Product description

DPL – Differential pressure controller

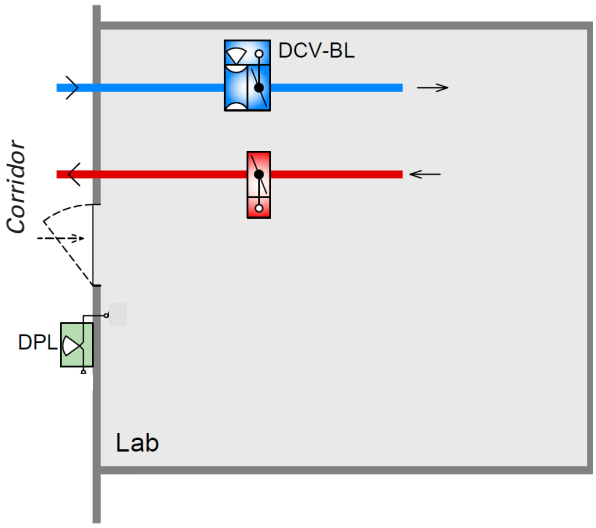
Introduction DPL

The controller DPL measures and keeps constant the differential pressure between two adjacent rooms.

Function

- Can control the differential pressure via the internal pressure sensor and a connected damper actuator.
- Can control the differential pressure with measurements from an external DPL via the communication loop (CAN).
- Can be operated as a slave controller for another DPL.
- Can be connected via node ID to a communication loop (CAN) for access to and communication with other concurrent nodes or systems via LINDINTELL or Gateway NCE with ModbusTCP/RTU.
- The controller has a great number of parameters that can be read and controlled from LINDINTELL/LINDINSPECT via CAN.

Magnetic contact
A contact can be connected to DPL to pause control when the connection is broken.



Functional chart DPL Control of differential pressure between lab and corridor. DCV-BL maintains constant supply air flow to the lab. DPL controls the extract air damper so as to maintain a constant differential pressure between lab and corridor.

DPL – Differential pressure controller

User interface

- Server with LINDINTELL/LINDINSPECT via CAN.
- Direct login on the controller via hand unit DHP. (IR or wired communication).
- Fixed wall panel FLOCHECK P (direct wired communication with DPL).

LINDINTELL/LINDINSPECT

LINDINTELL is a software package that is installed on a central server. The software coordinates all optimisation and monitoring functions in Lindinvent's systems for climate control and protective ventilation. LINDINTELL has, among other things, functions for optimisation, oversteering and free programming.

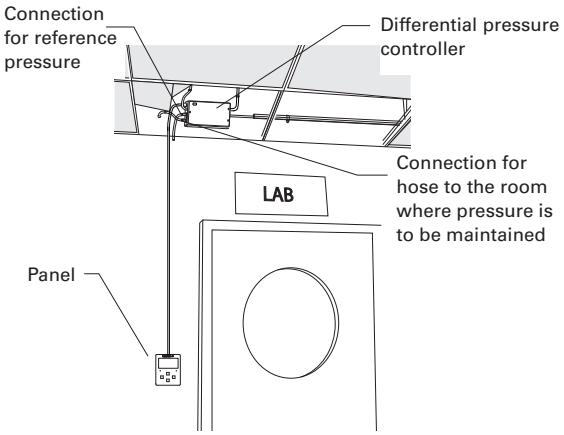
LINDINSPECT is a Web interface that has been developed to be used with LINDINTELL.

Control and alarm

Systems with LINDINTELL/LINDINSPECT can log pressure continually and set an alarm flag in the event of any deviations. By mounting FLOCHECK P as fixed panel, an alarm can be indicated both acoustically via a buzzer and optically in the event of differential pressure deviation.

Calibration

DPL is supplied factory calibrated. Settings for communication and other adaptations are made on site.



Differential pressure controller above ceiling with connected user panel.

DPL – Differential pressure controller

Technical specifications DPL

General

Dimension
176 x 100 x 44 mm (LxWxH)

Temperature limits
Operation: 10°C to 40°C; <85% RF
Storage: -20°C to 50°C; <90% RF

Material
Polystyrene encapsulation

Net weight
0.3 kg

Paint colour
RAL 9003

IP class
Covering complies with IP53

Electrical system

Supply voltage
24 VAC

Capacity
1.5 VA

CE marking
Complies with EMC and the Low Voltage Directive

Differential pressure control

Pressure sensor
DPL is equipped with a digital pressure sensor, integrated in the controller.

