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

3M™ Oldham OLCT 100

Fixed Gas Detection

APPLICATIONS

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

The OLC/OLCT100 range of fixed detectors has been designed for detection of combustible gases, toxic gases or oxygen.

Our products are always application-driven, solution-oriented.
Options include:

- OLCT100 transmitter with 4-20 mA output
- OLC100 detector with a Wheatstone bridge output for detection of combustible gases

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

The OLCT100 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 OLCT100 are certified for use in zones 1 (gas) and 21 (dust).



IR SENSOR

The infrared sensor provides detection of CO₂ and is warranty 3 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

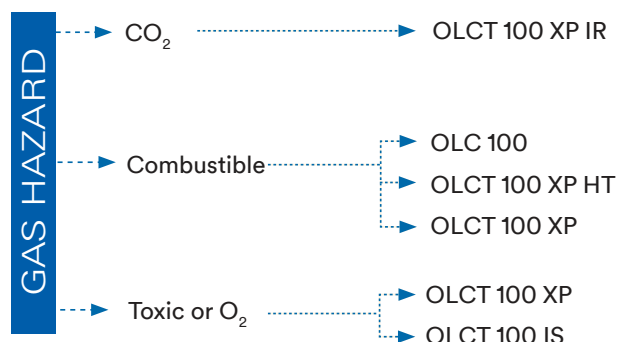
Explosion-proof IR version is equipped with an infrared sensor for detection of CO₂.

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.

RELIABILITY

The OLCT 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 10 ⁻⁴	12 months
O ₂ ^{(b)(c)}	Electrochemical	SIL 2	0.74 10 ⁻⁶	1.62 10 ⁻³	6 months
CO ^(b)	Electrochemical	SIL 2	1.09 10 ⁻⁶	1.19 10 ⁻³	3 months
H ₂ S ^(b)	Electrochemical	SIL 2	2.98 10 ⁻⁶	3.26 10 ⁻³	3 months
NH ₃ ^(b)	Electrochemical	SIL 2	4.48 10 ⁻⁶	4.91 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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Sensors technical specifications

Gas		Measuring Range (ppm)	XP Version	IS Version	Temperature Range (°C)	% RH	Accuracy (ppm)	Average Life Expectancy (month)	Response Time T ₅₀ /T ₉₀ (s)	Storage Condition
Explosive 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	•	•	-20 to +50	15 - 90	+/- 3 (range 0-100)	40	15/40	(a)
		300	•	•						
		1000	•	•						
CO ₂	Carbon dioxide	0-5000ppm	•		-20 to +40	10 - 90	+/- 3%	48	20/120	(a)
		0-5% vol.	•							
		0-10% vol.	•							
		0-100% vol.	•							
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	•	•	-40 to +50	15 - 90	+/- 1.5 (range 0-30)	36	15/30	(a)
		100	•	•						
		1000	•	•						
HCl	Hydrochloric chloride	30.0		•	-20 to +40	15 - 95	+/- 0.4 (range 0-10)	24	30/150	(a)
		100		•						
HCN	Hydrogen cyanide	10.0		•	-40 to +40	15 - 95	+/- 0.3 (range 0-10)	18	30/120	(c)
		30.0		•						
NH ₃	Ammonia	100	•	•	-40 to +40		+/- 5		70/210	
		100	•	•	-20 to +40	15 - 90	+/- 5	24	25/70	(a)
		1000	•	•			+/- 20		20/60	
		5000	•	•			+/- 150 or 10%		60/180	
NO	Nitrogen monoxide	100	•	•	-20 to +50	15 - 90	+/- 2 (range 0-100)	36	10/30	(a)
		300	•	•						
		1000	•	•						
NO ₂	Nitrogen dioxide	10.0		•	-20 to +50	15 - 90	+/- 0.8	24	30/60	(a)
		30.0		•						
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	
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		•	-20 to +50	15 - 90	+/- 0.7 (range 0-10)	36	15/45	(a)
		30.0		•						
		100		•						
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)
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 +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
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)
HFO-1234yf		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)
HFO-1234ze		1000	•		-20 to +55	20 - 95	+/- 15% (from 20 to 70% FS)	40	25/50	(d)

(a) +4°C à +20°C / 20 % à 60% HR
1 bar ± 10 % / 6 mois maximum

(b) -50°C à +70°C / 20 % à 60 % HR
1 bar ± 10 % / 6 mois maximum

(c) +4°C à +20°C / 20 % à 60 % HR
1 bar ± 10 % / 3 mois maximum

(d) -20°C à +50°C / 20 % à 60 % HR
1 bar ± 10 % / 6 mois maximum

ORDERING INFORMATION

The reference is broken down as follows:

OLCT100-XP-001-1

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

Range:	Type:	Gas:	Approval and entry of cable range:
OLC100 OLCT100 OLCT100 HT5* OLCT100 HT10* OLCT100 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



As an ISO 9001 & ISO 14001 approved company, OLDHAM quality assurance programmes demand the continuous assessment and improvement of all OLDHAM products. Information in this leaflet could thus change without notification and does not constitute a product specification. Please contact OLDHAM or their representative if you require more details.

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