

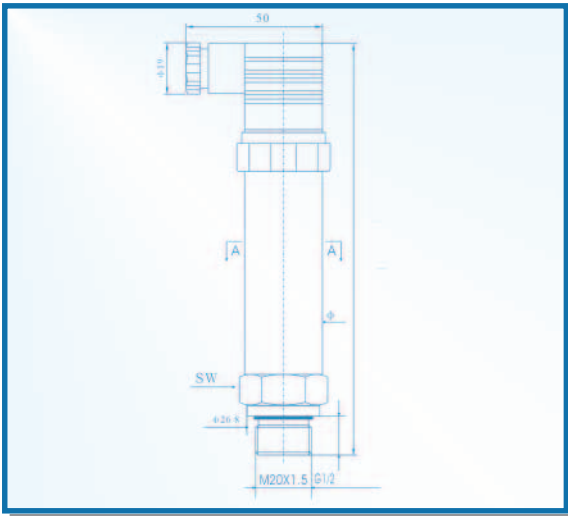
WP-8

Miniature Pressure Transmitter

825B088C

Features

- **Measuring Range:**
 - Gauge Pr.: Max. 0÷60Mpa Min. 0÷4kPa
 - Absolute Pr.: Max. 0÷2MPa Min. 0÷20kPa
 - Negative Pr.: Max. -0.1÷2MPa Min. -2÷2kPa
- **Power supply:** 12,5÷30Vdc (2-wired)
- **Output signal:** 4÷20mA
- **Overload Capacity:** 1.5 Times of F.S
- **Max. accuracy:** ±0.1%FS
- **Typical long-term stability:** ±0.1%FS per year
- **Operation Temperature:** -10° ÷ +80°C
- **Mechanical protection:** IP65
- **Max. adjustment scale:** ±3%F.S.



- 2-wired 4÷20mA transmitter**
- Pressure Classification: Absolute , gauge or negative**
- Accuracy: ±0.1% F.S.**
- Particularly heavy applications suitable**
- Any mounting positions compact transmitter**

General

Developed by our company, WP-8 series miniature pressure transmitters can be accurately adjusted and calibrated for its "Zero" and full scale output. We adopt imported sensor with stainless steel isolated membrane and high-performance amplifying circuit and put them in stainless steel housing. The pressure sensors in WP-8 series miniature pressure transmitters are all welded stainless steel body with built-in pressure sensing die and isolated membrane. The body is filled with silicon oil. When the measured pressure acts on the membrane and then to the sensing die by silicon oil, the sensing die are connected with special amplifying circuit via lead to realize accurate measurement for pressure. It takes advantages of piezoresistance effect of semiconductor material of Silicon to achieve the conversion between pressure signal and electrical signal, and there is a good linear relation between the output signal from Wheatstone bridge and measured pressure, too.



applied solution for the application

1. Power Supply and Output Signals

WP-8 series miniature pressure transmitters are powered by 24Vdc, and as for 2-wired transmitters with output of 4÷20mA, they can be normally operated during range of 5mA-30mA DC.

2. Construction Feature

WP-8 series miniature pressure transmitters are fully constructed with stainless steel to ensure its reliability and adaption to the ambient environment. The pressure joints are connected by Screw of M20×1.5, and embedded flat pressure joints are optional for users. The upper part of transmitters are imported explosion-proof plug-ins, which can be unscrewed for conveniently adjustment and calibration for “Zero” and full-scale output. The housing and plug-ins of transmitters are both in accordance with IP65.

3. Adjustment & Calibration for “Zero” and Full-scale Output

WP-8 series pressure transmitters can be adjusted and calibrated from outside and the adjustment scale is ±3%F.S.

