

PRODUCT SYNOPSIS

**Variable-area Flow-meter
with metallic measuring tube**



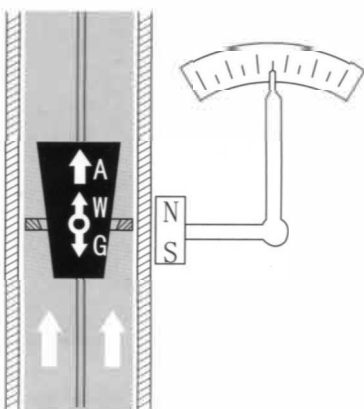
LZ Series Variable-area Flow-meter With Metallic Measuring Tube has the characteristics of simple construct, work reliable, widely used high precision. Convenient installing. Compared with the Variable-area Flow-meter with Glass Tube, this series has the characteristics of high-pressure proof, high-temperature proof safety, ocular reading etc. It can be suitable to measure the opaque medium and corrosive medium. The tube and the flange uses the material of stainless steel(1 Cr 1 9n9Ti or 31 6L). The orifice, floater of normal series uses material of Stainless steel, The orifice, float and the tube lining of Anticorrosion series uses the anticorrosion material of PTEF(Teflon).

NOTE:our company also produces DN4~DN1 00 all series Variable-area Flow-meter With Glass Tube

MEASURE PRINCIPLE

LZ Series Variable-area Flow-meter With Metallic Measuring Tube is the Variable-area Flow-meter.As the fluid flow upwards in the metal tube, the floater moves upwards to a certain position where the lift force and the gravitational force meets balance,at the moment,the circulation area between the float and the orifice(or the cone tube) keeps fixed. The circulation area is in proportion to the height of the floater, it means the height of the floater represent the volume of the flow. When the floater moves up and down, it transmit its position to the indicator outside in the form of Magnetic-coupling, in this way make the needle of the indicator moves following the movement of the floater, and by using the cam board to show the value of flow linearly on the

Electricity remote transmit means so far as the needle of the indicator pointed out the value, the flow-meter change the value into standard electric current signals of 4~20mA or 0~1 0mA accurately using angle displacement sensor and electric circuit.





TECHNIQUE PARAMETER

instrument type	LZZ LZD Series
flow rane	Water 2.5~100000L/h(详见下表) Air 0.07~3000m3/h(see form as follow)
range ration	DN≤100mm:10:1 DN>100mm:5:1
accuracy	Standard type: +2.5 5%FS,the special order:can be up to ± 1 .0%FS
maximum working pressure	DN15, DN25, DN40, DN50:4.0MPa DN80, DN100, DN150:1.6MPa
medium temperature	Normal of H1: -40°C~-1 00°C, High temperature type H2: -80°C~-250°C
environment temperature	-25°C~+55°C
conjunction way	Flange connection(flange standard:refer to GB9115-88, JB82-59), JB82-59, can be made by the useR'S requirement.
explosion-proof grade	Exib II CT4 Install the safe grid LB987S Explosion-proof number of certificate GYB00563
protection grade	IP65
viscidify	DN15:≤5mpa.s, DN25~DN150:≤250mPa.s
products executive standard	JB/T6844-1993

