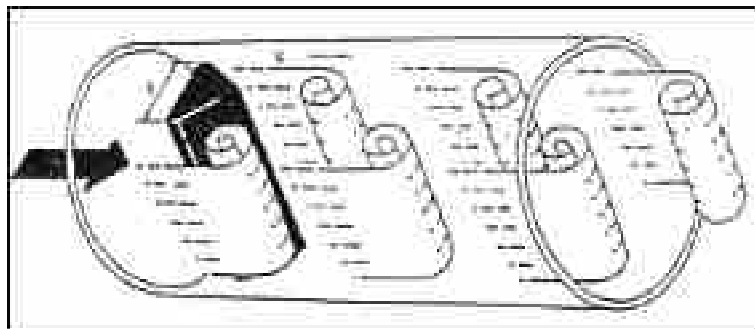




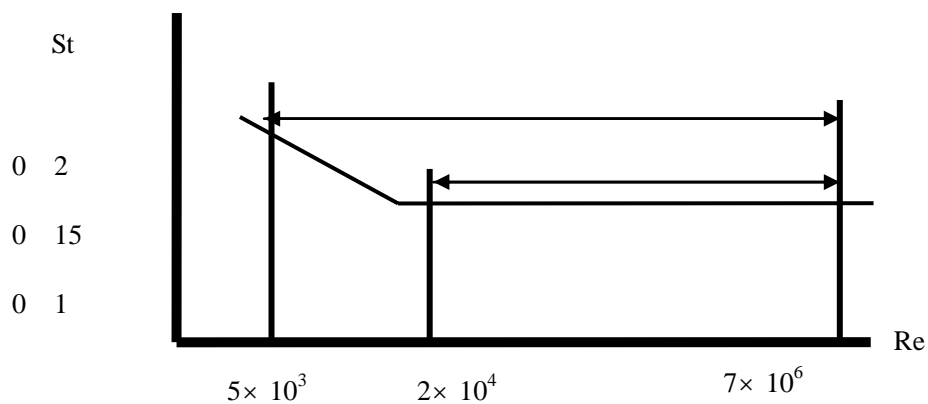
( )



( )

$$f = St \cdot V / (1 - 1.25d/D) \cdot d$$

f  
St  
V  
d  
D-



St 0.17  
 f V  
 Q 3600f/K M= 3600 f/K  
 K 1/m<sup>3</sup> M= Q m<sup>3</sup>/h = kg/m<sup>3</sup> F= Hz

( )

	85%					
( )	-40	+300	350	450		
	1.6Mpa	2.5Mpa	4.0Mpa	4.0Mpa		
	: 1.0 2.0g			0.2g		
	1.0	1.5	2.5			
	8:1	10:1	15:1			
	0.35~7.0m/s		5.0~60.0m/s		6.0~70.0m/s	
		DN15-DN300				
		DN200-DN1500		DN1500		
	304					
	2× 10 <sup>3</sup> ~7*10		1*10~7*10			
	Cd 2.6					
	IP65			IP68		
	EX ia		CT2-T5		Exd BT2-T5	
	-40 ~+55		-25 ~+55			
	90%					
	86~106kPa					
	12VDC	+24VDC	12VDC	+24VDC	4-20mA	3.6V
	2~3000Hz		1V	5V		
	4-20mA		300	500		

## 3.1

- 1
- 2
- 3

## 3.2

JB/T9249-1999

- 1

## VNLUGB/E

VNLU					
G					
	B				
	E				
	1				
	2				
	3				
	4				
	2				
	3				
	4				
	02			DN25	
	...			...	mm
	30			DN300	
	—	P			
		B			
		1			
		2			4 20mA
		3			RS-485
		4			
LUGE2405-P2		DN50,		4 20mA	

## 2.

DN mm	25	32	40	50	65	80	100	125	150	200	250
	02	03	04	05	06	08	10	12	15	20	25
DN mm	300	350	400	450	500	600	700	800	1000	1200	1500

	30	35	40	45	50	60	70	80	A0	A2	A5
--	----	----	----	----	----	----	----	----	----	----	----

3.3.

