Pressure switch for air DL

Product brochure · GB
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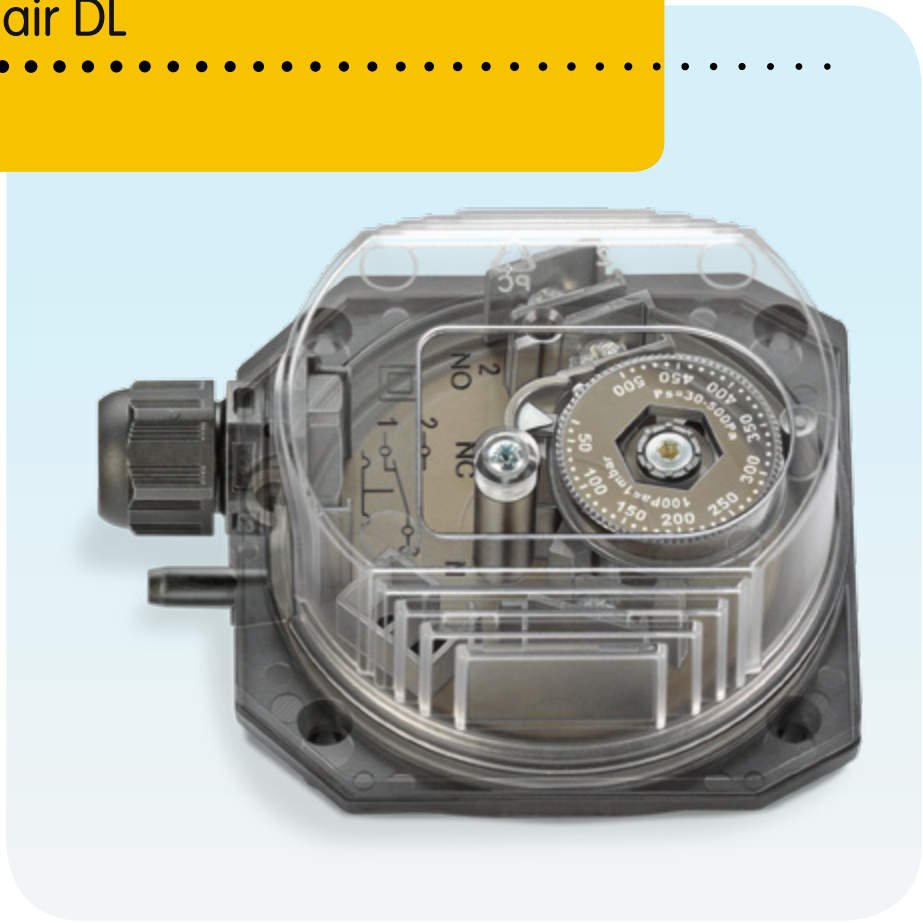


- Precision differential pressure switch
- Monitoring of air, flue gas and other non-aggressive gases
- DL..EH: up to +110°C ambient temperature
- High switching point stability
- Switching point selection via hand wheel or adjusting screw
- Screw terminals or AMP plugs for electrical connections
- Flexible mounting options
- All connections accessible from one side
- EU certified (DIN EN 1854)
- DL..ET, DL..KT: FM approved and UR recognized
- DL..AT, DL..KT: FM approved and UL listed
- RoHS 2002/95/EC and follow-up directive 2011/65/EC

Application

Pressure switches for air DL can be used as positive pressure switches, vacuum sensors or differential pressure switches for air, flue gas and other non-aggressive gases. They are not suitable for fuel gases. They monitor extremely low pressure differentials.

They trigger switch-on, switch-off or switch-over operations if a set switching point is reached. This switching point can be adjusted using a hand wheel or, if required, it can be fixed using an adjusting screw.

The diaphragm pressure switch with micro switch features particularly high contact reliability as low gas release components are used.

