Pressure gauge with helical tube
Miniature design, DirectDrive version
Model 116.18.023

Applications
- For measuring static pressures in dry gaseous media that will not attack copper alloy parts
- Indication of cylinder charging pressure
- Welding engineering
- Respiratory protective equipment
- Military engineering

Special features
- Ideal for integration solutions
- Very good vibration and shock resistance
- Compact, robust case
- Case and process connection one part
- Socket wrench mounting possible

Description
The model 116.18 is a DirectDrive pressure gauge, which does not require a movement for the transmission of the tube deflection to the pointer. This measuring principle as well as the robust case design lead to a very good vibration and shock resistance. The helical tube enables an increased number of load cycles. In addition, the model 116.18 offers the security feature of having a lateral pressure relief and IP 67 ingress protection.

This pressure gauge is particularly suited for the operating conditions of pressure controllers and pressure valves on fixed and portable gas cylinders.

For tailored versions WIKA develops individual solutions together with its customers. A main focus of the development is to integrate pressure measuring systems directly into the customer product.
Standard version

Nominal size in mm
23

Accuracy 1)
±5 % of full scale value

Scale ranges
0 ... 260 bar,
0 ... 315 bar,
0 ... 400 bar or
0 ... 450 bar

Pressure limitation
Steady: 3/4 x full scale value
Short time: Full scale value

Permissible temperature
Ambient: -40 ... +60 °C
Medium: -20 ... +60 °C
Storage: -40 ... +70 °C

Temperature effect
When the temperature of the measuring system deviates from the reference temperature (+20 °C):
≤ ±0.4 %/10 K of the span

Process connection
Copper alloy, nickel plated
Centre back mount (CBM)
M10 x 1.25 (male), 22 mm flats

Pressure element
Copper alloy, helical form

Case
Copper alloy, nickel plated

Dial
Aluminium, white, black lettering,
Indication angle 120 ° ±15 °

1) including non-linearity, hysteresis, zero offset and end value deviation

Window
Polycarbonate

Pointer
No separate pointer available; pointer is represented by tube end

Ingress protection
IP 67 per EN 60529 / IEC 60529

Options
- Accuracy ±2.5 % at defined scale value
- Other process connection
- Case copper alloy, natural finish
- Nominal size 27
- Other indication angles
- Phosphorescent dial
- Dial design to customer request

Dimensions in mm

Standard version

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>23 10 23</td>
<td>M10 x 1.25 22</td>
</tr>
</tbody>
</table>

2) Process connection per EN 837-1 / 7.3

Ordering information
Model / Nominal size / Scale range / Connection size / Options