ELECTRO MAGNETIC FLOW METER

1.SUMMARY

The Electromagnetic Flowmeter can be used to accurately measure the flowrate of liquids, paper pulp, slurry and mineral slurry which has an electrical conductivity greater than 5μs/cm. CN-100 is a flow measurement system in a compact design which integrates the primary and signal converter. The CNT-2 is a flow measurement system consists of a flowmeter primary and remote mounted converter.

MODEL	CN-100
TYPE	COMBINED TYPE

MODEL	CNT-2
TYPE	SEPARATE TYPE

CONVERTER

BODY(SENSOR)

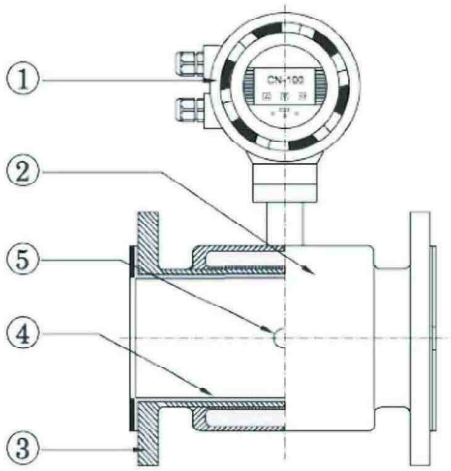
ELECTRO MAGNETIC FLOW METER

2.SPECIFICATIONS

MODEL	CN-100	CNT-2
Type	Combined Type	Separate Type
Size	10mm(3/8″)-1000(24″)	
Process connection	Flange type-Standard JIS10K RF (Option.ANSI 150#, DIN16BAR)	
Measuring range	0.3m/s-10m/s	
Flow velocity	0.3m/s-10m/s	
Accuracy	±0.5F.S(0.3m/s-10m/s)	
Fluid temperature	Teflon(-10°c~160°c) Hard rubber(-10°c~60°c)	
Ambient temperature	-10°c~60°c	
Conductivity	≥5μs/cm	
Power supply	AC 85-250V(50~60Hz) DC 24V - (Option)	
Power consumption	15VA	
Display	LCD Display Flowrate : 5-digit Display Total : 9-digit Display With Back light	
Output	Analog : 4-20mA(isolated) Pulse : DC 15V(Open collector pulse) Digital : RS485-(Option)	
Protection class	IP65, IP68(OPTION), Ex-proof(OPTION) : Exd IIC T5	
Special feature	①Self check ②Empty pipe ③Reverse flow enable ④Data logging ⑤Error message	
Electrode signal cable		Standard length 10m(max. 30m)

3.STANDARD MATERIAL

No.	Description	Material	
		15A ~2OOA	250A ~100A
1	Head	Cast Aluminum	
2	Body	Sus304	Sus304
3	Flange	Carbon Carbon	
4	Lining	PTEE(Teflon) / Hard rubber	
5	Electrode	SUS316L Option : Platinum Titanium Tantalum Hastelloy-C	