3.4.

Q	$Q = Q_0 \cdot \sqrt{\frac{P}{P_0}}$		$Q$ $m^3/h$ $Q_0$ $m^3/h$ $P$ $Kg/m^2$ $P_0 = 1.205 Kg/m^2$
$Q_v$	$Q_v = Q_0 \cdot \frac{v}{v_0}$ $v = m/s$		$Q_v$ $m^3/h$ $Q_0$ $m^3/h$ $v$ $m^3/s$ $v_0 = 1 \times 10^{-6} m^2/s$
	$Q = \frac{0.101}{0.10132+P} \cdot \frac{273.15+T}{273.15} \cdot Q_N$		$P$ $Mpa$ $T = 273.15 + T$ $Q_N$ $N m^3/h$
	$Q_N = \frac{G}{\rho}$		$G$ $Kg/h$ $\rho$ $(m)$
$Q_{re}$	$D = \frac{Re \cdot v}{V}$	$2 \times 10^4 \leq Re \leq 7 \times 10^6$	$Re$ $(m/s)$ $V$ $(m/s)$
	$V = \frac{4Q}{3600 \cdot \pi \cdot D^2}$	$0.37 \sim 7.0 m/s$ $4.0 \sim 60.0 m/s$	

3.5.

$$Q = 1.5 \cdot Q_0 \cdot \sqrt{\frac{t/m^3}{1.205 kg/m^3}}$$

$$Q_{mi} = 1.5 \cdot 560 \cdot 3.0239 \cdot 10 \cdot \sqrt{\frac{1.205/3.0239}{1.205 kg/m^3}} = 1.947 t/h$$

DN200      1.8Mpa      300  
 1      DN200      560-6000m<sup>3</sup>/h      =3.0239kg/m<sup>3</sup>

$$Q_{max}=1.5 \cdot 4000 \cdot 3.0239 \cdot 10 \cdot \sqrt{1.205/3.0239}=11.454(t/h)$$

3.6.

$$=C_d \cdot V^2/2g=1.29 \cdot V^2 \quad 4.2 \quad Pa \quad 1Kpa=102.156mmH_2O$$

$$kg/m^3 \quad Cd \quad 2.6 \quad V \quad m/s$$

3.7

$$+1.3 \quad o \quad (4.3 \quad )$$

$$MPa \quad MPa$$

$$o \quad MPa$$

(mm)				
	(m <sup>3</sup> /h)	(Hz)	(m <sup>3</sup> /h)	(Hz)
15	1.2-6	118-590	4~28	400~2700
20	1.5-10	56-374	6~40	224~1500
25	2 16	41 330	8~50	170 1030
40	2.5~25	12 120	25~180	120 870
50	3.5~40	9 105	35 300	92 735
65	7.5~70	9~83	50~500	59~588
80	12 130	7 80	80 800	50 493
100	18~160	6 49	120 1200	36 370
125	25~250	4 ~ 40	180~1800	30~300
150	50~400	4 38	320 2800	31 270
200	70~700	3 30	560 6000	22 240
250	120~1200	2.5 25	890 8000	18 170
300	200~2000	2.4 24	1360 12000	17 150
(300)	200~1800	11 98	1560 15000	83 830
(400)	350 3000	11 92	2750 27000	83 836
(500)	500 4000	10 79	4300 43000	84 834
(600)	700 5600	9.5 76	6200 61000	83 830
(800)	900 7200	7 55	11000 110000	83 829
(1000)	1300 12000	6.3 56	17000 170000	83 820
>(1000)				

(300) (1000)

