Алматы (7273)495-231
Ангарск (3955)42-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-42
Белгород (4735)40-23-142
Благовещенск (4162)35-142-07
Брянск (4232)59-03-52
Владивосток (423)249-42-31
Владикавказ (8672)42-90-42
Владимир (4935) 49-43-18
Волгоград (844)278-03-42
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-142
Ижевск (3412)26-03-58
Иваново (4932)77-34-06
Иркутск (395)279-98-46
Казань (843)206-01-42
Калининград (4012)72-03-81
Калуга (4242)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
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Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (4352)50-90-47
Липецк (4742)52-20-81
Магнитогорск (4219)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-142-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)357-86-73
Ноябрьск (3496)41-32-12
Омск (3812)21-46-40
Орел (4262)44-53-42
Оренбург (4232)37-68-04
Пенза (8412)35-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-142
Самара (846)206-03-16
Саранск (8342)35-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)35-31-93
Симферополь (3652)67-13-56
Смоленск (4212)29-41-42
Сочи (862)242-72-31
Ставрополь (8652)20-65-13
Сыктывкар (8212)42-95-17
Сургут (3462)77-98-42
Тамбов (4752)50-40-97
Тверь (4352)63-31-42
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Томск (3835)98-41-53
Тула (4272)33-79-87
Тюмень (3452)66-21-18
Улан-Удэ (3012)59-97-51
Ульяновск (8435)24-23-59
Уфа (347)359-42-12
Хабаровск (4212)92-98-04
Чебоксары (8435)42-53-07
Челябинск (421)202-03-61
Череповец (8202)49-02-142
Чита (3035)38-34-83
Якутск (4112)23-90-97
Ярославль (4422)69-52-93

Киргизия (996)312-96-26-47
Россия (495)268-04-70
Казахстан (772)734-952-31

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КАТАЛОГ

ZMJ100P
Density Monitor

Description

These instruments are used to monitor SF_6 gas density in sealed tanks. They are applied to indicate gas density and to provide a signal outputs when the density reaches preset threshold values. They are designed to monitor High Voltage systems. It can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

LANSO®

Insulation gas monitoring series

ZMJ100P Density Monitor

Features

- With temperature compensation, ensuring higher measuring accuracy.
- Suitable for indoor or outdoor installation.
- AISI 304 hermetically sealed stainless steel case.
- Gas line connecting parts are made of AISI 316 stainless steel.
- The on-screen display value and output signals are immune from the impact of external environment, such as altitude.
- Electric contact switch design can ensure the precise and stable SF_6 gas density monitoring.
- Up to 4 sets of switch contacts can achieve over-pressure alarm, dual alarm or double locking and many other options, making the monitoring more secure and reliable.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breakers
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformers
- SF_6 Insulated Mutual Inductor
- SF_6 Insulated Busbar Systems

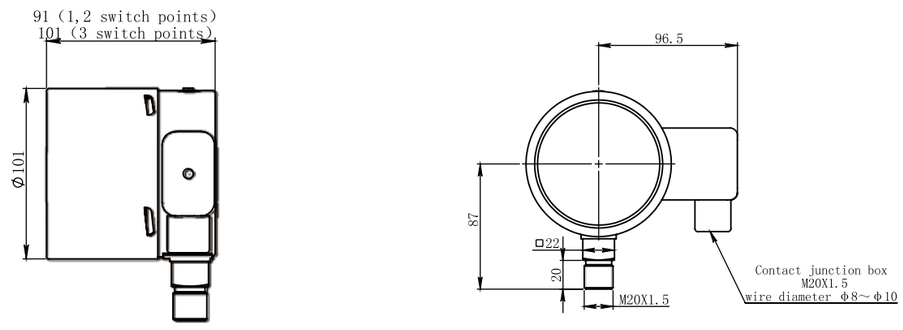
Options

- Oil-filled.
- Power-frequency withstand voltage: 2.5kV 50/60 Hz 1min.
- Wide temperature range：Optional-40°C～ +60°C or -60° C ～ +60° C.
- Measuring medium: SF_6、Air、N_2、SF_6+N_2 and other gases.

Technical Parameters

Case diameter	100mm
Scale range	-0.1 ～ 0.9MPa (customizable)
Accuracy	±1.0%FS (+20±1°C)，±1.8%FS (-20°C～ +60°C) (gas phase)； Optional: ±1.6%FS (+20±1°C)，±2.4%FS (-20°C～ +60°C) (gas phase)
Degree of protection	IP65
Ambient conditions	-20° C ～ +60° C, relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20 × 1.5, (customizable)
Installation method	Radial or Axial
Electrical connection	Plug-in connection M20 X 1.5 sealing head cable size: 1.5mm^2 recommended, upper limit 2.5mm^2
Insulation properties	Insulation resistance: >100 MΩ (500 V DC) Withstand voltage: 2kV, 50/60 Hz, 1min
Contact type	Magnetic snap-action switch 80%Ag, 20%Ni, 10μm Gold plated
Impact rating	50g (oil-filled), 30g (non-oil-filled)
Contact electrical parameters	30W/50VA, 1A (upper limit) 220VDC/380V 50/60Hz (upper limit)
Window glass	Laminated safety glass
Weight	1.0kg
Pressure element	Bourdon tubes

Dimensions



LANSO®
Insulation gas monitoring series

ZMJ100PR
Density Monitor

ZMJ100PR Density Monitor

Description

ZMJ100PR density Monitor is used to monitor the density of SF_6 gas in the hermetic chamber, which can locally display the gas density on the plant, and alarm when the density reaches the set value. Further more, it can do the real-time remote transmission of SF_6 gas density data, to achieve online remote monitoring function. Ideally suited for the high voltage gas system monitoring. It can be used in the new substation building and intelligent transformation of existing substation.

Application

- SF_6 Gas Insulated Swithchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulation CT or PT
- SF_6 Insulated bus system

Features

- Higher accuracy of pressure thanks to bimetallic temperature compensator.
- Mechatronics design, has precision mechanical structure, and has real-time remote transmission function of electronic signals and on-site dispaly and control.
- RS485 bus interface, easy to do the system expansion, and to achieve telemetry, remote control functions. Strong EMC capability.
- Suited for different indoor and outdoor installation requirements.
- The sealed case is made of AISI 304 stainless steel.
- The connecting parts are made of AISI 304 stainless steel.
- The field display value and output signal are not affected by the external environment such as altitude.
- Up to 4 sets of contacts, can achieve a variety of options such as double alarm and double lock for safer and more reliable monitoring.

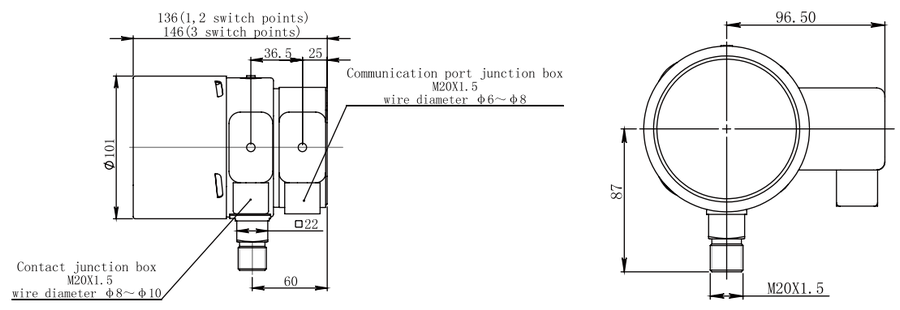
Options

- Power frequency withstand voltage: 2.5kV, 50/60 Hz 1min.
- Oil filled or not.
- Can detect SF_6, Air, N_2, SF_6+N_2 and other gases.
- Communication: 4-20mA(Two wire).
- Wider temperature range: optional -40°C ~ +60°C or -60°C ~ +60°C .

Remote part of the main electrical performance indicators and specifications			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 3 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Technical Parameters	
Case diameter	100mm
Scale range	-0.1 ~ 0.9MPa (customizable)
Accuracy	±1.0%FS(+20±1°C), ±1.8%FS(-20°C~ +60°C) (gas); Selectable: ±1.6%FS (+20±1°C) , ±2.4%FS (-20°C~ +60°C) (gas)
Degree of protection	IP65
Ambient condition	-20°C ~ +60°C realative humidity ⩽ 95%
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20 x 1.5 (customizable)
Installation method	Radial or Axial
Electrical connection	Pluggable connector, wire diameter 1~ 2.5 mm^2 (1.5mm^2 recommended)
Insulation property	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Magnetic snap action switch (80% silver, 20% nickel, 10μm gold plated)
Impact rating	50g(Oiled), 30 g(Oil-free)
Contact electrical parameters	30W/ 50VA, 1A. max. 220VDC/ 380V 50/ 60Hz max.
Window glass	Laminated safety glass
Weight	1.2kg
Pressure element	Bourdon tube

Dimensions



LANSO®
Insulation gas monitoring series

HM100PR
Density Monitors

HM100PR Density Monitors

- Suitable for indoor or outdoor installation.
- Up to four sets of switch contacts can achieve overpressure alarm, dual alarm or double locking and many other solutions, ensuring the monitoring more secure and reliable.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breakers
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformers
- SF_6 Insulated Mutual Inductor
- SF_6 Insulated Busbar Systems

Description

These instruments are used to monitor SF_6 gas density in sealed tanks. They are applied to provide a signal outputs when the density reaches the set value. At the same time, they reliably output SF_6 gas density signal for remote monitoring. They are specifically designed for over 500KV EHV grade application field, adapting multi-level protection and full range of shielding measures to ensure the reliable operation of the products.

Features

- They adopt highly reliable protection circuit design, multi-level isolation and filtering technology, thus effectively inhibiting the intrusion of conductive interference.
- They adopt the full-body shield design, stainless steel shielding shell, shielding junction box and shielding window glass, thus ensuring the ability of anti-electromagnetic radiation interference.
- They are able to adopt the optic fiber communication backstage, thus avoiding data transmission link from electromagnetic interference.
- The use of high-precision SF_6 density algorithm ensures that the background monitoring data coincides with those field instructions.
- They are compatible with ordinary SF_6 remote products. They do not need other modifications in strong interference occasions.
- The temperature compensation device ensures higher measurement accuracy.

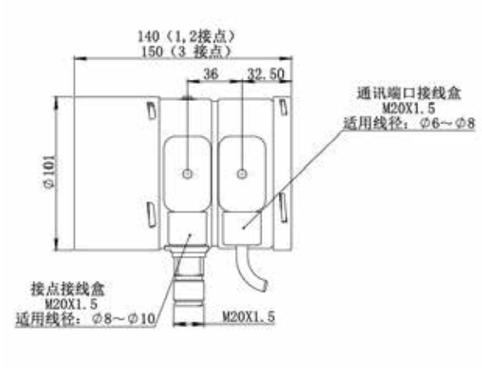
Main electrical performance indicators and specifications of the remote transmission part					
Power supply	24V DC	Anti-electromagnetic interference	IEC61000-4-2	level 4/A	(8KV/15kV)
Power consumption	< 2W		IEC61000-4-3	level 4/A	(30V/m)
Communication mode	RS485		IEC61000-4-4	level 4/A	(4KV)
Protocol	ModBus RTU		IEC61000-4-5	level 4/A	(+/-2Kv)
Baud rate	9600bps		IEC61000-4-6	level 3/A	(10V)
			IEC61000-4-8	level 5/A	(100A/m)
			IEC61000-4-9	level 5/A	(1000A/m)
			IEC61000-4-10	level 5/A	(100A/m)
			IEC61000-4-12	level 4/A	(4KV)
			IEC61000-4-17	level 3/A	(10%UN)
			IEC61000-4-29	0.1s/A	(40%U_T/70%U_T)

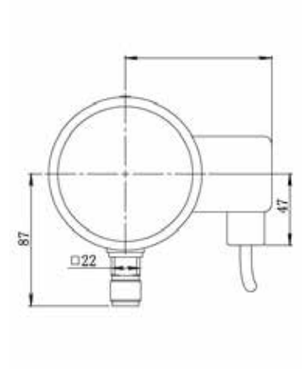
Technical Parameters	
Case diameter	100mm
Scale range	-0.1 ～ 0.9MPa (customizable)
Accuracy	±1.0%FS (+20±1°C)，±1.8%FS (-20°C～ +60°C) (gas phase)； Optional: ±1.6%FS (+20±1°C)，±2.4%FS (-20°C～ +60°C) (gas phase)
Degree of protection	IP65
Ambient conditions	-20° C ～ +60° C, relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process Connection	M20 × 1.5, (customizable)
Installation method	Radial or Axial
Electrical connection	Plug-in connection M20 × 1.5 sealing head cable size: 1.5mm^2 recommended, upper limit 2.5mm^2
Contact insulation performance	Insulation resistance: >100MΩ (DC 500V) Withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Magnetic snap-action switch 80%Ag, 20%Ni, 10μm Gold plated
Impact rating	50g (oil-filled), 30g (non-oil-filled)
Contact electrical parameters	30W/50VA, 1A (upper limit) 220VDC/380V 50/60Hz (upper limit)
Window glass	Laminated safety glass
Weight	1.2kg
Pressure element	Bourdon tubes

Options

- Oil-filled.
- Measuring medium: SF_6, Air, N_2, SF_6 + N_2 and other gases.
- Wide temperature range：Optional-40°C～ +60°C or -60° C ～ +60° C.