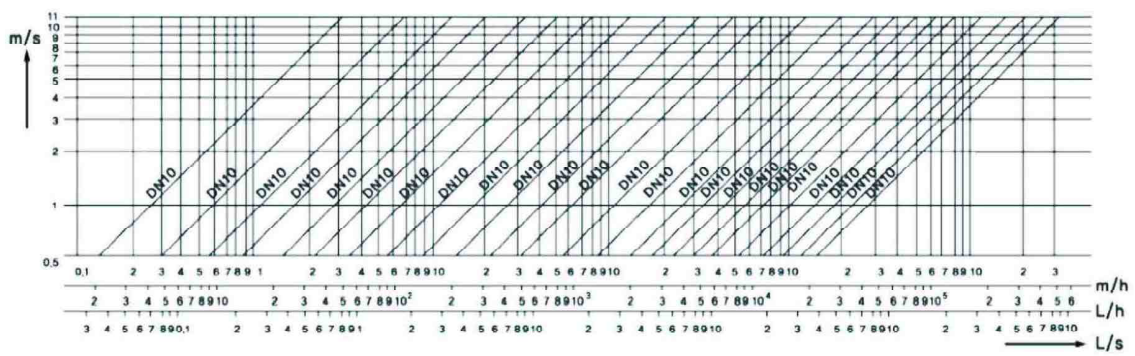
4.Measuring Range

In the normal industry application, it is better to set the measured medium speed as 2~4m/s, under the special situation, the minimum speed should be more than 0.2m/s and maximum speed less than 8m/s, if there are solid granules in liquid, the usual speed should be less than 3m/s for purpose to avoid the over-attrition between lining and electrical poles. For viscid liquid, the speed can choose as 2m/s, the fast flow speed makes for the automatic elimination of obstructive substances glued on poles, therefore improve the inspection's preciseness.

Measuring Range

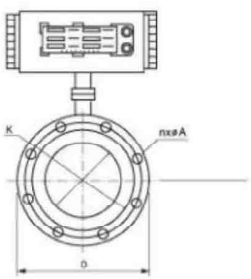
	Flow range			
	Minimum		Maximum	
	Velocity (m/s)	Flow rate (m^3/h)	Velocity (m/s)	Flow rate (m^3/h)
10A	0.3	0.08	10.0	2.82
15A		0.19		6.35
20A		0.34		11.29
25A		0.53		17.64
32A		0.87		28.91
40A		1.36		45.71
50A		2.12		70.58
65A		3.58		119.28
80A		5.43		180.68
100A		8.48		282.32
125A		13.25		441.12
150A		19.08		636.21
200A		33.91		1129.27
250A		52.99		1764.48
300A		76.30		2540.86
350A		103.86		3458.39
400A		135.65		4517.08
450A		171.68		5716.93
500A		211.95		7057.94
600A		305.21		10163.43
700A		415.42		13833.55
800A		542.59		18068.31
900A		686.72		22867.71
1000A		847.80		28231.74
1200A		1220.83		40653.71
1400A		1661.69		55334.21
1600A		2170.37		72273.25
1800A		2746.87		91470.84
2000A		3391.20		112926.96

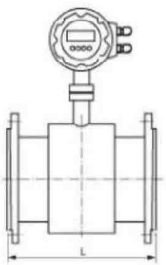
Graph Illustration Of Diameter, Flow Speed And Volume OF Flowmeter



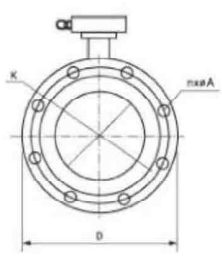
5.CN-100 External Dimension For Intergration And Partial Installation

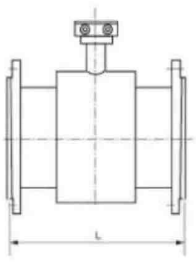
JIS10K	Working Pressure (Bar)	L	D	K	n-Ø A	Intergration weight(kg)	Partial Installation Weight(kg)
10	40	200	90	65	4 – Ø 15	6	4
15		200	95	70	4 – Ø 15	6	4
20		200	100	75	4 – Ø 15	6	4
25		200	125	90	4 – Ø 19	7	5
32		200	135	100	4 – Ø 19	9	7
40		200	140	105	4 – Ø 19	10	8
50		200	155	120	4 – Ø 19	12	10
65		200	175	140	8 – Ø 19	17	15
80		200	185	150	8 – Ø 19	17	15
100	16	250	210	175	8 – Ø 19	22	20
125		250	250	210	8 – Ø 23	24	22
150		300	280	240	8 – Ø 23	35	33
200	10	350	330	290	12 – Ø 23	45	43
250		400	400	355	12 – Ø 25	84	82
300		500	445	400	12 – Ø 25	102	100
350		500	490	445	16 – Ø 25	123	121
400		600	560	510	16 – Ø 27	147	145
450		600	620	565	20 – Ø 27	212	210
500		600	675	620	20 – Ø 27	229	207
600		600	745	730	24 – Ø 33	252	250
700		700	905	840	24 – Ø 33	352	350
800		800	1020	950	24 – Ø 33	462	460
900		900	720	1050	28 – Ø 33		550
1000	6	1000	1235	1160	20 – Ø 39		680

