



OLC(T) 100

Fixed Gas Detector



Description

The OLC/OLCT 100 range of fixed detectors has been designed for detection of combustible gases, toxic gases or oxygen.

Available in explosion-proof or intrinsically safe versions, the OLCT 100 is suitable for detection of all gases in ATEX zones.

The OLCT 100 is available in a stainless steel version, offering increased resistance to corrosive elements (ideal for marine, wastewater treatment plants, food processing activities, etc).

This stainless steel intrinsically safe version is certified for use in zones 0 (gas) and 20 (dust), whereas all other versions of the OLCT 100 are certified for use in zones 1 (gas) and 21 (dust).

Features

- Detection of Combustible, Toxic or Oxygen gases
- Infrared XP version
- SIL 2 high reliability
- IP 66
- Aluminium or Stainless Steel version

Applications

- Steel mills
- Petrochemical facilities
- Chemical industry
- Pharmaceutical industry
- Food industry
- Refrigeration industry
- Water treatment



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Fixed Gas Detection

Our products are always application-driven, solution-oriented.

Options include:

- OLCT 100 transmitter with 4-20 mA output
- OLC 100 detector with a Wheatstone bridge output for detection of combustible gases



IR Sensor

The infrared sensor provides detection of CO₂ and refrigerant gases and is warranty 2 years.



OLCT 100 XP

Explosion-proof version is equipped with a catalytic, electrochemical or semiconductor sensor, for detection of combustible, toxic gases or oxygen.

OLCT 100 IS

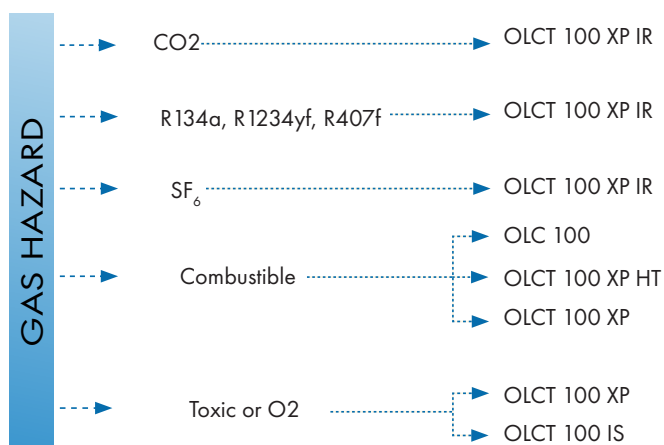
Intrinsically safe version is equipped with an electrochemical sensor for detection of toxic gases or oxygen.

OLCT 100 XP IR

Explosion-proof IR version is equipped with an infrared sensor for detection of CO₂, SF₆ and some freons.

OLCT 100 XP HT

High temperature explosion-proof version for detection of combustible gases up to 200°C. High temperature cable included: 5, 10, 15 meter lengths.



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Reliability

The OLC(T) 100 is SIL 2 certified by INERIS, according to the EN 50402 standard, which corresponds to IEC/EN 61508 for gas detectors.

Gas	Measure	SIL Capability	DU	PFD _{avg}	Test Period
Combustibles ^(a)	Catalytic (C1000)	SIL 2	$0,189.10^{-6}$	$8.3 \cdot 10^{-4}$	12 months
O ₂ ^{(b)(c)}	Electrochemical	SIL 2	$0.74 \cdot 10^{-6}$	$1.62 \cdot 10^{-3}$	6 months
CO ^(b)	Electrochemical	SIL 2	$1.09 \cdot 10^{-6}$	$1.19 \cdot 10^{-3}$	3 months
H ₂ S ^(b)	Electrochemical	SIL 2	$2.98 \cdot 10^{-6}$	$3.26 \cdot 10^{-3}$	3 months
NH ₃ ^(b)	Electrochemical	SIL 2	$4.48 \cdot 10^{-6}$	$4.91 \cdot 10^{-3}$	3 months

(a) complete unit, according to certificate INERIS No. 93664/2012

(b) software and hardware according to certificate INERIS No. 93664/2012, sensors data according to proven in use

