# Mechanical Pressure Measurement

# Bourdon Tube Pressure Gauges Dry or Liquid Filled Gauge with SAE Connection Type 212.53S - Dry Case Type 213.53S - Liquid-filled Case

WIKA Datasheet 21X.53S

# **Applications**

- Intended for adverse service conditions where pulsating or vibration exists (with liquid filling)
- Hydraulics & compressors
- Suitable for gaseous or liquid media that will not obstruct the pressure system

# **Special features**

- Vibration and shock resistant (with liquid filling)
- 7/16" -20 SAE connection
- Pressure ranges up to 15,000 psi



#### **Bourdon Tube Pressure Gauge Model 213.53S**

# **Description**

## Design

ASME B40.100 & EN 837-1

# Sizes

21/2" (63 mm)

#### **Accuracy class**

± 2/1/2% of span (ASME B40.100 Grade A)

#### Ranges

Vacuum / Compound to 200 psi Pressure from 15 psi to 15,000 psi or other equivalent units of pressure or vacuum

## Working pressure

Steady: 3/4 scale value
Fluctuating: 2/3 full scale value
Short time: full scale value

# **Operating temperature**

Ambient:  $-40^{\circ}F$  to  $+140^{\circ}F$  ( $-40^{\circ}C$  to  $+60^{\circ}C$ ) - dry

-4°F to +140°F (-20°C to +60°C) - glycerine filled

-40°F to +140°F (-40°C to +60°C) - silicone filled

Medium: +140°F (+60°C) maximum

# Temperature error

Additional error when temperature changes from reference temperature of 68°F (20°C) ±0.4% for every 18°F (10°C) rising or falling. Percentage of span.

# Weather protection

Weather tight (NEMA 4X / IP 65)

#### **Pressure connection**

Material: copper alloy Lower mount (LM)

7/16" - 20 SAE with o-ring, washer and lock nut

#### **Bourdon tube**

Material: copper alloy ≤ 1,000 PSI: C-type ≥ 1,500 PSI: helical type

#### Movement

Copper alloy

#### Dial

White ABS with stop pin and with black lettering

#### **Pointer**

Black aluminum



#### Case

304 stainless steel with vent plug and stainless steel crimp ring. Suitable for liquid filling. Case connection sealed with EPDM o-ring (glycerine filled) or Viton o-ring (dry or silicone filled).

#### Window

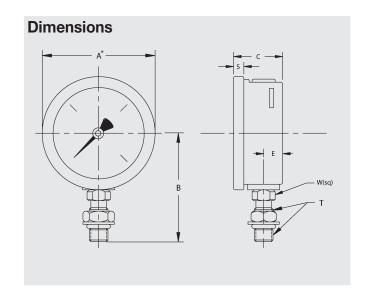
Polycarbonate with Buna-N gasket

#### Case fill

Glycerine 99.7% - Type 213.53S

# **Optional extras**

- Brass restrictor
- External zero adjustment (2½" only)
- Red drag pointer or mark pointer
- Silicone or Fluorolube case filling
- Custom dial layout
- Other pressure scales available bar, kPa, MPa, kg/cm² and dual scales



| Size |    |      |      |      |      |      |         |      |                 |
|------|----|------|------|------|------|------|---------|------|-----------------|
|      |    | Α    | В    | С    | Е    | S    |         | W    | Weight          |
| 2.5" | mm | 69   | 61.2 | 31   | 13   | 6    |         | 14   | 0.38 lb. dry    |
|      | in | 2.69 | 2.41 | 1.23 | 0.51 | 0.24 | 7/16-20 | 0.55 | 0.46 lb. filled |



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