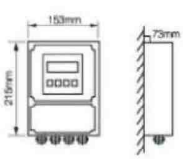




Intergration installation type





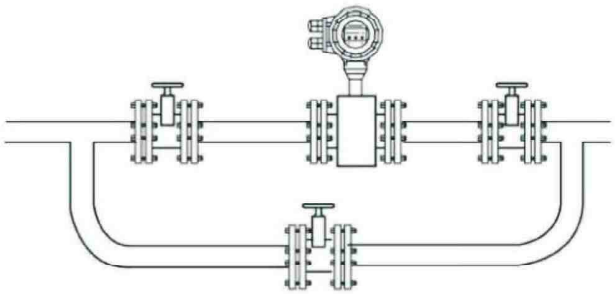
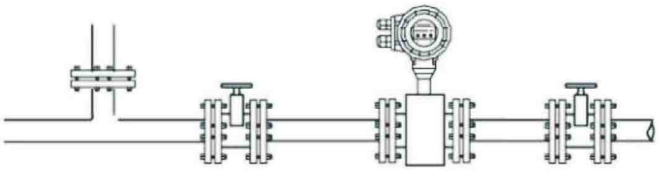
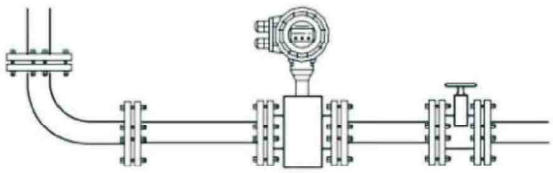
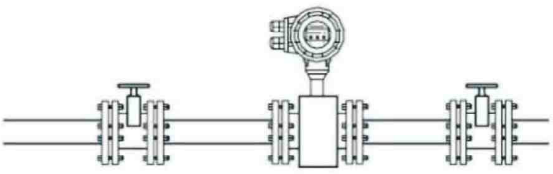


Partial installation type

6.Odering Code

MODEL	SPECIFICATION	DESCRIPTION
CN-100		COMBINED TYPE
CNT-2		SEPAXRATE TYPE
	METER SIZE	
	1	10A(3/8")
	2	15A(1/2")
	3	20A(3/4")
	4	25A(1")
	5	32A(1-1/4")
	6	40A(1-1/2")
	7	50A(2")
	8	65A(2-1/2")
	9	80A(3")
	10	100A(4")
	11	125A(5")
	12	150A(6")
	13	200A(8")
	14	250A(10")
	15	300A(12")
	16	350A(14")
	17	400A(16")
	18	450A(18")
	19	500A(20")
	20	600A(24")
	21	700A
	22	800A
	23	900A
	24	1000A
	CONNECTION FLANGE STANDARD	
	A	JIS 10K
	B	JIS 16K
	C	JIS 20K
	D	ANSI 150#
	E	ANSI 300#
	F	DIN PN16
	G	Other
	ELECTROD MATERIAL	
	A	316LSS
	B	Ti(titanium)
	C	Pt-Ir(platinum irdium)
	D	Ta (tantalum)
	E	Hastelloy C
	F	Other
	GROUNDING RING MATERIAL	
	A	316SS
	B	316LSS
	C	Ti(titanium)
	D	Ta (tantalum)
	E	Pt-Ir(platinum irdium)
	F	Hastelloy C
	N	None
	LINING MATERIAL	
	A	PTFE
	B	HARD RUBBER
	EXCITATION AND SIGNAL CABLE	
	A	Not provided
	B	30m Cable provided
	C	Other
	FLOW AND CALIBRATION VELOCITY RANGE	
	A	0.3 to 10m/sec(Standard range calibration)

7.Drawing Installation

By Pass Line	
"T" Bow Line	
90 ° C Bend Line	
Horizontal Straight Line	
Reduction & Extension Line