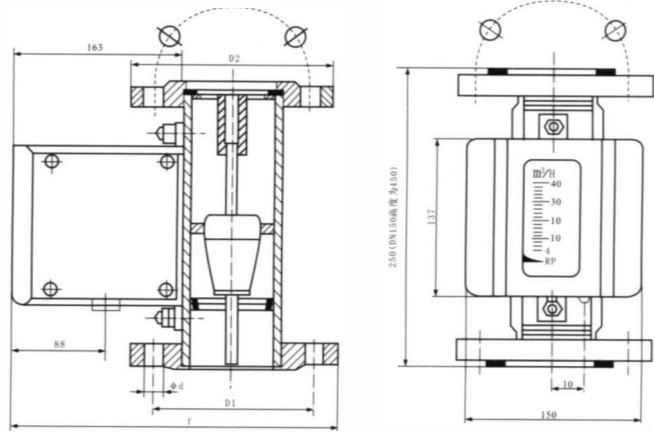
SPECIFICATION

Caliber (mm)	Work number	flowrange				pressure loss kPa		
		Water L/h*		Air m3/h*		Water		Air
		normal type	rot'-proof type	normal type	rot'-proof type	normal type	rot'-proof type	
15	1 A	2.5~25	--	0.07~0.7		6.5	-	7.1
	1 B	4.0~40	2.5~25	0.11~1.1		6.5	5.5	7.2
	1 C	6.3~63	4.0~40	0.18~1.8		6.6	5.5	7.3
	1 D	10~100	6.3~63	0.28~2.8		6.6	5.6	7.5
	1 E	16~160	10~100	0.48~4.8		6.8	5.6	8.0
	1 F	25~250	16~160	0.7~7.0		7.0	5.8	10.8
	1 G	40~400	25~250	1.0~10		8.6	6.1	10.0
	1 H	63~630	40~400	1.6~16.0		11.1	7.3	14.0
25	2 A	100~1000	63~630	3~30		7.0	5.9	7.7
	2 B	160~1600	100~1000	4.5~45		8.0	6.0	8.8
	2 C	250~2500	160~1600	7~70		10.8	6.8	12.0
	2 D	400~4000	250~2500	11~110		15.8	9.2	19.0
40	4 A	500~5000	300~3000	12~120		10.8	8.6	9.8
	4 B	600~6000	350~3500	16~160		12.6	10.4	16.5
50	5 A	630~6300	400~4000	18~180		8.1	6.8	8.6
	5 B	1000~10000	630~6300	25~250		11.0	9.4	10.4
	5 C	1600~16000	1000~10000	40~400		17.0	14.5	15.5
80	8 A	2500~25000	1600~16000	60~600		8.1	6.9	12.9
	8 B	4000~40000	2500~25000	80~800		9.5	8.0	18.5
100	10A	6300~63000	4000~40000	100~1000		15.0	8.5	19.2
150	15A	20000~100000	--	600~3000		19.2	--	20.3



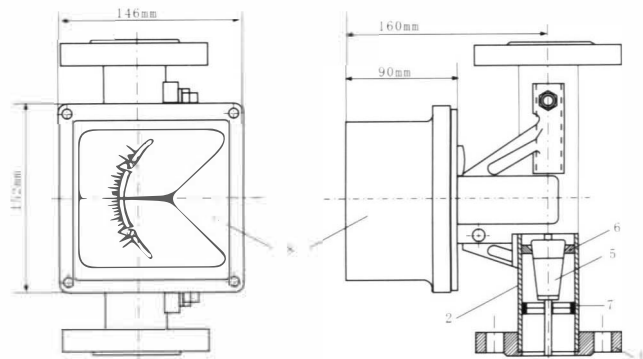
DIMENSIONS mm

caliber	D1	D2	Board Number - ϕ D	f
15	65	95	4- ϕ 14	224
25	85	115	4- ϕ 14	245
40	110	150	4- ϕ 18	266
50	125	160	4- ϕ 18	285
80	160	195	8- ϕ 18	306
100	180	215	8- ϕ 18	336
150	240	280	8- ϕ 23	386



MAIN CONSTRUCTION AND DIMENASIONS

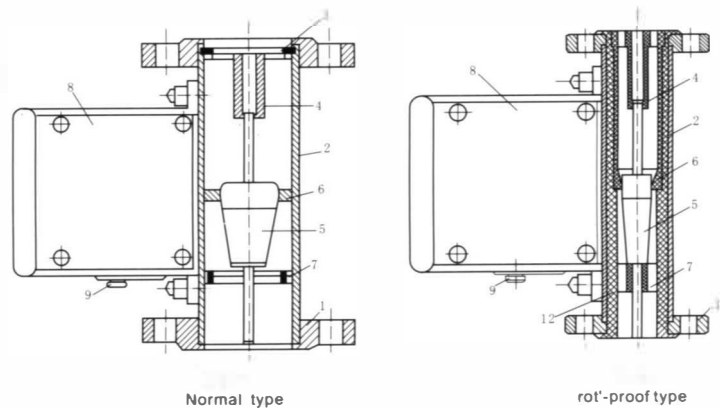
constructure: every instrument including measure tube and instrument sensing indicator



