

# Series 20

Detectors-Transmitters for Flammable, Toxic Gases and Oxygen

- Intrinsically Safe (IS) and XP approved
- Small in size
- Resistant to corrosion
- Pre-calibrated sensor unit



OLC 20



OLC 20 D

The OLC(T) 20 Series of gas detectors are designed for indoor or outdoor facility monitoring and other applications to accommodate your gas detection requirements at a reasonable price.

## OLC 20 Detector

The new generation of OLC 20 combustible sensors are unaffected by poisons. The units provide extremely quick response times and complete reliability. They can be fitted on a housing with a M25 or 3/4" NPT thread.

## OLC 20D Detector

Based on the OLC 20 sensor unit, the OLC 20D detector is equipped with a 15 m long cable (standard version) and fitting gland for direct connection to a data logger. A high-temperature version allows operation at 200°C.

## New Generation: New Advantages

The stainless steel detector provides protection and resistance to corrosive agents. Classified IP 66, they are resistant to dust and water ingress. The pre-calibrated sensors of the OLCT 20 and OLCT 20D can be disconnected by turning the head of the unit. These "smart" sensors can be calibrated on a work bench, outside hazardous areas.

# Series 20

SENSOR SP

| Gases            | Type of sensor  | Range (ppm)       | Operating temperature*           | Relative humidity uncondensed  |
|------------------|-----------------|-------------------|----------------------------------|--------------------------------|
| O <sub>2</sub>   | electrochemical | 30,00%            | -20°C to +50°C                   | 10% to 95% RH                  |
| CO               | electrochemical | 100, 300 and 1000 | -20°C to +50°C                   | 10% to 95% RH                  |
| H <sub>2</sub> S | electrochemical | 30, 100 and 1000  | -20°C to +50°C                   | 10% to 95% RH                  |
| NO               | electrochemical | 100, 300 and 1000 | -20°C to +50°C                   | 10% to 95% RH                  |
| NO <sub>2</sub>  | electrochemical | 10 and 30,0       | -20°C to +50°C                   | 10% to 95% RH                  |
| SO <sub>2</sub>  | electrochemical | 10,0 30,0 and 100 | -10°C to +50°C                   | 10% to 95% RH                  |
| Cl <sub>2</sub>  | electrochemical | 10,0              | -20°C to +50°C                   | 10% to 95% RH                  |
| H <sub>2</sub>   | electrochemical | 2000              | -20°C to +50°C                   | 10% to 95% RH                  |
| HCl              | electrochemical | 30,0 and 100      | -20°C to +40°C                   | 10% to 95% RH                  |
| HCN              | electrochemical | 10,0 and 30,0     | -20°C to +40°C                   | 10% to 95% RH                  |
| NH <sub>3</sub>  | electrochemical | 100<br>1000       | -20°C to +40°C<br>-20°C to +40°C | 10% to 95% RH<br>10% to 95% RH |
| O <sub>3</sub>   | electrochemical | 1,00              | -10°C to +40°C                   | 10% to 95% RH                  |
| PH <sub>3</sub>  | electrochemical | 1,00              | -20°C to +40°C                   | 10% to 95% RH                  |
| ClO <sub>2</sub> | electrochemical | 3,00              | -20°C to +50°C                   | 10% to 95% RH                  |
| SiH <sub>4</sub> | electrochemical | 50                | -20°C to +40°C                   | 10% to 95% RH                  |
| AsH <sub>3</sub> | electrochemical | 1,00              | -10°C to +40°C                   | 20% to 95% RH                  |
| CH <sub>4</sub>  | catharometer    | 0-100%vol         | -20°C to +50°C                   | 10% to 95% RH                  |
| H <sub>2</sub>   | catharometer    | 0-100%vol         | -20°C to +50°C                   | 10% to 95% RH                  |
| NH <sub>3</sub>  | catalytic       | 0-5000            | -20°C to +50°C                   | 10% to 95% RH                  |
| Flammable gas    | catalytic       | 0-100% LEL        | -20°C to +70°C<br>-20°C to 200°C | 10% to 95% RH<br>10% to 95% RH |

