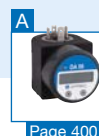


Pressure transducers DeltaFox® DMU 10 D

Version for differential pressure measurement



- Compact design
- Robust aluminium housing
- High long-term stability
- High overpressure safety
- Long service life



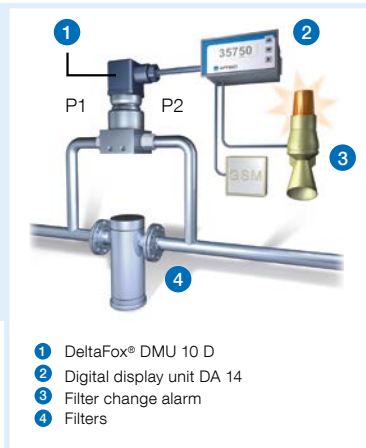
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- 1 DeltaFox® DMU 10 D
- 2 Digital display unit DA 14
- 3 Filter change alarm
- 4 Filters

Application For electronic differential pressure measurement at very low differential pressure. For non-corrosive gaseous media. Particularly suitable for monitoring filters and fans in air and air conditioning applications.

Description The DeltaFox® DMU 10 D pressure transducers feature piezo-resistive silicon measuring cells. When pressure is applied, the pressure difference between the positive side and the negative side is converted into a current or voltage signal which is proportional to the differential pressure.

Technical specifications

Measuring accuracy

Deviation from the characteristic curve as per IEC 60770 – limit point calibration (non-linearity, hysteresis, repeatability):

- > 0/160 mbar: < ±0.35 % FSO
- 0/40–0/160 mbar: ≤ ±1 % FSO
- < 0/40 mbar: ≤ ±2 % FSO

Long-term stability

≤ +0.2 % FSO/year

Measuring ranges

Differential pressure measuring range	Overload
0/6 mbar to 0/10 mbar	100 mbar
0/25 mbar	200 mbar
0/40 mbar to 0/60 mbar	350 mbar
0/100 mbar to 0/400 mbar	1000 mbar
0/600 mbar to 0/1000 mbar	3000 mbar

Operating temperature range

Medium: -25/+125 °C
Ambient: -25/+85 °C
Storage: -40/+100 °C

Temperature error band

Differential pressure measuring range	In compensated range 0/60 °C
≤ 0/10 mbar	≤ ±2 % FSO/10 K
≤ 0/25 mbar	≤ ±1.5 % FSO/10 K
≤ 0/250 mbar	≤ ±1 % FSO/10 K
> 0/250 mbar	≤ ±0.5 % FSO/10 K

Dynamic characteristics

Response time < 5 ms

Process connection

2 x G½B female thread

Materials

Housing: Aluminium, silver-coloured, anodised
Process connection: Aluminium
Sensor: Silicon, glass, RTV, Ceramic (Al₂O₃), nickel
Seal: PUR glued

Output signal / supply voltage

4–20 mA, 2-wire DC 8–32 V
0–20 mA, 3-wire DC 14–30 V
0–10 V, 3-wire DC 14–30 V

Load

4–20 mA: $R_{\max} = [(U_B - U_{B\min}) / 0.02 \text{ A}] \Omega$
0–20 mA < 500 Ω
0–10 V > 10 kΩ

Current input

0/4–20 mA max. 25 mA
0–10 V max. 7 mA

Electrical protection

Short circuit proof and protected against reverse polarity

Electrical connection/degree of protection

Connector and junction box as per ISO 4400 (DIN 43650-A), IP 65

CE conformity (EMC)

EMC Directive 2014/30/EU

Options

- Other process connections
- Other electrical connections
- Digital plug-in display DA 06



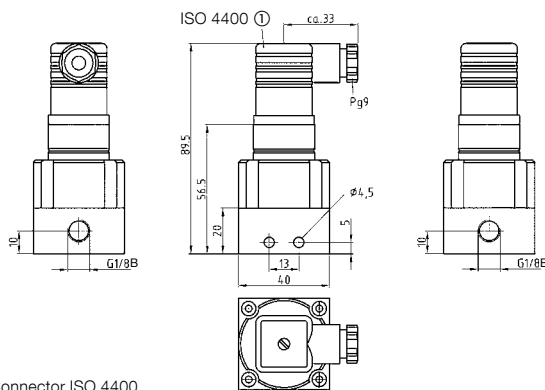
See page 239 for prices.

