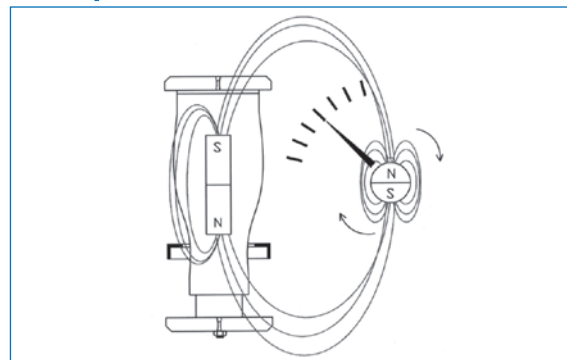


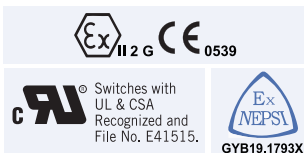
METAL TUBE FLOW METER BF300



Principle

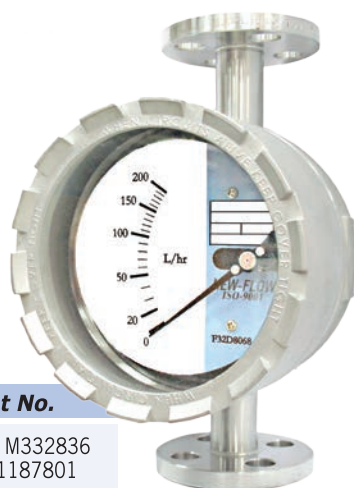


Approvals:



Patent No.

Taiwan: M332836
China: 1187801



Technical Data

BF300 for high flows of gas, liquid, steam

Case Material: Aluminum alloy case with paint; SS316 available

Body Wetted Parts Material: SS316, SS316+PTFE Lining (PVDF float), others on request, indication via magnetic coupling (no sealed)

Lens Material: Safety Glass

Scales Calibrated: in l/h, m³/h, kg/h, %, etc.

Flow Rates For:

SS316 Float:

- Water: 1 l/h up to 200,000 l/h (special ranges on request)
- Air: 0.03 Nm³/h up to 5,400 Nm³/h (special ranges on request)

PVDF Float:

- Water: 4 l/h up to 10,000 l/h (special ranges on request)
- Air: 0.13 Nm³/h up to 180 Nm³/h (special ranges on request)

Connection Type: Thread Type, Flange Type, Trip Clamp & Sanitary (others on request)

Connection Size: ¼"~6"

Mounting: Vertical mounting only

Mounting Length: 250mm standard for size ¼"~5", 300mm standard for size 6"; Special length is on request

Protection Class: Weather Proof IP66 / IP68 or Explosion proof available

Accuracy: ±2% F.S (±1.6% F.S option)

Max. Pressure: 40 kg/cm² (standard); Option: up to 100 kg/cm²

Working Temperature: -50°C to +200°C (standard);

up to 400°C on request

Option: Switch available (Micro switch 5A/125VAC, 5A/250VAC, 2A/30VDC); Adjustable Reed alarm switch available (form A bistable type, N.O. type); Adjustable Inductive alarm switch available; 4~20mA (2-wires) analog output available

LCD Display:

- Totalizer 10 Digital (Top) / Flow Rate 8 Digital (Bottom)
- Analog Output Available: 4~20mA (2-wires)
- Power Supply: 24 VDC

*HART® Communication: available

Two Wire Transmitter with HART® Protocol:



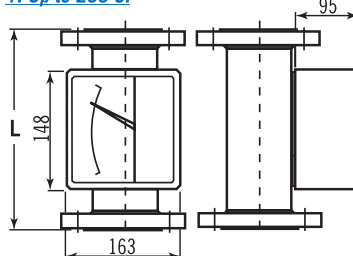
–Galvanic Isolation

–Suitable for application in SIL 2 installations

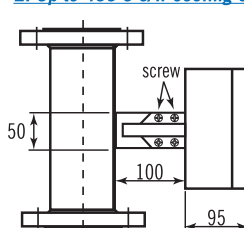
Dimensions-mm

IP66 Case Type: (A-1) Rectangle Bolt Tight Type
Housing Material: Aluminum alloy case with paint

1. Up to 200°C:



2. Up to 400°C c/w cooling element:



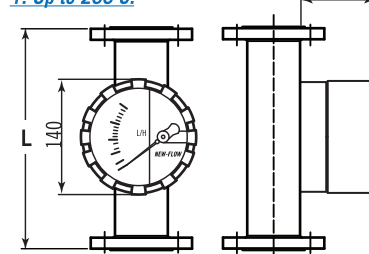
(A1)	½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"
L	250	250	250	250	250	250	250	250	250	300

• Flange rating is ANSI 150LB; please consult with the manufacturer for others flange rating and customized L length is on request.