\* Temperature at 20°C and at Atmospheric Pressure

### Transmitter Sensor Unit OLCT 20

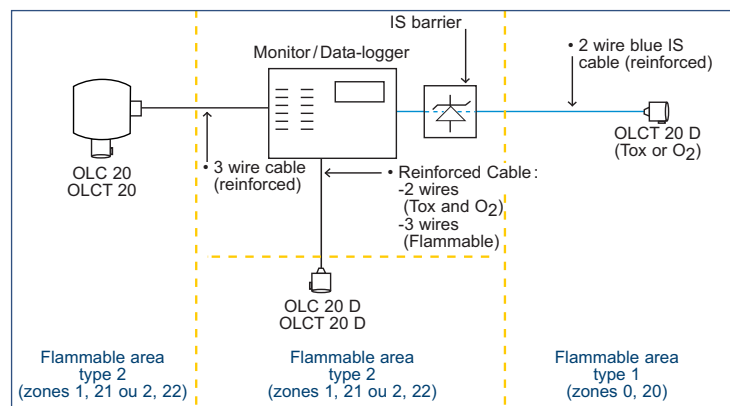
The OLCT 20 sensor units, which are equipped with pre-calibrated sensors (flammable, toxic or oxygen), are classified as flameproof or intrinsically safety according to your needs or the gases detected.

As in the case of the OLC 20, they are fitted on the housing by a M25 or 3/4" NPT thread.

### Detector-Transmitter OLCT 20D

Based on the OLCT 20 sensor unit, the OLCT 20D detector-transmitter is equipped with a 15 m long cable (standard version) and a packing gland for direct connection to a data-logger.

### Wiring connection depending on the type of area



# SPECIFICATIONS

| Pressure    | Accuracy at full scale (at atmospheric pressure) | Life span (in month) | T (50) | IP | IS  | AD  |
|-------------|--------------------------------------------------|----------------------|--------|----|-----|-----|
| Atm +/- 10% | from 5 à 30% = 0,4%vol                           | 28                   | 6      | 66 | YES | YES |
| Atm +/- 10% | +/- 2 ppm (range 0-100)                          | 48                   | 10     | 66 | YES | YES |
| Atm +/- 10% | +/- 1,5 ppm (between 0-30 ppm)                   | 48                   | 15     | 66 | YES | YES |
| Atm +/- 10% | +/- 2 ppm (range 0-100)                          | 36                   | 15     | 66 | YES | YES |
| Atm +/- 10% | +/- 0,8 ppm                                      | 26                   | 20     | 66 | YES | NO  |
| Atm +/- 10% | +/- 0,7 ppm range 0-10                           | 36                   | 15     | 66 | YES | NO  |
| Atm +/- 10% | +/- 0,5 ppm                                      | 26                   | 50     | 66 | YES | NO  |
| Atm +/- 10% | +/-5 ppm range 0-100                             | 26                   | 50     | 66 | YES | YES |
| Atm +/- 10% | +/- 0,5 ppm range 0-10                           | 26                   | 50     | 66 | YES | NO  |
| Atm +/- 10% | +/- 0,3 ppm range 0-10                           | 26                   | 40     | 66 | YES | NO  |
| Atm +/- 10% | +/- 5 ppm                                        | 26                   | 50     | 66 | YES | YES |
| Atm +/- 10% | +/- 10 ppm range 0-1000                          | 26                   | 50     | 66 | YES | YES |
| Atm +/- 10% | +/-0,05 ppm                                      | 20                   | 50     | 66 | YES | NO  |
| Atm +/- 10% | +/- 0,05 ppm                                     | 20                   | 40     | 66 | YES | NO  |
| Atm +/- 10% | +/- 0,3 ppm                                      | 26                   | 50     | 66 | YES | NO  |
| Atm +/- 10% | +/- 1 ppm                                        | 20                   | 40     | 66 | YES | NO  |
| Atm +/- 10% | +/- 0,05 ppm                                     | 26                   | 40     | 66 | YES | NO  |
| Atm +/- 10% | 1% vol                                           | 60                   | 5      | 66 |     |     |
| Atm +/- 10% | 1% vol                                           | 60                   | 5      | 66 | YES | YES |
| Atm +/- 10% | 100 ppm                                          | 36                   | 8      | 66 | YES | YES |
| Atm +/- 10% | 1% LEL between 0- 60% LEL                        | 60                   | 5      | 66 |     |     |
| Atm +/- 10% | 1% LEL between 0- 60% LEL                        | 60                   | 5      | 66 |     |     |

