



DMU/A

Pressure transducer for pressure difference and volume flow,
active output (0-10 V or 4-20 mA)

Measuring size: pressure, volume flow

Output: 0-10 V, 4-20 mA, Relay

Highlights: easy-to-install surface-mounted housing, 8 measurement ranges per version



Description

The pressure transmitter detects the overpressure, underpressure or differential pressure (P) between the two pressure inputs and converts the measured value into a linear output signal 0-10 V or 4-20 mA. 8 different scalings and the output damping of the pressure transmitter (0 sec / 1 sec / 5 sec / 10 sec) can be set on the device.

Alternatively, the measuring device can be operated as a volume flow measuring device. It calculates the volume flow (Q) using the system-specific K factor (k) and outputs the calculated value as a linear output signal 0-10 V or 4-20 mA. The K-factor, the desired scaling for the volume flow output signal 0-10 V or 4-20 mA, the density of the medium and the desired volume unit (l or m³ per s / min / h) can be conveniently set via the display menu.

The content of the backlit display can be rotated in 90 ° steps via the menu and the actual value, the set switching threshold, the relay status, the MIN / MAX measured values ??of the selected interval (1 h / 6 h / 12 h / 24 h) etc. can be read. For manual calibration of the zero point on site, the pressure transmitter carries out a zero point adjustment at the push of a button. If necessary, the pressure transmitter can be fine-calibrated on site using a SPAN controller.



Technical Specifications

Pressure type	positive, negative or differential pressure
Medium	air, non-aggressive, non-flammable, non-condensing gases
Measurement range pressure	V1: 0...+/-500 Pa, V2: 0...+/-5000 Pa, V3: 0...+/-100 Pa
Measurement range volume flow (calculated)	V1: 0-65.000 m ³ /h, V2: 0-200.000 m ³ /h, V3: 0-30.000 m ³ /h
Scales	V1: 0...+/-100, 0...+/-200 Pa, 0...+/-300 Pa, 0...+/-500 Pa; V2: 0...+/-1000, 0...+/-2000 Pa, 0...+/-3000 Pa, 0...+/-5000 Pa; V3: 0...+/-25, 0...+/-50 Pa, 0...+/-75 Pa, 0...+/-100 Pa
Accuracy	±3,0% FS (at 20°C)
Temperature dependency	±2,5% FS / 10 K
Linearity inaccuracy	±1,0% final value
Long term stability	±1% FS/year
Zero-point adjustment	max. +2% final value
Offset	±5% from the selected scale by 270° potentiometer
Reaction rate	< 1 s, at 5% alteration relating to final value
Output attenuation	0 s / 1 s / 5 s / 10 s selectable by DIP switch
Sensor protection	mounted inside housing
Running-in time	< 30 min at initial operation because of tempering
Supply voltage analog 0-10 V	24 V AC/DC (±5%)
Supply voltage analog 4-20 mA	15...36 V DC (U _{bmin} = 15 V + R _{Load} *0,02A)
Current consumption at 0-10 V	typ. 15 mA, 30 mA peak current consumption for 50 ms at switching moment at option relay
Current consumption at 4-20 mA	max. 20 mA / output, 40 mA peak current consumption for 50 ms at switching moment at option relay
Analogue output 0-10 V	3-wire connection, min. load resistance 100 kOhm
Analogue output 4-20 mA	2-wire connection (transmitter), max. R _{Load} (Ohm) = (+U _b - 15 V) / 0,02 A
Alarm output	1 x potential-free change-over contact, 48 V, 1 A
Switching Hysteresis Relay	2% of the selected scaling (without display), 0,5...5% of the selected scaling adjustable (with display)
Electrical connection	screw terminals max. 1,5 mm ²
Pressure resistance	5-times of measurement range
Housing	Polycarbonate PC UL 94 V0 with hinge locks, color signal white similar to RAL 9003
Dimensions	Housing: L 89 x W 80 x H 47 mm
Cable gland	PG11 high-strength cable gland with strain relief
Display	optional LCD display with backlight on/off/auto
Protection type	IP65, IP20 if pressure connection port is open
Protection class	III
Working range r.H.	0...98% r.H. in contaminant-free, non-condensing air
Working temperature	0...+50°C
Storage temperature	0...+50°C
Installation	Housing: screw fastening, Pressure connection: 2 plastic duct connecting nipple with fastening screws and 2 m PVC tube Ø 6 mm (in scope of delivery)



Manual zero-point adjustment	The zero point adjustment is started by pressing the button on the circuit board (push 10 s until LED stops flashing or by the display version the countdown 10-0 is completed). Before, a continuous operation of at least 1 hour must be sure, the offset must be in the middle position and the pressure inputs P+ and P- must be an obvious offense to the environment. The successful calibration will be signalized by 5 sec durable lightning of the LED.
Approvals	CE, EAC, RoHS

Variants

Article Number			
Pressure	Volume flow	Output pressure	Version
DMU/A-I/V1			
0...+/-500 Pa	-	4-20 mA	without display
DMU/A-I/V2			
0...+/-5000 Pa	-	4-20 mA	without display
DMU/A-ID/V1			
0...+/-500 Pa	0-65.000 m³/h	4-20 mA	with display
DMU/A-ID/V2			
0...+/-5000 Pa	0-200.000 m³/h	4-20 mA	with display
DMU/A-IR/V1			
0...+/-500 Pa	-	4-20 mA, changer	without display
DMU/A-IR/V2			
0...+/-5000 Pa	-	4-20 mA, changer	without display
DMU/A-IRD/V1			
0...+/-500 Pa	0-65.000 m³/h	4-20 mA, changer	with display
DMU/A-IRD/V2			
0...+/-5000 Pa	0-200.000 m³/h	4-20 mA, changer	with display
DMU/A-U/V1			
0...+/-500 Pa	-	0-10 V	without display
DMU/A-U/V2			
0...+/-5000 Pa	-	0-10 V	without display
DMU/A-U/V3			
0...+/-100 Pa	-	0-10 V	without display
DMU/A-UD/V1			
0...+/-500 Pa	0-65.000 m³/h	0-10 V	with display
DMU/A-UD/V2			



0...+/-5000 Pa	0-200.000 m³/h	0-10 V	with display
DMU/A-UD/V3			
0...+/-100 Pa	0-30.000 m³/h	0-10 V	with display
DMU/A-UR/V1			
0...+/-500 Pa	-	0-10 V, changer	without display
DMU/A-UR/V2			
0...+/-5000 Pa	-	0-10 V, changer	without display
DMU/A-UR/V3			
0...+/-100 Pa	-	0-10 V, changer	without display
DMU/A-URD/V1			
0...+/-500 Pa	0-65.000 m³/h	0-10 V, changer	with display
DMU/A-URD/V2			
0...+/-5000 Pa	0-200.000 m³/h	0-10 V, changer	with display
DMU/A-URD/V3			
0...+/-100 Pa	0-30.000 m³/h	0-10 V, changer	with display

Accessories

SB/E

Snap-on mounting for DIN rails



SAS/D

Hose connection set





Dimensional Drawing

