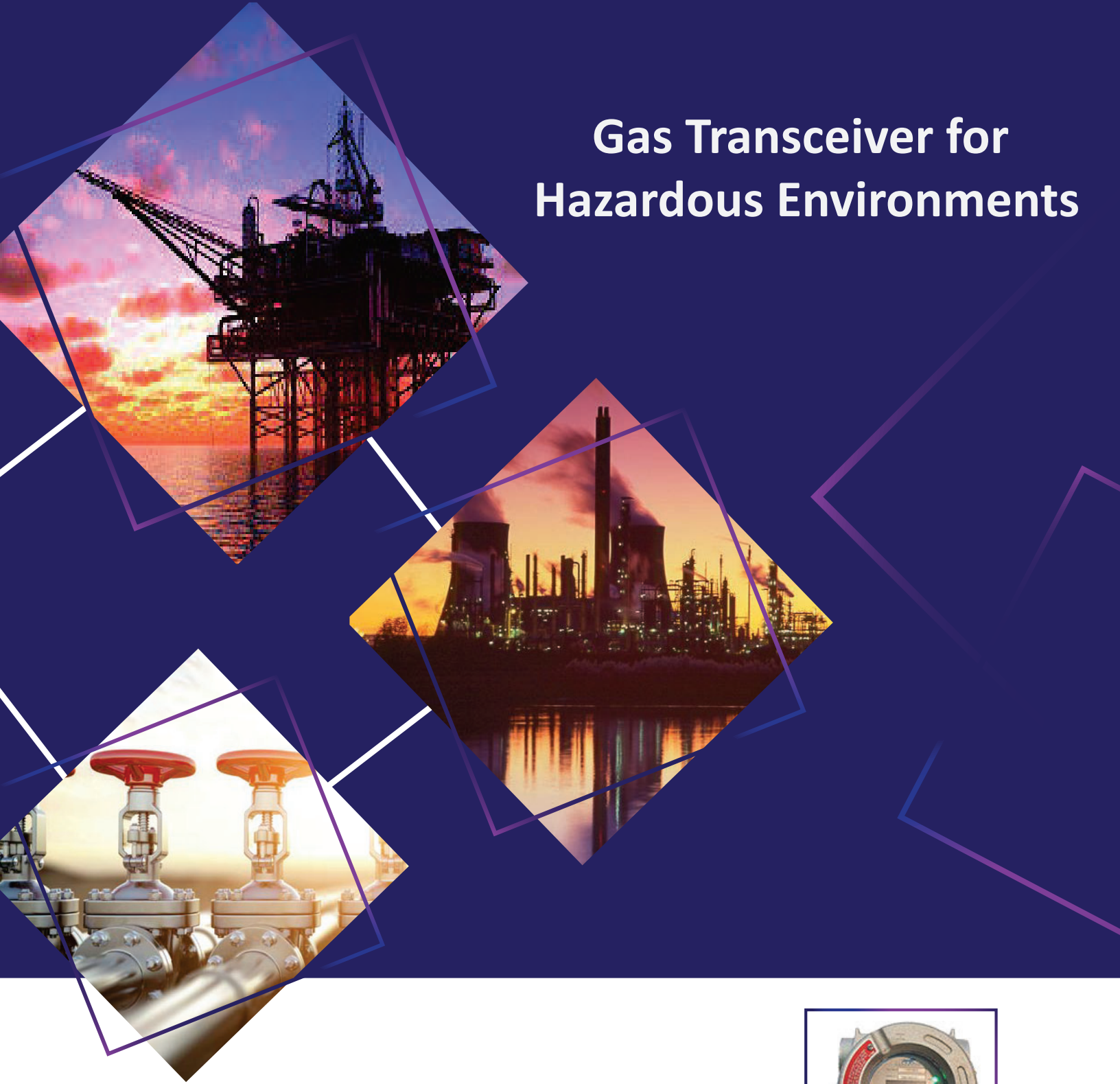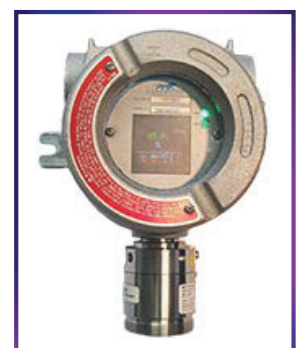# PERGAMON
PERCEPTIVE TECHNOLOGIES

OGTR

Gas Transceiver for Hazardous Environments

Flammable, toxic and oxygen gas detector for industrial applications

OGTR Overview

Easy to use

- User friendly intuitive multi-color LCD data display
- Fully configurable via an android mobile application
- Optional remote sensor available when using Modbus digital sensor

Cost effective

- Minimal training required
- Non intrusive, one-person operation
- Sensor configuration and calibration done via a mobile application

