LDN800 industrial pressure transmitter

Description

LDN800 series pressure transmitter (explosion proof) is at par with national standard GB3836.1、GB3836.4，and pass the checkout of nation explosion proof inspection center, acquired the certification. Explosion-proof indicate：iaIICT5。

Base parameters

- Environment condition：temperature：-30~70℃
  humidity：0~90%RH
- media：liquid、gas、steam
- atmosphere pressure：86~106kPa
- pressure type：gauge pressure（and load pressure），absolute pressure ，sealed.
- Pressure range ：non-isolation：0~500Pa-0~7kPa
  Isolation：0~7 kPa -0~60Mpa
- Power supply pressure：12~36VDC（the intrinsically safe version must be equipped with grid）

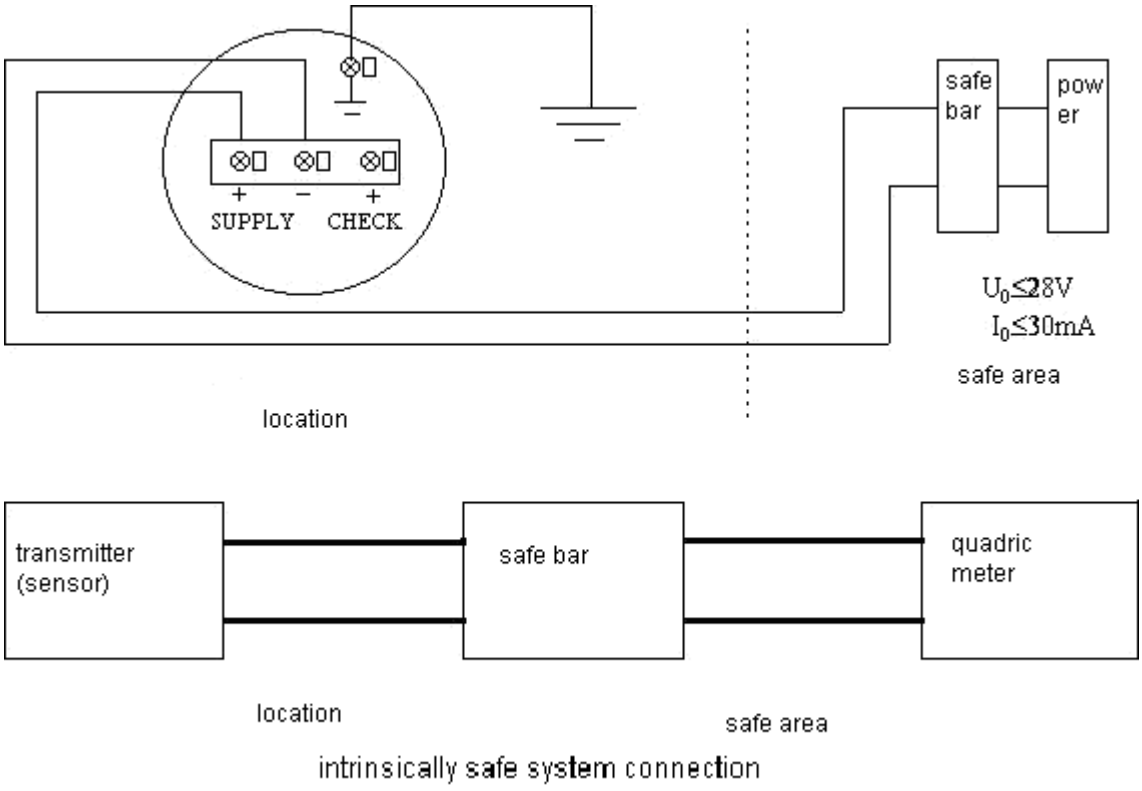
Mounting

- When LDN800 is used to measure pressure, its performance depends to a great degree on correct mounting. Take the technological process and economic factors into consideration. Transmitter usually has to be mounted in bad circumstances. However, they should be mounted in the place where the temperature fluctuates slightly and avoid vibration, shock and causticity.
- LDN800 series pressure transmitter can be mounted on the measurement point directly. Port thread：1/2-NPT or M20X1.5(custom)。To ensure the foundation and pipeline interface are sealed, first apply sealing tape around the port, and then fasten the transmitter tightly.
- Under some circumstances, pressure tube should be used. Please note：
  - High corrosive and over-heat media should be kept away from transducer.
  - Keep no sediment in the pressure tube.
  - The pressure tube should be as short as possible.
  - The pressure tube should be installed in the place where temperature fluctuates slightly.
- When measuring steam or other high temperature media, the transmitters operating temperature should not over limit. When measuring steam, the pressure tube should be filled with water to keep the transmitter from steam. The connection tube is used to transfer the pressure of the media from pressure port to transmitter. The following conditions may cause error during pressure transfer：
  (1) Leak;
  (2) Friction loss;
  (3) Air in liquid tube;
  (4) Liquid in air tube;

