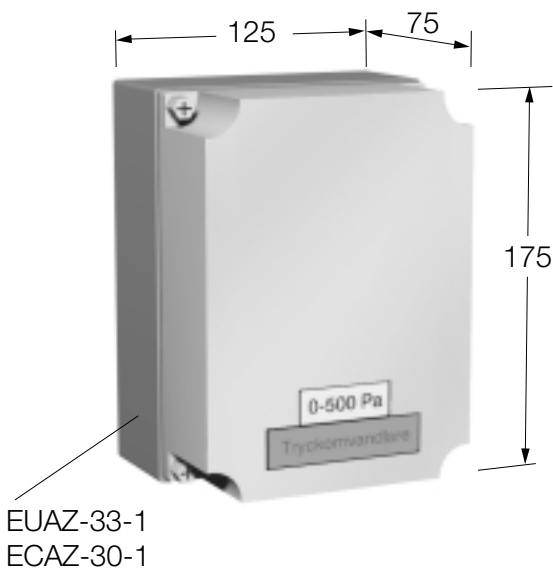
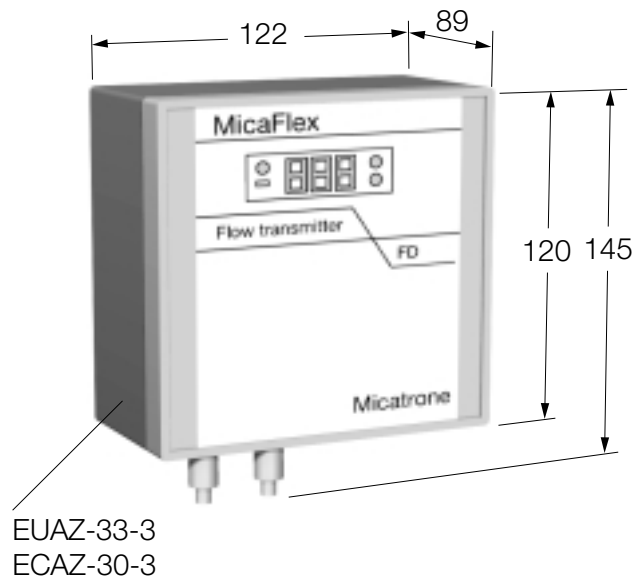


Flow indication equipment EUAZ-33, ECAZ-30



Pressure converter (0–500 Pa) without display



Digital indicator instrument with integral pressure changer

Pressure converter (0–500 Pa) without display

The pressure converter is connected via air hoses to the q-nozzle measurement probe in the fan inlet. The 0–10 V output signal, which is in a linear relationship to the flow, can be connected to a frequency inverter or to a central monitoring system.

Technical data, sensor

Supply voltage	24 V ± 20%
Frequency	50–60 Hz
Power consumption	3 VA
Analogue output signal	0–10 V
Current	1 mA
Measurement range	0–500 Pa
Accuracy	± 12,5 Pa
Enclosure	IP 32
Weight	0.45 kg
Permissible ambient operating temperature	–10 to +50°C

Electrical connection

G	24 V AC
B1	Output signal 0–10 V DC
M	Common neutral

Pressure converter (0–500 Pa) with display

The pressure converter is connected via air hoses to the q-nozzle measurement probe in the fan inlet. The 0–10 V / 4–20 mA output signal, which is in a linear relationship to the flow, can be connected to a frequency inverter or to a central monitoring system. The actual flow can be read on the display of the flow transmitter.

Technical data, sensor

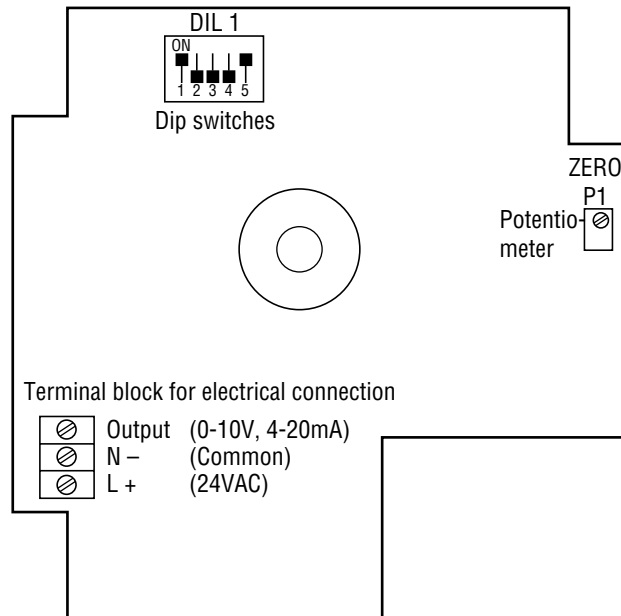
Supply voltage	24 V AC ± 15%
Frequency	50–60 Hz
Power consumption	3 VA
Analogue output signal	0–10 V / 4–20 mA
Current	0,5 mA
Measurement range	0–500 Pa
Accuracy	± 5 Pa
Enclosure	IP 65
Weight	0,65 kg
Permissible ambient operating temperature	0 to +55 °C