Flexible input / output options

- 2 Possible connected sensors (electrochemical, infrared , or catalytic bead)
- Fully programmable alarm relays (dry contacts) 10A-250 VAC to 3 individually configurable alarm set-points for each plugged sensor (optional)
- 1 Analog output (0-20mA / 4-20mA /0-24mA/ 0-5V /0-10V) for mapping
- Modbus RTU over RS485 for remote settings, diagnostics, and configuration
- Visual indication over an RGB LED status
- Audible alert using 58dB buzzer

OGTR Detector is a complete standalone gas detection system designed to detect a wide range of toxic and flammable gases in potentially hazardous environments.
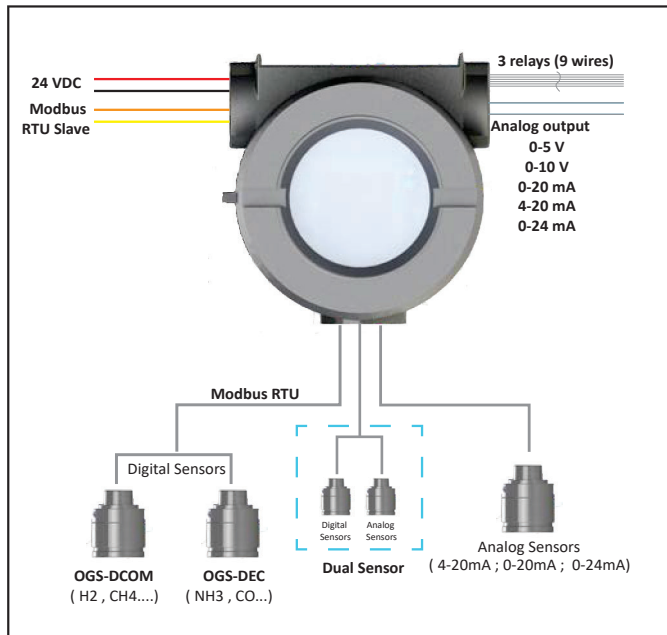
Wireless configurability and monitoring makes OGTR a non intrusive, easy to use solution that is ideal for various gas detection applications.

Typical applications

- **Oil & Gas industries**
- **Water / wastewater treatment plants**
- **Pulp & paper mills**
- **Manufacturing facilities**
- **Chemical plants**

Cover

Enclosure

Plug-in Sensor

Label

internal PCB
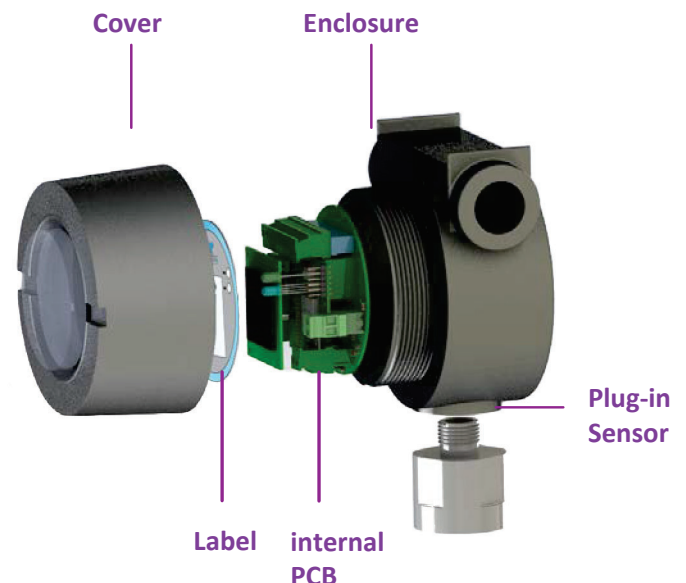
OGTR Overview

OGTR Transceiver supports three types of inputs :

- **Digital input :** used with Electrochemical (O2 ,CO2,CO, H2S, NO2,CH2O,CL2,NO,CO2); Catalytic (C4H10 , H2,CH4,C3H8) and Infrared (Refrigerant) sensor/Transmitter technologies.

- **Analog input :** supports Electrochemical (O2 ,CO2,CO, H2S, NO2,CH2O,CL2,NO,CO2) and Infrared(Refrigerant) sensor/transmitter technologies.

- **Dual input :** supports both digital and analog inputs.

Technical Specifications

Electrical

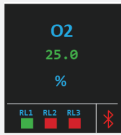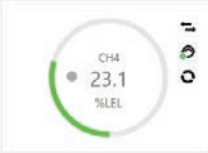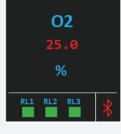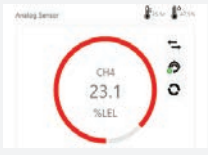| POWER SUPPLY	
Power Supply	18V-36V MAX (+24VDC Nominal)
Total Power Consumption	2W MAX (When 2 sensors are plugged)
Inrush Current	300mA MAX
AVAILABLE SENSOR TECHNOLOGIES	
OGS-A420	Analog 4-20 mA- Combustible 0 – 100%LEL
OGS-DCOM	Digital Modbus RTU- Combustible 0 – 100%LEL
OGS-EC3	Digital Electrochemical 0 – 100PPM
OGS-NDX	Digital NDIR 0 – 10000PPM
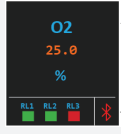
Environmental

