DIFFERENTIAL PRESSURE & VOLUME FLOW MULTI RANGE CONTROLLER DPC310

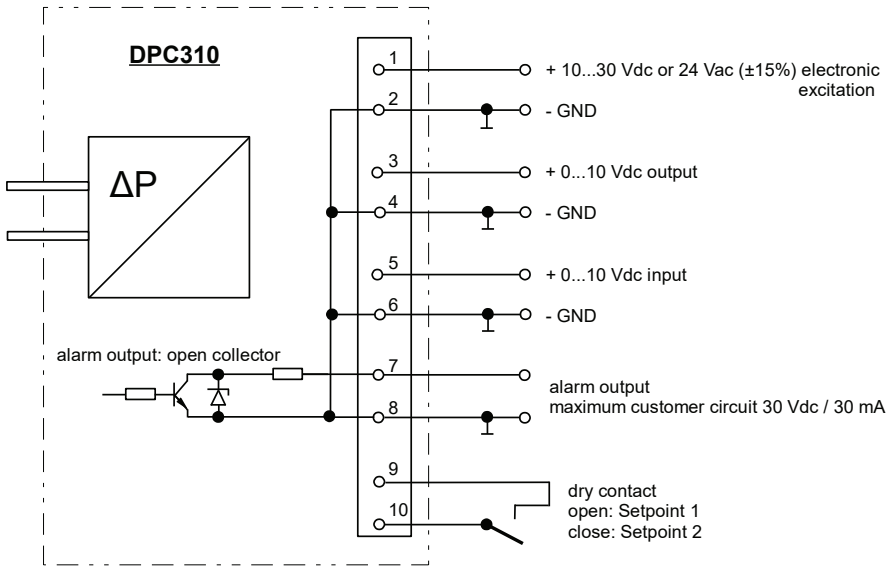
- ❑ **Switchable operating modes (measuring or controlling)**
- ❑ **Switchable measured variables (differential pressure or volume flow)**
- ❑ **Switchable measuring units (Pa and m3 / h or InH2O and cfm)**
- ❑ **4 application-oriented pre-set measuring ranges**
- ❑ **Analog output 0 ... 10 V**
- ❑ **Adjustable k-factor for volume flow calculation**
- ❑ **Measuring mode with adjustable limit**
- ❑ **Control mode with adjustable:**
  - ❑ **2 setpoints**
  - ❑ **Setpoint configurable via external signal input option:**
    - 10 V DC signal or temperature sensor
  - ❑ **PI parameters for PI algorithm**
  - ❑ **Maximum output voltage**
  - ❑ **Control effect positive / heat or negative / cool**

The DPC310 is based on the DPC200, but extends its functionality and thus has more dynamics than the DPC200.

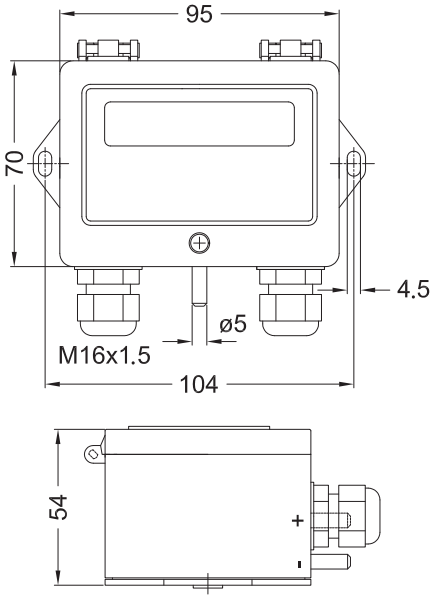
In control mode, the DPC310 now actively switches to the setpoint setting, by externally inputting a 10 V DC signal or in combination with a temperature sensor, the setpoint can be set dynamically. Pressure and flow are thus no longer solely responsible for the fan control, but other factors, such as the outside temperature can play a role. An additional improvement is the four preset measuring ranges. In each case, four important measuring ranges were combined in an application-oriented manner. Which increases the field of application and simplifies the ordering and storage.

In addition, the DPC310 has all the functions of the DPC200.

