

# MODEL DAX 3F-C: EXPLOSIVE GAS DETECTOR



The DAX 3F-C detector was designed to continuously measure the presence of various explosive gases such as methane, propane and butane 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 Model E or F Dalemans unit, you will have an installation that provides the best value for money.

ATEX certified, this detector is perfectly suited to boiler room applications.

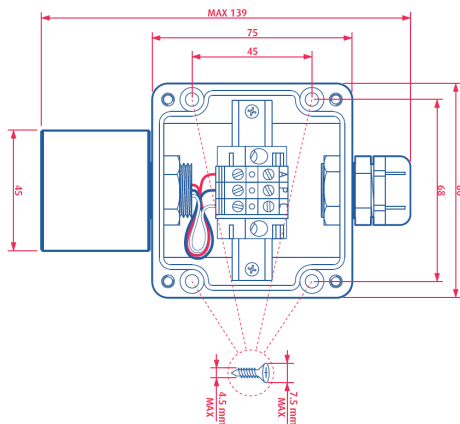


## TECHNICAL SPECIFICATIONS

<b>MODEL</b>	DAX 3F-C		<b>STORAGE TEMPERATURE</b>	-10 °C to +50 °C
<b>SENSING HEAD</b>	Stainless steel 1,4404 (AISI 316L)		<b>OPERATING CONDITIONS</b>	
<b>SINTERED METAL FILTER</b>			<b>TEMPERATURE RANGE</b>	-10 °C to +50 °C
<b>JUNCTION BOX</b>	Glass-fibre reinforced Polyester		<b>AMBIENT HUMIDITY</b>	20 - 90 % HR
<b>DIMENSIONS</b>	139 x 80 x 55 mm		<b>INTERMITTENT HUMIDITY</b>	10 - 99 % HR
<b>WEIGHT</b>	640 g		<b>PRESSURE</b>	90 - 110 kPa
<b>SENSOR TYPE</b>	Catalytic (Pellistor)		<b>CABLE CROSS SECTIONAL AREA</b>	1,5 - 2,5 mm <sup>2</sup> (solid wires)
<b>OUTPUT SIGNAL</b>	3-wire mV (Wheatstone bridge)		<b>MAX. CABLE LENGTH</b>	Refer to the installation instructions of the control unit
<b>MEASURING RANGE</b>	0 - 100 % LEL		<b>INGRESS PROTECTION</b>	IP6X (dust tight)
<b>RESOLUTION</b>	± 3 % of measuring range < 60 % LEL ± 5 % of measuring range < 100 % LEL		<b>CABLE ENTRIES</b>	1 x M20 (cable diameter 6 - 12 mm)
<b>RESPONSE TIME (T90)</b>	< 30 sec.		<b>HAZARDOUS AREAS</b>	Zones 1 or 2 (gas) - Zones 21 or 22 (dust)
<b>EXPECTED OPERATING LIFE SPAN</b>	> 2 years		<b>EQUIPMENT GAS GROUPING</b>	IIC (methane, propane, ethylene, hydrogen, acetylene)
<b>SENSOR CHARACTERISTICS*</b>	DAL 50	DAL-AC (acetylene)	<b>STANDARDS</b>	EN 60079-0:2006, EN 60079-1:2007, EN 60079-7:2007 EN 61241-0:2006, EN 61241-1:2004
<b>SUPPLY VOLTAGE</b>	2,50 V ± 0,25 V	2,00 V ± 0,10 V	<b>APPROVAL</b>	Ex II 2G Ex d e IIC T6 Ex II 2D Ex tD A21 IP6X T85 °C
<b>SUPPLY CURRENT</b>	170 mA ± 10 mA	145 - 160 mA	<b>AMBIENT TEMPERATURE</b>	Tamb = -10 °C to +50 °C
<b>POWER CONSUMPTION</b>	0,5 W	0,4 W	<b>CERTIFICATE</b>	FTZU 10 ATEX 0033X

\* Please refer to the marking label of the sensing head.  
Ensure that the sensor electrical characteristics meet the capability of the associated control unit.

## DIMENSIONS (mm)



## ELECTRICAL WIRING

Wiring must comply with local regulations and standards in force and meet the electrical requirements of the detector DAX 3F-C. Dalemans recommends the use of colour coded cable with solid wires. The acceptable cross sectional area of the cable is 1.5 to 2.5 mm<sup>2</sup> depending on the type of sensor used and the distance between the detector and the control unit. For more information about the cross sectional area of the cable and the maximum cable length, please refer to the instruction manual of the control unit. The overall cable diameter must be within the range given in figure 4 below. The cable gland must be sufficiently tightened on the cable to ensure a good sealing.

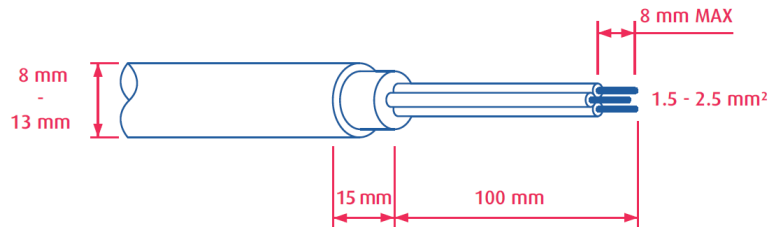
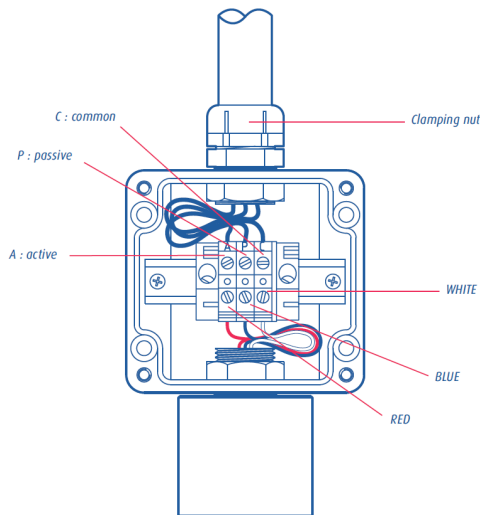


Figura 4: Cable stripping

## CONNECT THE DETECTOR



- Unscrew the four screws of the junction box cover and remove the cover.
- Loosen the clamping nut of the cable gland.
- Insert the cable in the junction box through the cable gland and tighten the clamping nut.
- Connect wires according to the diagram given in image.
- Wires must be stripped and plugged so that the gap between the insulation and the metallic edge of the terminal connection does not exceed 1 mm distance.
- Put the cover back in place on the junction box and tighten the four screws.

## EXAMPLES OF PLACEMENT FOR SOME FLAMMABLE GASES\*

GAS	FORMULA	DENSITY (air=1)	DETECTOR(S) POSITION
Acetylene	(CH) <sub>2</sub>	0,90	Techo + piso
Butane	C <sub>4</sub> H <sub>10</sub>	2,05	Piso
Cracked gas	-	0,47	Techo
Ethylene oxide	C <sub>2</sub> H <sub>4</sub> O	1,52	Piso
Hydrogen	H <sub>2</sub>	0,07	Techo
Isobutane	(CH <sub>3</sub> ) <sub>3</sub> CH	2,00	Piso
Methane	CH <sub>4</sub>	0,55	Techo
Natural gas	-	0,68	Techo
Propane	C <sub>3</sub> H <sub>8</sub>	1,56	Piso
Propane-air	-	±1,15	Techo + piso

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