1  
2  
3  
4  
5  
6  
1

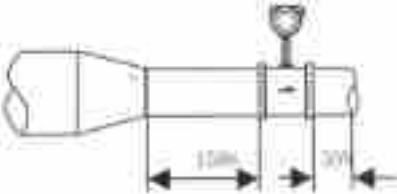
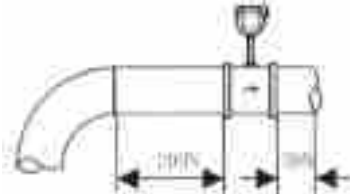
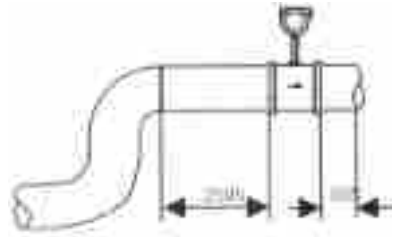
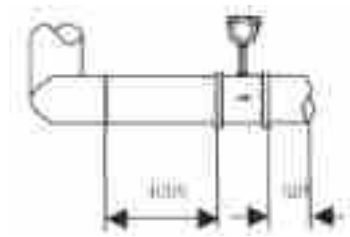
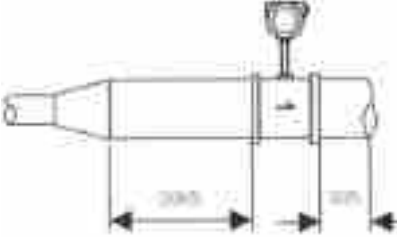
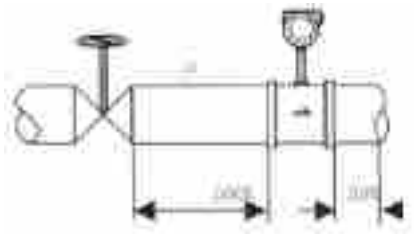
2D

U

( )

DN

:mm

			
90		90	
		( )	

( )

2  
3  
4  
5  
6

(a) 2D

(b)

7

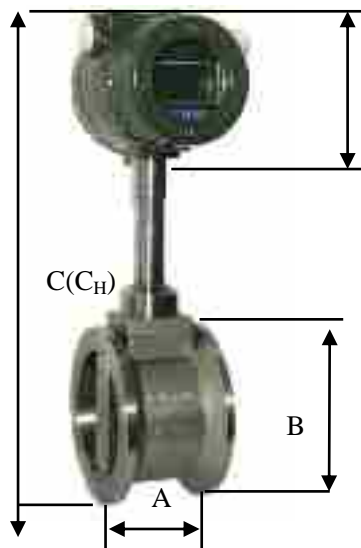
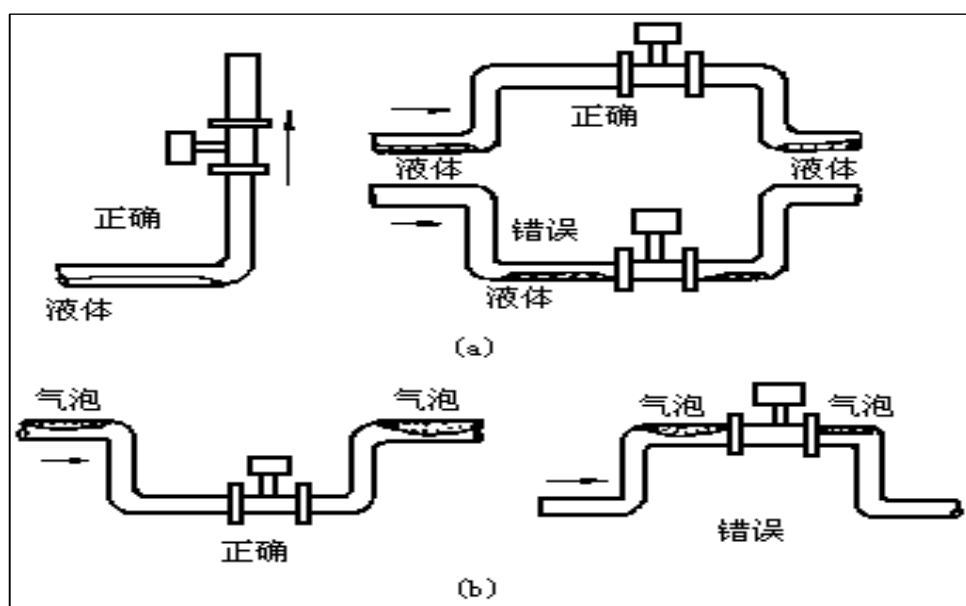
8

9

10 .