Connection diagram



Dimensions (mm)



PERFORMANCE:

Overpressure protection:	0.2 bar
Static pressure:	max. 0.2 bar
Zero point calibration:	Adjustable by REEDcontact, no cyclic zero-point calibration required
Reaction time:	direct

ACCURACY / ERROR LIMIT:

Zero drift:	± 0.75 %
Sum of linearity and hysteresis:	± 1 %
Temperature drift zero point:	± 0.3 % / 10 K
Temperature drift measuring range:	± 0.2 % / 10 K

TECHNICAL SPECIFICATIONS:

Operating mode:	Measuring mode or control mode
Measuring medium:	Air or non-aggressive gases
Measuring principle:	Electromechanical diaphragm measuring system

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date: 24.01.18

DIFFERENTIAL PRESSURE & VOLUME FLOW MULTI RANGE CONTROLLER DPC310

Measuring unit:	Pa / InH20 or m3/h or cfm
Smallest measuring range:	0...50 Pa (0.5 mbar) / 0.2 InH20
Largest measuring range:	0...6000 Pa (60 mbar) / 24 InH20
Measuring range selection:	4 preselected measuring ranges, switchable via software
Adjustable controlling parameters:	P/I - parameter, k-factor, maximum output voltage, normal/ inverse control
Characteristic:	linear or square root
Ambient temperature:	-10...+50 °C
Storage temperature:	-25...+60 °C
Control characteristic:	PI - algorithm
Setpoint settings:	2 setpoints adjustable within software, Setpoints are selectable with floating contact input
Signal input:	0...10 V, multifunctional input extern setpoint: 0...10 V input is related to measuring range temp. compensated setpoint: 0...10 V input is related to -30.0...+70.0°C
Limit signal Output / alarm output:	Open Collector, max. 30 V / 30 mA

PHYSICALLY:

Housing:	UL 94 HB; Ultramid with hinged lid of ABS
Dimensions:	95 x 70 x 54 mm (w x h x d)
Weight:	approx. 250 g
Protection class:	IP 54 according EN 60529
Display:	Two-line alphanumeric LCD display, 2 x 16 characters
Electrical connections:	Cable entry M16 x 1.5, screw terminals, electronics protected against
Pressure connections:	incorrect polarity
Operational position:	Hose connections 5 mm ø and 6 mm ø Vertical, position dependence when rotated through 90 ° approx. 25 Pa

ELECTRONIC:

Power supply:	10...30 Vdc; 24 Vac (±15%)
Power consumption:	approx. 8 mA @ 10 Vdc, ca. 10 mA @ 24 Vdc
Output:	0...10 V; 10 Vdc: I_{max} = 0.5 mA, R_{max} = 20 kΩ 24 Vdc: I_{max} = 4.0 mA, R_{max} = 2.5 kΩ

CONFORMITY:

EMC:	EN 61000-6-2, EN 61000-6-3, CE-mark
RoHS:	According RoHS-directive 2011/65/EU

	Item no.
Differential pressure controller DPC310-200: Supply voltage 10...30 Vdc; 24 Vac (±15%) / Output: 0...10V	2542
Measuring range **1: 0 ... 200 Pa** or **0 ... 0,8 InH2O** Measuring range **2: 0 ... 150 Pa** or **0 ... 0,6 InH2O** Measuring range **3: 0 ... 100 Pa** or **0 ... 0,4 InH2O** Measuring range **4: 0 ... 50 Pa** or **0 ... 0,2 InH2O**	
Differential pressure controller DPC310-1000: Supply voltage 10...30 Vdc; 24 Vac (±15%) / Output: 0...10V	2543
Measuring range **1: 0 ... 1000 Pa** or **0 ... 4.0 InH2O** Measuring range **2: 0 ... 750 Pa** or **0 ... 3.0 InH2O** Measuring range **3: 0 ... 500 Pa** or **0 ... 2.0 InH2O** Measuring range **4: 0 ... 250 Pa** or **0 ... 1.0 InH2O**	
Differential pressure controller DPC310-6000: Supply voltage 10...30 Vdc; 24 Vac (±15%) / Output: 0...10V	2544
Measuring range **1: 0 ... 6000 Pa** or **0 ... 24.0 InH2O** Measuring range **2: 0 ... 4000 Pa** or **0 ... 16.0 InH2O** Measuring range **3: 0 ... 3000 Pa** or **0 ... 12.0 InH2O** Measuring range **4: 0 ... 2000 Pa** or **0 ... 8.0 InH2O**	

ACCESSORIES

Mounting set M-DS with screws, bleeders and 2m plastic tube (4 x 1.5 mm)	**25110**

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