M10 indicator

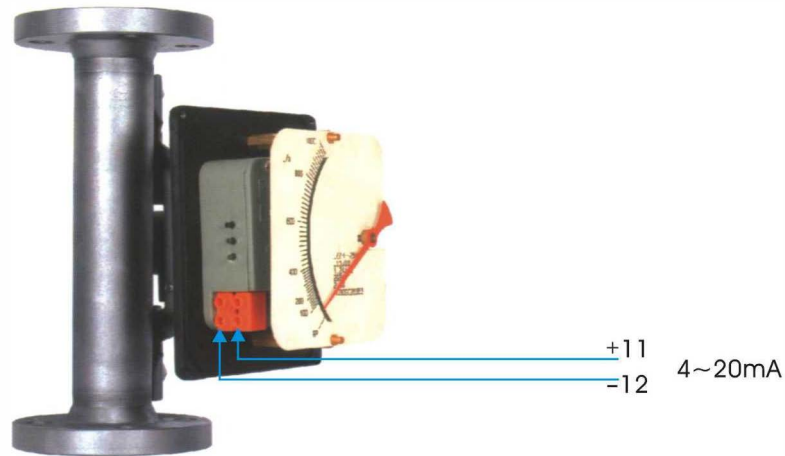
(stainless steel material. Especially for chemical industry)

1. flange
2. tube body
3. fasten and enclosed circle
4. floater stop shaft
5. floater
6. orifice hole(or cone tube)
7. floater leader panel
8. indicator
9. signal line connection
10. PTFE(Teflon)





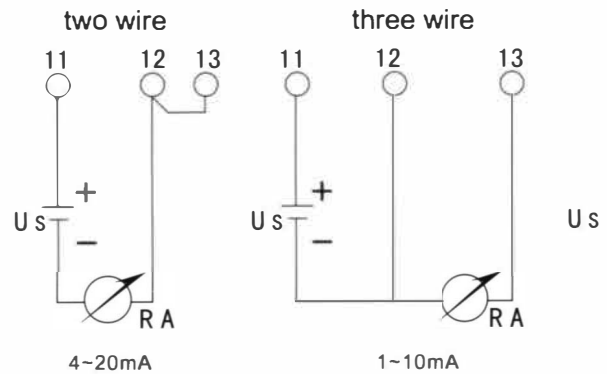
M10 INDICATOR



ELECTRICITY REMOTE TRANSMIT PERFORMANCE AND WIRING DIAGRAM

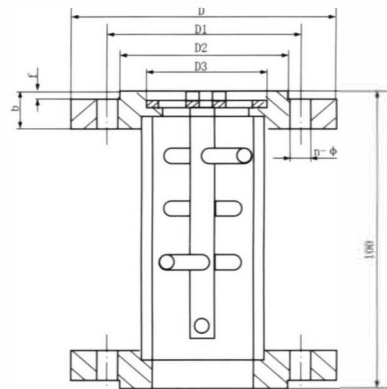
power supply: 24V DC
 output signal: two wire 4~20mA
 three wire 0~10mA
 maximum loaded: 750
 Linear accuracy: $\pm 1\%$
 signal line connection: M20 \times 1.5

US-power supply 24VDC
 RA-load electricity resistance



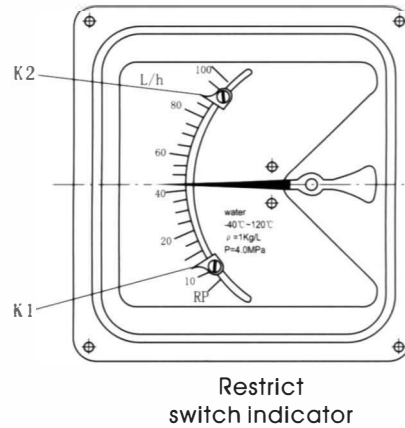
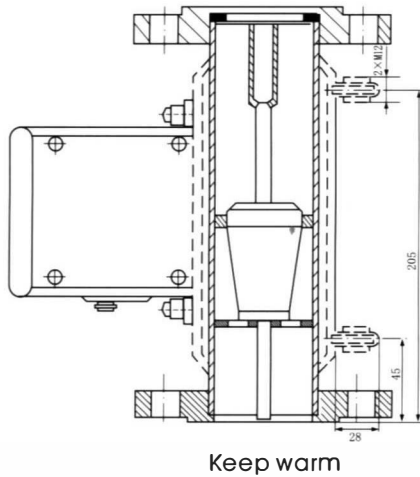
DIMENSIONS OF MAGNETISM FILTER