LEADER Electronic Co Ltd - 116, Jianghuali, Jianghua Road, Jiangmen City, GD, PRC
Tel: + 86 750 3379183、3101711 Fax: + 86 750 3388669 BQQ: 72841936
Website: www.leadersensors.com - e-mail: leader@leadersensors.com

Connection

- The power and signal terminal lies in the electrical housing. The signal cable needs not shielding. Do not lead the signal cable through pipe or channel together with the power cable. And keep it away from high-power equipment. SUPPLY is the power supply terminal; CHECK is the current check terminal. (Offered adjust meter or fixed meter)
- The connection lines on the electrical housing should be sealed to prevent water from entering the housing. The signal cable can be put on air connected to ground at any point in the signal circuit, the transmitter's housing can be either connected to ground or not.
- Safe bar must be located in safe place, capacitance and inductance of the connection cable which installed at transmitter do not allow over 0.04 μF and 2mH。



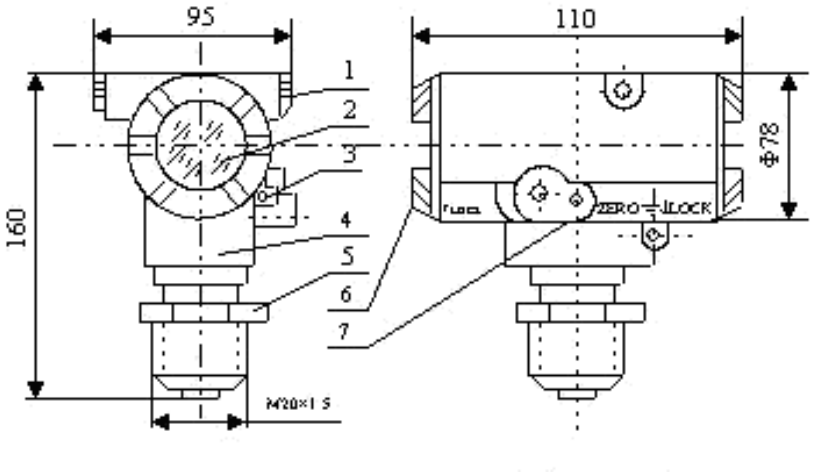
intrinsically safe system connection

- Note：

It do not allow to replace the components for effecting explosion-proof function. The explosion-proof product must be checked in safe place. To maintain the explosion-proof function, please pay attention to the following item：

(1) The lid must be tightened tightly and do not damage the thread；
(2) The sensing elements should be tightened；
(3) The connection holes must be sealed；
(4) Cover and tighten the connection holes；
(5) Do not damage the isolation coating beside the circuit and the connection cable；
(6) The intrinsically safe version must be equipped with safe grid.

Dimensions



note：

1. Nut (both in left side and right side)
2. Vision mirror
3. Vision mirror cover avoid the nut looses (both in left side and right side)
4. Housing
5. Based seat
6. Terminal cover
7. Tiny adjust (adjust zero outside)

Adjustment

- Zero move

  The max limit of LDN800 series pressure transmitter zero move range is 0~80%。

- Range adjustment

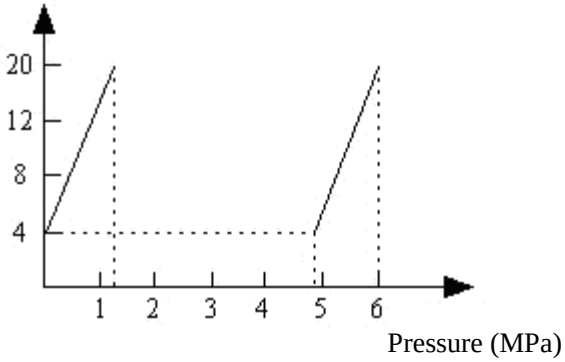
  LDN800series pressure transmitter adjust range is 20~100%：Graph