Electrical connection

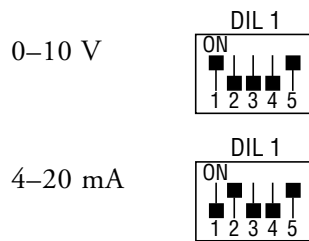
out	Output signal 0–10 V DC / 4–20 mA
N-	Common neutral
L+	24 V AC

Flow indication equipment EUAZ-33-3, ECAZ-30-3

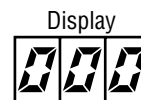
Settings on the lower card



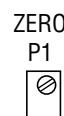
1. Remove the cover. Fold up the upper card.
2. Connect the supply cable (24 V AC) and any signal cable (0-10 V / 4-20 mA) to the terminal block, if this has not already been done.
3. Select the desired output signal.



4. Switch on the supply voltage and wait for 60 seconds (warm-up period).
5. Disconnect the pressure hoses. Adjust the zero point of the sensor with the ZERO potentiometer (P1) until the display shows 000. Then reconnect the pressure hoses.

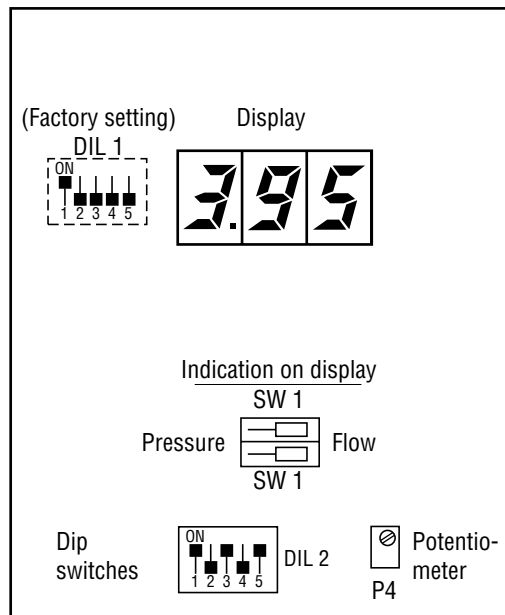


N.B.
The zero point should be checked annually.



Flow indication equipment EUAZ-33-3, ECAZ-30-3

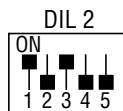
Settings on the upper card



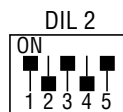
– Fold down the upper card.

Operational setting of DIL 2

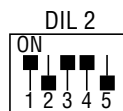
A) Flow indication 000–999 l/s.



B) Flow indication 1.00–9.99 m³/s.

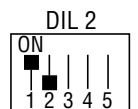
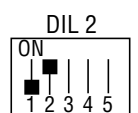
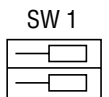


C) Flow indication 10.0–99.9 m³/s.



Fine adjustment of flow indication

- Slide the double switch SW1/SW2 to the right.
- First set switch 1 = OFF, **and then** switch 2 = ON.
- In the table, read the flow to be indicated on the display at 500 Pa. Example: EC-05, impeller wheel with forward-curved blades ⇒ 3.95 m³/s. Adjust potentiometer P4 until the display shows this value.
- Now set switch 2 = OFF, **and then** switch 1 = ON. Ready.