(c) O2 sensor with 28 months life expectancy

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Gas		Measuring Range (ppm)	XP Version	IS Version	Temperature Range (°C)	% RH	Accuracy (ppm)	Average Life Expectancy (month)	Response Time T_{90}/T_{20} (s)	Storage Condition
Com-bustible Gases	Catalytic	0-100% LEL	•		-40 to +70	0 - 95	+/- 1% LEL (from 0 to 70% LEL)	40	6/15 (CH ₄)	(b)
	Catalytic High Temperature	0-100% LEL	•		-20 to +200	0 - 95	+/- 1% LEL (from 0 to 70% LEL)	40	6/15 (CH ₄)	(b)
AsH ₃	Arsine	1.00		•	-20 to +40	20 - 90	+/- 0.05	18	30/120	(a)
CH ₂ O	Formaldehyde	50.0		•	-20 to +50	15 - 90	+/- 1.0	36	50/240	(a)
Cl ₂	Chlorine	10.0		•	-20 to +40	10 - 90	+/- 0.4	24	10/60	(a)
ClO ₂	Chlorine dioxide	3.00		•	-20 to +40	10 - 90	+/- 0.3	24	20/120	(a)
CO	Carbon monoxide	100 300 1000	• • •	• • •	-20 to +50	15 - 90	+/- 3 (range 0-100)	40	15/40	(a)
CO ₂	Carbon dioxide	0-5000ppm 0-5% vol. 0-10% vol. 0-100% vol.	• • • •		-20 to +40	10 - 90	+/- 3%	48	20/120	(a)
COCl ₂	Phosgene	1.00		•	-20 to +40	15 - 90	+/- 0.05	12	60/180	(c)
ETO	Ethylene oxide	30.0		•	-20 to +50	15 - 90	+/- 1.0	36	50/240	(a)
H ₂	Hydrogen	2000	•	•	-20 to +50	15 - 90	+/- 5%	24	30/50	(a)
H ₂ S	Hydrogen sulfide	30.0 100 1000	• • •	• • •	-40 to +50	15 - 90	+/- 1.5 (range 0-30)	36	15/30	(a)
HCl	Hydrochloric chloride	30.0 100		• •	-20 to +40	15 - 95	+/- 0.4 (range 0-10)	24	30/150	(a)
HCN	Hydrogen cyanide	10.0 30.0		• •	-40 to +40	15 - 95	+/- 0.3 (range 0-10)	18	30/120	(c)
NH ₃	Ammonia	1000	•	•	❄ -40 to +40	15 - 90	+/- 20	24	--	(a)
		100	•	•		15 - 90	+/- 5	24	25/70	
		1000 5000	• •	• •	-20 to +40		+/- 20 +/- 150 or 10%		20/60 60/180	
NO	Nitrogen monoxide	100 300 1000	• • •	• • •	-20 to +50	15 - 90	+/- 2 (range 0-100)	36	10/30	(a)
NO ₂	Nitrogen dioxide	10.0 30.0		• •	-20 to +50	15 - 90	+/- 0.8	24	30/60	(a)
O ₂	Oxygen	0-30% vol	•	•	-20 to +50	15 - 90	0.4% Vol (from 15 to 22% O ₂)	28	6-15	(a)
		0-30% vol	•	❄	-40 to +50	10 - 90	+/- 1,5%	60	15/25	(a)
PH ₃	Phosphine	1.00		•	-20 to +40	20 - 90	+/- 0.05	18	30/120	(a)
SiH ₄	Silane	50.0		•	-20 to +40	20 - 95	+/- 1.0	18	25/120	(a)
SO ₂	Sulphur dioxide	10.0 30.0 100		• • •	-20 to +50	15 - 90	+/- 0.7 (range 0-10)	36	15/45	(a)
CH ₃ Cl	Methyl chloride	500	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
CH ₂ Cl ₂	Methylene chloride	500	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R12		1% vol	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R22		2000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R123		2000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
FX56		2000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R134 a		2000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
		2000ppm	• (IR)		-20 to +50	0 - 95	+/- 40ppm (from 0 to 50% range)	60	40/170	(e)
Freon R11		1% vol	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R23		1% vol	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R143a		2000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R404 a		2000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R507		2000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R410a		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R32		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R407c		1000	•		-20 to +60	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Freon R407f		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
		2000	• (IR)		-20 to +50	0 - 95	+/- 40ppm (from 0 to 50% range)	60	40/105	(e)
Freon R408a		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Ethanol		500	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Toluene		500	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Isopropanol		500	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
2-butanone (MEK)		500	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
Xylene		500	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
SF ₆		2000	• (IR)		-20 to +50	0 - 95	+/- 40ppm (from 0 to 50% range)	60	25/120	(e)
R1234yf (HFO)		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
		2000	• (IR)		-20 to +50	0 - 95	+/- 40ppm (from 0 to 50% range)	60	25/120	(e)
		0-100% LEL	• (IR)		-20 to +50	0 - 95	+/- 2% LEL (from 0 to 50% LEL)	60	30/115	(e)
R1234ze		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)