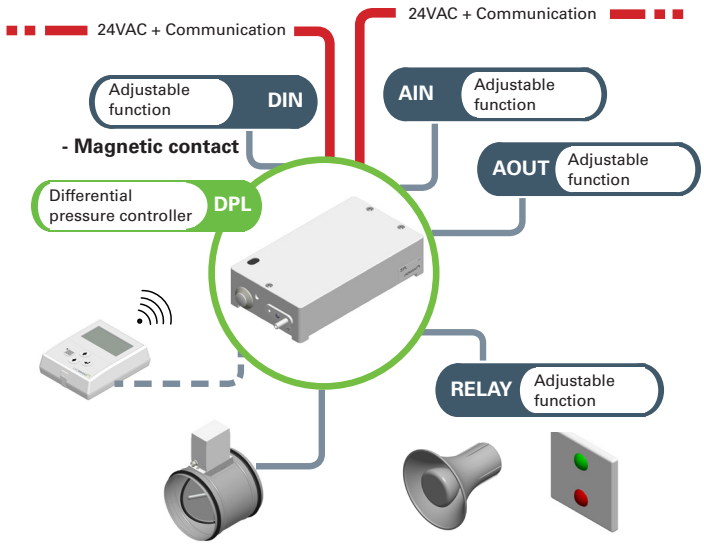
Interval
-100 to +100 Pa

Tolerance
± 5 % or a minimum of ± 2 Pa

Performance
Change regulated within 5 s (95 % within 4 s)

Connections

- 2 x 24 VAC + communication loop (CAN)
- 1 x 0-10 VDC analogue out for damper actuator
- 1 x 0-10 VDC analogue in for feedback from damper actuator
- 1 x general 0-10 VDC analogue in
- 1 x general 0-10 VDC analogue out
- 1 x general digital in (used for magnetic contact)
- 1 x relay (alternating 24VAC or potential-free switch)
- 1 x IR port (for communication with DHP)
- 1 x modular jack RJ45 - for wired connection of user panel DHP or FLOCHECK P.



Connection diagram DPL. The controller is connected to a combined voltage feed and communication loop via Lindinvent's standard cable with two conductors for voltage feed and two twisted-pair conductors for communication. The same cable is used for connection of damper actuator and other accessories.

DPL – Differential pressure controller

Accessories DPL

The following products can be ordered as accessories for DPL:

Differential pressure monitor - Flocheck P

- FLOCHECK P is used as a fixed panel for DPL.
- FLOCHECK P shows the status of ongoing control via text and LEDs.
- Green LED indicates normal operation: The setpoint of the differential pressure is within expected values.
- Lighted red LED and clear text message indicate alarm: The setpoint for the diffusion pressure is then outside recorded limit values.
- A buzzer can be activated to highlight alarms.

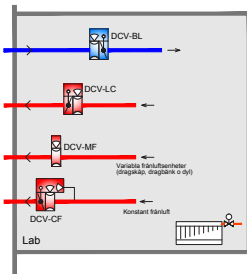
Flocheck P - Fixed panel that can be used with DPL.

Hose-end protection box DPB

DPB is a protection box that can be used when installing DPL. The box is used to conceal and protect the ends of the hoses from DPL. The ends would otherwise extend without protection into the room in which pressure is to be measured. The box is installed on the wall or on the ceiling where the hose end enters the room.

DPB - Protective box that conceals hose ends.

Other products in the area of protective ventilation:

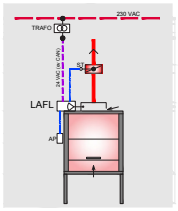


Airflow controller FBL (DCV-BL)

Lab climate controller LCX (DCV-LC)

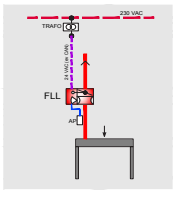
Airflow controller FBL (DCV-MF)

Pressure controller with airflow measuring CFL (DCV-CF)



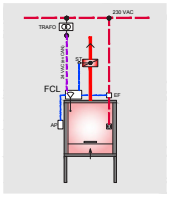
Draught diverter controller LAFL (LAF-bench)

Flocheck P (Fixed panel to be used with a LAF-bench)



Two stage airflow controller (Downflow bench)

Flocheck F (Downflow bench monitor)



Fume cupboard controller FCL (Fume cupboard)

Flocheck V (Fume cupboard monitor)

DPL – Differential pressure controller

Additional product documentation DPL

Table 1: Additional documentation for DPL can be obtained via links on the product's website under Products at *www.lindinvent.se*

Document	Available	Not available	Comments
Installation Instruction	●		Assembly + connection.
Start-up instruction	●		Describes the complete menu structure with settings.
Maintenance instruction		●	Regarded as maintenance-free.
External connection diagram	●		Shows connections on circuit board.
Environmental product declaration	●		To be assessed by Byggvarubedömningen.
User information	●		User panel DHP and FLOCHECK P.
Modbus list	●		
AMA text	●		

Product documentation can be downloaded via www.lindinvent.se/produkter/

Contact

www.lindinvent.se
Tel: 046–15 85 50

Lindinvent – Smarter indoor climate. Greener buildings.

The company offers products and systems for controlling ventilation, lighting, solar shading and local utilization. Equipment and climate solutions are being developed for offices, schools, hospitals, laboratories and similar working environments. Lindinvent's systems work together to provide high indoor comfort and the lowest possible energy use.