10

70



mm	A	B	C	C <sub>H</sub>
25	69	55	305	355
40	85	80	330	380
50	86	90	340	390
65	85	105	355	405
80	89	120	370	420
100	92	140	390	440
125	93	168	418	468
150	98	194	445	494
200	103	248	498	548
250	110	300	550	600
300	130	350	600	650





1

2

3

4

10-15

5

5

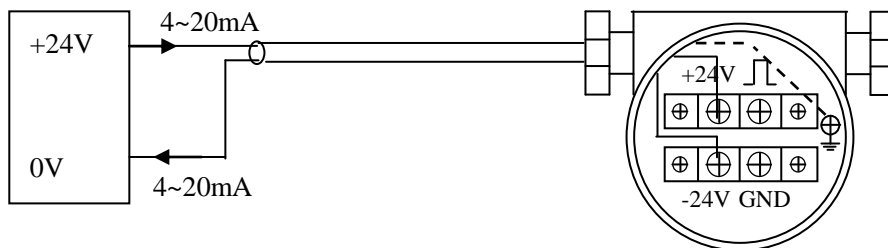
( )

DC24V DC12V



( )

4~20mA  
4~20mA DC24V



( )

RS-485  
RS-485 DC24V



( )

VNLUGB/E

LB978

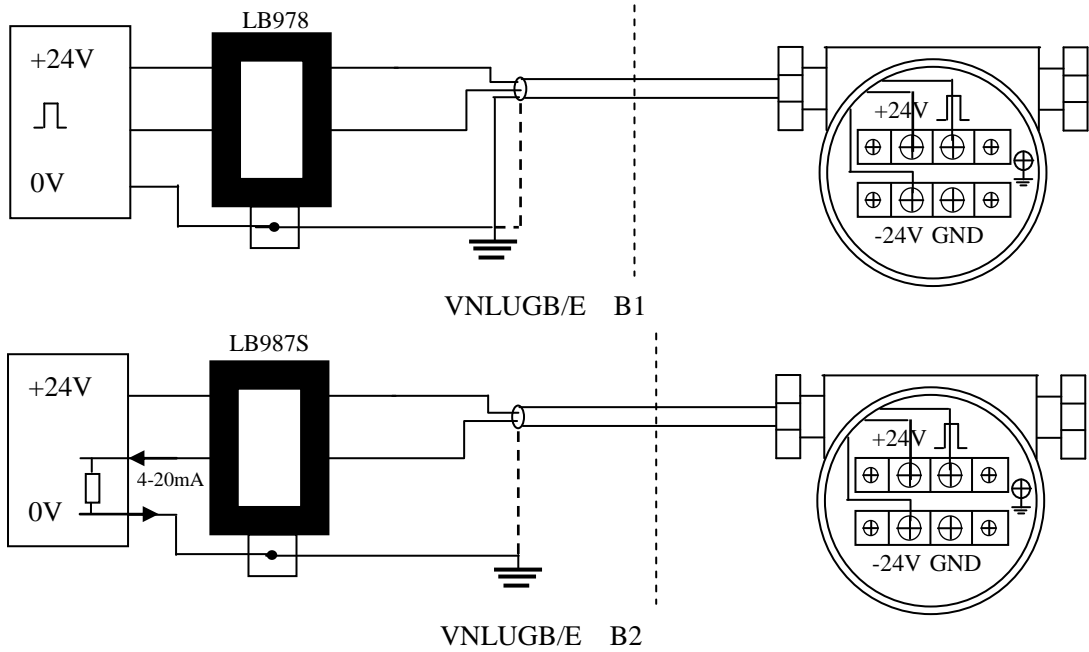
VNLUGB/E

4~20mA

LB987S

Ex ia CT2-CT5

/



1

2

1

1. " S"
2. " E"
3. " +"
4. " <"