(a) +4°C to +20°C / 20% to 60% RH
1 bar ± 10% / 6 month maximum

(b) -50°C to +70°C / 20% to 60% RH
1 bar ± 10% / 6 month maximum

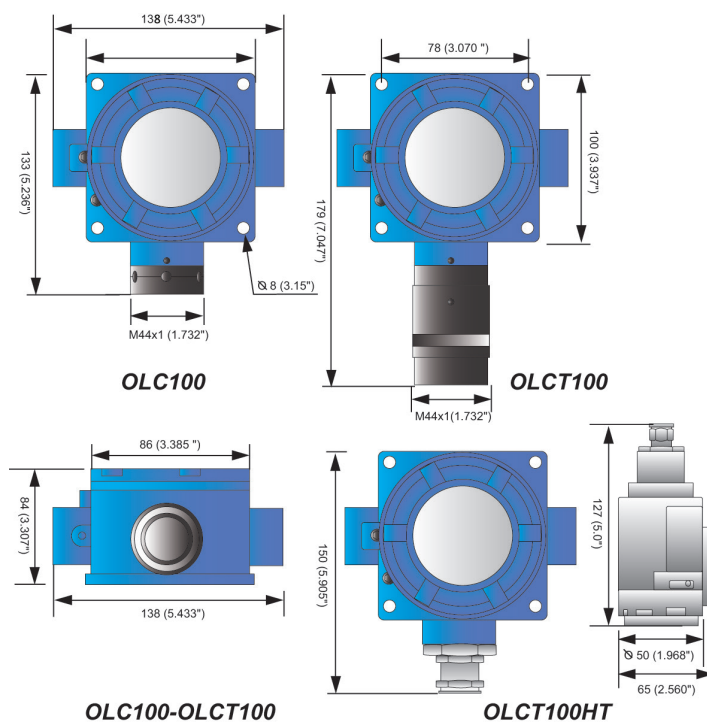
(c) +4°C to +20°C / 20% to 60% RH
1 bar ± 10% / 3 month maximum

(d) -20°C to +50°C / 20% to 60% RH
1 bar ± 10% / 6 month maximum

(e) -40°C to +85°C / 0-80% RH
1 bar ± 10% / 6 month maximum

Fixed Gas Detection

- linear 4 to 20 mA output, reserved for measurement
- 0 mA : electronic fault or no power supply
- < 1 mA: fault
- 2 mA: initialization mode
- > 23 mA: out of range



Ordering Information

The reference is broken down as follows:

OLCT 100-**XP**-**001**-**1**

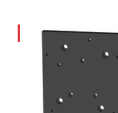
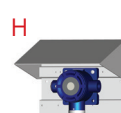
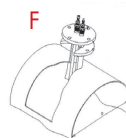
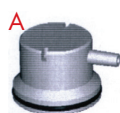
OLCT 100 XP Transmitter, 0-100% LEL CH₄, ATEX, M20 cable entry

Range:	Type:	Gas:	Approval and entry of cable range:
OLC 100 OLCT 100 OLCT 100 HT5* OLCT 100 HT10* OLCT 100 HT15*	XP IS XPIR	Codified from 1 to 999, includes gas and detection range	1 - ATEX and M20 cable entry - Aluminium 3 - ATEX and 3/4 NPT cable entry - Aluminium 5 - ATEX and M20 cable entry - Stainless steel 7 - ATEX and 3/4 NPT cable entry - Stainless steel

* Sensor movable up to 5, 10, or 15 meters using a high temperature cable

Accessories

- A** Calibration cup (6331141)
allows introduction of calibration gas on the sensor
- B** Bypass adapter (6327910)
allows measurement of samples
- C** Splash guard system (6329004)
protects the detector from liquid projections
- D** Remote gas introduction head (6327911)
allows introduction of gas without opening the detector
- E** Removable protective filter (6335975)
protects the sensor against projections and dust
- F** Duct measurement kit (6793322)
allows gas monitoring in a duct
- G** Mounting bracket (6322420)
allows the mounting of the detector to the ceiling
- H** Protective cover (6123716)
protects the detector against bad weather conditions or against direct sun radiations
- I** Adapter plate (6793718)
allows the replacement of another OLDHAM detector without re-drilling
- J** Wall mounted collecting cone (6331169)
for use with lighter-than-air gases
- K** Ceiling mount collecting cone (6331168)
for use with lighter-than-air gases





TELEDYNE OLDHAM SIMTRONICS
Everywhereyoulook™



TELEDYNE
GAS AND FLAME DETECTION
Everywhereyoulook™

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