caliber	D	D1	D2	D3	b	f	n- ϕ
15	$\phi 95$	$\phi 65$	$\phi 46$	$\phi 30$	17	3	4- $\phi 14$
25	$\phi 115$	$\phi 85$	$\phi 65$	$\phi 40$	17	3	4- $\phi 14$
40	$\phi 150$	$\phi 110$	$\phi 84$	$\phi 50$	18	3	4- $\phi 18$
50	$\phi 160$	$\phi 125$	$\phi 90$	$\phi 58$	19	3	4- $\phi 18$
80	$\phi 195$	$\phi 160$	$\phi 132$	$\phi 104$	19	3	8- $\phi 18$



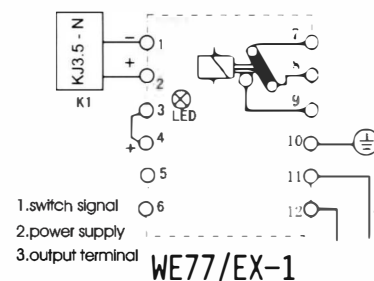
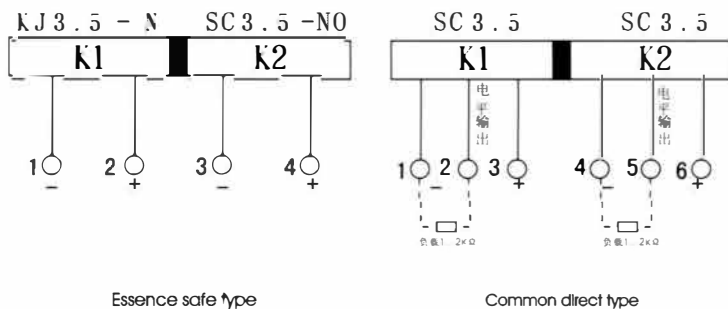
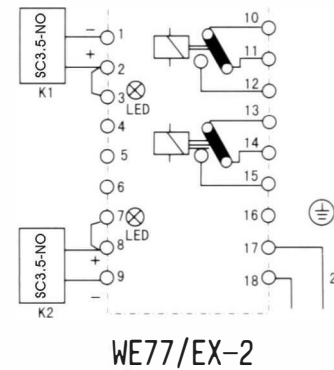


KEEP WARM



RESTRICT SWITCH

restrict switch	SC3.5-N0 (Essence safe type)	SC3.5 (普通直接型) (Common direct type)
rated voltage	8V DC	24V DC
valid area open	$\geq 3\text{mA}$	
valid area closed	$\leq 1\text{mA}$	
induction	160 μH have the relation with dangerous occasion	
electric capacitance	20nF	
environment temperature	25°C ~ +100°C (maximum electric signal output 60°C)	
protection type	Ip65	



One or two location limited switch as can be installed in the indicator, when the flow arrives at the limited value, the alarm switch will send the alarm signal. The flow control figure was set when the alarm switch was made. Customer can also open the cover of the MI0 indicator, set up corresponding position of K1, K2, to your own will. SC3.5 Limit Location Switch should use together with the transistor amplifier (WE77/EX1.2 order alone) in order to fits the explosion-proof type. SC3.5-N0 Limit Location Switch is common direct type, power supply of 24VDC, three wire direct export about 23.5V electric signal to the PLC regulating system.



MODEL SELECTION AND INSTRUCTION

Design selection and basic code

LZ

Z	scene indicator
D	electricity remote transmit
H	
LA	
AA	
S	
M	
Measure tube materials selection	
R1	Stainless steel 1Cr18Ni9Ti
R0	Stainless steel 0Cr18Ni12Mo2Ti
F	PTFE (Teflon)
Indicator pattern	
M7	Pointer linearly indicate instantaneous flow
M10	Pointer non-linearly indicate instantaneous flow
Remote transmit changer selection	
Es1 electricity remote transmit:0-10mA DC three wire	
Es4 electricity remote transmit:4~20mA DC two wire	
flameproof type	
Essence safe type with Connection equipments r, LB987S of equipment. anti-blast grade Exib II CT4	
Medium stage selection	
A	Air(Gas antivibrator of apolegamy)
L	Liquid
Measure tube special requirement	
T	warmkeeper
Alarm Selection	
K1	SC 3.5-N0
K2	SC 3.5-N0