MODEL DAX 3F-I: EXPLOSIVE GAS DETECTOR
CH_4 - H_2 - C_3H_8 - C_xH_y...

The DAX 3F-I 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, you will obtain a very high performance installation.

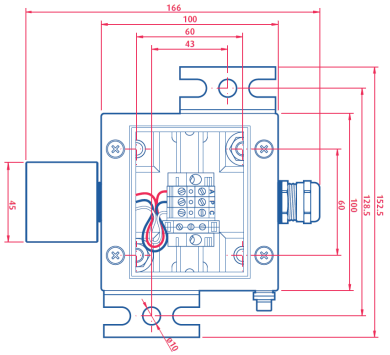
ATEX certified and with a stainless steel casing, this detector is especially suitable for applications in aggressive environments or environments where hygiene is essential.

TECHNICAL SPECIFICATIONS

MODEL	DAX 3F-I			**AMBIENT HUMIDITY**	20 - 90 % HR
SENSING HEAD	Stainless steel 1,4404 (AISI 316L)			**INTERMITTENT HUMIDITY**	10 - 99 % HR
SINTERED METAL FILTER				**PRESSURE**	90 - 110 kPa
JUNCTION BOX				**CABLE CROSS SECTIONAL AREA**	1,5 - 2,5 mm^2 (solid wires)
CABLE GLAND	Nickel plated brass or stainless steel			**MAX. CABLE LENGTH**	Refer to the installation instructions of the control unit
DIMENSION / WEIGHT	166 x 152,5 x 75 mm / 1.140 g			**INGRESS PROTECTION**	IP6X (dust tight)
SENSOR TYPE / SIGNAL	Catalytic (Pellistor) / 3-wire mV (bridge Wheatstone)			**CABLE ENTRIES**	1 x M20 or M25 / 6 - 12 mm (other sizes available)
MEASURING RANGE	0 - 100 % LEL			**HAZARDOUS AREA**	Zones 1 or 2 (gas) - Zones 21 or 22 (dust)
RESOLUTION	± 3 % of measuring range < 60 % LEL			**EQUIPMENT GAS GROUPING**	IIC (methane, propane, ethylene, hydrogen, acetylene)
	± 5 % of measuring range > 60 % LEL			**STANDARDS**	EN 60079-0:2006, EN 60079-1:2007, EN 60079-7:2007
RESPONSE TIME (T90)	< 30 sec.				EN 61241-0:2006, EN 61241-1:2004
EXPECTED OPERATING LIFE	> 2 years			**APPROVAL**	Ex II 2G Ex d e IIC T6-T4
SENSOR CHARACTERISTICS*	DAL17	DAL21	DAL-AC (acetylene)		Ex II 2D Ex tD A21 IP6X Tx °C
SUPPLY VOLTAGE	2,00 V	2,00 V ± 0,10 V	2,00 V ± 0,10 V	**AMBIENT TEMPERATURE**	Tamb = -20 °C to +55 °C for T6 and T85 °C
SUPPLY CURRENT	175 mA ± 20 mA	300 mA	145 - 160 mA		Tamb = -20 °C to +75 °C for T5 and T100 °C
POWER CONSUMPTION	0,4 W	0,75 W	0,4 W		Tamb = -20 °C to +90 °C for T4 and T135 °C
STORAGE TEMPERATURE	-40 °C to +80 °C			**CERTIFICATE**	FTZU 10 ATEX 0034X
OPERATING TEMPERATURE	-20 °C to +55 °C for T6 temperature class				
	-20 °C to +70 °C for T5 and T4 temperature class				

* 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)



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ELECTRICAL WIRING

Wiring must comply with local regulations and standards in force and meet the electrical requirements of the detector DAX 3F-I.
Dalemans recommends the use of colour coded cable. The acceptable cross sectional area of the cable is 1.5 to 2.5 mm² 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 6 below. Cable gland must be sufficiently tightened on the cable to ensure a good sealing.

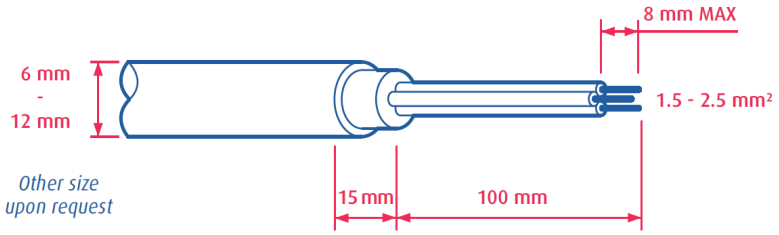
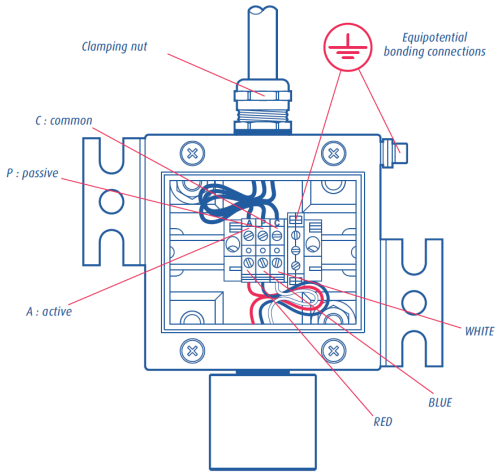


Figura 6: Cable stripping

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 insulation and the metallic edge of the terminal connection does not exceed 1 mm distance.
- Equipotential bonding may be provided using either the internal or the external connection. If the external connection is used, the cross sectional area of the bonding conductor should be of at least 4 mm².
- Put the cover back in place on the junction box and tighten the four screws.

EXAMPLE OF PLACEMENT FOR SOME FLAMMABLE GASES*

GAS	FORMULA	DENSITY (air=1)	DETECTOR(S) POSITION
Acetylene	$(CH)_2$	0,90	Ceiling + floor
Butane	C_4H_{10}	2,05	Floor
Cracked gas	-	0,47	Ceiling
Ethylene oxide	C_2H_4O	1,52	Floor
Hydrogen	H_2	0,07	Ceiling
Isobutane	$(CH_3)_3CH$	2,00	Floor
Methane	CH_4	0,55	Ceiling
Natural gas	-	0,68	Ceiling
Propane	C_3H_8	1,56	Floor
Propane-air	-	±1,15	Ceiling + floor

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

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