Examples of application

DL 3,3 – 40K *DL 3K* *DL 5 – 150K*

DL..K is used in air-conditioning systems and kitchens due to its low adjusting range (from 20 Pa).

The pneumatic and electrical connections on DL 3,3 – 40K are accessible from the same side in order to ensure space-saving and easy-to-fit installation.

The switching point can be infinitely adjusted using the hand wheel.

Filter monitoring in kitchens

DL 1,5 – 3A, DL 3K *DL 5 – 150A, DL 5 – 150K*

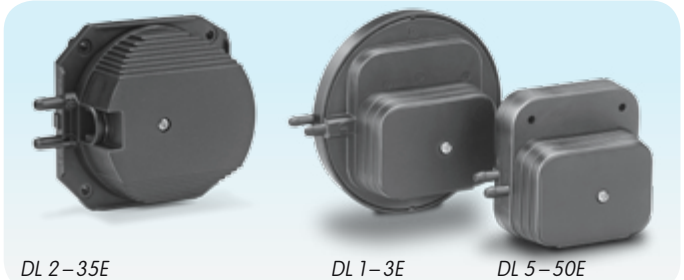
DL..A, DL..K are used for controlling butterfly valves for air and fire dampers in firing systems, and for fan monitoring.

DL 1,5 A (-0.5 to +1.5 mbar) is used in laboratories and special applications in particular.

On DL..A, the positive pressure can be connected via a threaded connection (Rp ¼) in the lower housing section.

DL..A-3Z with tube connection for negative pressure also has a threaded connection Rp ⅛ for negative pressure. To use the threaded connection, the tube connection must be unscrewed (minus).

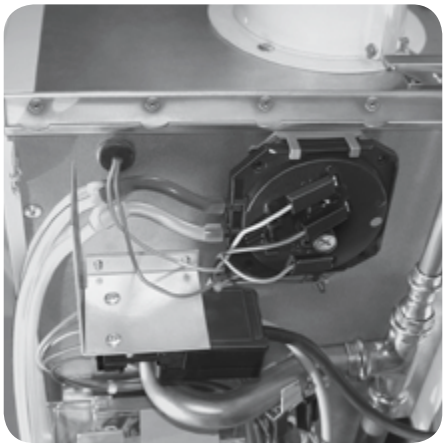
Fan monitoring in laboratories



DL 2 – 35E *DL 1 – 3E* *DL 5 – 50E*

Thanks to its slim design and low adjusting range (20 to 5000 Pa/0.08 to 20 "WC), the fields of application of DL..E include fan monitoring on calorific value boiler units or on atmospheric wall-mounted units with flue gas fan.

On request, the air pressure switch DL..E can be supplied with only one NO contact, e.g. for a non-interchangeable connection to boiler control systems.



Pressure switch DL mounted on heating boiler using a D clip

Heating boilers connected in cascade

Type code

DL 3,3 – 40K

Code	Description
DL	Pressure switch for air
	Adjusting range
3,3	20 – 330 Pa
3,5	30 – 350 Pa
4,5	30 – 500 Pa
5,1	100 – 510 Pa
8	50 – 800 Pa
11	100 – 1100 Pa
16	400 – 1600 Pa
24	200 – 2400 Pa
40	500 – 4000 Pa
K	Tube connection and hand wheel for adjustment
T	T-product
G	Gold contacts
-1	AMP plug connection
-3	Electrical connection via screw terminals
K2	Red/green pilot LED 24 V DC/AC
N	Blue pilot lamp 120 V AC
T	Blue pilot lamp 230 V AC
T2	Red/green pilot LED 230 V AC
W	Z-angle bracket

DL 2 – 35E

Code	Description
DL	Pressure switch for air
	Adjusting range
2[1]	20 – 200 Pa
4[1]	50 – 400 Pa
14	300 – 1400 Pa
35	1200 – 3500 Pa
	With flat plugs, tube connection, adjusting screw,
EH	-40 to +110°C
E	-20 to +85°C
T	T-product
G	Gold contacts
-1	AMP plug connection
W	Z-angle bracket

[1] Adjusting range: DL..2EH: 45 – 200 Pa, DL..4EH: 70 – 400 Pa.

