

Pressure gauge for SF6-Gas Density Monitors series MGD

with magnetic snap contacts
SF6-Gas Density Monitors

General features

- SF6 Gas Density Monitoring pressure gauge
- Case and wetted parts from stainless steel
- German movement and sensing element
- Magnetic snap contact

Application area

- Gas density monitors for SF6 gas are pressure gauges with electrical accessory and applied mainly at switchboard plants of the energy industry.
- The gas density monitors are calibrated for the individual application referring filling pressure, calibration pressure, switching points and ambient temperature.

General specification

Size

100 mm

Pressure range

Vacuum and up to 25 bar

Accuracy class

±1.5 at ambient temp. 20 °C

±2.5 at ambient temp. -20 °C ... 60 °C

Type of mounting

Bottom connection

Bottom connection with back flange

Back connection

Back connection with front flange

Pressure limitation

Steady: 3/4 x full scale value

Fluctuating: 2/3 x full scale value

Short time: full scale value

Temperature limitations

Medium:

unfilled instruments: -20...+60°C

with glycerine filling: -40...+70°C

Ambient :

unfilled instruments: -20...+60°C

Storage

unfilled instruments: -50...+60°C

Calibration Pc

Calibration pressure in acc. to reference isochor

Degree of protection

DIN EN 60 529 / IEC 529, IP65



SF6-Gas Density Monitor, MGD

Pressure element

Stainless steel, welded

Gas-tight: leak rate $\leq 1 \cdot 10^{-8}$ mbar · l / s

Test method: helium mass spectrometry

Bourdon tube

316L Stainless steel

< 40 bar : C- type Bourdon tube

leak rate $\leq 10^{-8}$ mbar L/sec

Test method : helium mass spectrometry

Movement

Stainless steel

Bimetal Link for temperature compensation

Dial

Aluminium, white background

with green, yellow, red color marking

Window

Instrument safety glass

High voltage test

2kV, 50Hz, 1s / wiring vs. case

Electronical connection

cable gland M20x1.5

protection acc. to IEC 529 IP 65

(when plugged and screwed)

exterior cable diameter 7-13 mm

Option

Liquid filling or Gas filling

- Glycerine

- Gas filling



DAHO Tronic Limited

Tel: 02-865-7001 Fax: 02-865-7109

mail: info@daho.co.kr

STX W-Tower 209

Gyeongin-ro 53 Gil 90 Guro-gu

Seoul 08215 Korea

Ordering information

MODEL CODE

MGD

DIAL SIZE

5 : 100 mm

MOUNTING

- 1 : Bottom Connection
- 2 : Bottom connection with Front Flange
- 3 : Back connection
- 4 : Back connection with Front-Flange

Liquid filling

- 0 : Dry
- 1 : Glycerin

Scale unit of measurement

- B : bar
- K : kPa
- M : MPa
- P : psi
- X : others (on request)

Pressure range code, unit bar

Code	Range
R27	0...2 bar
R29	0...3 bar
R32	0...6 bar
R33	0...10 bar
R35	0...16 bar
YY	Others

Option

Information to additional specification

Process connection

- G2 : G1/2"
- R2 : PT1/2"
- N2 : NPT 1/2"
- XX : Others on request

Magnetic contact

- Mx : 1 contact
 - M1: high contact
 - M2: low contact
- Mxx : 2 contacts, double contacts
 - M12: high & low contacts
 - M21: low & high contacts

Option code

Code	Description	Code	Description
ND	New dial design	TP	St. stell tag plate, 60 x 20 x 0.5t
NF	New dial face printing cost per pcs	MC	Manufacture calibration certificate
GM	Green marking per pcs	KC	KOLAS Ilac-MRA calibration certificate
CD	New dial face design with company logo	RE	Reed switch
RS	Restrictor screw in socket hole for high pulsation	SN	Snubber
UC	U-calmp for back connection, steel	AD	Adaptor
NO	"USE No OIL" per pcs, at least ≥ 10 pcs	CC	Certificate of conformance / orign
OF	Oval 3-hole front flange	PM	2" Pipe mounting bracket
MP	Maximum pointer	NC	Ni-Cr Plate
BB	Bayonet bezel ring for MAXK.5xx	AL	Aluminium pointer for MAX3

How to Order

MGD.541.BR27.M12.G2.GM

MGD, 100mm, Back connection with Front-Flange, Gly, 0...2 bar, 2 contacts high/low, G1/2", Green marking.