Product description

MC740 - Magnetic contact switch [Surface mounted]

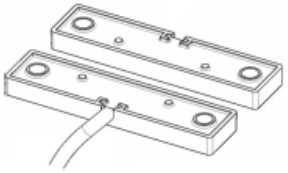
Introduction MC740

Surface mounted magnetic contact with a 6 meter cable. The switch is used to temporarily interrupt pressure control when a door is opened to the room where pressure is to be maintained using differential pressure controller DPL or pressure controller SPL.

MC740 - Magnetic contactontakt.

Technical specification

- ABS encapsulation
- IP 67 (Water proof including cable)
- Function: NC (Normally Closed)
- Working gap wood: Max 30 mm (Steel 7 mm; assembly on steel is not recommended)
- Dimensions: 58 x 14 x 5 mm
- Pre-assembled cable with four conductors, two of which are not used. The conducters that are not used are marked with a label. They are intended for microswitches in the event of damage.
- Voltage load 48 VDC / 10 VA
- Breaking current up to 500 mA
- Magnet: Alnico 5
- Colour: White
- Assembly positions: Front to front or side to side.



MC740 can be mounted as in this figure seen from below, with edge to edge (narrow long side) or with top to top.

Mounting in a door opening

MC740 is supplied with screws for mounting. The contact part with cable is mounted on the door frame and the magnet part is mounted on the door, normally on the top edge. The contact and magnet sides must meet parallel to each other; the gap between contact and magnet should normally be as small as possible, maximum 20 mm.

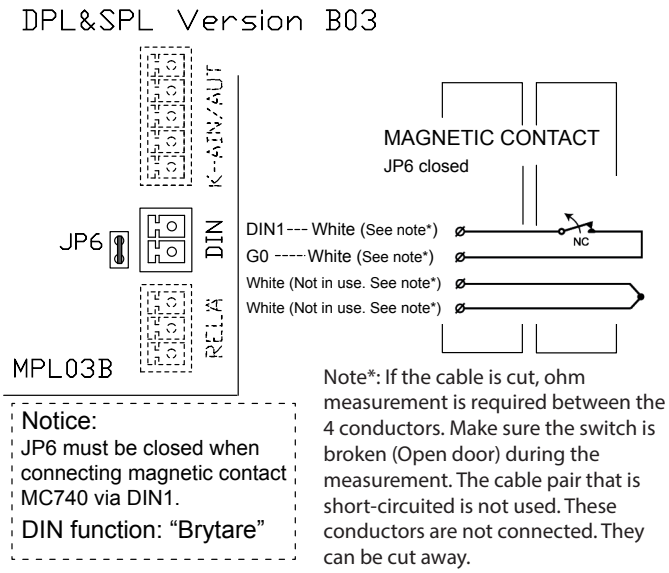
Note: If the magnet side is fastened in the vicinity of magnetic material, the possible gap to the contact is considerably reduced.

Connection

Connection to the controller is according to the external connection diagram for MC740 or for the controller DPL or controller SPL. See DIN1 according to the illustration below.

Connection diagram MC740:

(A commented section from the connection diagram for DPL and SPL)



Yttre förbindningsschema för magnetkontakt MC740.

MC740 - Magnetic contact switch [Surface mounted]

Additional product documentation MC740

Table 1: Additional documentation for MC740 is available via the product's website under Products at www.lindinvent.se

Document	Available	Not available	Comments
Installation Instruction		●	See product description for guidance.
Start-up instruction		●	See start-up instruction for differential pressure controller DPL and Settings
Maintenance instruction		●	Regarded as maintenance-free.
External connection diagram		●	See this description or the external connection diagram for DPL or SPL.
Environmental product declaration		●	To be assesed by Byggvarubedömningen and Sundahus
User information		●	Not applicable
Modbus list		●	Not applicable
AMA text		●	None

Product documentation can be downloaded via www.lindinvent.se/produkter/

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Product description

DPB – Protection box [Accessory for DPL]

Introduction DPB

DPB is a protection box that can be used when installing differential pressure controller DPL to conceal and protect the ends of the pressure hoses that would otherwise extend without protection into the room in which pressure is to be measured. The box is installed on the wall or ceiling where the pressure hose enters the room.

DPB - Protection box, front towards the room.

DPB - Rear towards the wall.

Technical specification

General

Dimension
80x40x20 mm (LxWxH)

Material
ABS

Colour
Grey

Weight
0.02 kg

DPB – Protection box [Accessory for DPL]

Additional product documentation DPB

Table 1: Additional documentation for DPB can be obtained via links on the product's website under Products at www.lindinvent.se

Document	Available	Not available	Comments
Installation Instruction		●	None
Start-up instruction		●	Not applicable
Maintenance instruction		●	Regarded as maintenance-free
External connection diagram		●	Not applicable
Environmental product declaration	●		Assessed by Byggvarubedömningen and Sundahus
User information		●	Not applicable
Modbus list		●	Not applicable
AMA text		●	None

Product documentation can be downloaded via www.lindinvent.se/produkter/

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