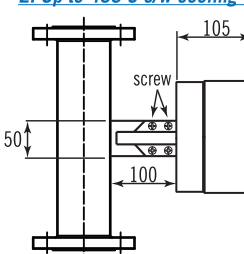
Case Type: (A-2) & (B-2) Round Screw Tight Type

Housing Material: IP66 (A-2) Aluminum alloy, IP68 (B-2) SS316

1. Up to 200°C:



2. Up to 400°C c/w cooling element:



(A2 / B)	½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"
L	250	250	250	250	250	250	250	250	250	300

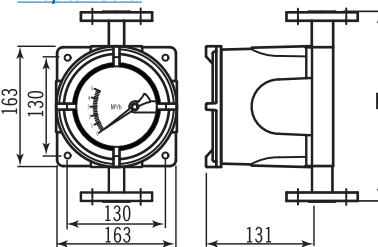
• Flange rating is ANSI 150LB; please consult with the manufacturer for others flange rating and customized L length is on request.

Explosion Proof

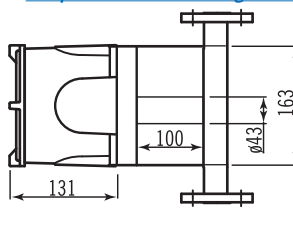
Case Type: (C) Explosion Proof Certificate on Housing only (D) & (D1) Taiwan Explosion Proof Certification

Housing Material: (C) Aluminum alloy, (D) Aluminum alloy, (D1) SS316

1. Up to 200°C:



2. Up to 400°C c/w cooling element:

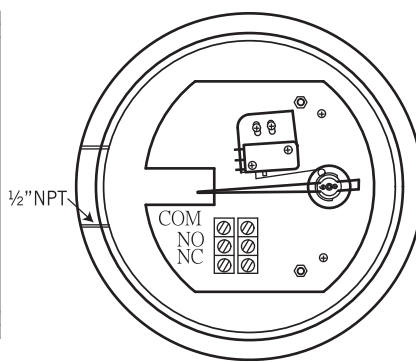
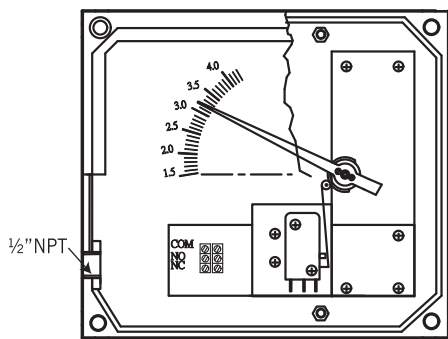


(C)	½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"
L	250	250	250	250	250	250	300	300	300	300
(D / D1)	½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"
L	250	250	250	250	250	250	250	250	250	300

• Flange rating is ANSI 150LB; please consult with the manufacturer for others flange rating and customized L length is on request.

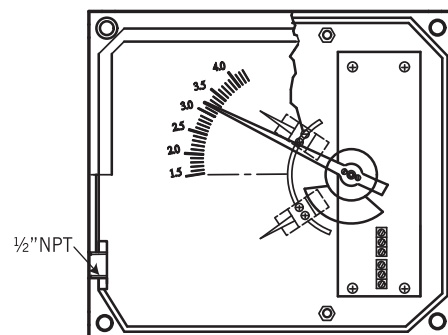
Alarm / Analog Output

BF-300 / GS-M (Micro Switch)



Adjustable Micro Switch, Series BF300/GS-M
1 adjustable alarm contact
Load: 5A/125VAC, 5A/250VAC, 2A/30VDC
Temperature: -25°C ~ +70°C (AMB)
Hysteresis: ±10% F.S (Dead Band)

BF-300 / GS-R (Reed Switch)