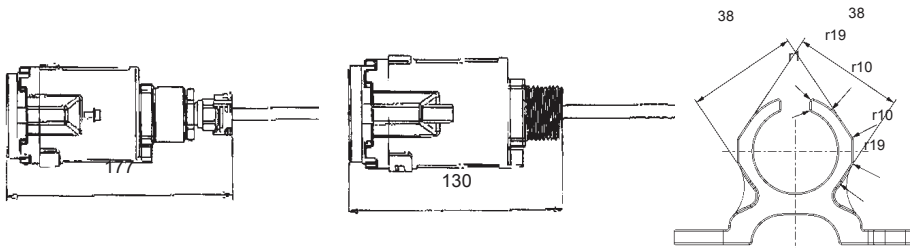
1. Tool kit
2. Calibration cup:
  - standard model: O<sub>2</sub>, CO, H<sub>2</sub>S, NO, H<sub>2</sub>
  - model for special gases: NO<sub>2</sub>, SO<sub>2</sub>, Cl<sub>2</sub>, HCl, HCN, NH<sub>3</sub>, O<sub>3</sub>, ClO<sub>2</sub>, PH<sub>3</sub>
3. Bypass adapter for combustible gases, CO, H<sub>2</sub>S, O<sub>2</sub>
4. Splash guard
5. Remote gas injection device
6. PTFE protective filter/ Activated carbon filter (additional protection of the cell)
7. Gas collectors
8. Pitot tube
9. Remote mounting bracket