Pressure transducers DeltaFox® DMU 10 D

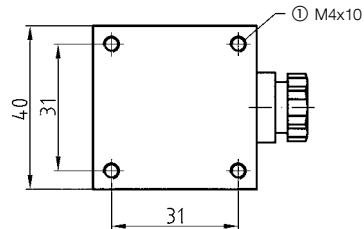
Dimensions (mm) and electrical connections

3

Connection 2 x G $\frac{1}{8}$ female thread

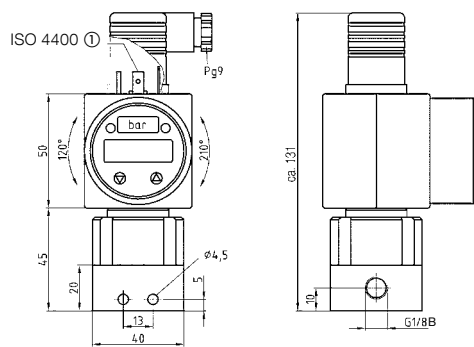


① Connector ISO 4400



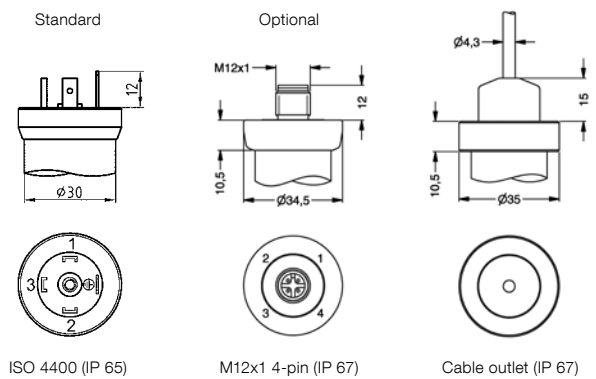
① Screw

DMU 10 D with plug-in display DA 06



① Connector ISO 4400

Electrical connections

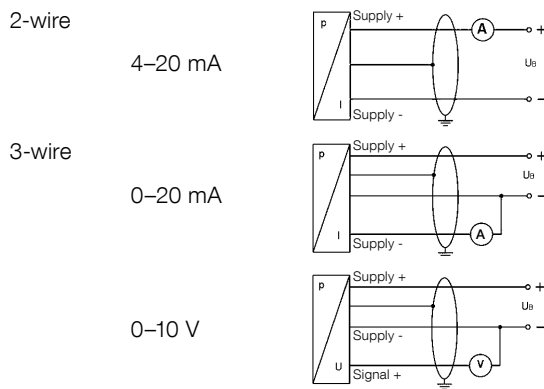


ISO 4400 (IP 65)

M12x1 4-pin (IP 67)

Cable outlet (IP 67)

Wiring diagram

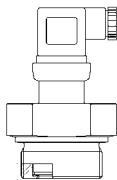
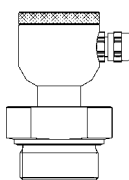



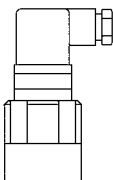
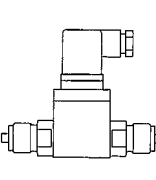


Pin assignment table

Pin assignment	ISO 4400 (DIN 43650)	M 12 x 1	Cable colours
2-wire system: Supply + (4–20 mA) supply – Earth	1 2 Earth pin	1 2 4	White Brown Yellow/ green
3-wire system: Supply + Supply – Signal + Earth	1 2 3 Earth pin	1 2 3 4	White Brown Green Yellow/ green