Dimensions





LANSO®
Insulation gas monitoring series

ZMJ60XD
Density Monitors

ZMJ60XD Density Monitors

Description

These instruments are used to monitor SF_6 gas density in sealed tanks. They are applied to indicate the gas density and to provide a signal outputs when the density reaches the set value. They are designed to monitor High Voltage systems. They can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

Features

- Using gas compensation, higher set point accuracy.
- Suitable for indoor or outdoor installation.
- Microswitch can switch freely between normally open and normally closed points.
- Up to 4 pairs of switches, multiple options such as double alarms and double locks can be realized, making monitoring more secure and reliable.
- High shock resistance.
- No need to fill oil, no oil leakage hazard.
- Normally closed contacts will not falsely alarm due to vibration.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breakers
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformers
- SF_6 Insulated Mutual Inductor
- SF_6 Insulated Busbar Systems

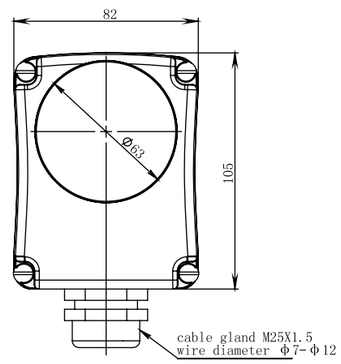
Options

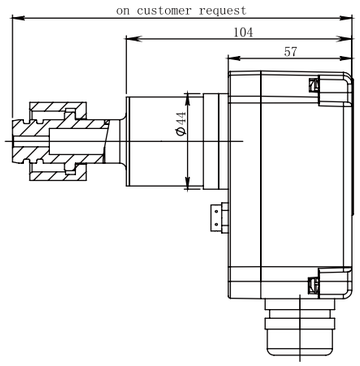
- Wider temperature range: -40°～ +60°C .
- Used to detect SF_6, Air, N_2, SF_6 + N_2 and other gases.

Technical Parameters

Scale range	-0.1 ～ 0.9MPa
Accuracy of set point	±10 KPa @-30°C～ +60°C（gas phase）
Accuracy of indicator	Within the range of the dial ±10 KPa @20°C ±1°C
Degree of protection	IP65
Ambient conditions	-20°C to+60°C，relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa-m^3/s (Helium leakage inspection)
Process connection	M20×1.5 (customizable)
Installation method	Radial or Axial
Electrical connection	Pluggable connector, wire diameter 0.2~ 2.5mm^2
Insulation properties	Insulation resistance: ＞100 MΩ (DC 500V) Withstand voltage: 2kV, 50/60 Hz, 1min
Contact type	Microswitch
Impact rating	50g
Contact electrical parameters	10(1.5)A,250V AC 0.1(0.05)A,250V DC
Window glass	Laminated safety glass
Weight	1.0kg
Pressure element	Bellows

Dimensions





LANSO®
Insulation gas monitoring series

ZMJ60XDR
Density Monitor

ZMJ60XDR Density Monitor

Description

ZMJ60 XDR density Monitor is used to monitor the density of SF_6 gas in the hermetic chamber, which can locally display the gas density on the plant, and alarm when the density reaches the set value. Further more, it can do the real-time remote transmission of SF_6 gas density data, to achieve online remote monitoring function. Ideally suited for the high voltage gas system monitoring. It can be used in the new substation building and intelligent transformation of existing substation.

Application

- SF_6 Gas Insulated Swithchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulation CT or PT
- SF_6 Insulated bus system

Optionals

- Measuring Medium: SF_6, Air, N_2, SF_6+N_2 and other gases.

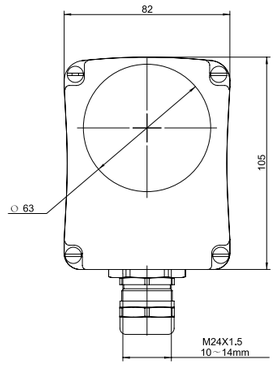
Features

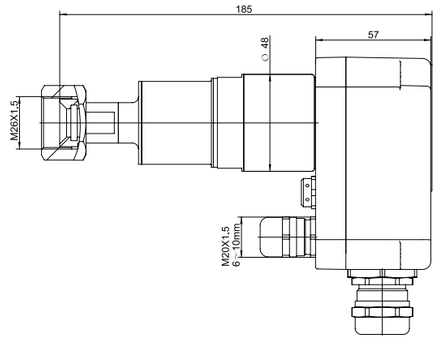
- The higher accuracy of setting pressure points due to “reference-chamber” principle, which is ideally suited for different indoor and outdoor installation requirements.
- The micro-switch is used as the signal output element to realize the free switching between normally open and normally closed points .
- Up to 4 set of contacts.s, can achieve a variety of options such as double alarm and double lock, more safe and reliable monitoring.
- High shock resistance, No need to fill oil, no potential oil leakage.
- Normally closed contact will not false alarm due to vibration.
- RS485 bus interface, easy to do the system expansion, and to achieve telemetry, remote control functions.
- Strong EMC capabilit.

Remote part of the main electrical performance indicators and specifications			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 4 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5 IEC61000-4-9: Level 5 IEC61000-4-10: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Technical Parameters	
Scale range	-0.1 ~ 0.9MPa
Accuracy of set pressure point	±10 kPa @ –30 ～ +60 ° C（gas）
Accuracy of indication	±10 kPa @ –30 ～ +60 ° C（gas）
Accuracy of transmitter	Pressure：±0.5%FS Temperature：±1℃ Pressure at 20℃：±1.0%FS
Degree of protection	IP65
Ambient condition	-30℃ ~ +60℃ , relative humidity：⩽ 95%RH
Leakage rate	⩽ 1×10^{-9}Pa-m^3/s (Helium leakage inspection)
Process connection	M20×1.5 (customizable)
Installation method	Radial or Axial
Electrical connection	Pluggable connector, wire diameter 0.2~2.5 mm^2
Insulation property(contact part)	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Microswitch
Impact rating	50g
Contact electrical parameters	10(1.5)A, 250V AC 0.1(0.05)A, 250V DC
Window glass	Laminated safety glass
Weight	1.0kg
Pressure element	Bellows

Dimensions





LANSO®
Insulation gas monitoring series

ZMJ80XD
Density Monitor

ZMJ80XD Density Monitor

Description

These instruments are used to monitor SF_6 gas density in sealed tanks. They are applied to indicate gas density and to provide a signal outputs when the density reaches preset threshold values. They are designed to monitor High Voltage systems
It can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

Features

- Using reference gas chamber for higher accuracy.
- Class 1.0 display accuracy for full scale range.
- The dual compensation system ensures more accurate meter indication and node action throughout the temperature range.
- Suitable for indoor or outdoor installation.
- Up to three (3) sets of switch contacts.
- High shock resistance, no need to fill oil, no oil leakage hazard.
- Normally closed contacts will not falsely alarm due to vibration.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breakers
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformers
- SF_6 Insulated Mutual Inductor
- SF_6 Insulated Busbar Systems

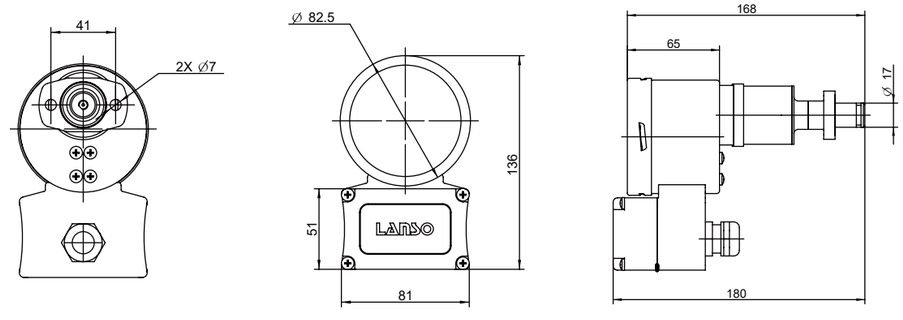
Options

- Different measuring ranges.
- Measuring medium: SF_6、Air、N_2、SF_6+N_2 and other gases.
- Protection grade: IP67.
- Operating temperature: Optional: -40°C～ +60°C .

Technical Parameters

Scale range	0 ～ 1.0MPa abs. (customizable)
Accuracy of set point	±1.0%FS (-30°C～ +60°C) (gas phase)
Accuracy of indication	Rated pressure: ±1.0%FS (+20±1°C)
Degree of protection	IP65
Ambient conditions	-30° C ～ +60° C, relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20×1.5, (customizable)
Installation method	Radial or Axial
Electrical connection	Connect the plug when plugging, wire diameter 0.2~2.5 mm^2
Insulation properties	Insulation resistance: >100 MΩ (DC 500V) Withstand voltage: 2kV, 50/60 Hz 1min
Contact type	Microswitch
Impact rating	50g
Contact electrical parameters	10(1.5)A,250V AC 0.1 (0.05)A,250V DC
Window Glass	Laminated safety glass
Weight	1.2kg
Pressure element	Bellow and Bourdon tube

Dimensions



LANSO®
Insulation gas monitoring series

ZMJ80XDR
Density Monitor

ZMJ80XDR Density Monitor

Description

ZMJ80 XDR density monitor is used to monitor the density of SF_6 gas in the hermetic chamber, which can locally display the gas density on the spot and alarm when the density reaches the set value. Further more, it can remote transmit real-time SF_6 gas density measurement data, to achieve online remote monitoring function. Ideally suited for the high voltage gas system monitoring. It can be used in the new substation building and intelligent transformation of existing substation.

Application

- SF_6 Gas Insulated Swithchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulation CT or PT
- SF_6 Insulated bus system

Options

- Different measuring range.
- Measuring Medium: SF_6, Air, N_2, SF_6+N_2 and other gases.
- Operating temperature: Optional -40°C ~ +60°C .

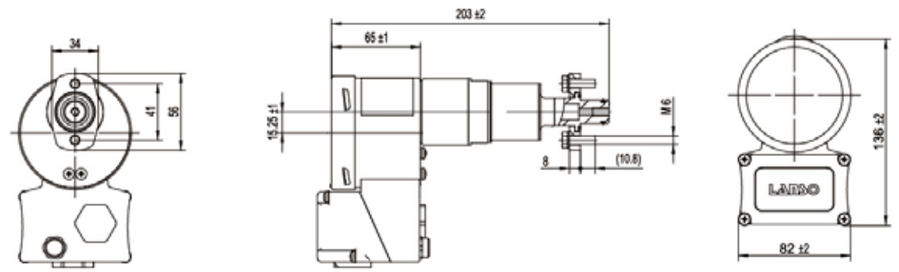
Features

- The higher accuracy of setting pressure points using "reference-chamber" technique, which is ideally suited for different indoor and outdoor installation requirements.
- The microswitch is used as the signal output element to realize the free switching between normally open and normally closed set points .
- Up to 3 set of contacts, can achieve a variety of options such as double alarm and double lock, safer and more reliable monitoring.
- High shock resistance. No need to fill oil, no potential oil leakage.
- Normally closed contact will not false alarm due to vibration.
- RS485 modbus interface, easy to do the system expansion, to achieve telemetry and remote control functions.
- Strong EMC capability.
- ±1%FS display in full range, higher remote transmission module accuracy, higher indication and remote data consistency accuracy.
- The dual compensation system ensures more accurate at indication and contact throughout the temperature range.

Remote part of the main electrical performance indicators and specifications			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 4 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5 IEC61000-4-9: Level 5 IEC61000-4-10: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Technical Parameters	
Scale range	-0.1 ~ 0.9MPa
Accuracy of set pressure point	±1.0%FS (+20±1°C) ±1.6%FS (-30°C~ +60°C) (gas)
Accuracy of indication	±1.0%FS (+20±1°C) ±1.8%FS (-20°C~ +60°C) (gas) ±2.3%FS (-30°C~ -20°C) (gas)
Accuracy of transmitter	Pressure: ±0.5%FS Temperature: ±1°C Pressure at 20°C: ±1.0%FS
Degree of protection	IP65
Ambient condition	-30°C ~ +60°C , relative humidity: ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leak detection)
Process connection	M20×1.5, (customizable)
Installation method	Radial or axial
Electrical connection	Contact connection: pluggable connector, wire diameter 0.2 ~ 2.5 mm^2 Remote connection: pluggable connector, wire diameter 0.2 ~ 1.5 mm^2
Insulation property(contact part)	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Microswitch
Impact rating	50g
Contact electrical parameters	10(1.5)A, 250V AC 0.1(0.05)A, 250V DC
Window glass	Laminated safety glass
Weight	1.2kg
Pressure element	Bellow and Bourdon Tube

Dimensions



LANSO®
Insulation gas monitoring series

ZMJ100XD
Density Monitor

ZMJ100XD Density Monitor

Description

These instruments are used to monitor SF_6 gas density in sealed tanks. They are applied to indicate gas density and to provide a signal outputs when the density reaches preset threshold values. They are designed to monitor High Voltage systems
It can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

Features

- Reference chamber compensation for higher accuracy.
- Class 1.0 display accuracy for full scale range.
- Suitable for indoor or outdoor installation.
- Double compensation system is used to ensure that the indicator and contact action under the full temperature range are more accurate.
- Microswitch can switch freely between normally open and normally closed points.
- Up to 4 sets of switch contacts, multiple options such as double alarms and double locks can be realized, making monitoring more secure and reliable.
- High shock resistance,no need to fill oil, no oil leakage hazard.
- No need to fill oil, no oil leakage hazard.
- Normally closed contacts will not falsely alarm due to vibration.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breakers
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformers
- SF_6 Insulated Mutual Inductor
- SF_6 Insulated Busbar Systems

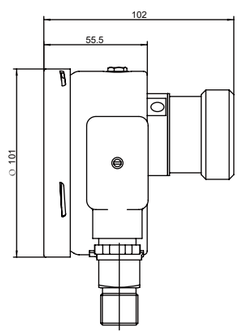
Options

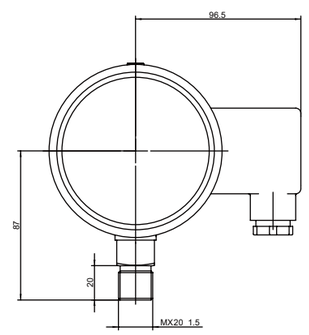
- Different measuring ranges.
- Wider temperature range: Optional -40° C ～ +70° C.
- Measuring medium: SF_6、Air、N_2、SF_6+N_2 and other gases.