# Series 20

## SPECIFICATIONS

| Detectors                              | OLCT 20                                                                                                      |                                                    | OLCT 20D                                                                                                     |                                                    | OLC 20                                               | OLC 20D                                              |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
|                                        | Type                                                                                                         | IS transmitter                                     | XP remote transmitter                                                                                        | IS remote transmitter                              | XP detector                                          | XP remote detector                                   |
| Gas detection principle                | Catalytic/<br>Electrochemical                                                                                | Electrochemical                                    | Catalytic/<br>Electrochemical                                                                                | Catalytic                                          | Catalytic                                            | Catalytic                                            |
| Detected gases                         | Flammable,<br>toxics and oxygen                                                                              | Toxics and oxygen                                  | Flammable,<br>toxics and oxygen                                                                              | Toxics and oxygen                                  | Flammable                                            | Flammable                                            |
| Measuring range                        | See chart inside                                                                                             |                                                    |                                                                                                              |                                                    |                                                      |                                                      |
| Sensor housing                         | Stainless steel type 316 L                                                                                   |                                                    | Stainless steel type 316 L                                                                                   |                                                    | Stainless steel type 316 L                           |                                                      |
| Pre-calibrated sensor                  | yes                                                                                                          | yes                                                | yes                                                                                                          | yes                                                | no                                                   | no                                                   |
| Power supply at the detector           | 15 to 30 VDC (catalytic)<br>15 to 30 VDC (chemical)                                                          | 10 to 26 VDC                                       | 15 to 30 VDC (catalytic)<br>15 to 30 VDC (chemical)                                                          | 10 to 26 VDC<br>on the detector                    | Depending<br>on the detector                         | Depending                                            |
| Maximum power consumption              | 100 mA (catalytic)<br>25 mA (chemical)                                                                       | 25 mA                                              | 100 mA (catalytic)<br>25 mA (chemical)                                                                       | 25 mA                                              | Depending<br>on the detector                         | Depending<br>on the detector                         |
| Output signal                          | 4-20 mA                                                                                                      | 4-20 mA                                            | 4-20 mA                                                                                                      | 4-20 mA                                            | Wheatstone bridge                                    | Wheatstone bridge                                    |
| Load impedance                         | 250 Ω (catalytic)<br>Depending on power<br>supply (chemical)                                                 | 47 Ω max                                           | 250 Ω (catalytic)<br>Depending on power<br>supply (chemical)                                                 | 47 Ω max                                           | Not applicable                                       | Not applicable                                       |
| Wiring                                 | 3 reinforced wires<br>(catalytic)<br>2 reinforced wires<br>(chemical)                                        | 2 reinforced wires                                 | 3 reinforced wires<br>(catalytic)<br>2 reinforced wires<br>(chemical)                                        | 2 reinforced wires                                 | 3 reinforced wires                                   | 3 reinforced wires                                   |
| Loop impedance with ISC monitor        | 32 Ω (catalytic)<br>(1 km with 1,5 mm <sup>2</sup> )<br>128 Ω (chemical)<br>(4 km with 1,5 mm <sup>2</sup> ) | 32 Ω<br>(1 km with 1,5 mm <sup>2</sup> )           | 32 Ω (catalytic)<br>(1 km with 1,5 mm <sup>2</sup> )<br>128 Ω (chemical)<br>(4 km with 1,5 mm <sup>2</sup> ) | 32 Ω<br>(1 km with 1,5 mm <sup>2</sup> )           | 32 Ω (catalytic)<br>(1 km with 1,5 mm <sup>2</sup> ) | 32 Ω (catalytic)<br>(1 km with 1,5 mm <sup>2</sup> ) |
| Wiring connection                      | Delivered with a 6mm-diameter cable                                                                          |                                                    |                                                                                                              |                                                    |                                                      |                                                      |
| Fastening                              | M25 thread to screw<br>or 3/4" NPT                                                                           | M25 thread to screw<br>or 3/4" NPT                 | With a stirrup                                                                                               | With a stirrup                                     | M25 thread to screw<br>or 3/4" NPT                   | With a stirrup                                       |
| Ingress protection                     | IP 66                                                                                                        | IP 66                                              | IP 66                                                                                                        | IP 66                                              | IP 66                                                | IP 66                                                |
| Certification                          | ⊕ EEx d IIC T6<br>II 2 GD<br>INERIS 01 ATEX 0004X                                                            | ⊕ EEx ia IIC T4<br>II 1 GD<br>INERIS 01 ATEX 0004X | ⊕ EEx d IIC T6<br>II 2 GD<br>INERIS 01 ATEX 0004X                                                            | ⊕ EEx ia IIC T4<br>II 1 GD<br>INERIS 01 ATEX 0004X | ⊕ EEx d IIC T6<br>II 2 GD<br>INERIS 01 ATEX 0004X    | ⊕ EEx d IIC T6<br>II 2 GD<br>INERIS 01 ATEX 0004X    |
| CEM mark                               | EN 50270                                                                                                     | EN 50270                                           | EN 50270                                                                                                     | EN 50270                                           | EN 50270                                             | EN 50270                                             |
| Weight                                 | 800 gr                                                                                                       |                                                    | 800 gr                                                                                                       |                                                    | 800 gr                                               | 800 gr                                               |
| Dimensions                             | L 130 x D 60                                                                                                 | L 130 x D 60                                       | L 177 x D 60                                                                                                 | L 177 x D 60                                       | L 130 x D 60                                         | L 177 x D 60                                         |
| Operating temperature (for electronic) | -25°C to +60°C                                                                                               | -25°C to +60°C                                     | -25°C to +60°C                                                                                               | -25°C to +60°C                                     | -25°C to +70°C<br>-25°C to +200°C<br>in HT version   | -25°C to +70°C<br>-25°C to +200°C<br>in HT version   |



# OLDHAM

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