4. Installation and Operation

WP-8 series pressure transmitters can be installed on pressure joint of pipeline. A cut-off valve should be added between pressure joint and pipeline to make it easier for installation and debugging. The impact on “Zero” from the installation position can be well adjusted and calibrated. If users want to adjust or calibrate “Zero” and full-scale output, they can unscrew the screw cap or tightened nut for plug-ins(please draw out the plugs), and then slightly turn the relative potentiometer by instrument screwdriver.

Note: Chemical effect should not happen between measured medium will and housing material of the transmitters.

5. Technical Specifications

Measuring Range: Gauge Pr.:	Max. 0÷60Mpa	Min. 0÷4kPa
Absolute Pr.:	Max. 0÷2MPa	Min. 0÷20kPa
Negative Pr.:	Max. -0.1÷2MPa	Min. -2÷2kPa

Overload Capacity: 1.5 Times of F.S

Pressure Classification: Absolute pressure, gauge pressure or negative pressure

Accuracy: Typical: ±0.3%FS; Max.: ±0.5%FS (Including non-linearity, sluggishness and repetition)

Long-term Stability: Typical: ±0.1%FS per year; Max. ±0.2%FS per year

Temperature Offset for “Zero”: 0.03%FS/°C (≤100kPa); 0.02%FS/°C (>100kPa)

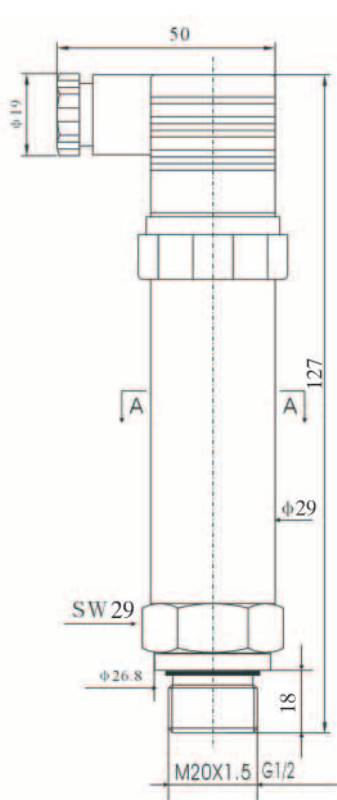
Temperature Offset for Full Scale: 0.03%FS/°C (≤100kPa); 0.02%FS/°C (>100kPa)

Tolerant Temperature: Normal Operation Temperature: -20°÷ +80°C
Membrane: -20°÷ +80°C (even up to 130°C at a short time)
High & Low Temperature: -65°÷ +150°C; 10°÷ +200°C; 10°÷ +350°C

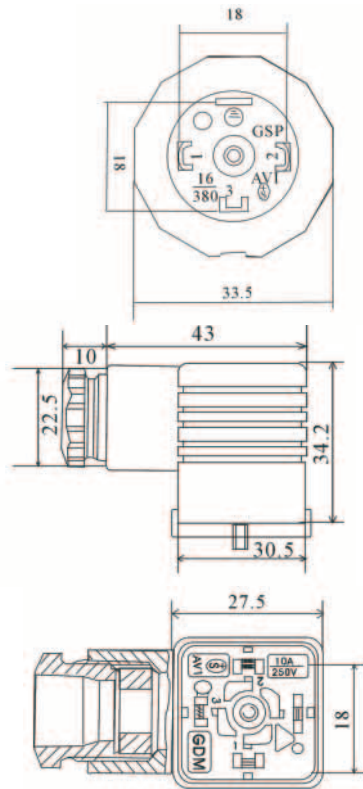
Storage Temperature: -40°÷ +80°C



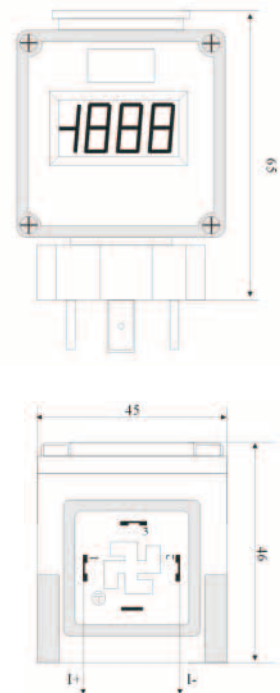
6. Outline Dimensions and Mounting Dimensions