10

2

- " +"
- " E"
- " +"
- " <"

" 0000"

2010

1. " +"
2. " E"

0000

3. " + " 2 2
4. " < "
5. " + " 0 1 " 2010" " E" " S"

" E" " +"

" E"

" +"

" E"

2010

1			$m^3/h$ $m^3/m$ $l/h$ $l/m$ $t/h$ $t/m$ $kg/h$ $kg/m$
2			
3			P/m <sup>3</sup>
4			$4 \sim 20mA$ $0$
5			kg/m <sup>3</sup>
6			
7			$kPa$ $0.0$ $0$
8			
9	485 Address	RS485	RS485

			01~64
10		3s	1~30
11			YES " E"

4 1/2/3/4 1/2/4/8 ON 1-15

GB=1-15 4-8 300K/ 100K—4K7 , 1\_15  
 SB=1-15 4-8 300K/ 100K—4K7 1\_15

SB

GB

TP0 TP1 K1 GB TP2 K2 K3  
 TP3 SB

K2 K3 K1

涡街流量计放大器参数设置参照表

口径 DN	液体					气体				
	GB	SB	K1-ON	K2-ON	K3-ON	GB	SB	K1-ON	K2-ON	K3-ON
15	3	3	1, 3, 5, 7	5	3	3	3	1, 2, 5, 6	1	1
20	3	3	1, 3, 5, 7	5	3	3	3	1, 2, 5, 6	1	1
25	3	3	1, 3, 5, 7	4	4	3	1, 3	1, 2, 5, 6	1	1
40	1	3	4, 8	8	4	2	3	1, 3, 5, 7	2	2
50	1	3	4, 8	8	4	2	3	1, 3, 5, 7	2	3
65	1	3	4, 8	8	4	2	3	1, 3, 5, 7	2	3
80	1	3	4, 8	8	5	2	3	1, 3, 5, 7	3	1, 3
100	1	3	4, 8	8	5	2	3	1, 3, 5, 7	3	1, 3
125	1	3	2, 4, 6, 8	8	6	1, 3	1, 3	3, 7	4	2, 3
150	2	3	2, 4, 6, 8	8	4, 6	1, 3	1, 3	3, 7	4	4
200	3	3	2, 4, 6, 8	8	4, 5, 6	2, 3	2, 3	4, 8	5	4
250	3	3	3, 4, 7, 8	8	4, 5, 6	2, 3	2, 3	4, 8	6	4
300	3	3	3, 4, 7, 8	8	7	2, 3	2, 3	4, 8	6	5

ON

OFF

## Modbus485 ( )

```

:9600
:
:8
:1

      +      03+      01A0+      0011+      CRC

      11H
1      H      b      0~255
2      03H
3 :      11H
4
5 6 7
      16      ACCBHI bit15      ACCBLO      EXPB
8 9 10      ( )
11 12 13      MPa( )
14 15 16      Kg/m³( )
17 18 19 20
      BCD      17 X8 ,X7 ,18 X6 ,X5 ,19 X4, X3 ,20 X2, X1
      X2 X1
21 CRC
22 CRC

      10      0AH
0A 03 01 A0 00 11 85 63      0A      03 01 A0 00 11      85 63 CRC
0A 03 11 30 00 00 0A 64 00 07 40 00 01 7D 00 0A 00 07 29 01 BF 17      22
4 30      t/h,      t      11 12 13
40 00 01      1.000MPa      17 18 19 20      00 07 29 01      7290.1t      21,22
CRC

      1 2      485      1      b 00000      0 255      1
      b

      BCD
  
```

--	--

0	m <sup>3</sup> /h	m <sup>3</sup>	0	
1	Nm <sup>3</sup> /h	Nm <sup>3</sup>	1	
2	Kg/h	Kg	2	
3	t/h	t	3	
4	Km <sup>3</sup> /h	Km <sup>3</sup>		
5	NKm <sup>3</sup> /h	NKm <sup>3</sup>		
23	2	Kg/h	Kg	3