  Graph 1 zero point can move to 0~80% rated pressure

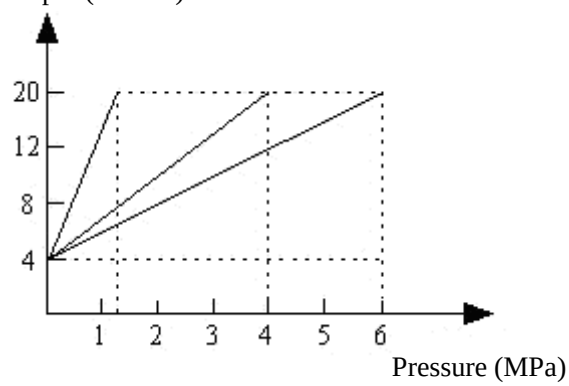
  Graph 2 the range can adjust 20~100%

  Illustrate ：limit pressure 0~6MPa pressure transmitter，the range of zero move is 0~4.8MPa，its adjustment range is 1.2MPa。

Output (mADC)



Output (mADC)



picture1：zero can positive move 0～80% rated range　　picture2：range can adjust 20～100%

- The method of zero point and range adjustment：

LDN800 series pressure transmitter adjust depend on the max measure range without demand ，zero corresponds 4mADC，the upper limit range corresponds 20mADC。

(1) Zero adjustment：

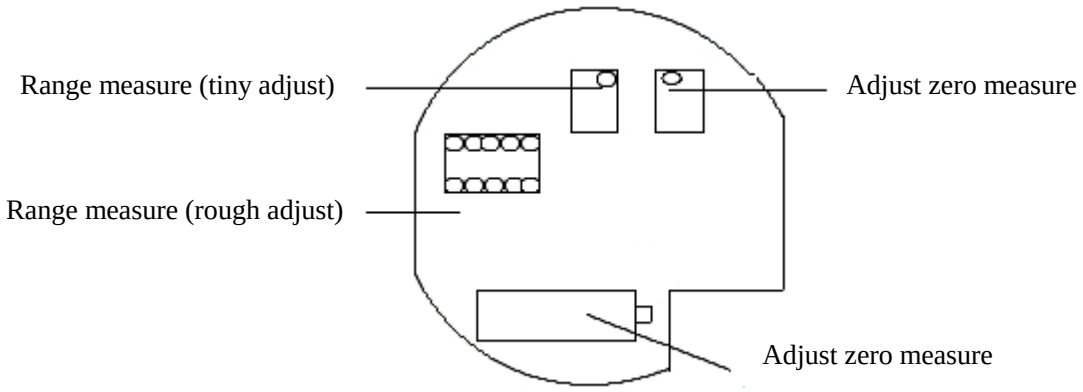
Small range zero adjustment：Adjust the electrometer directly outside

Large range zero adjustment：it need to open mirror , take off the transmitter head, adjust the zero electrometer, so that zero pressure inputted, output is 4mADC。

（2） range adjustment：It needs to open the mirror, take off the machine head, then we can see circuit board.

Small range adjustment：only adjust the electrometer Span。

Large range adjustment：change short circuit place，make the output is nearly 20mADC，then adjust range electrometer, output range is 20mADC。



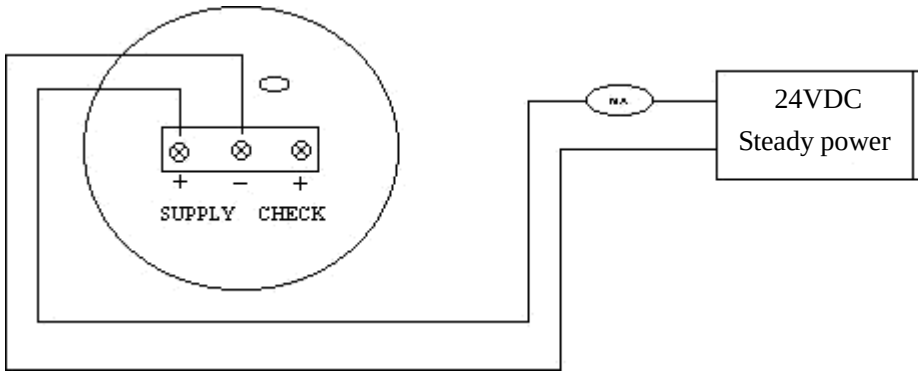
- Response time setting

It sets the normal response time when leave factory, if the consumer demand to relay the response time , they should modify “response time setting” short circuit board (delicacy adjustment).