Outline Dimensions and Mounting Dimensions for B1 Plug-in



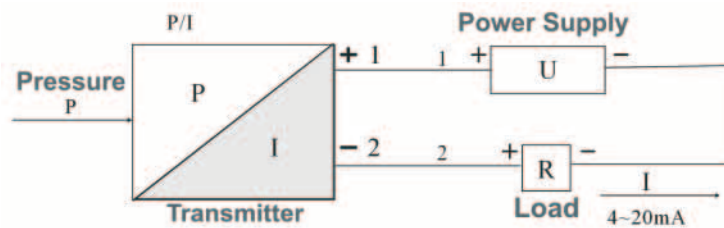
Outline of Plug-in and Array



Outline of Display

7. Electric Connection

Electric Connection for 2-wired Transmitters with Output of 4÷20mA:



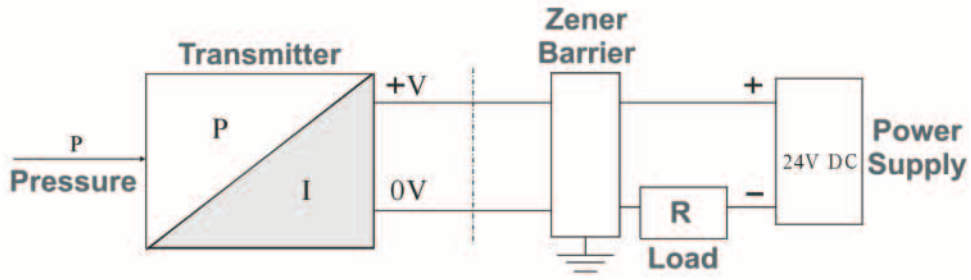
Definition of Pins for Plug-in	
PINS	2-WIRED
1	Power + = +V
2	Power - = 0V
3	Blank

Definition of Wiring Connection for Cable	
LEAD	2-WIRED
Black	Power + = +V
Red	Power - = 0V
White	Blank

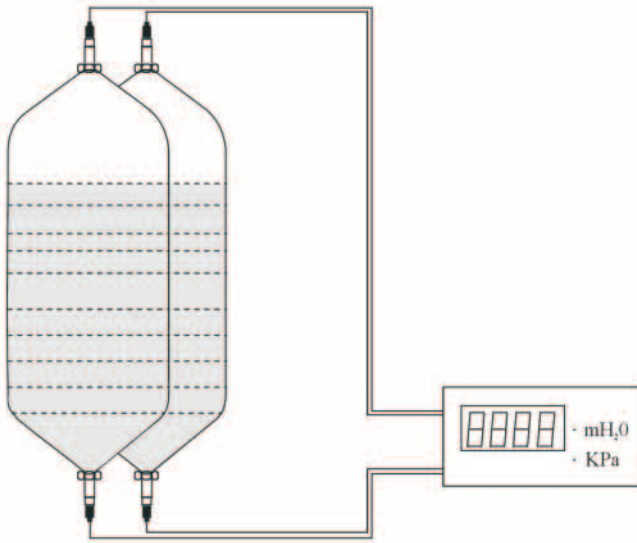


8. Electric Connection for Explosion Proof MPM 480

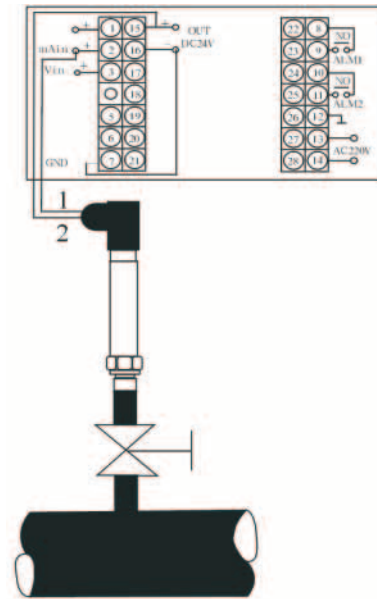
2-wired Intrinsic Safety System with Output of $4 \pm 20\text{mA}$:



