Gas density monitor
Model GDM-063

Applications

- Medium-voltage equipment
- Gas density monitoring of closed SF_6 gas tanks
- Raising an alarm when defined limit values have been reached

Special features

- Case and wetted parts from stainless steel
- On-site display with switch contact
- Temperature-compensated and hermetically sealed, therefore no influence of temperature fluctuations, differences in level and atmospheric pressure fluctuations
- Compensation possible for gas mixtures
- Traceability by serial number

Gas density monitor model GDM-063

Description

Gas density is a crucial operating parameter for medium-voltage switchgear. If the required gas density is not present, safe operation of the plant cannot be guaranteed.

The WIKA gas density measuring instruments provide reliable warnings against dangerously low gas levels, even under extreme environmental conditions. Electrical switch contacts warn the plant operator when the gas density drops below defined levels due to leakage.

Numerous fields of application
The WIKA gas density monitor is hermetically sealed and temperature-compensated. Measured value fluctuations and erroneous alarms caused by changes in either ambient temperature or atmospheric pressure are therefore prevented.

Via the on-site display, the pressure can be read directly on the instrument with reference to 20 °C. With the integrated switch contacts, simple switching tasks can be realised quickly and without complication.

Gas density monitor

Nominal size
63

Calibration pressure P_E
To customer specification

Accuracy specifications
- ±1 % at ambient temperature +20 °C
- ±2.5 % at ambient temperature -20 … +60 °C and with calibration pressure in accordance with reference isochor (reference diagram KALI-Chemie AG, Hanover, prepared by Dr. Döring 1979)

Scale ranges

Selectable versions	
Option 1	-1 ... +1 bar
Option 2	-1 ... +3 bar

Others on request

Permissible ambient temperature
Operation: -20 ... +60 °C (-4 ... +140 °F), gaseous phase
Storage: -50 ... +60 °C (-58 ... +140 °F)

Process connection
G ¼ B per EN 837, back mount
Stainless steel, spanner flats 14 mm

Other connections and connection locations on request.

Pressure element
Stainless steel, welded
Gas-tight: leak rate ≤ $1 \cdot 10^{-8}$ mbar · l / s
Test method: helium mass spectrometry

Movement
Stainless steel
Bimetal link (temperature compensation)

Dial
Aluminium
The scale range is subdivided into red, yellow and green ranges

Pointer
Aluminium, black

Case

Selectable versions	
Option 1	Stainless steel, with gas filling
Option 2	Stainless steel, with filling liquid

Gas-tight: leak rate ≤ $1 \cdot 10^{-5}$ mbar · l / s

Window

Selectable versions	
Option 1	Laminated safety glass
Option 2	Clear non-splintering plastic

Ring
Bayonet ring, stainless steel, secured by means of 3 welding spots

Permissible humidity
≤ 90 % r. h. (non-condensing)

Ingress protection
IP 65 per EN 60529 / IEC 60529

Weight
With gas filling: approx. 0.8 kg
With filling liquid: approx. 1.2 kg

High-voltage test 100 %
2 kV, 50 Hz, 1s

Switch contacts

Electrical connection
Cable outlet, length 1 m
Cable bushing from glass

Number of switch contacts

Selectable versions	
Option 1	1 magnetic snap-action contact
Option 2	2 magnetic snap-action contacts

Switching directions

Selectable versions	
Option 1	Falling pressure
Option 2	Rising pressure

Switching functions

Selectable versions	
Option 1	Normally open
Option 2	Normally closed
Option 3	Change-over contact (max. 1 switch contact)

Circuits

Selectable versions	
Option 1	Galvanically connected (not for change-over contact)
Option 2	Galvanically isolated

Switching accuracy
Switch point = calibration pressure P_E: see accuracy specifications

Switch point ≠ calibration pressure P_E: Shifted parallel to calibration pressure

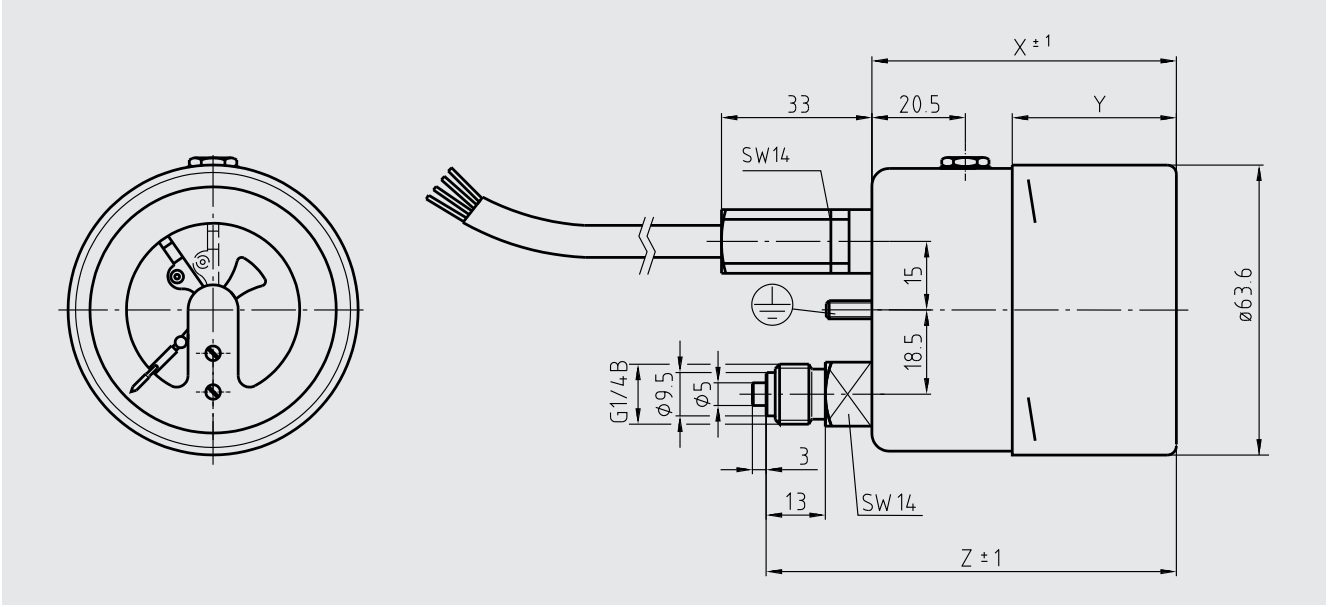
Max. switching voltage
AC 250 V

Switching power
With gas filling: 30 W / 50 VA, max. 1 A
With filling liquid: 20 W / 20 VA, max. 1 A

Material of switch contacts
80 % Ag / 20 % Ni, gold-plated

Further information on magnetic snap-action contacts in data sheet AC 08.01

Dimensions in mm



Switch contact model 821	Dimensions in mm		
	x	y	z
Single and double contacts, without galvanic isolation	66.5	36	86
Double contacts, with galvanic isolation	76.5	46	96

Approvals

Logo	Description	Country
CE	**EC declaration of conformity** Low voltage directive 2006/95/EC, EN 61010-1	European Community

Manufacturer's information and certifications

- RoHS conformity 2011/65/EU

Approvals and certificates, see website

Ordering information

Model / Process connection / Pressure unit / Measuring range / Filling pressure / Switch configuration / Gas mixture / Options

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