

Tri-clamp Electromagnetic Flow Meter





Description

QTLT/T tri-clamp magnetic flow meter is designed for sanitary applications, size is DN15-DN200, the sensor is SS304 or SS316 and lined with PFA. With tri-clamp, the magnetic flow meter can be installed and torn down easily to clear, it meet the strict requirements of food-processing and pharmaceutical industries.



Industries



Food Processing CIP/SIP



Industries Process or Industry



Filling and metering of infusion products such as saline and glucose water.



Filling and metering of liquid foods such as vegetable juice, juice, beer.



Pharmaceutical Industry



Food and Beverage Industry



Features

- Tri-clamp electromagnetic flow meter is easy to be installed and dismantled.
- It adopts harmless food grade stainless steel as raw material, so it can contact with food directly.
- It is easy to clean, customer just need open the tri-clamp and dismantle the flow meter.
- It has current output and pulse output for connecting with PLC or other devices. And user can also read flow measurement by RS485/HART/Profibus.
- Stainless steel material has long service life, and it can be used to measure most of drinks.

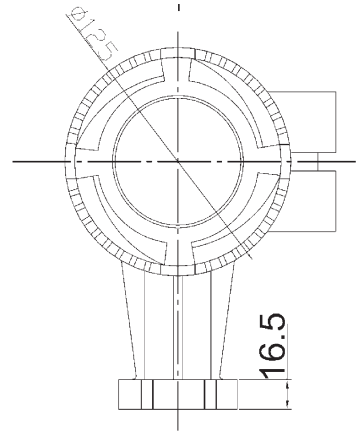
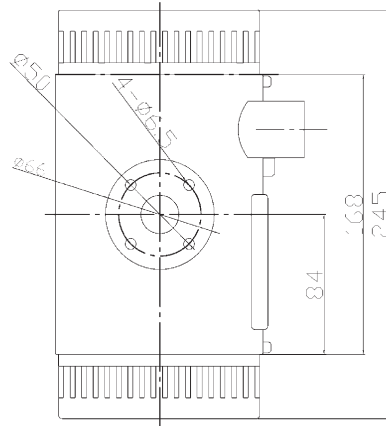


Technical Data

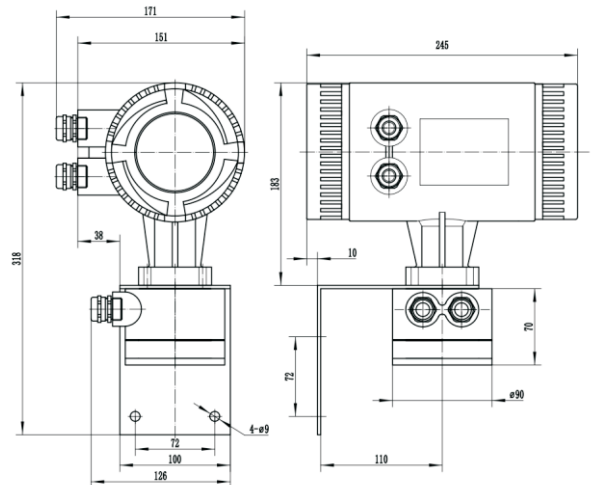
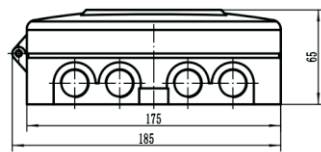
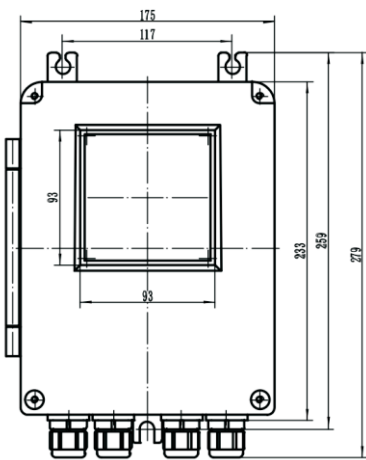
Size	DN15-DN200 (1/2"-8")	
Accuracy	±0.5% of reading at flow rate ≥ 0.5m/s, ±0.2% optional at flow velocity ≥ 0.5m/s	
Velocity	0.1~15 m/s	
Repeatability	≤0.17%	
Structure	Compact / remote, cable length 10m standard, 100m max	
Conductivity	> 5 μS/cm, demineralized water > 20 μS/cm	
Protection Grade	Transmitter: IP65 standard, IP67 optional	
	Sensor: IP65 std, IP68 (submersible, only available for remote type)	
Electrode	SS316L	
Power Supply	85~250 VAC (50/60 HZ), 20~36 VDC	
Power Consumption	<20W	
Signal Output	Analog	4~20mA (load resistor 0~750Ω)
	Frequency	Forward & reverse flow output with a frequency range of 1~5000Hz
	Alarm	Two isolated open collector transistor (OCT) outputs for alarm signals
Communication	RS485 MODBUS standard, HART, GPRS, PROFIBUS optional	
Display	LCD Display, 128X128mm, three lines, 4 buttons	
Ambient Temperature	-20°C~60°C	
Fluid Temperature	Compact: -20°C~80°C, Remote: -20°C~120°C	
Liner material	PFA	
Sensor Material	Measuring tube: SS304	
	Tri-clamp & housing: SS304 standard, SS316 optional	
Transmitter Material	Aluminium alloy with epoxy painting	
Nominal Pressure	1.6 Mpa	
Display	Instantaneous flow, total flow, flow velocity	
Function	High and low alarm, empty pipe alarm, exciting alarm, self-diagnosis	
Totalizer	Three built-in totalizers: forward flow, reverse flow and net flow	
Display Unit	L/s, L/m, L/h, m³/s, m³/m, m³/h, UKG, USG, gal/s, gal/m, gal/h, kg/s, kg/m, kg/h, t/s, t/m, t/h	
Language	English, Chinese, Italian, Portuguese, French, Spanish, Korean	