9. Application examples



Level Measurement by Flat Membrane Type transmitter Mounted on Beer Tanks



Pressure Measurement by General Transmitter Mounted on Pipeline

WP-8 - Model Table

WP-8 Miniature Pressure Transmitter	
Code	Membrane Materials
A	Si-diffused sensor [A1-default Standard; A2- ultra Stable; A3- Sanitary(Flat with membrane;) A4 –anti-corrosive(Ta Material)
B	High Temperature [-65÷150°C] [10÷200°C] [10÷350°C]
C	Ceramic Capacitance
Code	Explosion-Proof
I	Intrinsic Safe Exib II CT6 or Exia II CT6
S	Standard (Without Explosion Proof)
Code	Process Connection Material
1	Stainless Steel 316L
2	Stainless Steel 1.4581
3	Stainless Steel 1Gr18Ni9Ti
4	Hutchinson alloy C
9	Special Requirement
Code	Process Connetions
A	Screw Thread 1/2NPT(small hole)
G	Screw Thread M 20×1.5(small hole)
M	Screw Thread G1/2"(small hole)
N	Screw Thread M 20×1.5(big hole)
R	Screw Thread G1/2"(big hole)
Y	Special Requirement
Code	Sealed Material
1F	Fluorin Rubber: FPM (Viton)
2F	Butyl Rubber: IIR
3F	Polyvinyl-4F: PTFE (Teflon)
4F	Fully Sealed Welding
Code	Output Signals
2	2-wired 4÷20mA
9	Special Requirement
Code	Display
A	No Field Indication
C	0÷100% Digital LCD
D	0÷100% Digital LED
Y	Special Requirement
Code	Accuracy
1	0,1%
2	0,2%
5	0,5%
9	Special Requirement
Code	Measuring Range
xxx	Please see "Standard Range Table of WP-8"series pressure transmitters
Code	Measured pressure
A	Absolute Pressure
B	Air-proof Reference Pressure(please provide reference pressure)
G	Gauge Pressure

WP-8 A S 1 G 1F 2 A 5 G17 G

Note: Si-diffused transmitter range for Standard and Sanitary are: Min. 0÷20kPa, Max. 0÷35Mpa. The range for stable pressure transmitter is: Min. 0÷10kPa, Max. 0÷60Mpa.