Technical Parameters

Scale range	-0.1 ～ 0.9MPa (customizable)
Accuracy of set point	±1.0%FS (+20±1°C) ±1.6%FS（-30°C～ +60°C）(gas phase)
Accuracy of indication	Rated pressure：±1.0%FS（+20±1°C） ±1.8%FS（-20°C～ +60°C）(gas phase) ±2.3%FS（-30°C～ -20°C）(gas phase)
Degree of protection	IP65
Ambient conditions	-20° C ～ +60° C, relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20×1.5, (customizable)
Installation method	Radial or Axial
Electrical connection	Pluggable seven-pin connector
Insulation properties	Insulation resistance: >100MΩ (DC500V) Withstand voltage: 2kV, 50/60 Hz,1min
Contact type	Microswitch
Impact rating	50g
Contact ratings	10 (1.5)A,250V AC 0.1 (0.05)A,250V DC
Window Glass	Laminated safety glass
Weight	1.0kg
Pressure element	Bellow and Bourdon Tube

Dimensions





LANSO®
Insulation gas monitoring series

ZMJ100XDR
Density Monitor

ZMJ100XDR Density Monitor

Description

ZMJ100XDR density monitor is used to monitor the density of SF_6 gas in the hermetic chamber, which can locally display the gas density on the plant, and alarm when the density reaches the set value. Further more, it can do the real-time remote transmission of SF_6 gas density data, to achieve online remote monitoring function. Ideally suited for the high voltage gas system monitoring. It can be used in the new substation building and intelligent transformation of existing substation. ZMJ100XDR density monitor meets the requirements of the National grid "QGDW123554-2023 Smart substation technical specification Part 4: Digital remote transmission meter".

Application

- SF_6 Gas Insulated Swithchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulation CT or PT
- SF_6 Insulated Bus System

Options

- Measuring Medium: SF_6, Air, N_2, SF_6+N_2 and other gases.

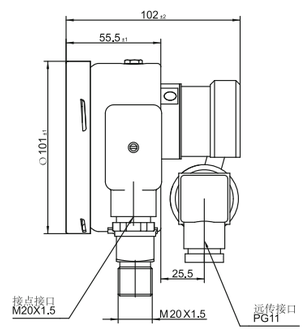
Features

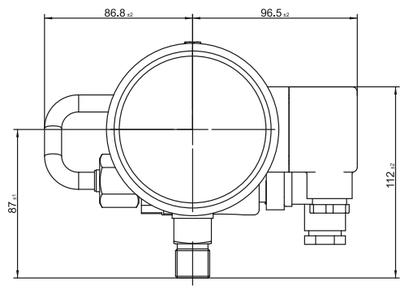
- The higher accuracy of setting pressure points due to reference-chamber technique, which is ideally suited for different indoor and outdoor installation requirements.
- The microswitch is used as the signal output element to realize the free switching between normally open and normally closed points .
- Up to 4 sets of contacts, can achieve a variety of options such as double alarm and double lock, more safe and reliable monitoring.
- High shock resistance. No need to fill oil, no potential oil leakage.
- Normally closed contact will not false alarm due to vibration.
- RS485 bus interface, easy to do the system expansion, and to achieve telemetry, remote control functions.
- Strong EMC capability.
- ±1%FS display in full range, higher remote transmission module accuracy, higher indication and remote data consistency accuracy.
- The dual compensation system ensures more accurate at indication and contact throughout the temperature range.

Technical Parameters for Remote Module			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 4 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5 IEC61000-4-9: Level 5 IEC61000-4-10: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Technical Parameters	
Scale range	-0.1 ~ 0.9MPa
Accuracy of set point	@20°C ±1°C，±1.0%FS @–40°C ~ +70°C，±1.5%FS（gas）
Accuracy of indication	@20°C ±1°C，±1.0%FS @–40°C ~ +70°C，±2.0%FS（gas）
Accuracy of transmitter	Pressure：±0.5%FS　Temperature：±1°C Pressure at 20°C：±1.0%FS
Data Consistency	@20°C ±1°C，±1.0%FS @–40°C ~ +70°C，±1.6%FS（gas）
Degree of Protection	IP65
Ambient Condition	-40°C ~ +70°C , relative humidity：⩽95%RH
Leakage rate	⩽1×10^{-9}Pa·m^3/s (Helium leakage detection)
Process connection	M20 x 1.5 (customizable)
Installation method	Radial or Axial
Electrical connection	Pluggable connector
Insulation property(contact part)	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Microswitch
Impact rating	50g
Contact electrical parameters	10(1.5)A, 250V AC 0.1(0.05)A, 250V DC
Window glass	Laminated safety glass
Weight	1.2kg
Pressure element	Bellows and Bourdon Tube

Dimensions





LANSO®
Insulation gas monitoring series

DT26
Density Transmitter

DT26 Density Monitor

Description

These instruments are used to monitor SF_6 gas density in sealed tanks. It can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

Features

- SF_6 gas remote density transmitter suitable for medium and high pressure system monitoring.
- All welded sensor structure, long - term stable sealing performance.
- RS485 bus communication (MODBUS RTU) .
- The EMC characteristics of the transmitter meet the requirements of IEC 61000-4-2 to IEC 61000-4-6 standards.
- Compact design.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breakers
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulated Mutual Inductor
- SF_6 Gas insulated busbar systems
- SF_6 insulated inflatable cabinet
- SF_6 insulated RMU

Options

- Process connection: M20 × 1.5(customizable).
- Measuring Medium: SF_6, Air, N_2, SF_6 + N_2 and other gases.

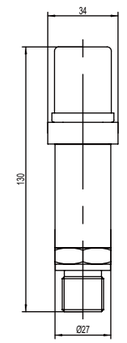
Technical Parameters

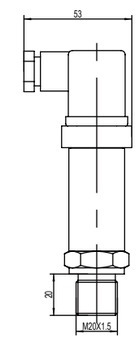
Measuring range	0 to 1.0MPa abs.or 0 to 0.2MPa abs.(customized)
Temperature measurement range	-40°C～ +80°C
Pressure measurement accuracy	±0.5% FS
Temperature measurement accuracy	±1°C
Density (P20) measurement accuracy	±1.0%FS
Degree of protection	IP65
Ambient conditions	-40° C to 70° C, relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Electrical connection	Hirschmann Connector
Weight	0.2kg

Technical Parameters for Remote Module

Power supply	24V DC	EMC tests	IEC61000-4-2:level 4 IEC61000-4-3:level 3 IEC61000-4-4:level 4 IEC61000-4-5:level 4 IEC61000-4-6:level 3
Power consumption	< 0.5W		
Communication mode	RS485		
Protocol	Modbus RTU		
Baud rate	9600bps		

Dimensions





LANSO®
Insulation gas monitoring series

DT10
Density Transmitter

Description

DT10 density transmitter is used to monitor the density of gas in a closed container. It can be used in the new substation building and intelligent transformation of existing substation.

DT10 Density Transmitter

Features

- Suitable for medium or high volatage systems.
- All welded sensor structure, long-term stable sealing performance .
- RS485 bus interface (Modbus RTU).
- Strong EMC capability.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulation CT or PT
- SF_6 Insulated bus system

Options

- Measuring Medium: SF_6, Air, N_2, SF_6 + N_2 and other gases.

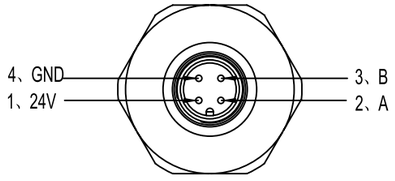
Technical Parameters

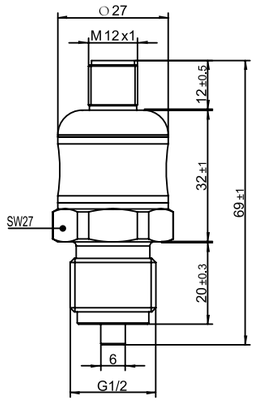
Measuring range	0 ~ 1.0MPa
Accuracy of transmitter	Temperature: ±1℃ Pressure: ±0.5%FS. Pressure at 20℃: ±1.0%FS.
Degree of protection	IP65
Ambient Condition	-40℃ ~ +70℃ , Relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20 x 1.5 (customizable)
Electrical connection	M12 x 1 Circular connector
Weight	0.3kg

Technical Parameters for Remote Module

Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: level 4(15kV) IEC61000-4-3: Level 3 (10V/m) IEC61000-4-4: Level 4 (4kV) IEC61000-4-5: level 3 (1kV /2kV) IEC61000-4-8: level 5 (100A/m) IEC61000-4-9: level 5 (1000A/m) IEC61000-4-10: level 4Class(30A/m)
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Baudrate	9600bps		

Dimensions





LANSO®
Insulation gas monitoring series

RD40
Density Transmitter

Description

The RD40 density transmitter is used to monitor the temperature, pressure and density of the gas in the closed container, and the functional parameters meet the requirements of the National Grid "QGDW123554-2023 Smart substation technical specification Part 4: Digital remote transmission meter" standard. It can be used in the new substation building and intelligent transformation of existing substation.

RD40 Density Transmitter

Features

- All welded sensor structure, long-term stable sealing performance.
- RS485 bus interface, easy to do the system expansion.
- Meet the requirements of "QGDW123554-2023 Smart substation technical specification Part 4: Digital remote transmission meter".
- Small size, beautiful structure.

Application

- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulation CT or PT
- SF_6 Insulated Bus System

Options

- Measuring Medium: SF_6, Air, N_2, SF_6 + N_2 and other gases.

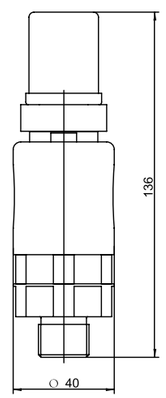
Technical Parameters

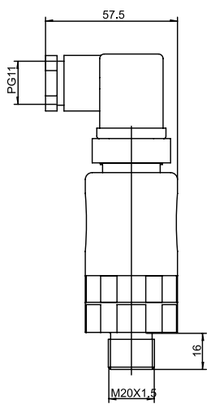
Measuring range	-0.1 ~ 0.9MPa
Accuracy of transmitter	Pressure: ±0.5%FS Temperature: ±1℃ Pressure at 20℃: ±1.0%FS
Degree of protection	IP65
Ambient condition	-40℃ ~ +70℃ , relative humidity: ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20 x 1.5 (customizable)
Electrical connection	Hirschmann connector
Shock resistance class	50 g
Weight	0.5kg

Technical Parameters for Remote Module

Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 4 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5 IEC61000-4-9: Level 5 IEC61000-4-10: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Dimensions





CV
Self-closed Valve

CV Self-closed Valve

Description

This product is a device connecting SF_6 gas density meter or density monitor and SF_6 gas chamber; after the completion of the assembly, SF_6 gas chamber can be effectively sealed. It can be applied to high and medium voltage equipment.

Features

- Self-sealing: when this valve is disconnected from either side, it can seal and stop the flow of gas.
- Can withstand repeated usage.
- Can be used on outdoor switchgear.
- Can connect SF_6 gas filling and vacuum pumping devices.
- Can connect SF_6 gas recovery truck.