Transmitter Drawing



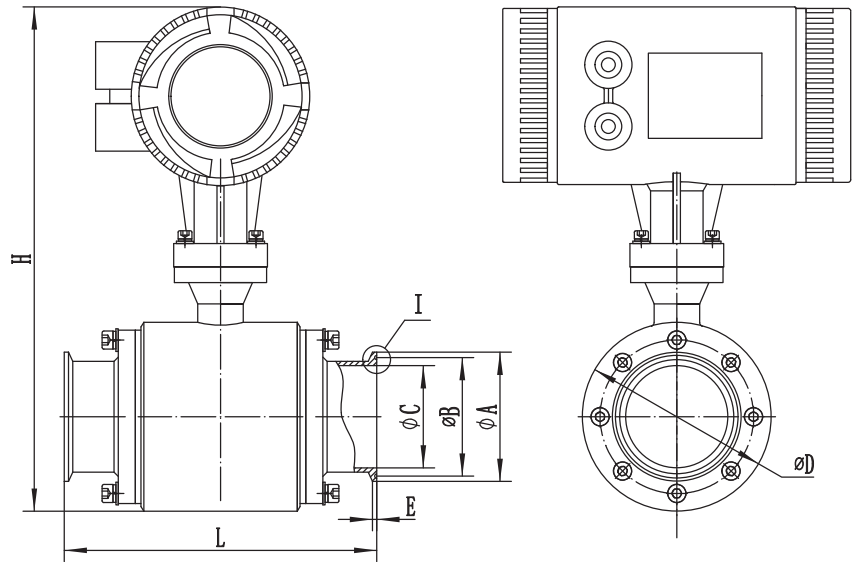
Compact Transmitter



Remote Transmitter



Dimension

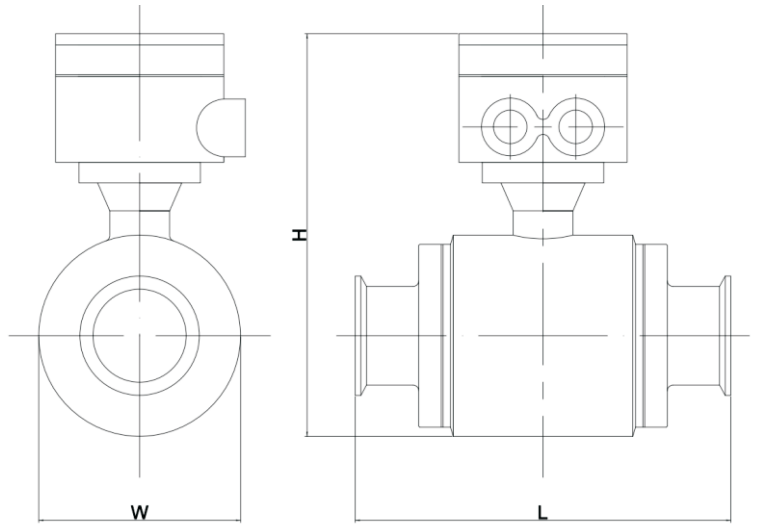


DN15-DN200 (1/2"-8") Sanitary (Tri-clamp) Electromagnetic Flow Meter Drawing (Compact)

Size		φA(mm)	φB(mm)	φC(mm)	φD(mm)	E(mm)	H(mm)	L(mm)
mm	Inch							
DN15	1/2"	50.5	43.5	16	76	2.85	303	200
DN20	3/4"	50.5	43.5	19	83	2.85	310	200
DN25	1"	50.5	43.5	24	83	2.85	310	200
DN32	1¼"	50.5	43.5	31	94	2.85	321	200
DN40	1½"	50.5	43.5	35	94	2.85	321	200
DN50	2"	64	56.5	45	108	2.85	335	200
DN65	2½"	77.5	70.5	59	115	2.85	342	250
DN80	3"	91	83.5	72	135	2.85	362	250
DN100	4"	119	110	98	159	2.85	386	250
DN125	5"	145	136	129	183	3.6	410	300
DN150	6"	183	174	150	219	3.6	446	300
DN200	8"	233.5	225	199	261	3.6	488	350



