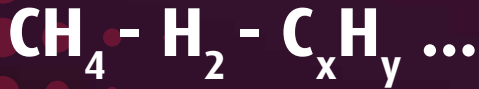




DAX 420

explosive gas
detector



- ✓ Principle: **CATALYTIC**
- ✓ Connection: 3 wires
- ✓ Output signal: 4..20 mA
- ✓ ATEX marking: II 2G Ex db IIC T6
 II 2D Ex tb IIIC T85°C



DALEMANS

GAS DETECTION

THE BELGIAN PIONEER IN GAS DETECTION

To guarantee safety and performance, all gas detection installations must be calibrated and maintained regularly in accordance with the manufacturer's instructions.

DAX 420

The **DAX 420** detector was designed to continuously measure the presence of various **explosive gases** in the air.

Its measurement principle, **catalytic combustion**, gives it its major benefits:



- **very short response time,**
- **accuracy and reliability of measurements.**

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.**

ATEX certified, this detector is especially suitable for the **industrial sector, whose applications are located in an explosive atmosphere.**



CHARACTERISTICS

Sensing head	Stainless steel 1.4404 (AISI 316L)
Sintered metal filter	Stainless steel 1.4404 (AISI 316L)
Junction box	Aluminium
Dimensions / Weight	170 x 145 x 90 mm / 1400 g
Sensor type	Catalytic (Pellistor)
Output signal	4..20 mA current loop (3-wires)
Setting	Zero and calibration by internal potentiometers
Accuracy	± 3 % full scale < 60 % LEL ± 5 % full scale > 60 % LEL
Response time (T90)	< 30 sec.
Lifetime	> 2 years
Supply voltage *	19 - 30 Vdc
Consumption *	Max. 90 mA
Storage temperature	-40 °C to +80 °C
Operating conditions	
Temperature	-20 °C to +55 °C
Ambient humidity	20 - 90 % HR
Occasional humidity	10 - 99 % HR
Pressure	90 - 110 kPa
Cable cross sectional area	0.75 - 2.5 mm ² (solid wires)
Max. cable length	1000 m
Loop resistance	50 - 750 ohms
Casing ingress protection	IP66
Cable entry	1 x M20 / 6.1 - 11.7 mm (other sizes available)
Hazardous areas	Zone 1 or 2 (gas) Zone 21 or 22 (dust)
Equipment gas grouping	IIC (methane, propane, ethylene, hydrogen, acetylene)
Standards	EN 60079-0 EN 60079-1 EN 60079-31
Approval (ATEX + IECEx)	 II 2G Ex db IIC T6  II 2D Ex tb IIIC T85 °C
Certificates	FTZU 09 ATEX 0182

* Depends on type of cell used.

GASES CONCERNED

Gas	Formula	Density (air=1)	Measurement range (L.E.L.)	L.E.L. (% vol.)
Acetylene	(CH) ₂	0.90	0 - 100	2.30
Butane	C ₄ H ₁₀	2.05	0 - 100	1.40
Ethylene oxide	C ₂ H ₆ O	1.59	0 - 100	3.10
Hydrogen	H ₂	0.07	0 - 100	4.00
Isobutane	(CH ₃) ₃ CH	2.00	0 - 100	1.30
Methane	CH ₄	0.55	0 - 100	4.40
Natural gas	-	0.68	0 - 100	-
Propane	C ₃ H ₈	1.56	0 - 100	1.70

Other gases upon request.

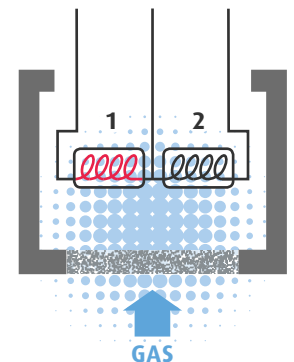
CATALYTIC MEASUREMENT PRINCIPLE

The detector sensing element is made up of two platinum filaments electrically heated to around 400°C.

One of them (1) is covered with an active catalytic layer which heats up strongly in the presence of a combustible gas.

This temperature increase causes an increase in the resistance of the filament which is measured in the unit.

The other filament (2), passive, serves as a thermal compensator.



DALEMANS
GAS DETECTION

rue Jules Mélotte 27 - B-4350 Remicourt

Tel.: +32 (0)19 33 99 43 • Fax: +32 (0)19 33 99 44 • sales@dalemans.com www.dalemans.com