

# MODEL DTX 420: TOXIC AND OXYGEN GAS DETECTOR $Cl_2$ - CO - $NH_3$ - $O_2$ ...



The DTX 420 detector was designed to continuously measure the presence of various toxic gases in the air such as carbon monoxide and ammonia but also oxygen.

Its electrochemical measurement principle gives it its major assets:

- measurement stability,
- selectivity of the gas to be detected and high accuracy.

By connecting it to a Dalemans unit or to any other instrument that can receive a 4..20 mA signal, you will benefit from a highly flexible installation.

This detector is especially suitable for applications like underground car parks, laboratories and cooling systems.

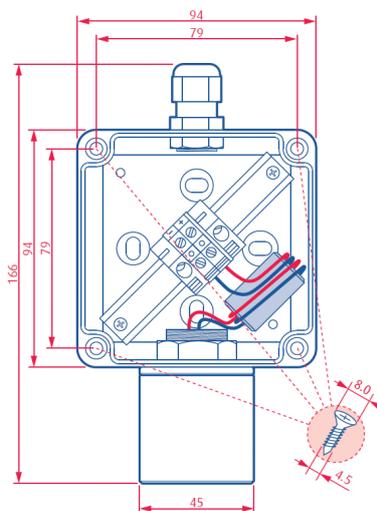


## TECHNICAL SPECIFICATIONS

<b>MODEL</b>	DTX 420			<b>OXYGEN (<math>O_2</math>)</b>	1.11	-	0 - 25 %
<b>MATERIAL</b>	<b>SENSING HEAD</b>	Brass ( $CuZn_{30}Pb_3$ ) or stainless steel 1.4404 (AISI316L)			<b>ACCURACY</b>	$\pm 1.5$ % full scale	
	<b>JUNCTION BOX</b>	Polystyrene			<b>RESPONSE TIME (T90)</b>	< 45 sec.	
<b>DIMENSIONS / WEIGHT</b>	165 x 94 x 57 mm / 540 g			<b>EXPECTED OPERATING LIFE SPAN</b>	> 2 years		
<b>SENSOR TYPE</b>	Electrochemical			<b>ELECTRICAL CHARACTERISTICS</b>	10 - 30 Vdc / 30 mA		
<b>OUTPUT SIGNAL</b>	4-20 mA current loop			<b>TEMPERATURE</b>	-10 °C to +40 °C		
<b>ADJUSTMENTS</b>	Zero and calibration by potentiometers			<b>AMBIENT HUMIDITY</b>	20 - 90 % RH		
<b>TARGET GAS*</b>	Density (air=1)	TLV	Range	<b>INTERMITTENT HUMIDITY</b>	10 - 99 % RH		
<b>AMMONIA (<math>NH_3</math>)</b>	0.59	20.00 ppm	0 - 100 ppm	<b>PRESSURE</b>	90 - 110 kPa		
			0 - 1000 ppm	<b>CABLE</b>	2 x 0.5 mm <sup>2</sup> twisted and shielded pair (max. 1.000 m)		
			0 - 5000 ppm				
<b>CARBON MONOXIDE (CO)</b>	0.94	25.00 ppm	300 ppm	<b>WIRING</b>	2 wires		
			0 - 500 ppm	<b>LOOP RESISTANCE</b>	50 to 750 ohms		
			0 - 1000 ppm	<b>INGRESS PROTECTION (BOX)</b>	IP 65		
<b>NITROGEN DIOXIDE (<math>NO_2</math>)</b>	1.59	3.00 ppm	0 - 20 ppm	<b>CABLE ENTRY</b>	1 x M16		
			0 - 50 ppm				

\* Non-exhaustive list - Other gases upon request

## DIMENSIONS (mm)

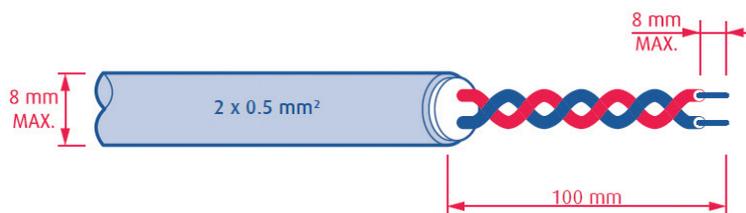


## ELECTRICAL WIRING

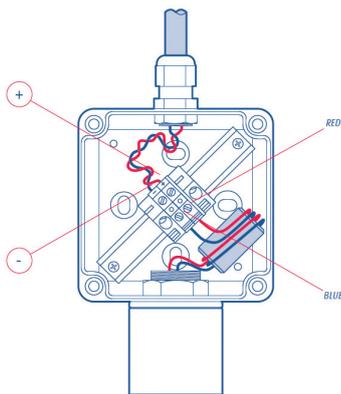
Wiring must comply with local regulations and standards in force and meet the electrical requirements of the detector DTX 420. Dalemans recommends the use of a cable with a shielded or screened twisted-wire pair.

Observe the following requirements for the wiring of the DTX 420:

- Recommended cable: 2 x 0,5 mm<sup>2</sup> twisted and screened pair.
- Cable length: maximum 1.000 m
- Overall cable diameter: maximum 8 mm
- The cable shielding or screening must be connected to the ground of the control unit/PLC.
- The cable gland must be sufficiently tightened on the cable to ensure a good sealing.
- The wires end must be stripped over a length of 8 mm.



## CONNECT THE DETECTOR



- Unscrew the four screws of the junction box and remove the cover to access to the terminal block of the detector.
- Wires must be stripped and plugged so that the gap between insulation and the metallic edge of the terminal connection does not exceed 1 mm distance.
- Connect wires according to the diagram given in image.

## EXAMPLE OF PLACEMENT FOR SOME FLAMMABLE GASES\*

GAS	FORMULA	DENSITY (air=1)
Ammonia	NH <sub>3</sub>	0,59
Carbon monoxide	CO	0,97
Chlorine	Cl <sub>2</sub>	2,49
Hydrogen sulfide	H <sub>2</sub> S	1,19
Nitrogen dioxide	NO <sub>2</sub>	1,59
Oxygen	O <sub>2</sub>	1,11
Sulfur dioxide	SO <sub>2</sub>	2,26

\*This list is not exhaustive. Contact Dalemans for further information.