Dimension



DN15-DN200 (1/2"-8") Sanitary (Tri-clamp) Electromagnetic Flow Meter Drawing (Remote)

Size		H(mm)	L(mm)	W(mm)
mm	Inch			
DN15	1/2"	188	200	76
DN20	3/4"	191	200	83
DN25	1"	191	200	83
DN32	1¼"	202	200	94
DN40	1½"	202	200	94
DN50	2"	216	200	108
DN65	2½"	223	250	115
DN80	3"	243	250	135
DN100	4"	267	250	159
DN150	6"	327	300	219
DN200	8"	369	350	273



Selection Table

QTLT/T		X	X	X	X	X	X	X	X	X
Caliber size	DN15-DN200 (1/2"-8")									
Structure	Compact		1							
	Remote		2							
	Compact with explosion proof		3							
	Remote with explosion proof		4							
Accuracy	±0.5%		1							
	±0.2%		2							
	Others		3							
Electrode Material	SS316L			1						
	Hastelloy B			2						
	Hastelloy C			3						
	Others			4						
Sensor Material	SS304					1				
	SS316					2				
Power Supply	85~265 VAC						E			
	20~36 VDC						G			
	Others						X			
Signal Output /Communication	4~20 mA + Pulse + RS485 Modbus							A		
	4~20 mA + HART							B		
	4~20 mA + Profibus							C		
	GPRS							D		
Protection Grade	IP65 Transmitter + IP65 sensor								1	
	IP65 Transmitter + IP68 sensor (remote)								2	
Transmitter	Square									A
	Round									B




Flow Range Table

Size		Flow Range & Velocity Table							
mm	Inch	0.1 m/s	0.2 m/s	0.5 m/s	1 m/s	4 m/s	10 m/s	12 m/s	15 m/s
DN3	1/8"	0.003	0.005	0.013	0.025	0.102	0.254	0.305	0.382
DN6	1/4"	0.01	0.02	0.051	0.102	0.407	1.017	1.221	1.526
DN10	3/8"	0.028	0.057	0.141	0.283	1.13	2.826	3.391	4.239
DN15	1/2"	0.064	0.127	0.318	0.636	2.543	6.359	7.63	9.538
DN20	3/4"	0.113	0.226	0.565	1.13	4.522	11.304	13.56	16.956
DN25	1"	0.177	0.353	0.883	1.766	7.065	17.663	21.2	26.494
DN32	1¼"	0.289	0.579	1.447	2.894	11.575	28.938	34.73	43.407
DN40	1½"	0.452	0.904	2.261	4.522	18.086	45.216	54.26	67.824
DN50	2"	0.707	1.413	3.533	7.065	28.26	70.65	84.78	105.98
DN65	2½"	1.19	2.39	5.97	11.94	47.76	119.4	143.3	179.1
DN80	3"	1.81	3.62	9.04	18.09	72.35	180.86	217	271.3
DN100	4"	2.83	5.65	14.13	28.26	113.04	282.6	339.1	423.9
DN125	5"	4.42	8.83	22.08	44.16	176.63	441.56	529.9	662.34
DN150	6"	6.36	12.72	31.79	63.59	254.34	635.85	763	953.78
DN200	8"	11.3	22.61	56.52	113.04	452.16	1130.4	1356	1696
DN250	10"	17.66	35.33	88.31	176.53	706.5	1766.25	2120	2649
DN300	12"	25.43	50.87	127.2	254.34	1017	2543.4	3052	3815
DN350	14"	34.62	69.24	173.1	346.19	1385	3461.85	4154	5193
DN400	16"	45	90	226.1	452	1809	4522	5426	6782
DN450	18"	57	114	286.1	572	2289	5723	6867	8584
DN500	20"	71	141	353.3	707	2826	7065	8478	10598
DN600	24"	102	203	508.7	1017	4069	10174	12208	15260
DN700	28"	138	277	692.4	1385	5539	13847	16617	20771
DN800	32"	181	362	904.3	1809	7235	18086	21704	27130
DN900	36"	229	458	1145	2289	9156	22891	27469	34336
DN1000	40"	283	565	1413	2826	11304	28260	33912	42390
DN1200	48"	407	814	2035	4069	16278	40694	48833	61042
DN1400	56"	554	1108	2769	5539	22156	55390	66468	83084
DN1600	64"	723	1447	3617	7235	28938	72346	86815	108518
DN1800	72"	916	1831	4578	9156	36625	91562	109875	137344
DN2000	80"	1130	2261	5652	11304	45216	113040	135648	169560
DN2200	88"	1368	2736	6839	13678	54711	136778	164134	205168
DN2400	96"	1628	3256	8139	16278	65111	162778	195333	244166
DN2600	104"	1910	3821	9552	19104	76415	191038	229245	286556
DN2800	112"	2216	4431	11078	22156	88623	221558	265870	332338
DN3000	120"	2543	5087	12717	25434	101736	254340	305208	381510

Remark: Recommend flow velocity range 0.5 ~ 15 m/s



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