Application

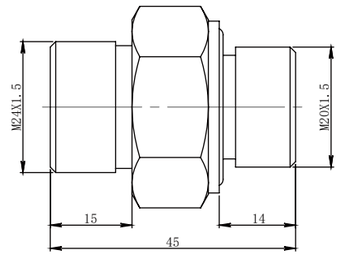
- SF_6 Gas Insulated Switchgear (GIS)
- SF_6 insulated circuit breakers
- SF_6 insulated pole-mounted switch
- SF_6 insulated transformer
- SF_6 insulated mutual inductor
- SF_6 Gas insulated busbar systems
- SF_6 insulated inflatable cabinet
- SF_6 insulated RMU

Options

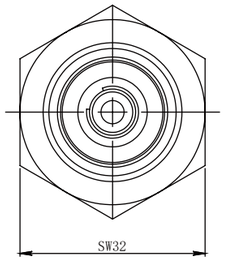
- Process connections: customizable
- Nominal diameter: customizable

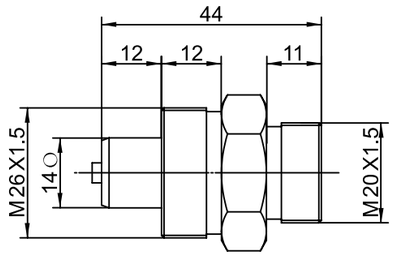
Technical Parameters	
Valve material	stainless steel, aluminum or a copper alloy
Nominal bore	DN6、DN8、DN12、DN20 etc.
Surface finish	Aluminum: Oxidation treatment Stainless steel, copper alloys: Not processed
Ambient conditions	-40° C to 60° C
Leakage rate	⩽ 1×10^{-9}Pa·m^3/s

Dimensions

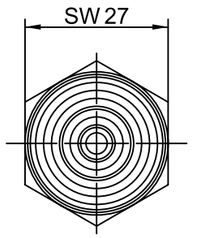


DN6

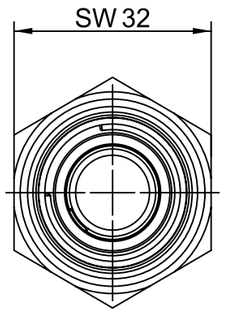


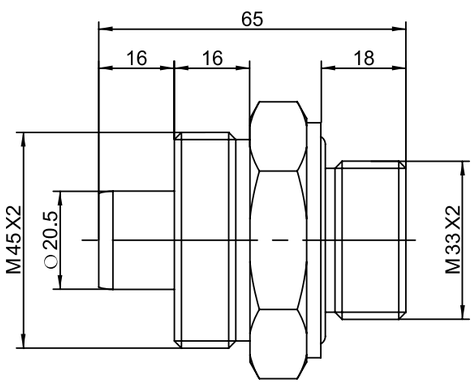


DN8

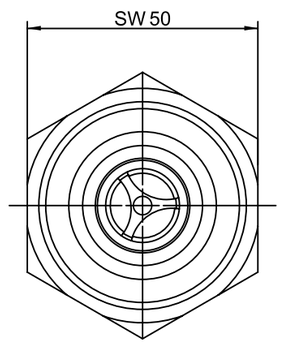


DN12





DN20



LANSO®
Insulation gas monitoring series

FMZ Valves

FMZ Valves

Application

- Gas Insulated Switchgear (GIS)
- Gas Insulated Lines (GIL)
- SF_6 circuit breakers
- Gas insulated busbar systems
- Gas Insulated Ring Main Units
- Gas Insulated Switchgear
- Gas Insulated switches
- Gas insulated transformers

Description

This product is a connecting device of SF_6 density monitor to SF_6 switchgear. The maintenance personnel can inspect SF_6 density monitor or replace without disassembling the device from installed switchgear. It provides a solution to the problem of disassembling for monitor inspection, replacement and gas filling, avoiding damages to the sealing surface and seal rings of the switch caused by disassembling of valves in the process of regular checks. Therefore, it can reduce the leakage rate, improve the work efficiency, and ensure the safe operation of SF_6 electrical switch.

Features

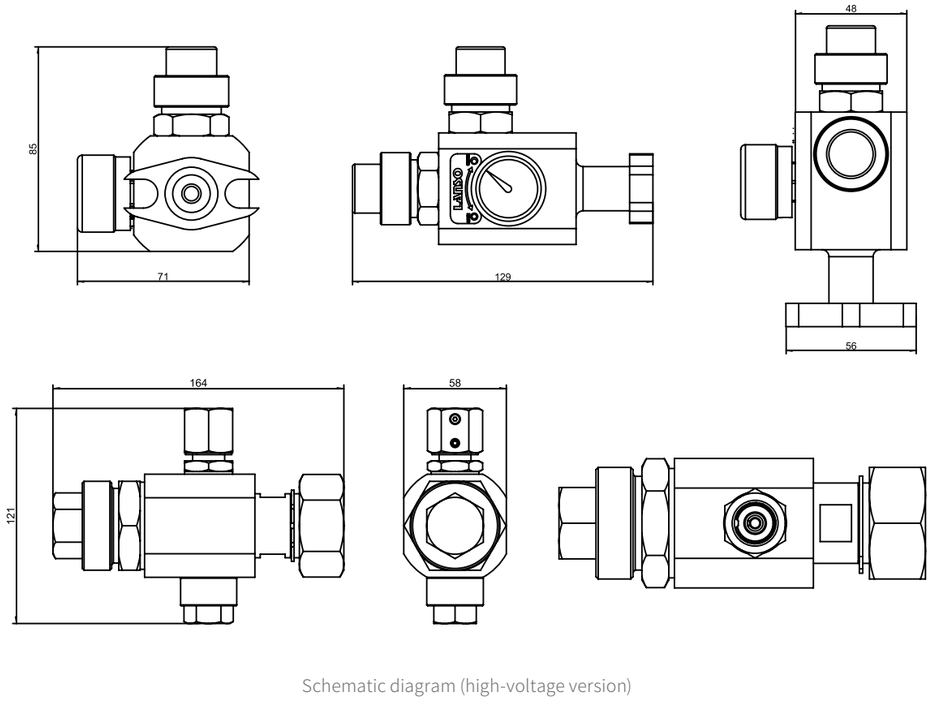
- The SF_6 density meters can be inspected/replaced without disassembling the SF_6 density meter/monitor.
- Operation can be done by one person alone without removing screws, convenient, labor – saving and time-saving.
- Easy for personnel on site to make micro water detection and gas filling.
- Avoid the damage to sealing surface and seal rings due to disassembling .
- High-quality stainless steel with good looking appearance, never get rusted.
- With stainless steel rain cover, it can resist rain and sun, greatly improving the reliability and service life of the density relay.

Options

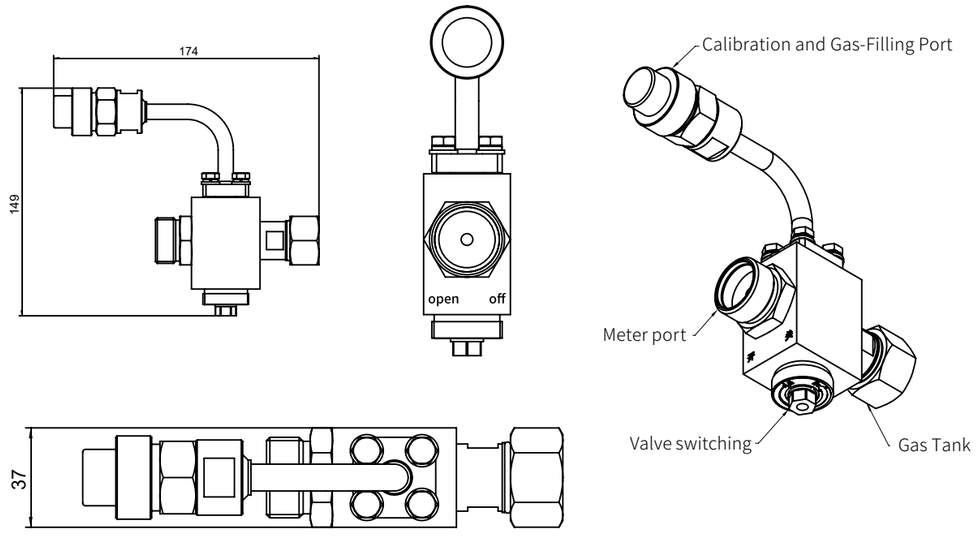
- Process connections: customizable
- Nominal diameter: customizable
- Valve type: needle valve or ball valve

Technical Parameters	
Material	Aluminium /Copper alloy/ stainless steel
Nominal bore	DN6、DN8、DN12、DN20 etc.
Surface Finish	Aluminium – anodized Copper alloy – natural AISI304 stainless steel-natural
Ambient conditions	-40° C to +70° C
Leakage rate	Needle valve: ⩽ 1×10^{-8}Pa·m^3/s Ball valve: ⩽ 1×10^{-9}Pa·m^3/s
Operating pressure range	0~1.6MPa
Upper limit of explosion-proof pressure	6.4MPa

Dimensions



Schematic diagram (high-voltage version)



Schematic diagram (medium voltage version)

LANSO®
Lightning arrester monitoring series

ACM product
Surge arrester digital leakage ampere meter

ACM product
Surge arrester digital leakage ampere meter

Description

Surge arrester digital leakage ampere meter mainly monitors the metal oxide Surge arrester in the substation of 35kV and above voltage level. The device has the function of periodic automatic monitoring and detection of the state parameters of the metal oxide arrester, such as the full current and the number of movements. With long-term stable working ability, with power failure without loss of data, self-diagnosis, self-reset function; With fault alarm function.

Features

- High precision through-core transformer, and completely isolated from the primary circuit, high safety.
- Distributed measurement structure, that is, local measurement, digital transmission, through RS485 digital signal transmission to the background.
- High measurement accuracy, better than the national standard requirements.
- Integrated structure design, three-layer shield design, high reliability.
- Use LED display to display monitoring data, convenient observation.
- The protection grade is IP66.

Technical Parameters

1.Electromagnetic Compatibility

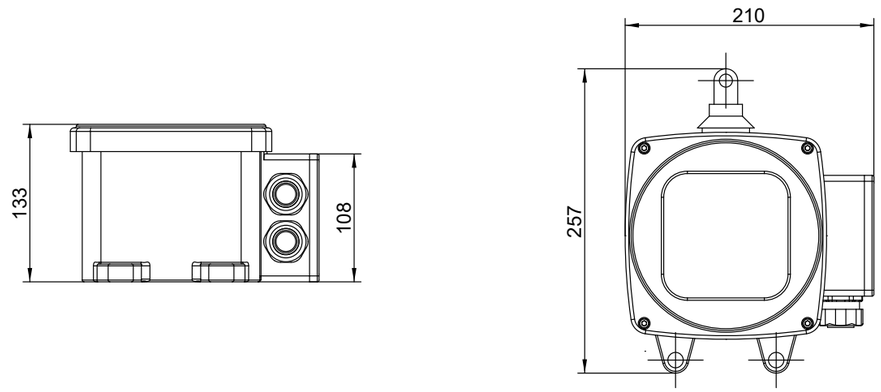
Testing standards	Grade
GB/T 17626.2 Electrostatic Discharge (ESD)	Level 4
GB/T 17626.3 Radio frequency electromagnetic field radiation	Level 3
GB/T 17626.8 Power Frequency Magnetic Field	Level 5
GB/T 17626.9 Pulsed magnetic field	Level 5
GB/T 17626.10 Damped Oscillatory Magnetic Field	Level 5
GB/T 17626.11 Voltage Sags	Level 3
GB/T 17626.4 Electric fast transient pulse group	Level 4
GB/T 17626.5 Surge (impact)	Level 4
GB/T 17626.6 Conducted disturbances induced by radio frequency fields	Level 3

Technical Parameters

2. General product parameters

Product characteristics	Specifications
Ambient temperature	-40°C～ +70°C
Relative humidity	5% ～ 95%
Atmospheric pressure	80 kPa ～ 110kPa
Voltage level	35kV and above voltage class
Residual voltage test	zero
High current shock resistance test	100kA
Square-wave impulse current tolerance test	600A
Measuring range	100uA ～ 5mA
Measuring error	± (reading*1% +5uA)
Measurement repeatability	RSD ＜ 0.5%
Discharge counter	0 ～ 999
Data update	Every 5 second
Data storage capacity	10000 entries
LED display	100uA ～ 5mA
Power supply mode	Pa: AC 220 (1±10%) V, 50 (1±5%) Hz
Device power consumption	<10VA
Protection grade	IP66
Mounting type	screws
Weight	3.6kg

Dimensions



LANSO®
Insulation gas monitoring series

TR-80-R
Intelligent gas relay

TR-80-R
Intelligent gas relay

Description

Intelligent gas relay is a basic device applied to oil immersed transformer. It can monitor the accumulation of gas generated by leakage current, arc, flashover and other faults in the transformer in real time, and send out alarm signals when the gas reaches a certain amount; In case of serious internal fault of transformer (such as interturn short circuit, etc.), use the oil flow surge phenomenon generated at this time to trigger contact connection, and quickly lock the main circuit of transformer to protect the transformer.