DL 1 – 50E

Code	Description
DL	Pressure switch for air
	Adjusting range
1	0.2 – 1 mbar
3	0.3 – 3 mbar
5[1]	0.4 – 5 mbar
10	1.0 – 10 mbar
50	2.5 – 50 mbar
E	With flat plugs, tube connection, adjusting screw
T	T-product
G	Gold contacts
-1	AMP plug connection
P	With test tapping point
W	Z-angle bracket

[1] DL..5ET: adjusting range 0.5 – 5 mbar.

DL 1,5 – 150A, DL3 – 150K

Code	Description
DL	Pressure switch for air
	Adjusting range
1,5	-0.5 – 1.5 mbar
3[1]	0.2 – 3 mbar
5[1]	0.4 – 5 mbar
10	1 – 10 mbar
30	2.5 – 30 mbar
50	2.5 – 50 mbar
150	30 – 150 mbar
K	With tube connection and hand wheel
A	Additionally with Rp ¼ connection (optional: Rp ⅛)
T	T-product
G	Gold contacts
	Electrical connection
-3	via screw terminals
-4	via screw terminals, IP 65
-5	with 4-pin plug, without socket
-6	with 4-pin plug, with socket
-9	with 4-pin plug, with socket, IP 65
K2	Red/green pilot LED 24 V DC/AC
T	Blue pilot lamp 230 V AC
T2	Red/green pilot LED 230 V AC
N	Blue pilot lamp 120 V AC
P	With test tapping point
1	With 1 test key (lower chamber +)
2	With 2 test keys (upper chamber -, lower chamber +)
A	External adjustment
W	Z-angle bracket

[1] Adjusting range: DL..3AT: 0.3 – 3 mbar, DL 5AT and DL 5KT: 0.5 – 5 mbar

Technical data

Gas types: air or flue gas, no flammable gases, no aggressive gases.

Micro switch to EN 61058-1,
switching capacity:

DL..: 24 V (min. 0.05 A) to 250 V AC (max. 5 A, with cos φ 0.6 = 1 A),

DL..G: 5 V (min. 0.01 A) to 250 V AC (max. 5 A, with cos φ 0.6 = 1 A), 5 V (min. 0.01 A) to 48 V DC (max. 1 A),

DL..T: 30 – 240 V AC, 50/60 Hz, 5 A resistive or 0.5 A inductive (cos φ = 0.6),

DL..TG: < 30 V AC/DC, 0.1 A resistive or 0.05 A inductive (cos φ = 0.6).

If the DL..G (DL..TG) has switched a voltage > 24 V (> 30 V) and a current > 0.1 A at cos φ = 1 or > 0.05 A at cos φ = 0.6 once, the gold plating on the contacts will have been burnt through. It can then only be operated at this power rating or higher power rating.

Contact gap < 3 mm (μ).

Safety class II to VDE 0106-1.

DL..K

Enclosure to IEC 60529: IP 54.

Diaphragm pressure switch, tempered LSR diaphragm system. Housing: glass fibre reinforced PBT plastic with low gas release.

Max. inlet pressure p_{max} = withstand pressure: 5 kPa, differential pressure: 5 kPa.

Permitted ambient temperature in operation:
DL..K: -20 to +85°C (-4 to +185°F),
DL..KT: -40 to +60°C (-40 to +140°F).

Storage and transport temperature:
-20 to +40 °C (-4 to +104 °F).

Line diameter: 0.5 to 1.8 mm (AWG 24 to AWG 13).

Line entrance: M16 x 1.5, clamping range: diameters of 4 to 10 mm.

Electrical connection type:
screw terminals, max. torque: 250 Ncm.

Weight: 125 g (4.4 oz).