WP-8 - Standard range table

Gauge	Absolute	Measuring Range	Adjustment Range	Si-diffused or High Temperature Overload	Capacitance	Si-diffused	High & Low Temperature
G01	N	0+4KPa	1.6+5KPa	6.0KPa	N	N	Y
G02	N	0+6KPa	4+10KPa	9.0KPa	N	N	Y
G03	N	0+10KPa	4+20KPa	15KPa	N	Y	Y
G04	N	0+16KPa	6.4+20KPa	25KPa	N	Y	Y
G05	A01	0+20KPa	8+35KPa	30KPa	N	Y	Y
G06	A02	0+25KPa	10+35KPa	40KPa	N	Y	Y
G07	A03	0+30KPa	12+35KPa	45KPa	N	Y	Y
G08	A04	0+35KPa	14+35KPa	55KPa	N	Y	Y
G09	A05	0+40KPa	16+70KPa	60KPa	N	Y	Y
G10	A06	0+60KPa	24+70KPa	90KPa	Y	Y	Y
G11	A07	0+100KPa	40+100KPa	150KPa	Y	Y	Y
G12	A08	0+160KPa	64+200KPa	250KPa	Y	Y	Y
G13	A09	0+200KPa	80+200KPa	300KPa	Y	Y	Y
G14	A10	0+250KPa	100+350KPa	400KPa	Y	Y	Y
G15	A11	0+400KPa	160+700KPa	600KPa	Y	Y	Y
G16	A12	0+600KPa	240+700KPa	1.0MPa	Y	Y	Y
G17	A13	0+1.0MPa	0.4+1.0MPa	1.5MPa	Y	Y	Y
G18	A14	0+1.6MPa	0.64+2.0MPa	2.5MPa	Y	Y	Y
G19	A15	0+2.0MPa	0.8+2.0MPa	3.0MPa	Y	Y	Y
G20	N	0+2.5MPa	1.0+3.5MPa	4.0MPa	Y	Y	Y
G21	N	0+4.0MPa	1.6+4.0MPa	6.0MPa	Y	Y	Y
G22	N	0+6.0MPa	2.4+7.0MPa	9.0MPa	Y	Y	Y
G23	N	0+10MPa	4.0+10MPa	15MPa	Y	Y	Y
G24	N	0+20MPa	8.0+20MPa	30MPa	N	Y	Y
G25	N	0+30MPa	12+35MPa	45MPa	N	Y	Y
G26	N	0+40MPa	16+40MPa	60MPa	N	Y	Y
G27	N	0+60MPa	24+60MPa	90MPa	N	Y	Y
G28	N	-2+2KPa	-1.6+2.5KPa	N	N	N	Y
G29	N	-5+5KPa	-3+5KPa	N	N	N	Y
G30	N	-10+10KPa	-6+10KPa	30KPa	N	Y	Y
G31	N	-20+20KPa	-13+20KPa	60KPa	N	Y	Y
G32	N	-50+50KPa	-33+50KPa	150KPa	N	Y	Y
G33	N	-100+60KPa	-66+100KPa	250KPa	N	Y	Y
G34	N	-100+100KPa	-66+100KPa	300KPa	N	Y	Y
G35	N	-100+150KPa	-100+200KPa	400KPa	N	Y	Y
G36	N	-100+300KPa	-100+350KPa	600KPa	N	Y	Y
G37	N	-100+500KPa	-150+500KPa	1.0MPa	N	Y	Y
G38	N	-100+900KPa	0.24+1.0MPa	1.5MPa	N	Y	Y
G39	N	-100KPa+1.5MPa	0.5+1.9MPa	3.0MPa	N	Y	Y
G40	N	-100KPa+2.0Mpa	0.5+2.0MPa	3.0MPa	N	Y	Y
Z99	N	Special	Special	Special	N	Y	Y

Note: "N" means unavailable, "Y" means available.

Note: Special orders are all transmitters with membrane material of code A or B with pressure range below 20kPa and all transmitters with membrane material of code C with pressure range over 20MPa.



WP-8 Warranty

Products supplied by SGM LEKTRA are guaranteed for a period of 12 (twelve) months from delivery date according to the conditions specified in our sale conditions document. SGM LEKTRA can choose to repair or replace the Product. If the Product is repaired it will maintain the original term of guarantee, whereas if the Product is replaced it will have 12 (twelve) months of guarantee. The warranty will be null if the Client modifies, repair or uses the Products for other purposes than the normal conditions foreseen by instructions or Contract. In no circumstances shall SGM LEKTRA be liable for direct, indirect or consequential or other loss or damage whether caused by negligence on the part of the company or its employees or otherwise howsoever arising out of defective goods.

WP-8 Factory test certificate

In conformity to the company and check procedure I certify that the equipment:

WP-8 part nb.

is conform to the technical requirements on Technical Data and it is made in conformity to the SGM-LEKTRA procedure

Quality Control Manager:

Production and check date:





CERT. N. 2032308

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