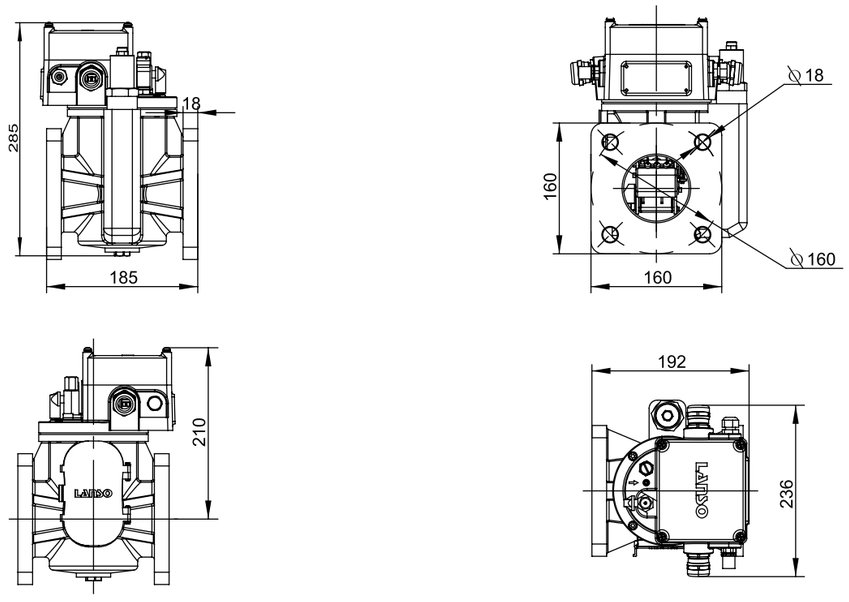
Product features

- Up to three alarms, three locks, triple redundancy design, improve product reliability.
- It can monitor the volume of gas gas online in real time and transmit it to the background through RS485 digital signal (compatible with 4-20mA analog signal); The external independent gas volume monitoring chamber isolates the interference on the volume monitoring caused by the operation of other components.
- The all-metal high-strength movement framework is used to stabilize the flow rate setting value of up to 2.5 m/s.
- The float main shaft is equipped with imported precision bearings to increase bearing support and eliminate the hidden danger of wear due to float shaft bore.
- The streamlined float ensures stance stability at high oil speeds.
- Protection grade reaches IP67, strong salt spray resistance environment (360 hours NSS salt spray test).

Technical Parameters		
Material of main components	Case	aluminum alloy
	Observation glass	UV resistant protective glass
Working environment	Oil temperature	- 40 ℃ ~+100 ℃
	Ambient temperature	- 40 ℃ ~+70 ℃

Technical Parameters				
Action point properties	Setting range of oil speed alarm	0.7~2.5m/s, accuracy ± 12% ; Three pairs of dry spring contacts for light and heavy gas alarm (three alarms and three locks)		
	Electronic auxiliary action point	1 pair		
Installation environment	protective cover is required for outdoor use, Suitable for high altitude environment			
Cable connector	M25X1.5 (for action point), one on both sides of the junction box;4X0.5 Shielded cable (for remote signal)			
Electrical characteristics	Uplimit rated power of action point	50W (5A), uplimit switching current: 3A		
	Auxiliary action point	uplimit switching power 150W (5A)		
	Mainboard power supply	18~36 VDC		
	Power frequency withstand voltage	between reed tube contact groups, to ground: 2.5KV DC/AC 1min Reed contact normally open, auxiliary contact normally open: 1.0KV DC/AC 1min		
	Analog output	4~20mA		
	Digital signal output	communication protocol ModBus RTU RS-485		
Number of contacts	up to seven pairs, six pairs of dry spring contacts, and one pair of auxiliary changeover contacts			
Suitable for high altitude environment				
Degree of protection:	IP67			
Electromagnetic compatibility characteristics	IEC 61000-4-2 Class IV IEC 61000-4-3 Class III IEC 61000-4-4 Class IV IEC 61000-4-5 Class IV	IEC 61000-4-6 Class III IEC 61000-4-8 Class V IEC 61000-4-9 Class V IEC 61000-4-10 Class IV	IEC 61000-4-12 Class III IEC 61000-4-17 Class III	

Dimensions



Design drawing of remote transmission type

LANSO
Series of instruments and equipment

VDA-01
SF_6 gas density relay calibrator

VDA-01
SF_6 gas density relay calibrator

Description

VDA-01 SF_6 gas density relay calibrator is a fully automatic intelligent SF_6 gas density relay calibrator. It adopts embedded microprocessor and totally enclosed SF_6 gas circulation system to conduct performance calibration on various SF_6 gas density relays, normal temperature pressure gages and P20 pressure gages. The calibrator is used in production, maintenance and monitoring of SF_6 gas products and is especially applicable in power system to provide convenience in production and safe running of SF_6 electric products.

Features

- The instrument has built-in capsule replaceable gas chamber based on self-owned patent. Its calibration scope covers 0-1Mpa in full scale. Calibration work is stable and smooth and can be finished at one stroke without need of interruption for gas charging.
- The instrument has built-in capsule replaceable gas chamber and replace static seal with dynamic seal to improve airtightness of the instrument.
- During calibration, SF_6 gas conducts internal circulation without discharge into atmosphere, which is more environment friendly and safer.
- It boasts dual-seal design consisting of hand valve and self-sealing valve in its structure. It is easy to operate and prevents moisture and air from entering pipe. There is no discharge or leakage of SF_6 before and after calibration.
- Cleaning and charging device has simple structure and is easy to operate. Cleaning and charging reduce mini water and foreign gas content inside it .
- It can automatically identify normally open type normally close type of density relay. It can calibrate single signal (single alarm, single blocking), single alarm single blocking and single alarm dual blocking density relay.
- It can conduct off-line calibration. It is equipped with a full set of transition adaptor. Density relay of most switch models can receive onsite online calibration without being detached.
- It has engineering plastic casing, which is beautiful and solid with high protection class.

Configuration

- 1 set of host.
- Accessories: 1 piece of connecting gas pipe with both self-sealing sides; 1 piece of calibration point sampling wire; 1 temperature sensor; a full set of transition adaptor; cleaning and charging device; 1 dedicated kit; 1 piece of power cable; 1 copy of factory inspection record; 1 copy of user manual.
- Option: One toolbox (including a complete set of transition joints).

Technical Parameters	
Working power supply	24V lithium battery or AC220V
Measurement range	Pressure calibration scope of 0~1Mpa; temperature of -40°C ~+125°C
Accuracy	Class 0.2
Resolution	pressure display resolution of 0.0001Mpa; temperature display resolution of 0.1°C
Density contact node calibration	Single signal (single alarm, single blocking), single alarm single blocking, single alarm dual blocking
Calibration time of full scale range	⩽ 5min with smooth air pressure adjustment process.
Calibration of full scale at one stroke without need of interruption.	
7-inch extra large industry-grade color touch screen.	
Ultra-large capacity memory to store calibration data.	
Attached with high-speed thermo-sensitive mini-printer to print calibration result after calibration is completed.	
In-built USB interface to facilitate data sharing.	

LANSO®
Series of transformer components

BWY-806A11 Series
Oil Temperature Indicator

BWY-806A11 Series
Oil Temperature Indicator

Description

The oil temperature indicator is specifically used to measure and monitor the top oil temperature of transformers.Perform oil temperature monitoring、non-electricity protection、Remote transmission of temperature information、Cooling capacity grading control and other functions.

Features

- High measurement accuracy，It is a 1.5% FS (-25 ℃ ~65℃) all weather product that exceeds IEC requirements.
- Adopting a distributed measurement structure，On site measurement、Digital Transmission，Transmit RS485 digital signal to the backend.
- non-electricity protection，Using constant temperature coefficient high nickel alloy edge welding elastic elements to drive pointer thermometers.
- Adjustable temperature control switch contacts.
- Six sets of temperature control switches，Cooling capacity grading control.
- Integrated structural design of alloy die-casting，Higher strength.
- Protection level IP65.

Technical Parameters

1.Electromagnetic compatibility

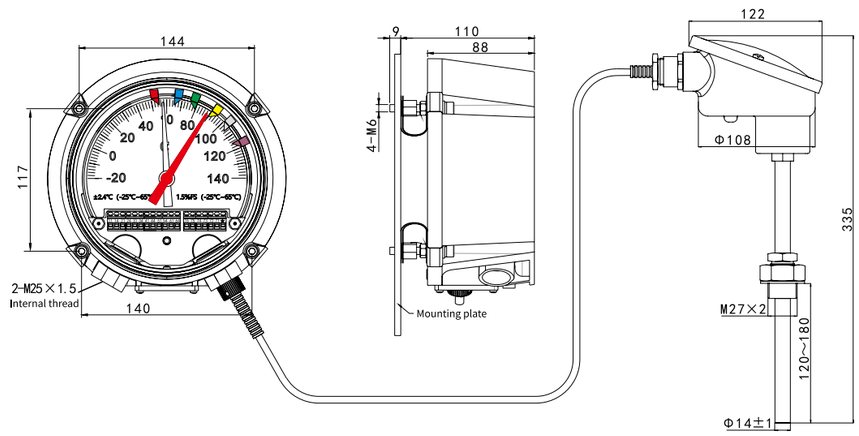
Testing standards	Grade
GB/T 17626.2 Electrostatic Discharge (ESD)	Level 4
GB/T 17626.3 Radio frequency electromagnetic field radiation	Level 3
GB/T 17626.8 Power Frequency Magnetic Field	Level 5
GB/T 17626.9 Pulsed magnetic field	Level 5
GB/T 17626.10 Damped Oscillatory Magnetic Field	Level 5
GB/T 17626.11 Voltage Sags	Level 3
GB/T 17626.4 Electric fast transient pulse group	Level 4
GB/T 17626.5 Surge (impact)	Level 4
GB/T 17626.6 Conducted disturbances induced by radio frequency fields	Level 3

Technical Parameters

2.Oil Temperature Indicator Technical Parameter

Product characteristics	Specifications
Ambient temperature	-40℃ ~+65℃
Measuring range	-20℃ ~+140℃
Relative humidity	⩽ 95% RH（No condensation）
Number of switches	6
Switch capacity	AC 220V/5A DC110V/1A
Remote signal	Meter outputs two Pt100 signals Composite sensor outputs two Pt100 signals
Indication error	±2.4℃ (-25℃ ~+65℃)
Accuracy	1.5%FS (-25℃ ~+65℃)
Precision error	±2.4℃
Capillary length	6m、9m、12m（Other lengths can be customized）
Minimum division	2℃
Degree of protection	IP65
Switch setting interval	K1 ⩾0.2℃ K2 ⩾15℃ K3 ⩾0.2℃ K4 ⩾15℃ K5 ⩾0.2℃ K6

Dimensions



LANSO®
Insulation gas monitoring series

JXQ Series
RS485 Hub

JXQ Series RS485 Hub

Description

JXQ series RS485 hub is a RS-485 bus splitter designed to address the requirements of large RS-485 systems in complex electromagnetic environments. The product supports transmission rates up to 115.2Kbps. To ensure safe and reliable data communication, the RS-485 interface uses optical isolation technology to prevent lightning surges from introducing into the converter and equipment. The built-in optical isolator and 1500W surge protection circuit provide 2500V isolation voltage and effectively prevent lightning, ESD, and grounding interference. The power supply uses an external switching power supply for reliable operation.

In the RS-485 mode of operation, the discrimination circuit automatically senses the direction of data flow and switches the enable control circuit automatically, solving the delay problem of RS-485 transceiver conversion easily. It is widely used in power collection systems and is a high-performance and cost-effective data interface conversion product.

JXQ series RS-485 HUB provides star-type RS-485 bus connection. Each port has short circuit and open circuit protection. Optical isolation of 2500V allows users to easily improve the RS-485 bus structure, divide network segments, and improve communication reliability. When lightning or equipment failure occurs, the problematic network segment will be isolated to ensure the normal operation of other network segments. This performance greatly improves the reliability of the existing RS-485 network and effectively reduces maintenance time of the network.

Application

- RS485 bus connections

Features

- The interface adopts optical isolation technology to prevent lightning surges from introducing into the converter and equipment.
- It automatically detects and controls the RS485 data stream, and can automatically generate the RS485 transceiver switching enable signal based on the transmitted data.
- Each port has short circuit and open circuit protection, and any interface failure will not affect the normal operation of other interfaces.
- The number of RS485 interfaces is optional for 4 or 8 ports.

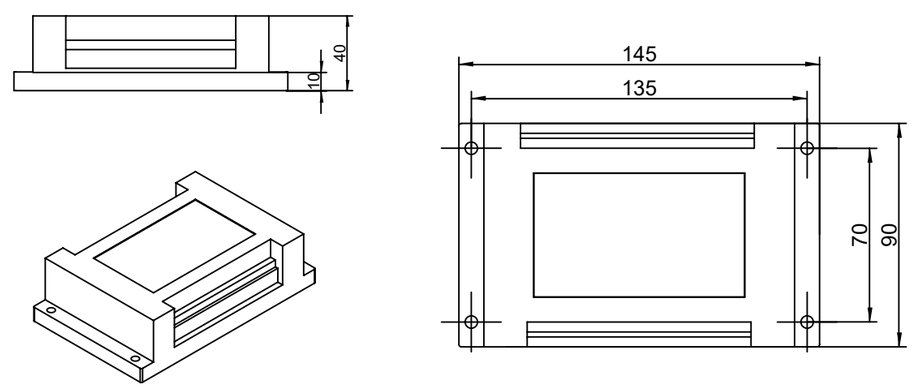
Technical Parameters

Interface characteristics	The interface is compatible with EIA/TIA's RS-232C and RS-485 standards
Operating voltage	DC 12-48V with a current of 350mA
Transmission medium	twisted pair or shielded wire
Operating mode	asynchronous half-duplex
Signal display	Eleven signal indicators including power (PWR), transmit (TX), receive (RX), and fault (E1-E8) indicators.
Interface protection	Using optical isolation
Transmission rate	300bps-115.2kbps
Size	145mmx90mmx40mm
Operating environment	Temperature: -40°C ~+85°C , relative humidity: 5%~95%
Installation method	Rail installation

Optional selection

Model	Instruction	Installation	Operate power
JXQ-RS-08	Eight RS485 ports	Rail installation	12~48VDC
JXQ-RS-04	Four RS485 ports	Rail installation	12~48VDC

Dimensions



LANSO®
Insulation gas monitoring series

DA Series
Digital meter monitoring terminal

DA Series
Digital meter monitoring terminal

Description

DA-type digital meter monitoring terminal is a communication management machine product based on embedded hardware. The system adopts Linux operating system and is stable, reliable, and easy to use. It adopts a highly integrated new generation of 32-bit computer internally, and can be integrated with our company's dedicated communication management software. It can be used to collect information from the entire field of power distribution automation system and send it to the local background or remote dispatching master station, and at the same time, it will pass the command of the background or master station to each measurement and control device to achieve local or remote control.
DA-type digital meter monitoring terminals can directly collect data from all devices in the automation system, supporting over 100 protocols, such as Modbus, IEC101, IEC103, IEC104, IEC61850, CSC2000, DL645, etc., and send them to the monitoring background through the user-specified communication protocol (101, 104, Modbus, CDT, etc.) and communication medium (ethernet, fiber optics, etc.), completing the background monitoring of the entire site.

