Intelligent pressure transducers DMU 14

Application
For electronic pressure measurement in applications requiring high accuracy of measurement and long-term stability, especially under arduous operating conditions. With aluminium die cast housing, the units are particularly suitable for process technology applications. With stainless steel weatherproof housing and hygienic process connection, the units are ideally suited for applications in the food and beverage industries.

Description
The DMU 14 pressure transducers use piezo-resistive stainless steel measuring cells and feature calibrated, amplified sensor signals which are available as standardised current outputs.

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DMU 14 features:

- *Robust housing versions*
- *High accuracy*
- *Long service life*
- *High long-term stability*
- *High overpressure safety*
- *Turn Down 1:5*
- *Display (optional)*
- *HART communication (optional)*
- *Ex version (optional)*

Accuracy of measurement
Deviation characteristics according to IEC 60770 – limit point setting (non-linearity, hysteresis, repeatability)
250 mbar: ≤ ± 0.2 % FSO
> 0/1 bar: < ± 0.1 % FSO

Long-term stability
± 0,1 % x Turn Down FSO/year

Meas. ranges/overpressure safety

Measuring range	Max. overpressure
0/ 250 mbar	1000 mbar
0/1 bar	3 bar
0/1,6 bar	6 bar
0/6 bar	20 bar
0/16 bar	60 bar
0/25 bar	100 bar
0/60 bar	140 bar
0/160 bar	340 bar
0/250 bar	600 bar
0/600 bar	1000 bar

Operating temperature range
Without display
Medium: -40 °C/+125 °C
Ambient: -40 °C/ +80 °C
Storage: -40 °C/ +80 °C
With display
Medium: -40 °C/+125 °C
Ambient: -20 °C/ +70 °C
Storage: -30 °C/ +80 °C

Temperature error
-20/+80 °C ≤ 0,1 % FSO/10 K

Dynamic characteristics
Response time < 200 ms

Process connection
G½B (EN 837-1/7.3)

Materials
Housing: Stainless steel 1.4435
Process-connection: stainless steel 1.4571
Diaphragm: stainless steel 1.4435
Seal: FKM, NBR for ≥ 35 bar

Adjustable parameters
Electronic damping: 0/100 s
Offset: 0/90 %
Turn down (of span): 1:5

Output signal/supply voltage
4–20 mA, 2-wire DC 10–30 V
4–20 mA, 2-wire DC 10–28 V
ith Ex version/
HART communication

Load
$R_{max} = [(U_B - U_{Bmin})/0.02]\ \Omega$
HART-Kommunikation $R_{min} = 250\ \Omega$

Current input
4–20 mA max. 25 mA

Protective electrical measures
Short circuit proof and polarity protected

Electrical connection (protection)
Connection terminals in terminal chamber (IP 67)

CE conformity (EMC)
EN 61326

Options

- *Other process connections*
- *Ex version with HART communication*
- *High temperature version*
- *Integrated local display*

Refer to page 467 for prices

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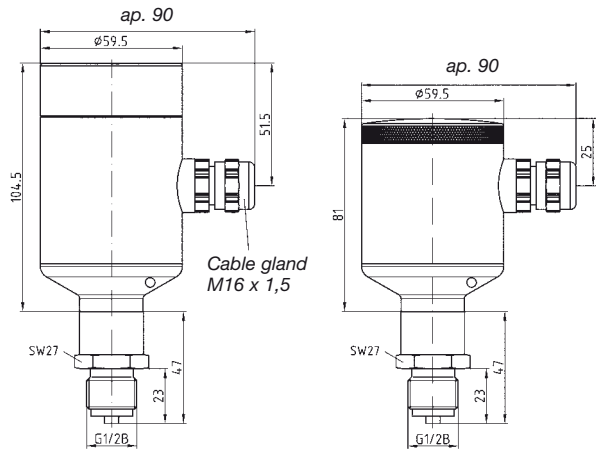
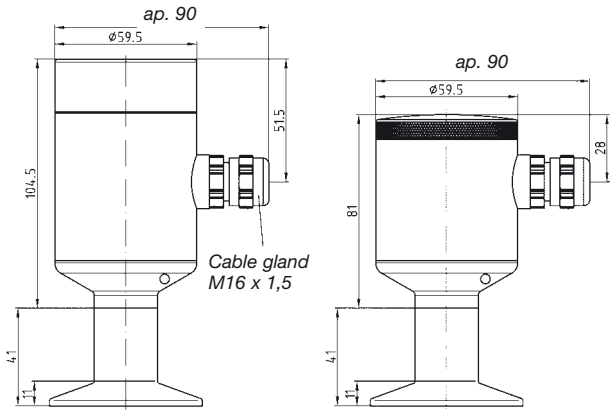
Dimensions (in mm) and electrical connections

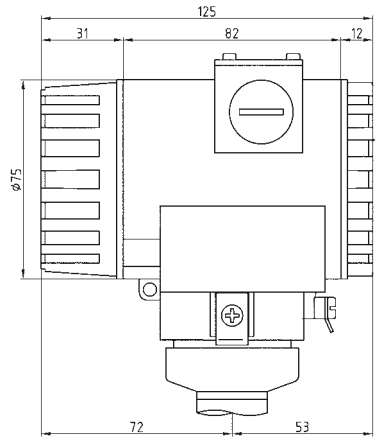
DMU 14 FG ½“ with and without local display



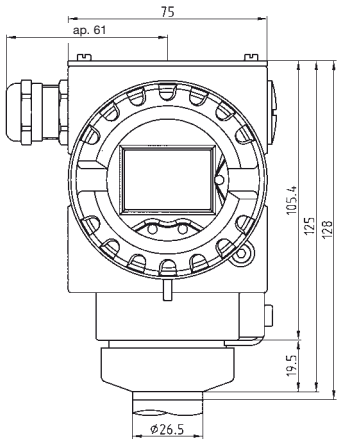
DMU 14 FG clamp 1½“ with and without local display



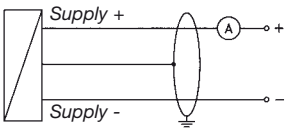
DMU 14 DG



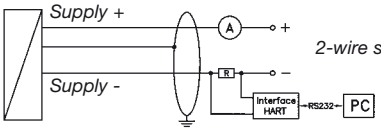
DMU 14 DG



Wiring diagrams



2-wire system (current)



2-wire system (current) HART

Pin assignment table

		Stainless steel weatherproof housing Connection terminals	Aluminium die cast housing Connection terminals
Supply	+	1	2
Supply	-	2	4
Test		-	3
Earth		6	1

By connecting an ammeter between supply + and test terminals, the output signal can be checked without disconnecting the supply voltage.