

Pressure transducers DMU 14 DG/FG Ex

Intelligent precision version



DMU 14 DG EX

- Version DMU 14 FG Ex with ATEX approval for zone 0
- Ideal for process engineering
- High accuracy of $\pm 0.1\%$
- Either die cast housing (DG) or field housing (FG)
- Turn down 1:10
- Local display

DMU 14 FG Ex



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Application The intelligent pressure transducer DMU 14 DG EX with die cast aluminium housing provides very high accuracy and a turn down function for measuring range selection and is an ideal solution for process engineering applications. The version DMU 14 FG EX with a stainless steel field housing is perfectly suitable for applications in the pharmaceutical and food industries. The devices come with HART® communication.

Description Pressure transducers convert physical pressure into an electrical signal proportional to the pressure. DMU 14 DG/FG EX is equipped with an oil-filled piezo-resistive silicon measuring cell.

Technical specifications

Measuring accuracy

Deviation from the characteristic curve according to IEC 60770 – limit point calibration (non-linearity, hysteresis, repeatability)
 $\leq \pm 0.1\%$ FSO
 $\leq \pm 0.2\%$ FSO with turn down $> 1:5$

Long-term stability

$\leq \pm 0.1\%$ x FSO/year at reference conditions

Display

LC display, 5-digit 7-segment main display
 Character height 8 mm, indication range $\pm 9,999$
 8-digit 14-segment additional display
 Character height 5 mm
 52-segment bar chart
 Accuracy: 0.1 %, ± 1 digit

Measuring ranges

Relative pressure: 0/0.4 to 0/600 bar
 Absolute pressure possible from 0/1 bar
 Vacuum ranges -1/+1; -1/+2; -1/+4 and -1/+10 bar

Overpressure safety

Up to 0/20 bar, at least 4 x FS
 0/40 to 0/400 bar, at least 2 x FS
 0/600 bar: Overload = 1,000 bar

Operating temperature range

Medium: -30/+125°C
 Short-term (60 min) up to +150 °C
 Ambient: -20/+70 °C
 in EX zone 0 at p_{atm} 0.8 to 1.1 bar
 -20/+60°C
 without display -40/+80 °C
 Storage: -30/+80°C

Temperature error

$\leq \pm 0.2\%$ FSO x turn down
 in compensated range -20/+85 °C

Dynamic characteristics

100 ms (without consideration of electronic damping)

Process connection

G $\frac{1}{2}$ B (EN 837-1/7.3)

Materials

Housing DG: Aluminium die cast, powder-coated
 Housing FG: Stainless steel 316 L
 Pressure connection: Stainless steel 316 L
 Diaphragm: Stainless steel 316 L
 Seal: FKM

Pressure transmission liquid

Silicone oil
 (Option food oil – temp. of the medium -10/+125 °C)

Adjustable parameters

Electronic damping: 0/100 s
 Offset: 0/90 %
 Turn down (of span): 1:10

Output signal/supply voltage

4–20 mA, 2-wire DC 12–28 V
 with EX version/HART communication

Load

4–20 mA: $R_{max} = [(U_B - U_{Bmin})/0.02] \Omega$
 HART® communication $R_{min} = 250 \Omega$

Current input

Max. 25 mA

Electrical protection

Short circuit proof and protected against reverse polarity

Electrical connection

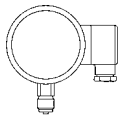
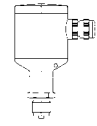
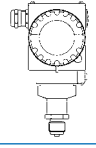
Cable gland M20 x 1.5

Degree of protection

IP 67 (EN 60529)

Pressure transducers DMU 13 – DMU 14

DG: H, PG: 4

Type	DMU 13	DMU 14 FG Ex	DMU 14 DG Ex
Version			
Housing Ø	100	60	75
Housing	Stainless steel	Stainless steel	Aluminium
Measuring accuracy	0.5 % FSO Pressure gauge: class 1.0	0.1 % FSO	0.1 % FSO
Wetted parts	Stainless steel 316 Ti/316 L	Stainless steel 316 L/FKM	Stainless steel 316 L/FKM
Connection	G½B	G½B	G½B
Supply voltage	DC 12–36 V	DC 12–28 V	DC 12–28 V
Output	4–20 mA	4–20 mA	4–20 mA
Measuring range	Part no.	Part no.	Part no.
Price €			
0/400 mbar	---	31977	31987
Price €			
-1/0 bar	---	---	---
0/0.6 bar	---	---	---
0/1 bar	31077	31978	31988
Price €			
0/1.6 bar / 0/2 bar*	31078	31979	31989
0/2.5 bar	31079	---	---
0/4 bar	31080	31980	31990
0/6 bar	31081	---	---
0/10 bar	31082	---	---
0/16 bar	31083	---	---
0/25 bar / 0/20 bar*	31084	31981	31991
0/40 bar	31085	31982	31992
Price €			
0/60 bar	---	---	---
0/100 bar	---	31983	31993
0/160 bar	---	---	---
0/250 bar / 0/200 bar*	---	31984	31994
0/400 bar	---	31985	31995
0/600 bar	---	31986	31996
Price €			
0/700 bar	---	---	---
Extra charges (without PG)	Price €	Price €	Price €
Housing filling		---	---
Without display – reduced price	---		
Clamp connection 1" or 1½", PN = 16	---		
Clamp connection 2", P _{max} = 16 bar	---		
Dairy fitting DIN 11851 DN 25, PN = 40	---		
Dairy fitting DIN 11851 DN 40, PN = 40	---		
Dairy fitting DIN 11851 DN 50, PN = 25	---		
High-temperature version +300 °C	---		
Measuring range -1/xx bar	---		
Pressure transmission liquid food oil	---		
Absolute pressure (measuring ranges according to data sheet)	---		

* Applies to DMU 14 DG/FG Ex only.

Blue part no. = in-stock items