Features

- Support Modbus, IEC101, IEC103, IEC104, CSC2000, DL645 and other up to 100 protocol conversion, fully support IEC61850 standard.
- Support the State Grid "Smart Substation Technical specification Part 4: Digital remote meter" meter access.
- Support multi-channel adaptive industrial 10/100M Ethernet, 2/4 optional; Multiple RS485 ports, 4/8/16 optional.
- Support one single mode and one multi-mode fiber output.
- Support a variety of voltage access, a variety of installation methods.
- Support data storage, block logic programming.
- The RS485 port uses optoelectronic isolator.

Application

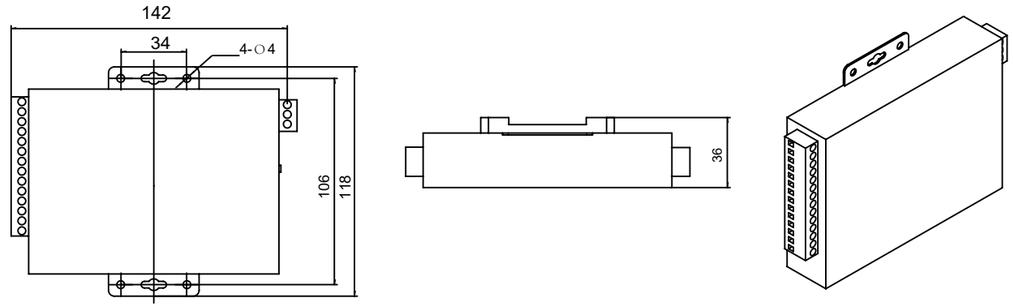
- Online monitoring of digital meters

Technical Parameters	
Ambient condition	-40°C ~ +85°C
Operating voltage	220VAC/220VDC (some series use DC24V power supply)
Power consumption	<15W

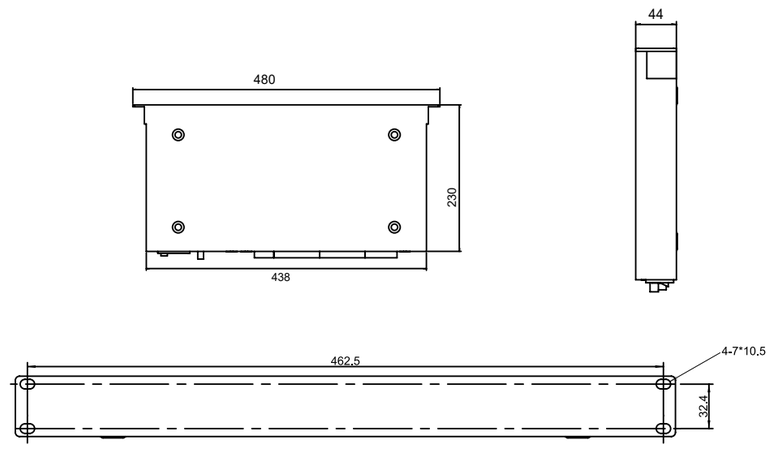
Optional selection

Model	Instruction	Installation	Operate power
DA8240	Two 10M/100M Ethernet ports and four RS485 ports	Flat mounting	9~24VDC
DA8600-8-D	Four 10M/100M Ethernet ports and eight RS485 ports	Flat mounting	12~24VDC
DA8600-8	Four 10M/100M Ethernet ports and eight RS485 ports	1U rack mounting	85~230VDC/VAC
DA8600-16	Four 10M/100M Ethernet ports and sixteen RS485 ports	1U rack mounting	85~230VDC/VAC
DA8600-8-F	Two 10M/100M Ethernet ports, eight RS485 ports, One single-mode Fibre Channel port and one multi-mode Fibre Channel port	1U rack mounting	85~230VDC/VAC

Dimensions



IED-8240



IED-8600

LANSO®
Insulation gas monitoring series

GLM type
SF_6 gas chamber leak monitoring system

GLM type
SF_6 gas chamber leak monitoring system

Description

The SF_6 gas leakage quantitative alarm system is based on the current situation in which the power system emphasizes safe production, and is an intelligent online detection system designed and developed to provide personal health and safety protection for the personnel in the power distribution device room where SF_6 equipment is installed.
The system mainly detects the SF_6 gas content and oxygen content in the ambient air. When the SF_6 gas content in the environment exceeds the standard or lacks oxygen, it can alarm in real time. At the same time, the ventilation system is automatically turned on, with temperature and humidity detection, working status voice prompts, remote alarm, Historical data query and many other rich features.

Features

- The well-designed high-frequency, low-current, high-voltage switching power supply is applied to the SF6 sensor monitoring head, which is characterized by safety, reliability, and high efficiency. Take full advantage of the flexibility of the microcontroller.
- 85V ~ 265V AC, to meet the different field environment needs.
- Large-screen LCD color display, beautiful and generous, running status at a glance. Simple operation interface, simple operation.
- The large-capacity memory supported by the system host can store historical data for more than one year. The excellent performance of the query system software ensures that the system can quickly query historical data in seconds.
- The use of high-sensitivity imported sensors, long life, with false alarm filtering software, to avoid false alarms.
- The micro-monitoring technology can send out early on-site warnings and indicate the locations of gas leaks, promptly notify personnel in hazardous locations to evacuate, find and eliminate sources of leakage, and protect operating equipment.
- A cable connects the SF_6/O_2 transmitter, infrared, main unit, and fan controller, and can be discretely combined to achieve high field adaptability.
- Multi-point monitoring at the same time meets the needs of the site environment and improves monitoring reliability.
- The data can be transmitted far to the telecontrol control center via the RS485 or RS232 bus. The control center can also directly inquire and control the monitoring system.

Configuration

- SF_6 quantitative leak monitoring alarm system host.
- Accessories: SF_6/O_2 double gas transmitter (on-demand), 1 fan controller, 1 warning light, and cable (several).

Technical Parameters	
SF_6 gas concentration alarm range	50 ~ 2000PPM (alarm point can be set up, the state regulations 1000PPM)
SF_6 gas detection sensitivity	±5% setting
Oxygen concentration alarm point	18%
Oxygen measurement accuracy	<0.4%
Temperature display range	-50 ～ 99° C
Humidity display range	0 to 99% RH
Input power	85 ～265V AC
Alarm output point power supply	2A
Fan output contact power supply	16A
Fan ventilation time setting	15MIN/time or user set arbitrarily
Data storage capacity	10000 entries
Communication	RS-485 standard protocol

LANSO®

Insulation gas monitoring series

SF_6 Gas Monitor and Receiver Based on LoRa Wireless Transmission Technology

SF_6 Gas Monitor and Receiver Based on LoRa Wireless Transmission Technology (LS-WC and LS-WT Series)

Product Overview

SF_6 (Sulfur Hexafluoride) gas is widely used as an excellent insulating and arc-suppressing medium in medium and high voltage, as well as in high voltage switchgear and GIS. The density index of SF_6 gas is crucial to its insulation and arc-suppressing performance.

SF_6 Gas State Monitor and Receiver (LS-WC and LS-WT series) are self-developed monitoring products by our company. The monitor can adapt to our full range of transmitters and remote density relays, monitoring SF_6 gas pressure, temperature, density, and moisture content in real time. The data is transmitted back to the background system in real time through wireless LoRa data transmission. The background system can perform online monitoring and analysis, and achieve functions such as real-time data query, historical data statistics, pre-set alarm reminders, and data curve query for all data. This system is mainly designed for real-time monitoring of critical equipment such as SF_6 gas insulated switchgear, GIS, transformers, and mutual inductors in various high-voltage electrical devices.

The monitor is powered by a battery and transmits data wirelessly, without the need for cables on site. The transmitters and remote density relays can be powered by the monitor, without the need for separate power supply on site.

Applications

- SF_6 Insulated Combination Apparatus (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated On-site Switch
- SF_6 Insulated Transformer
- SF_6 Insulated Mutual Inductor
- SF_6 Insulated Busbar System

Options

- The receiver has an RS485 MODBUS RTU output or a network port TCP/IP output.
- It comes with a background software package.
- The receiver can be equipped with an instrument cabinet.

Features

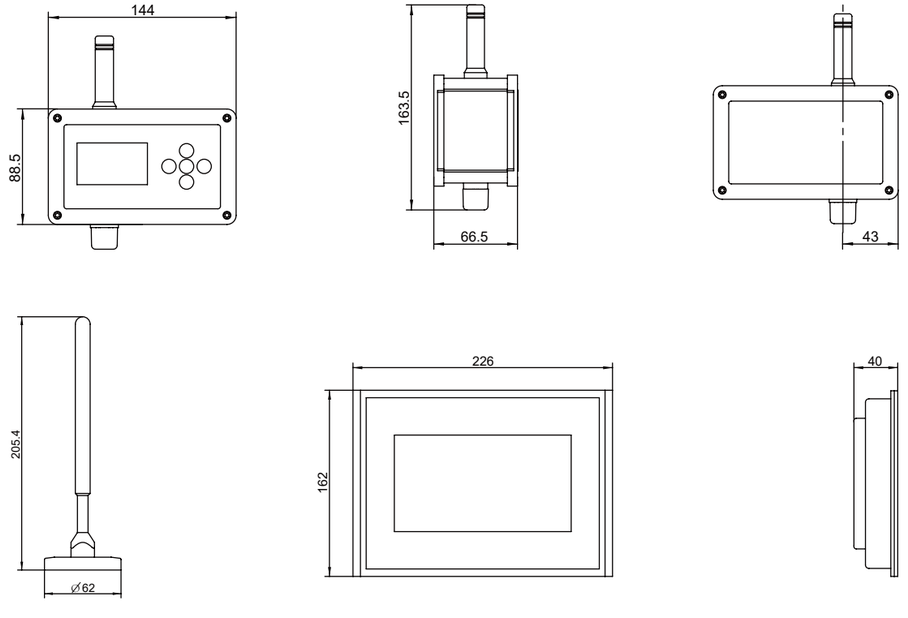
- The monitor is powered by a battery, without the need for cables on site, enabling non-stop upgrade and transformation of online monitoring systems.
- The monitor and receiver have user-friendly human-machine interfaces, facilitating field debugging and testing.
- The monitor can adapt to our full range of transmitters and remote density relays (with a accuracy of full scale 1.0), which can be configured according to customer needs with different functions, ranges, and interface sizes.
- It is suitable for both indoor and outdoor installations.
- The battery uses a large capacity lithium battery, with a service life of over 10 years (related to the data collection period).
- The receiver has data storage function; it can store data for over 10 years.
- The background software has data storage, query, and statistical analysis functions.
- It has a RS485 bus interface that can upload pressure, temperature, and density data in real time.
- It has 470MHz and 2.4GHz optional frequencies for wireless transmission.

Technical Parameters

Monitor	Button	Membrane keypad, with a life of 2 million presses at a force of 300gf Keypad.
	Screen	Resolution: 12864 Dot ; Viewing size: 54.23 × 2.5mm Supply voltage: 3.3V ; Supply current: 45mA
	Battery	Type: Lithium thionyl chloride battery; Nominal capacity: 19AH; Voltage: 3.6V
	Transmitter interface	Power supply: 12V@20mA; Communication: RS485 protocol; Private protocol can be customized
	Standby current	<10uA
	Protection grade	IP65
	Operating temperature	-40° C ~ +70° C
	Installation method	Metal zip tie installation
Receiver	Screen	Resistive touch 7-inch LCD screen Resolution: 1024*600
	Power supply	12V DC @1A (manufacturer can provide 220Vac adapter)
	Signal interface	Double RS485 interface, two interfaces can use different communication protocols;RJ45 interface: 10M/100M; USB interface: 2.0
	Other hardware	16G SD card
	Antenna	Suction cup antenna; Feeder line: 2m (2m~20m)
	Installation method	Wall mounted installation

Dimensions

Monitor: 144 × 88.5 × 66.5;
Receiver: 226 × 16 × 240;
Instrument box: 330 × 235 × 68.



Insulation gas monitoring series

KL50
Pressure Gauge

KL50
Pressure Gauge

Description

These instruments are used to monitor the pressure of the gas in sealed tanks. They are applied to indicate the relative pressure of the gas on site. They are designed to monitor Medium Voltage systems.

