH (non-condensing), typical
Temperature Range	(Sensor Specific) -40°C to +75°C (-40°F to +167°F)
Dimensions	127 x 153 x 129 mm (5.0" x 6.0" x 5.1"), 2.9 Kg (6.4 lbs)
Cable	3-wire or 4-wire
Maximum Cable Loop	15 Ohm (3-wire configs) 10 Ohm (4-wire configs)
Output Signal:	Standard: 4-20mA (source) Optional: RS-485 Modbus (9600 baud) Optional: HART Protocol
Alarm relays (opt)	3 alarm relays (5 Amps at 30VDC) Two user-programmable relays, SPST, N.O. One fault relay, SPST, N.C.
Approvals (Sensor Specific)	NRTL/c and CSA Class I, Div 1, Groups B, C, D AEx d IIB + H2 T5 ⁽¹⁾ Class I, Div 2, Groups A, B, C, D AEx d IIB + H2 T5 ⁽²⁾ ATEX (pending) and IECEx II 2G - Ex d IIB + H2 T5 ⁽¹⁾ II 3G - Ex nA II T5 ⁽²⁾ China GYB13.1323X - Ex d IIC T6 Gb GB15322-94 Fire protection



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(1) Combustible gases, Hydrogen, Oxygen, Carbon Monoxide, Hydrogen Sulfide, Sulfur Dioxide, Hydrogen Cyanide, Phosphine, Nitrogen Dioxide, Nitric Oxide, Carbon Dioxide.

(2) Ammonia, Hydrogen Chloride, Chlorine, Chlorine Dioxide.