Flow indication equipment EUAZ-33, ECAZ-30

EU size	1) size 2		2) size 1 normal		2) size 2 normal		2) size 3 normal		2) size 1 reinforced		2) size 2 reinforced		2) size 3 reinforced	
	K-factor	m ³ /s at 500 Pa	K-factor	m ³ /s at 500 Pa	K-factor	m ³ /s at 500 Pa	K-factor	m ³ /s at 500 Pa	K-factor	m ³ /s at 500 Pa	K-factor	m ³ /s at 500 Pa	K-factor	m ³ /s at 500 Pa
11	30.76	0.727												
20	15.89	1.41			21.34	1.05	16.42	1.36						
21	10.07	2.22	16.42	1.36	10.72	2.09	8.12	2.75						
22	8.21	2.72	10.72	2.09	8.12	2.75	6.51	3.43					6.51	3.43
30	8.21	2.72	10.72	2.09	8.12	2.75	6.51	3.43					6.51	3.43
31	5.07	4.41	6.51	3.43	4.57	4.89	3.90	5.73	6.51	3.43	4.57	4.89	3.90	5.73
32	3.61	6.19	4.57	4.89	3.90	5.73	3.03	7.38	4.57	4.89	3.90	5.73	3.03	7.38
33	3.61	6.19	3.90	5.73	3.03	7.38			3.90	5.73	3.03	7.38		
40	3.61	6.19	4.57	4.89	3.90	5.73	3.03	7.38	4.57	4.89	3.90	5.73	3.03	7.38
41	2.89	7.74	3.90	5.73	3.03	7.38	2.30	9.72	3.90	5.73	3.03	7.38	2.72	8.22
42	2.22	10.1	3.03	7.38	2.30	9.72	1.99	11.24	3.03	7.38	2.72	8.22	2.23	10.03
44	2.22	10.07	2.30	9.72	1.99	11.24			2.72	8.22	2.23	10.03		
50	2.22	10.1	3.03	7.38	2.30	9.72	1.99	11.24	3.03	7.38	2.72	8.22	2.23	10.03
51	1.69	13.2	2.30	9.72	1.99	11.24	1.50	14.91	2.72	8.22	2.23	10.03	1.75	12.78
53	1.4	16.0	1.99	11.24	1.50	14.91	1.35	16.56	2.23	10.03	1.75	12.78	1.35	16.56
60	1.4	16.0	1.99	11.24	1.50	14.91	1.35	16.56	2.23	10.03	1.75	12.78	1.35	16.56
62	1.09	20.5	1.50	14.91	1.35	16.56	1.08	20.70	1.75	12.78	1.35	16.56	1.08	20.70
64	0.85	26.3	1.35	16.56	1.08	20.70	0.80	27.95	1.35	16.56	1.08	20.70	0.80	27.95
71	0.85	26.3	1.35	16.56	1.08	20.70	0.80	27.95	1.35	16.56	1.08	20.70	0.80	27.95
73			1.08	20.70	0.80	27.95	0.68	32.88	1.08	20.70	0.80	27.95	0.68	32.88
80	0.85	26.3	1.35	16.56	1.08	20.70	0.80	27.95	1.35	16.56	1.08	20.70	0.80	27.95
82			1.08	20.70	0.80	27.95	0.68	32.88	1.08	20.70	0.80	27.95	0.68	32.88
84			0.80	27.95	0.68	32.88	0.52	43.00	0.80	27.95	0.68	32.88	0.52	43.00

EC size	1)		2)	
	K-factor	m ³ /s at 500 Pa	K-factor	m ³ /s at 500 Pa
1	32.18	0.69		
2	24.37	0.92		
3	15.81	1.41	21.63	1.03
4	9.31	2.40	11.25	1.99
5	5.49	4.07	6.06	3.69
6	4.17	5.36	4.95	4.52
7	3.20	6.99	3.88	5.76
8	2.52	8.87	2.96	7.55
9	1.99	11.24	2.29	9.76

Inspection of pressure converter:

Fit T-pieces to the air hoses and connect a manometer. The flow is determined from the relationship:

$$q = \frac{\sqrt{\Delta p}}{k} \text{ m}^3/\text{s}$$

N.B. The q-nozzle measurement probe should be blown clean 1–2 times a year, depending on the air quality.

Temperature correction

The indicated flow is applicable to air at a temperature of +20°C. At other air temperatures, the flow must be corrected using the formula:

$$q = q_{20} \cdot \sqrt{\frac{(273 + t)}{293}} \text{ m}^3/\text{s}$$

where q = actual flow,
 q₂₀ = indicated flow, and
 t = ambient temperature in degrees C

- 1) Impeller wheel forward-curved blades
- 2) Impeller wheel with backward-curved blades

Calculation of air flow from output signal

Flow as a function of output signal 0–10 V

$$q = q_{500} \cdot \frac{E}{10} \text{ m}^3/\text{s}$$

Flow as a function of output signal 4–20 mA

$$q = q_{500} \cdot \frac{E - 4}{16} \text{ m}^3/\text{s}$$

where q₅₀₀ = flow at 500 Pa from q-nozzle, m³/s
 E = actual output signal from pressure converter in V and mA