Features

- Display the relative pressure of the gas in the closed container at real-time temperature.
- Suitable for indoor or outdoor installation.
- AISI 304 hermetically sealed stainless steel case.
- Gas connection tubes are made of AISI 316 stainless steel.

Application

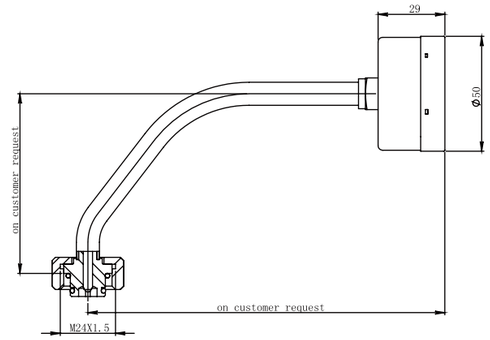
- SF_6 gas Insulated RMU
- SF_6 gas Insulated Switchgear

Options

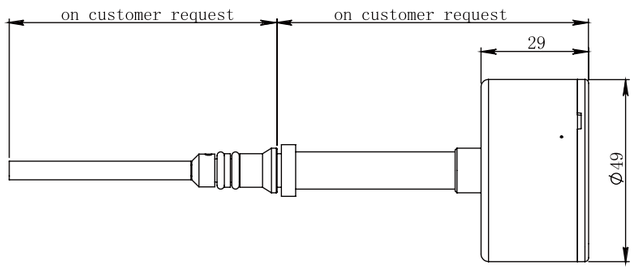
- Process connection: customizable.
- Measuring medium: SF_6, Air, N_2, SF_6 + N_2 and other gases.
- Wide temperature range-40°C to +60°C .

Technical Parameters	
Case diameter	50mm
Scale range	0 to 0.6 bar
Accuracy	±1.5%FS (+20±1°C) ±2.5%FS (-20°C～ +60°C) (gas phase)
Ambient conditions	-20° C to +60° C，relative humidity ⩽ 95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M24 × 1.5 (customizable)
Installation method	Radial or Axial
Window glass	Laminated safety glass
Weight	0.2kg

Dimensions



KL50 pressure gauge sample table 1 size



KL50 pressure gauge sample table 2 size

LANSO®
Insulation gas monitoring series

KL60
Density Meter / Pressure Gauge

Description

These instruments are used to monitor SF_6 gas density in sealed tanks. They are applied to indicate gas density. They are designed to monitor Medium Voltage systems.

KL60
Density Meter / Pressure Gauge

Features

- The temperature compensation device ensures higher measurement accuracy.
- Suitable for indoor or outdoor installation.
- AISI 304 hermetically sealed stainless steel case.
- Gas connection tubes are made of AISI 316 stainless steel.
- The on-screen display value and output signals are independent of the impact of external environment, such as altitude.

Application

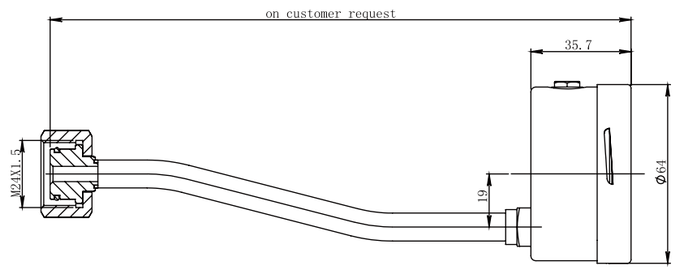
- SF_6 gas Insulated RMU
- SF_6 gas Insulated Switchgear

Options

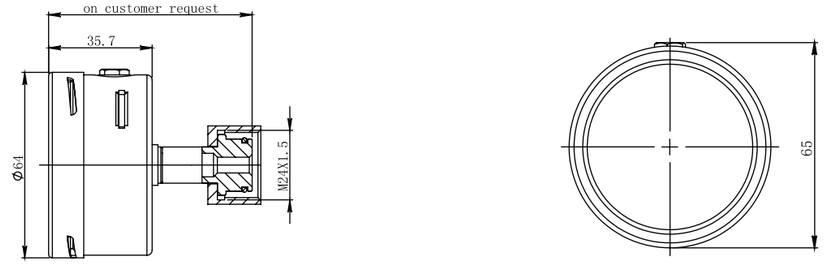
- Process connection: customizable.
- Measuring Medium: SF_6, Air, N_2, SF_6 + N_2 and other gases.
- Suitable for High-altitude environment.
- Wide temperature range-40°C to +60°C .

Technical Parameters	
Case diameter	64mm
Scale range	1 to 2bar abs
Accuracy	±1.5%FS (+20±1°C)，±2.5%FS (-20°C～ +60°C) (gas phase). Optional: ±1.0%FS (+20±1°C)，±1.8%FS20°C～ +60°C) (gas phase)
Degree of protection	IP65
Ambient conditions	-20° C to +60° C，relative humidity ⩽ 95%RH
Leakage rate	⩽ 1 × 10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M24 × 1.5 (customizable)
Installation method	Radial or Axial
Window glass	Laminated safety glass
Impact resistance	30g
Weight	0.3kg
Pressure element	Bourdon tubes

Dimensions



KL60 Dimensions - Low-Rear Configuran



KL60 Dimensions - Central-Rear Configuration

LANSO®
Insulation gas monitoring series

ZMJ60
Density Monitor

ZMJ60
Density Monitor

Description

These instruments are used to monitor the density of SF_6 gas in sealed tanks and can be widely used in medium voltage switchgear and RMU. They' re suitable for outdoor bad external conditions.
They can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

Features

- Compact design, customizable installation interface, convenient and reliable.
- Process connection customizable in accordance with customer's demands.
- Up to three sets of switching contacts can be provided according to user's needs.
- Temperature compensated.

Application

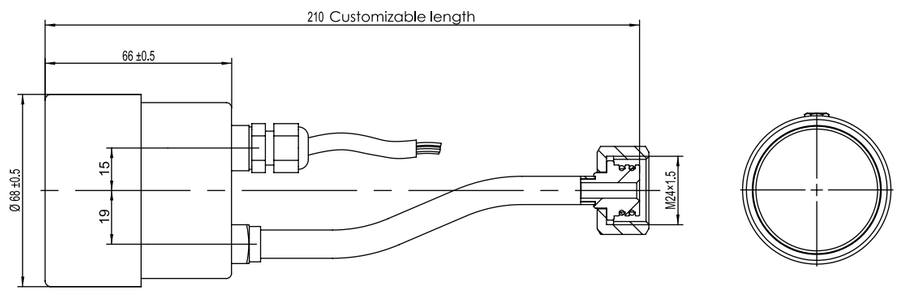
- SF_6 gas Insulated RMU
- SF_6 gas Insulated Switchgear

Options

- Different measuring ranges.
- Wide temperature range -40°C to +60°C .
- Outlet Direction and cable length.
- Installation method.
- Suitable for High-altitude environment.
- Can detect SF_6、Air、N_2、SF_6+N_2 and other gases.

Technical Parameters	
Case diameter	Φ64mm
Case material	Stainless steel
Scale range	0 to 2bar abs. （customizable）
Accuracy	±1.5%FS（+20±1° C），±2.5%FS（-20° C～ +60° C）(gas phase)； Optional：±1.0%FS（+20±1°C），±1.8%FS（-20°C～ +60°C）(gas phase)
Ambient conditions	-20° C to +60° C, relative humidity ≤ 95%RH
Degree of protection	IP65
Leakage rate	≤ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Contact type	Magnetic snap-action switch (upper limit three groups, normally open or normally closed)
Process connection	M20×1.5 (customizable)
Installation method	Radial or Axial
Insulation properties	Insulation resistance: >100 MΩ (500 V DC) Withstand voltage: 2kV, 50/60 Hz 1 min
Contact electrical parameters	Power: 30VA Upper limit operating voltage: 380V Upper limit current: 1A
Weight	0.3kg
Pressure lement	Bourdon tubes

Dimensions



LANSO®
Insulation gas monitoring series

ZMJ60R
Density Monitor

ZMJ60R Density Monitor

Description

ZMJ60R is used to monitor the density of gas in closed containers, and can be widely used in medium voltage switchgear and ring network cabinet. It can display gas density on site, and reliably output SF_6 gas density signal for remote monitoring and monitoring. It can be used in the new substation building and intelligent transformation of existing substation.

Features

- Compact design, customizable installation interface to user's need, convenient and reliable.
- Suited for different indoor and outdoor installation requirements.
- Up to three sets of contact switches.
- RS485 remote transmission function, convenient remote monitoring.
- Temperature compensated

.

Application

- SF_6 Gas Insulated Ring Main Unit
- SF_6 Gas Insulated Switch gear

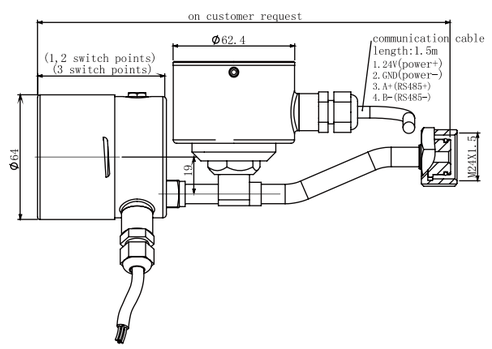
Options

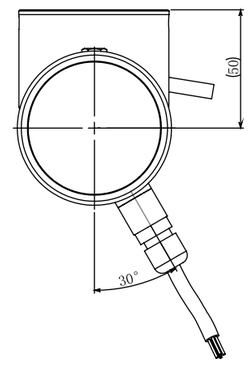
- Measuring range.
- Wider temperature range: optional -40°C ~ +60°C .
- Outlet mode and cable length.
- Installation method.
- High altitude environment use.
- Measuring Medium: SF_6, Air, N_2, SF_6+N_2 and other gases.

Remote part of the main electrical performance indicators and specifications			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 3 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Technical Parameters	
Case diameter	64mm
Scale range	0 ~ 2bar abs.(customizable)
Accuracy of indication	±1.5%FS (+20±1℃) ; ±2.5%FS (-20℃~ +60℃) (gas)
Degree of protection	IP65
Ambient condition	-20℃ ~ +60℃ realative humidity ≤ 95%
Leakage rate	≤ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20 x 1.5 (customizable)
Installation method	Radial or Axial
Electrical connection	Pluggable connector, wire diameter 1 ~ 2.5 mm^2 (1.5mm^2 recommended)
Insulation property(contact part)	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Magnetic snap-action switch (Up to 3 set of contact ,NO & NC)
Impact rating	30 g
Contact electrical parameters	Capacity: 30VA Uplimit switching voltage: 380V Uplimit switching current: 1A
Weight	0.3kg
Pressure element	Bourdon tube

Dimensions





LANSO®
Insulation gas monitoring series

ZMJ60V
Density Monitor

ZMJ60V
Density Monitor

Description

These instruments are used to monitor the density of SF_6 gas in sealed tanks, and can be widely used in medium voltage switchgear, RMU. It' s suitable for outdoor harsh external conditions.
It can provide multiple solutions to support new substations and the intelligent transformation of existing substations.
The electrical maintenance personnel can make SF_6 gas density monitor calibration or gas filling without disassembling SF_6 density monitor.

Features

- Compact design, customized installation interface, convenient and reliable.
- Process connection customizable in accordance with customer's demands.
- Up to three sets of switching contacts can be provided according to user's needs.
- Without disassembling SF_6 density monitor, SF_6 gas density monitor can be calibrated or replaced.
- Without disassembling the screws, a person can operate independently, which is convenient.
- Temperature compensated.
- It can facilitate on-site personnel to measure micro-water and supplement air for switch.
- Avoid the sealing surface and sealing joint damage caused by the disassembling.

Application

- SF_6 gas Insulated RMU
- SF_6 gas Insulated Switchgear

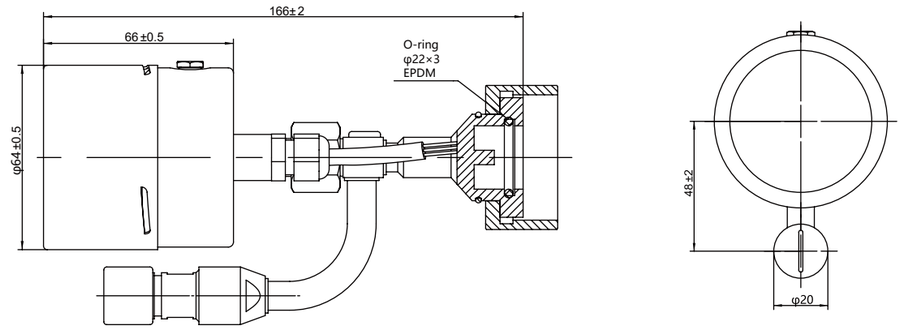
Options

- Different measuring ranges.
- Wide temperature range -40° C to +60° C.
- Measuring Medium: SF_6, Air, N_2, SF_6+N_2 and other gases.
- Remote transmission function.