Operating Temperature	-40°C to 80°C
Operating Humidity	0% to 90°%

OGTR Overview

OGTR displays data using the built in LED screen or via the OGTR mobile app:

OGTR STATUS	Built In Display		Mobile App
NORMAL	O2 25.0 % RL1 RL2 RL3	• **Gas level indication** :green • **Relay status indication**	CH4 23.1 %LEL
ALARM	O2 25.0 % RL1 RL2 RL3	• **Gas level indicatio**:orange • **Relay status indication**	Analog Sensor CH4 23.1 %LEL
ALERT	O2 25.0 % RL1 RL2 RL3	• **Gas level indicatio**:red • **Relay status indication**	Analog Sensor CH4 23.1 %LEL

Check operation manual for more details about OGTR mobile app

OGTR Mobile app

OGTR mobile application is an android interactive HMI that enables users to pair the OGTR with their mobile phone. Users can perform many tasks related to system configuration, calibration, diagnostics, and maintenance.

Mobile app features

- Ping/ silence and find the transceiver.
- Auto-detect sensor information and on-site calibration.
- Real-time monitoring of sensor(s).
- Relay output configuration and mapping.
- Analog output configurations and mapping.
- Hardware diagnostic and maintenance.
- OTA firmware updating.

OGTR Application

OGTR is applicable to a variety of industries :

ENVIRONMENT	Specific Area	Gases Present
Chemical Plants	• Raw material storage • Process areas • Laboratories • Pump skids • Compressor stations • Loading/unloading areas	• General Hydrocarbons • H_2S • NH_3 • O_2
Oil and Gas	• Exploration drilling rigs • Production platforms • Onshore oil and gas terminals • Refineries	• General Hydrocarbons • H_2S • CO • O_2
Power Stations	• Around the boiler pipework and burners • Turbines • Coal silos and conveyor belt areas in older coal/oil fired stations	• Flammable • CH_4 • H_2 • O_2
Boiler Rooms	• Boiler and gas piping • Incoming gas main	• General Hydrocarbons • H_2S • CO • O_2
Hospitals	• Laboratories • Refrigeration plants • Boiler rooms	• General Hydrocarbons • H_2S • O_2 • CO
Waste Water Treatment	• Pumps • Plant sumps • Digesters • H_2S scrubbers	• General Hydrocarbons • H_2S • CO • O_2
Towers	• Boiler rooms • Chillers	• General Hydrocarbons • H_2S • CO • CO_2

OGTR Supported gas sensors

Gas		Snsor Technology	Range	Sensor Lifespan	Coverage Radius
Combustible					
Butane	C_4H_{10}	Catalytic bead	0-60% LEL	>3 years	20 ft . (6m)
Hydrogen	H_2	Catalytic bead	0-60% LEL	>3 years	20 ft . (6m)
Methane	CH_4	Catalytic bead	0-60% LEL	>3 years	20 ft . (6m)
Propane	C_3H_8	Catalytic bead	0-60% LEL	>3 years	20 ft . (6m)
Oxygen Deficiency					
Oxygen	O_2	Electrochemical	0-25%	>5 years	20 ft . (6m)
Refrigerant					
Refrigerant	R-407C	Infrared	0 - 1000 ppm	>10 years	20 ft . (6m)
Refrigerant	R-134A	Infrared	0 - 1000 ppm	>10 years	20 ft . (6m)
Refrigerant	R-410A	Infrared	0 - 1000 ppm	>10 years	20 ft . (6m)
Refrigerant	R-404A	Infrared	0 - 1000 ppm	>10 years	20 ft . (6m)
Refrigerant	R-22	Infrared	0 - 1000 ppm	>10 years	20 ft . (6m)
Toxic					
Ammonia	NH_3	Electrochemical	0 - 1000 ppm	>2 years	20 ft . (6m)
Carbon dioxide	CO_2	Infrared	0 - 5000 ppm	>10 years	50 ft . (6m)
Carbon monoxide	CO	Electrochemical	0 - 200 ppm	>2 years	50 ft . (6m)
Hydrogen sulfide	H_2S	Electrochemical	0 - 20 ppm	>3 years	20 ft . (6m)
Nitrogen dioxide	NO_2	Electrochemical	0 - 10 ppm	>2 years	50 ft . (6m)
Formaldehyde	CH_2O	Electrochemical	0 - 10 ppm	>2 years	20 ft . (6m)
Chlorine	CL_2	Electrochemical	0 - 10 ppm	>2 years	20 ft . (6m)
Nitric oxide	NO	Electrochemical	0 - 250 ppm	>2 years	20 ft . (6m)
Sulfur dioxide	SO_2	Electrochemical	0 - 2000 ppm	>2 years	20 ft . (6m)

Other GASES and RANGES are available.
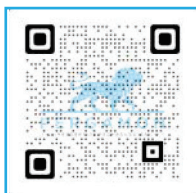
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