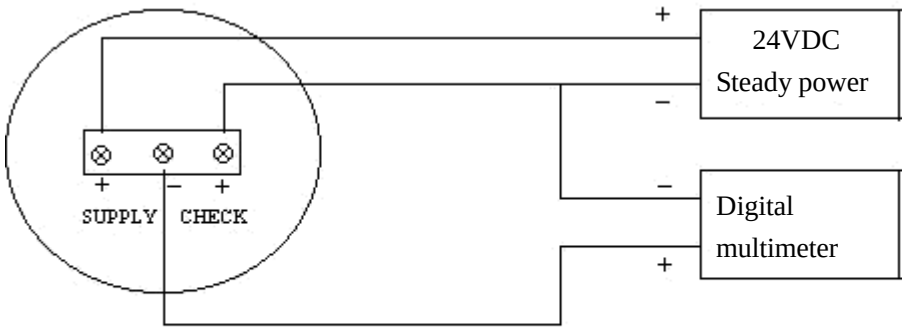
- Linearity modify

It can cross the adjustment “linearity electrometer”，the linearity point is placed the most suitable point when it leave factory. If it lacks non-standard equipment, do not adjust the electrometer.

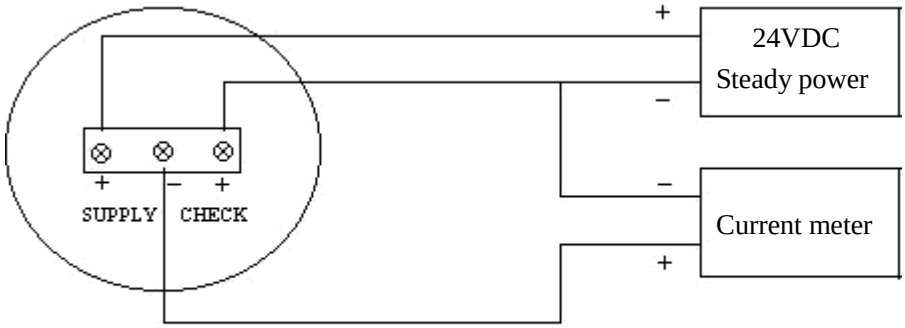
- Principle graph (instrument adjustment)：



4~20mADC connection



0.1~5VDC connection



0~10mADC connection

Maintain

- Summarize：

  LDN800 series pressure transmitter do not owned mechanical parts, free from service. The structure of the pressure transmitter is easy, take down convenience. The base compost：sensitivity parts、circuit board、housing.

- Sensitivity parts do not maintain, it must replace the same type apparatus if it demand (isolation parts or leak oil) after taking down.
- Circuit board check

  （1） The circuit board located inside mirror, turn-on the mirror cover, take off the instrument head, and turn-on root bolt, then take it out..

  （2） It is easy to check circuit board; you just replace the spare board.

- Housing

  The connection terminal is located in the owned hole side, turn-off the cover, you can see the power supply signal terminal, the terminal root at the housing perpetuity. It does not take off. Or the airproof will be destroyed; the structure of the housing explosion-proof is inefficacious.

Type selection

Item	Description
LDN800	Industrial pressure transmitter

Code	Pressure type
A	Absolute pressure
G	Gauge（negative）
S	Sealed

Code	Reference range	Measurement range	
01	1.0kPa	0～500-1000Pa	Non-isolation
02	2.5kPa	0～1.5-2.5kPa	Non-isolation
03	7kPa	0～2.5-7.0kPa	Non-isolation
04	35kPa	0～7.0-35kPa	
05	100kPa	0～20-100kPa	
06	200kPa	0～40-200kPa	
07	600kPa	0～120-600kPa	
08	1MPa	0～0.2-1.0MPa	
09	1.6MPa	0～0.4-1.6MPa	
10	2.5MPa	0～0.5-2.5MPa	
11	4MPa	0～0.8-4.0MPa	
12	6MPa	0～1.2-6.0MPa	
13	10MPa	0～2.0-10MPa	
14	16MPa	0～4.0-16MPa	
15	25MPa	0～5.0-25MPa	
16	40MPa	0～8.0-40MPa	
17	60MPa	0～12-60MPa	

Code	Precision class
A	0.1%FS
B	0.2%FS

Code	Connector
1	M20X1.5 extemal threaded
2	1/2-NPT extemal threaded

Code	Explosion-proof type
N	Normal
I	Intrinsically safe
B	Explosion isolation

Code	Indicator
U	None
M	Pointer
S	LCD

LDN800	G	08	A	I	B	M◄—complete specificatons

Note：

- Accdoring to the selecton when place an order
- Special in special way