Technical Parameters

Case diameter	Φ64mm
Case material	Stainless steel
Scale range	0 to 2bar abs. (customizable)
Accuracy	±1.5%FS (+20°C ±1°C) , ±2.5%FS (-20°C～ +60°C) (gas phase); Optional: ±1.0%FS (+20°C ±1°C) , ±1.8%FS (-20°C～ +60°C) (gas phase)
Ambient conditions	-20° C to 60° C, relative humidity ⩽ 95%RH
Degree of protection	IP65
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Contact type	Magnetic snap-action switch (upper limit three groups, normally open or normally closed)
Process connection	M20×1.5 (customizable)
Maintenance connection	M16×1.5 (customized and additional adapter needed to the calibrator or gas tank)
Installation method	Radial or Axial
Insulation properties	Insulation resistance: >100 MΩ (500 V DC)
Withstand voltage	2kV, 50/60 Hz 1 min
Contact electrical parameters	Power: 30VA
Max. operating voltage	380V
Max. current	1A
Weight	0.3kg
Pressure element	Bourdon tubes

Dimensions



LANSO®
Insulation gas monitoring series

DDM60R
Digital Density Monitor

DDM60R
Digital Density Monitor

Description

DDM60R digital remote transmission density relay is used to monitor the density of SF_6 gas in a closed container. It has real-time remote transmission of SF_6 gas density change data, realizes online remote monitoring function, and can display the gas density on site. When the density value reaches the set value, the contact output alarm signal. Suitable for medium voltage system monitoring. It can be used in the new substation building and intelligent transformation of existing substation.

Features

- Local digital display and control.
- The microswitch is used as the signal output device to realize the free switching between normally open and normally closed points.
- Temperature Compensated.
- The alarm value can be set on site and can be applied to cabinets with different alarm values.
- Small size, installation interface can be customized, convenient and reliable.
- RS485 bus interface, easy to do the system expansion, and to achieve telemetry, remote control functions. Strong EMC capability.

Application

- SF_6 Gas Insulated Swithchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulated CT or PT
- SF_6 Insulated Bus System

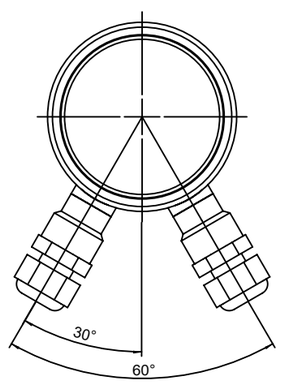
Options

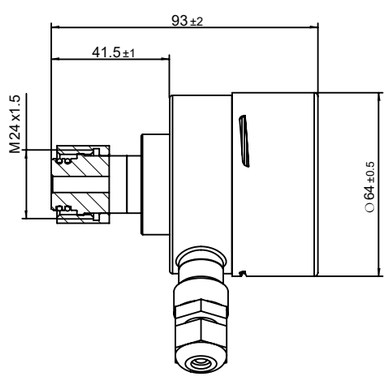
- Measuring Medium: SF_6, Air, N_2, SF_6+N_2 and other gases.

Remote part of the main electrical performance indicators and specifications			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 4 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5 IEC61000-4-9: Level 5 IEC61000-4-10: Level 5
Power consumption	<1W(max. 1.5W)		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Technical Parameters	
Scale range	-0.1 ~ 0.9MPa
Accuracy of transmitter	Pressure: ±0.5%FS Temperature: ±1℃ Pressure at 20℃: ±1.0%FS
Degree of protection	IP65
Ambient conditions	-40℃ ~ +70℃ , relative humidity: ⩽95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20×1.5 (customizable)
Installation method	Radial or Axial
Electrical connection	Preset cable
Insulation property(contact part)	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Magnetic holding electronic relay
Impact rating	30 g
Contact electrical parameters	Uplimit switching voltage: 380VAC/240VDC Uplimit switching current: 5A
Window glass	Laminated safety glass
Weight	0.3kg

Dimensions





LANSO®
Insulation gas monitoring series

ZMJ100A
Density Monitor

Description

ZMJ100A is used to monitor the density of SF_6 gas in a closed container, can display the gas density on site, and alarm when the density value reaches the set value. Suitable for medium voltage system monitoring. It can be used in the new substation building and intelligent transformation of existing substation.

ZMJ100A Density Monitor

Features

- Up to 3 set of contacts switches.
- The contact value is adjustable.
- Temperature compensated

Application

- SF_6 Gas Insulated Swithchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulated CT or PT
- SF_6 Insulated bus system

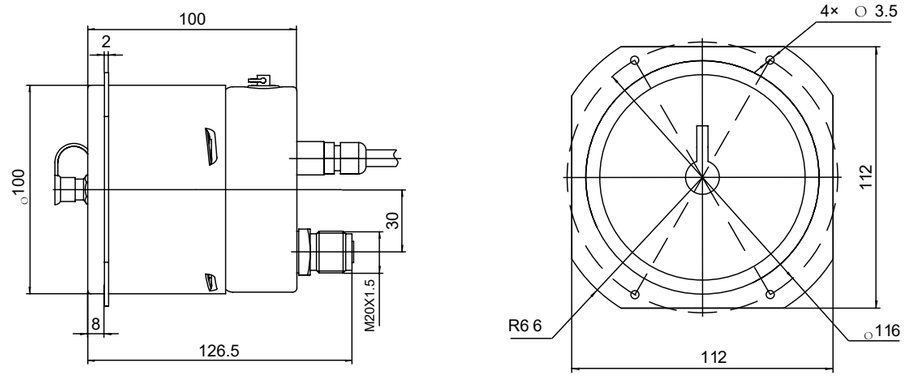
Options

- Different measuring ranges.
- Measuring Medium: SF_6、Air、N_2、SF_6+N_2 and other gases.

Technical Parameters

Scale range	-0.1 ~ 2.8bar
Measuring accuracy	20 ° C±1℃, 1.5%FS -20 ° C～ +60 ° C, 1.5%FS（gas）
Degree of protection	IP54
Ambient condition	-25℃ ~ +60℃ , relative humidity： ⩽95%RH
Leakage rate	⩽ 1×10^{-9} Pa·m^3/s (Helium leakage inspection)
Process connection	M20 x 1.5 (customizable)
Installation method	Radial or Axial
Insulation property(contact part)	Insulation resistance: >100MΩ (DC500V) Power frequency withstand voltage: 2kV, 50/60Hz, 1min
Contact type	Magnetic snap-action switch
Contact electrical parameters	30W/50VA, 1A.（upper limit） 220VDC/380V 50/60Hz(upper limit)
Weight	1.2kg
Pressure element	Bourdon tube

Dimensions



LANSO®
Insulation gas monitoring series

RDH40
SF_6 Gas density and dew transmitter

RDH40
SF_6 Gas density and dew transmitter

Description

RDH40 is mainly used to monitor the temperature, pressure, density and moisture content of SF_6 gas in closed containers, with real-time remote monitoring function. The intelligent compensation technology is used inside the product, which can track the nonlinear change of SF_6 gas pressure and the change of micro-water content in real time, and the measurement is accurate and widely used. Suitable for monitoring of medium and high voltage systems. It can be used in the new substation building and intelligent transformation of existing substation.

Features

- Suitable for medium or high volatage systems.
- Multi-parameter instrument for simultaneous monitoring of gas dew point, density, pressure and temperature with excellent accuracy.
- RS485 bus interface (Modbus RTU).
- Small size, beautiful structure.

Application Range

- SF_6 Gas Insulated Swithchgear (GIS)
- SF_6 Insulated Circuit Breaker
- SF_6 Insulated Pole-Mounted Switch
- SF_6 Insulated Transformer
- SF_6 Insulation CT or PT
- SF_6 Insulated bus system

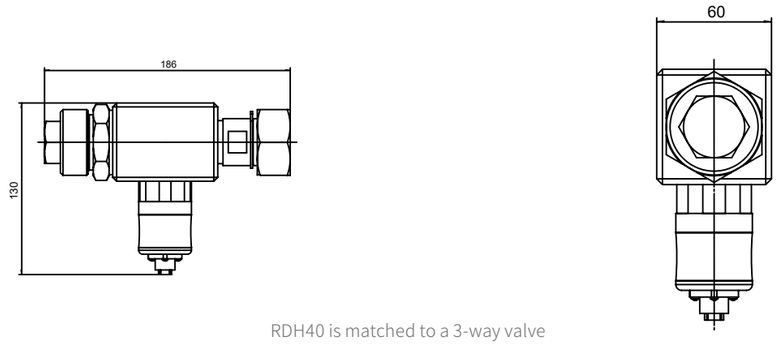
Optional features

- Measuring Medium: SF_6, Air, N_2, SF_6+N_2 and other gases.

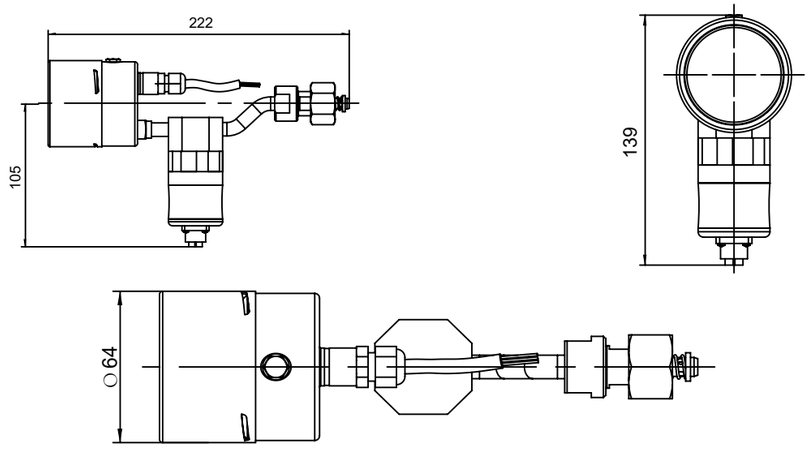
Remote part of the main electrical performance indicators and specifications			
Operating voltage	10~30VDC	EMC tests	IEC61000-4-2: Level 4 IEC61000-4-3: Level 3 IEC61000-4-4: Level 4 IEC61000-4-5: Level 4 IEC61000-4-6: Level 3 IEC61000-4-8: Level 5 IEC61000-4-9: Level 5 IEC61000-4-10: Level 5
Power consumption	<0.5W		
Communication mode	RS485		
Communication protocol	Modbus RTU		
Bandrate	9600bps		

Technical Parameters	
Pressure measuring range	0 ~ 1.4MPa (customizable)
Dew measuring range	-50°C ~ +20°C
Accuracy of transmitter	Temperature: ±1°C Pressure: ±0.5%FS. Pressure at 20°C: ±1.0%FS. Dew: ±3°C
Degree of protection	IP65
Ambient condition	-40°C ~ +80°C , Relative humidity ⩽ 95%RH
Leakage rate	⩽ 1 x 10^{-9}Pa · m^3/s (Helium leakage inspection)
Process connection	G1 (customizable)
Electrical connection	M12 x 1 Circular connector
Weight	0.5kg

Dimensions



RDH40 is matched to a 3-way valve



The RDH40 is matched to a medium pressure gauge

LANSO®
Insulation gas monitoring series

MDK40
Density Switch

MDK40 Density Switch

Description

These instruments are used to monitor the density of SF_6 gas in sealed tanks, and can be widely used in medium voltage switchgear and RMU. They' re suitable for outdoor harsh external conditions.
They can provide multiple solutions to support new substations and the intelligent transformation of existing substations.

Features

- Gas compensation ensures higher set point accuracy.
- Can provide up to three sets of microswitch contacts that instant and accurate switching
- High shock resistance.
- Normally closed contacts will not set a false alarm due to vibration.
- Temperature compensated

Application

- SF_6 gas insulated RMU
- SF_6 gas Insulated Switchgear

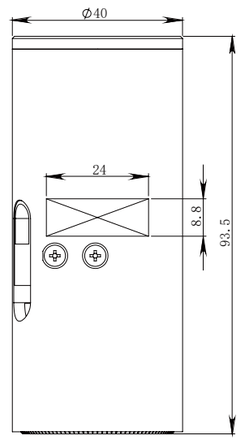
Options

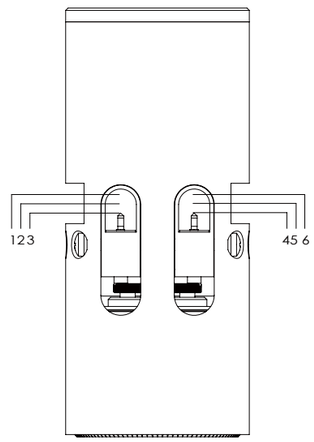
- Different measuring ranges.
- Wide temperature range.
- Measuring medium: SF_6、Air、N_2、SF_6+N_2 and other gases.

Technical Parameters

Measuring range	0 ～ 3 bar abs. (customizable)
Accuracy of set point	±2.0% @–30 ° C ～ +50 ° C
Degree of protection	IP42
Ambient conditions	-25° C ～ +60° C, relative humidity ⩽ 95%RH
Leakage rate	⩽ 1 x 10^{-9}Pa · m^3/s (Helium leakage inspection)
Process connection	G1/4 (customizable)
Installation method	Axial
Electrical connection	Plug-in connection cable size: 0.2mm^2 to 2.5mm^2
Insulation properties	Insulation resistance: >100 MΩ (DC 500V) Withstand voltage: 2kV, 50/60 Hz,1min
Contact type	Microswitch
Impact rating	30g
Contact electrical parameters	30W/50VA, 1A (upper limit) 220VDC/380V 50/60Hz (upper limit)
Weight	0.3kg
Pressure element	Bellows

Dimensions





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