TELEDYNE
OLDHAM SIMTRONICS
Everywhere**you**look™

iTrans 2

Fixed gas detector

Characteristics

- Large Sensor Offering – Electrochemical, Catalytic and Infrared
- Non-Intrusive Calibration
- Smart Sensor
- HART (optional)
- RS-485 Modbus
- Programmable Relays (optional)
- Dual Gas Sensing (optional)

Applications

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

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Sensors

- The iTrans 2 is available with sensors for most common gases including: Infrared, CO_2, Catalytic Bead Combustible and electrochemical sensors. It can support simultaneous detection from two sensors, either directly attached to the display, or remote sensors.

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
- 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
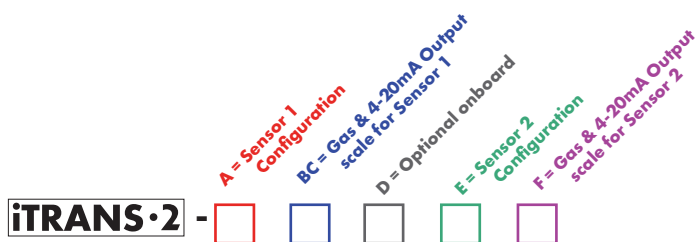
Other features and benefits

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 standard-ization 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 includes: 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 - Allows 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 super - imposing 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-ABCDEFG (sensor options listed below) Magnetic calibration tool, and calibration cup are standard items with all iTrans 2 monitors.

Questions ? Visit us at www.teledynegasandflamedetection.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 = Sensor 1 Configuration
BC = Gas & 4-20mA Output scale for Sensor 1
D = Optional onboard
E = Sensor 2 Configuration
F = Gas & 4-20mA Output scale for Sensor 2

iTRANS·2 -

A	BC	D	E	FG
Sensor 1 Configuration	Gas & 4-20 mA Output Scale for Sensor 1	Optional on Board Relays	Sensor 2 Configuration	Gas & 4-20 mA Output Scale for Sensor 2
1 — Explosion proof/ On-Board	10 — CO (0-999ppm)*** ●	0 — No Relay Modules (Modbus)	0 — No sensor	10 — CO (0-999ppm)*** ●
2 — Explosion proof/ remote*	20 — NO (0-999ppm)*** ●	1 — With On-Board Relays (Modbus)	1 — Explosion proof/ On-Board**	20 — NO (0-999ppm)*** ●
3 — Non-hazardous remote/ Duct mount*	31 — NH_3 (0-500ppm)*** ●	2 — No Relay Module (Hart)	2 — Explosion proof/ remote*	31 — NH_3 (0-500ppm)*** ●
6 — Stainless Steel / On-Board	41 — H_2S (0-500ppm)*** ●	3 — With On-Board Relays (Hart)	3 — Non-hazardous remote/ Duct mount*	41 — H_2S (0-500ppm)*** ●
7 — Stainless Steel / Remote*	52 — SO_2 (0-100ppm)*** ●		7 — Stainless Steel / Remote*	52 — SO_2 (0-100ppm)*** ●
8 — Explosion proof / Dual sensors / Single remote enclosure**	62 — NO_2 (0-100ppm)*** ●		8 — Explosion proof / Dual sensors / Single remote enclosure**	62 — NO_2 (0-100ppm)*** ●
	72 — Cl_2 (0-100ppm)*** ●			72 — Cl_2 (0-100ppm)*** ●
	87 — ClO_2 (0-1ppm)*** ●			87 — ClO_2 (0-1ppm)*** ●
	94 — HCN (0-30ppm)*** ●			94 — HCN (0-30ppm)*** ●
	A4 — O_2 (0-30%vol)*** ●			A4 — O_2 (0-30%vol)*** ●
	B2 — Methane by LEL (catalytic) (0-100%LEL)*** ◆			B2 — Methane by LEL (catalytic) (0-100%LEL)*** ◆
	C2 — Pentane by LEL (catalytic) (0-100%LEL)*** ◆			C2 — Pentane by LEL (catalytic) (0-100%LEL)*** ◆
	D0 — CO/null H_2 (0-999ppm)*** ●			D0 — CO/null H_2 (0-999ppm)*** ●
	F4 — HCl (0-30ppm)*** ●			F4 — HCl (0-30ppm)*** ●
	K7 — PH_3 (0-1ppm)*** ●			K7 — PH_3 (0-1ppm)*** ●
	L0 — H_2 (0-999ppm)*** ●			L0 — H_2 (0-999ppm)*** ●
	H2 — Hydrogen by LEL (catalytic) (0-100%LEL)*** ◆			H2 — Hydrogen by LEL (catalytic) (0-100%LEL)*** ◆
	VA — CO_2 (0-5 %vol) ▲			VA — CO_2 (0-5 %vol) ▲
	W2 — $CO_2$0 (0-100 %vol) ▲			W2 — $CO_2$0 (0-100 %vol) ▲
	XB — CO_2 (0-0.5 %vol) ▲			XB — CO_2 (0-0.5 %vol) ▲

* Remote sensor maximum distance = 200m
** Dual On-Board are CSA certified only.
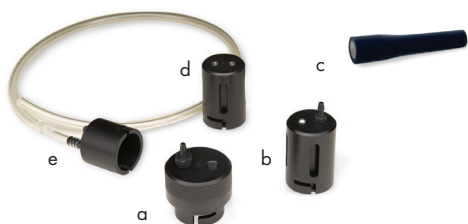*** Factory measurement range, configurable on site.
Consult factory for availability, additional gases, ranges and certification information.

● = electrochemical
▲ = IR
◆ = catalytic

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Accessories

Accessories	Part number	Image code
By-Pass / Flow-thru Kit	P/N 77014579	a
Splash guard / remote Cal Cup for Toxic, O2, 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
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	0.02-1.00 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
	Toxic / Oxygen: Electrochemical, Infrared (CO_2)
	2 years on electronics
Warranty from date of shipment	3 years on infrared sensors (CO_2)
	2 years on catalytic (LEL), CO and H_2S 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 (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: < 10 seconds
	T90: < 30 seconds
Humidity Range	10-90% RH (non-condensing), typical (sensor specific)
Temperature range	-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)
	+ 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.

Homologations Sensor Specific		
	$_cCSA_{us}$ *	Class I, Div 1, Groups B, C, D
		Ex d IIB + H2 T5
		AEx d lIB + H2T5 [1]
		Class I, Div 2, Groups A, B, C, D [2]
	ATEX and IECEx	II 2G - Ex db IIB + H2 T5 Gb [1]
	NEPSI	GYB15.1621X - Ex d IIB + H2 T5 Gb
		GB15322.1-2003 Fire protection
	INMETRO	Ex db IIB+H2 T5 Gb[1]

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

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