DDLU2: Differential pressure transducer



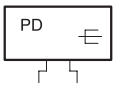
DDLU2*5F*01

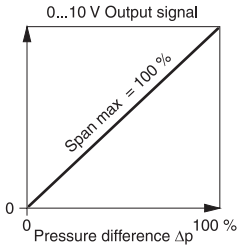
How energy efficiency is improved

Precise detection of small differential pressures in an air duct

Features

- Adjustable measuring ranges
- Sensors specially developed for any pressure range, providing measurement that is physically precise and stable over a long period
- Calibrated, temperature-compensated sensor signal
- Quick and easy to fit. Fixing bracket for wall or ceiling mounting, integrated in housing
- Available with or without LCD in pascal
- Reset button for zero point
- End value can be set by customer
- Can be used in positive and negative pressure zones
- Measurement procedure: Ceramic cantilever beam
- Scope of delivery: Transducer, connecting kit with 2 m of PVC hose and connectors





Technical data

Power supply		
Current consumption	Power supply	13.5...33 V=, 24 V~, ±15%
	Voltage output	< 10 mA
	Current output	< 30 mA
Parameters		
	Characteristic	Linear/root-extracted
	Linearity	< ±1%
	Hysteresis	< ±1%
	Reproducibility	< ±1%
	Admissible overload on one side	100 mbar
	Filter time constant	OFF/0.2 s/1 s/5 s/20 s
Ambient conditions		
	Admissible ambient temperature	0...70 °C
	Admissible media temperature	0...70 °C
Inputs/outputs		
	Outputs	0...10 V (load > 10 kΩ)
		0...20 mA (load < 500 Ω)
		4...20 mA (load < 500 Ω)
Construction		
	Housing material	Polycarbonate
	Cable inlet	PG 11
	Pressure connections	Ø 6.2 mm
Standards and directives		
	Type of protection	IP54 (EN 60529)
CE conformity according to	EMC Directive 2014/30/EU	EN 61326-2-3

Overview of types

Type	Measuring range Δp, can be changed	Measuring range Δp	Weight	Display
DDLU205F001	0...100/300/500 Pa	0...1/3/5 mbar	0.09 kg	–
DDLU225F001	0...1000/1600/2500 Pa	0...10/16/25 mbar	0.09 kg	–
DDLU205F101	0...100/300/500 Pa	0...1/3/5 mbar	0.1 kg	•
DDLU225F101	0...1000/1600/2500 Pa	0...10/16/25 mbar	0.1 kg	•

Function

The pressure difference to be measured is converted by a pressure sensor into a linear electrical signal and amplifi ed by the measuring amplifi er into a continuous unit signal. The pressure ranges, the characteristic curve (linear or radiused) and the filter time constant can be switched by a dip switch. Application in overpressure and vacuum range possible.

Engineering and fitting notes

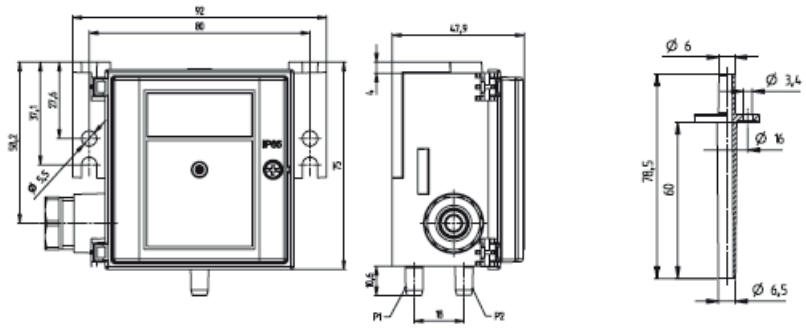
Fitting position

Vertical (factory calibration), pressure connections downwards. The zero point, and thus the fitting position, can be adjusted using the reset button.

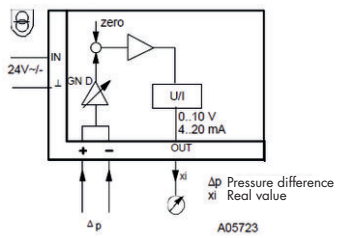
Setting for DIP switch

			1	2	3	4	5	6	7	8	9	10
Factory setting		1										
		0	x	x	x	x	x	x	x	x	x	x
Pressure/mbar	0...1	0...10	1	0								
	0...3	0...16	0	1								
	0...5	0...25	0	0								
Output	0 ... 10 V, 3W				1	1	0	0	0	0		
	0 ... 20 mA, 3W				0	1	1	1	0	1		
	4 ... 20 mA, 3W				0	1	1	0	0	1		
	4 ... 20 mA, 2W				0	0	1	1	1	0		
Filter	off: 0 on: 1										x	
Signal	linear: 0 root-extracted: 1											x

Dimension drawing



Connection diagram



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