Pressure transducers DMU 07 – DMU 11 D

DG: H, PG: 4

Type	DMU 07	DMU 07 FG	DMU 08	DMU 08 T**	DMU 09	DMU 10 D	DMU 11 D*
Version							
Measuring principle	Capacitance ceramic measuring cell		Piezo-resistive stainless steel measuring cell	Piezo-resistive stainless steel measuring cell	Piezo-resistive ceramic measuring cell	Piezo-resistive silicon measuring cell	Piezo-resistive stainless steel measuring cell
Measuring accuracy (IEC 60770)	0.35 % FSO	0.35 % FSO	0.35 % FSO (≤ 0.4 bar 0.5 % FSO)	0.35 % FSO (≤ 0.4 bar 0.5 % FSO)	0.35 % FSO	> 160 mbar = 0.35 % FSO 40–160 mbar = 1 % FSO < 40 mbar = 2 % FSO	0.5 % FSO (with ref. to nominal pressure)
Wetted parts	Ceramic/FKM Stainless steel 316 L	Ceramic/FKM Stainless steel 316 L	Stainless steel/ FKM 316 L	Stainless steel/ FKM 316 L	PP/ceramic/ FKM	Aluminium/silicon/glass RTV/ceramic, nickel/PUR (glued)	Stainless steel/ FKM 316 Ti
Connection	G1½B with flush diaphragm	G1½B with flush diaphragm	---	---	---	2 x G1/8B female thread	2 x G1/2B EN 837
Supply voltage	DC 9–32 V	DC 9–32 V	DC 8–32 V	DC 10–30 V	DC 9–32 V	DC 8–32 V	DC 12–36 V
Output	4–20 mA	4–20 mA	4–20 mA	4–20 mA	4–20 mA	4–20 mA	4–20 mA
System	2-wire	2-wire	2-wire	2-wire	2-wire	2-wire	2-wire
Electrical connection	Connector ISO 4400 (43650-A)	Field housing M12 x 1.5	5 m PUR cable	5 m PUR cable	5 m FEP cable	Connector ISO 4400 (43650-A)	
Measuring range	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
Price €							
0/6 mbar	---	---	---	---	---	31861	---
0/10 mbar	---	---	---	---	---	31862	---
0/25 mbar	---	---	---	---	---	31863	---
0/40 mbar	31789	31821	---	---	31767	31864	31830
0/60 mbar	31790	31805	---	---	31768	31865	31831
0/100 mbar	31791	31547	31555	31555T0070	31571	31866	31813
0/160 mbar	31792	31806	31556	31556T0070	31572	31867	31814
0/200 mbar	31793	31548	31557	31557T0070	31573	---	---
0/250 mbar	31794	31807	31558	31558T0070	31574	31868	31815
0/300 mbar	---	---	31519	31519T0070	31812	---	---
0/400 mbar	31795	31549	31559	31559T0070	31575	31869	31832
0/600 mbar	31796	31808	31560	31560T0070	31576	31870	31833
0/1 bar	31797	31550	31561***	31561T0070	31577	31871	31816
0/1.6 bar	31798	31809	31562	31562T0070	31578	---	31834
0/2 bar	31799	31551	31563	31563T0070	31579	---	---
0/2.5 bar	---	---	31564	31564T0070	31580	---	31817
0/4 bar	31800	31552	31565	31565T0070	31581	---	31835
0/6 bar	31801	31810	31566	31566T0070	31582	---	31818
0/10 bar	31802	31553	31567	31567T0070	31583	---	31836
0/16 bar	---	---	31568	31568T0070	---	---	31837
0/20 bar	---	---	31569	31569T0070	---	---	---
0/25 bar	---	---	31570	31570T0070	---	---	---

* Please specify required nominal pressure/maximum static pressure when ordering. Standard temperature range: 0–70 °C Replace the designation of the part number, if necessary ** 0–30 °C, designation: 0030 / 0–50 °C, designation: 0050 / 0–70 °C, designation: 0070 *** Electrical connection 15 m PUR cable, price €

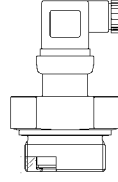
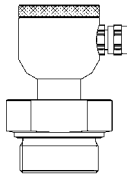



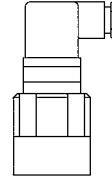
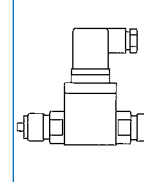
Blue part no. = in-stock items



See page 240 for extra charges for and accessories.

Extra charges/accessories for DMU 07 – DMU 11 D

DG: H, PG: 4

Type	DMU 07	DMU 07 FG	DMU 08	DMU 08 T	DMU 09	DMU 10 D	DMU 11 D
Version							
	Price €	Price €	Price €	Price €	Price €	Price €	Price €
EX protection II 1G EEx ia IIC T4				---	---	---	---
2 x G $\frac{1}{4}$ female thread	---	---	---	---	---	---	
2 x hose connection 6 mm	---	---	---	---	---		On request
2 x $\frac{7}{16}$ UNF	---	---	---	---	---	---	
Other connections	On request	On request	---	---	---	On request	On request
Cable connection per metre PUR cable	---	---			---	---	---
Cable connection per metre FEP cable	---	---				---	---
Binder connector		---	---	---	---	---	---
Fixed cable connection 2 metres		---	---	---	---		---
Cable extension per metre		---	---	---	---		---
Output 0–20 mA, 3-wire	---	---		---	---	---	---
Output 0–10 V, 3-wire				---	---		
Other output signals	On request	On request	On request	---	On request	On request	On request
Measuring accuracy 0.25 % FSO			---	---	---	---	---
5-point calibration report (for measuring accuracy up to 0.25 % FSO)			---	---	---	---	---
SIL 2 (4–20 mA only)	---	---		---	---	---	---

Accessories for DMU 08/ DMU 09

DG: H	PG	Part no.	Price €
Screw connector kit G2" – 1½" – 1"	1	52125	
Screw connector kit stainless steel G1"	3	31822	
Junction box with pressure relief port (IP 65)	1	31824	
Anchor clamp	3	31825	

Blue part no. = in-stock items

i See chapter 8 for digital display units and signal processing.