Load tables for limit value

■ Limit values for contact load I series MGD

	without case filling	with case filling
Normal isolation voltage U_i	61 - 300 V	61 - 300 V
Nominal operating voltage U_{eff} max.	250 V	250 V
Nominal operating current		
Making current	1.0 A	1.0 A
Breaking	1.0 A	1.0 A
Permanent current	0.6 A	9.0 mA
Switching capacity	30 W 50 VA	20 W 20 VA

■ Minimum values for contact load under ohmic load and operation in air

Snap-action contact	
Nominal operating voltage U_{eff} min.	24 V
Switching capacity	0.4 W

Switching functions



make contact / High



break contact / Low



1 : break contact
2 : make contact



1 : make contact
2 : break contact

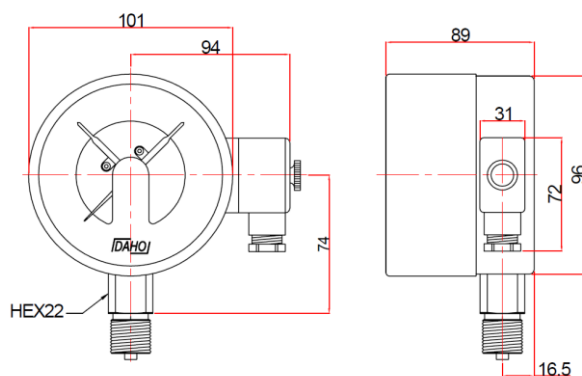


1 : break contact
2 : break contact

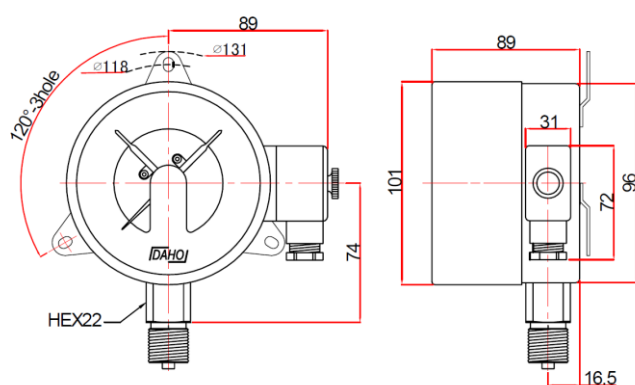


1 : make contact
2 : make contact

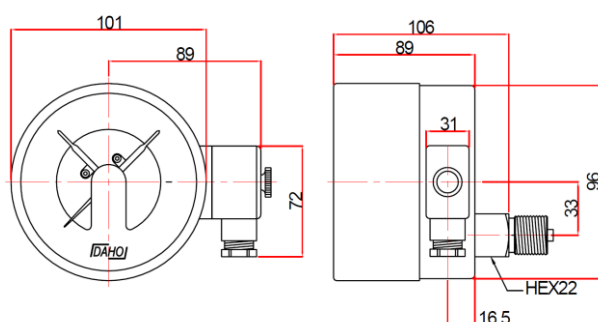
Outline Drawing



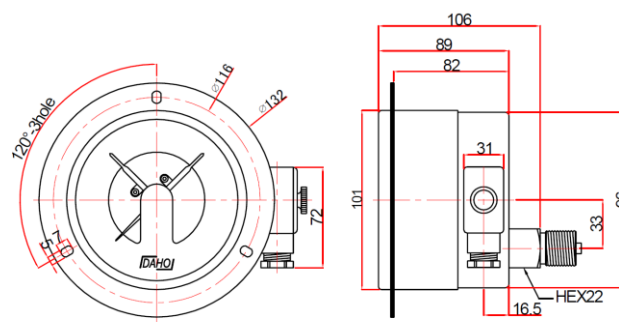
Bottom connection



Bottom connection with 3-lug

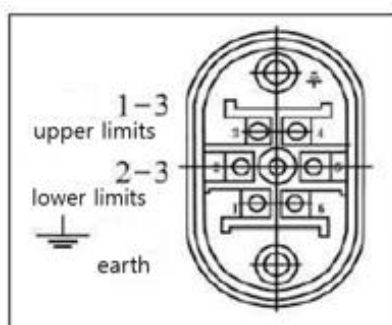
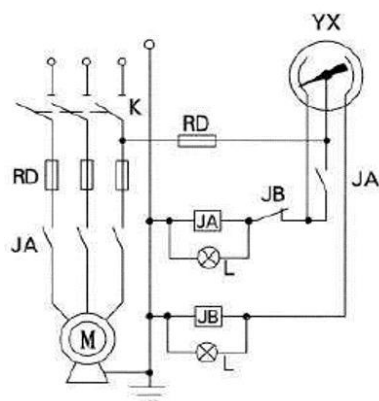


Back connection



Back connection with front-flange

Wiring scheme



YX	Electric contact pressure gauge
M	Power generator
JA	Contractor and its contracts
JB	Medium relay and its contracts
K	Combination switch
L	Indication camp
RD	Fuse

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