Alarm Switch: One or Two setting point, form A bistable type (N.O Type)
Hysteresis: ±10% F.S (Dead Band)
Switch Rating: AC 125V 0.5A / DC 100V 10W / Max. DC 250V < 40mA

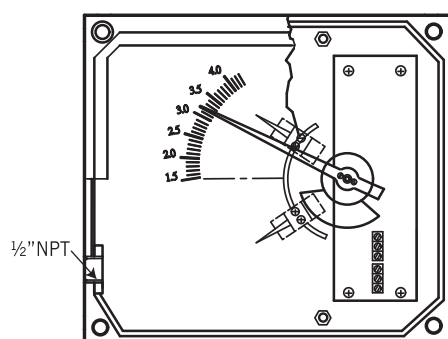
1 adjustable alarm

Contact setting point should be within 10% to 100% of F.S

2 adjustable alarm

The second setting point should be a gap 40% from first setting point

BF-300 / GS-C (Inductive Switch)



Adjustable Inductive Alarm Switch

Hysteresis: ±10% F.S (Dead Band)

Inductive Sensors Slotted Type: 3.5 mm Slot Switch

DC. voltage 2 wire's to DIN19234 (NAMUR) for use in hazardous areas

- Power Supply: 8 VDC (Ri.approx. 1kΩ)
- Current Consumption: Active face uncovered 3mA; Active face covered 1mA
- Ambient Temp.: -25°C ~ +70°C

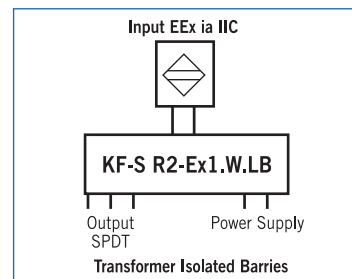
Isolated barriers output relay for inductive sensor

- Rail Mounting
- Control Circuit EEx ia IIC
- EMC acc to NAMUR NE21
- Contact Loading 250 VAC 2A SPDT 40 VDC 2A

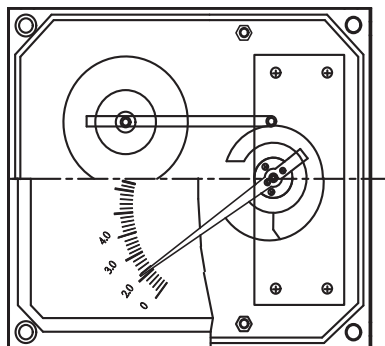
2 adjustable alarm

The second setting point should be a gap 65% from first setting point

For
 24VDC : KFD2-SR2-Ex1.W
 115VAC: KFA5-SR2-Ex1.W
 230VAC: KFA6-SR2-Ex1.W

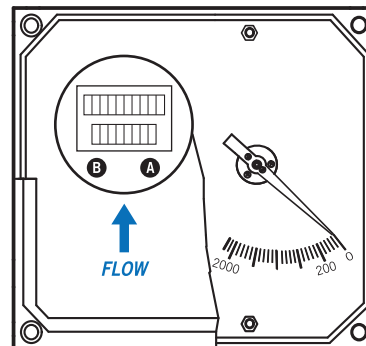


BF-300 / GT (Analog Output) / GTA (Hall Sensor)



Electric Transmitter BF-300/GT/GTA
Analog Output Available: 4~20mA (2-wires)
No Alarm Switch Available
Power Supply: 24VDC
Temperature: -25°C ~ +70°C (AMB)

LCD Display / Totalizer



LCD Display: Totalizer 10 Digital (Top) / Flow Rate 8 Digital (Bottom)
Analog Output Available: 4~20mA (2-wires)
Power Supply: 24 VDC

NOTE.

1. This is for the case type (A-1) only.
2. Please refer to the catalogue of D-1000 for the explosion proof type.

Standard Scales

A. Float Material: SS316, SS316L available

Tube	L/H 20°C Water	NM ³ /H Air 0°C 1.013bar	PmmWater	Connection	Accuracy (NOTE 1.)
BF300a	1 ~ 10	0.03 ~ 0.3	≤750	½"	±5% F.S
BF300b	1.8 ~ 18	0.06 ~ 0.6	≤750	½"	±5% F.S
BF3001	2.5 ~ 25	0.075 ~ 0.75	≤750	½"	±5% F.S
BF3002	4 ~ 40	0.13 ~ 1.3	≤750	½"	±5% F.S
BF3003	5.5 ~ 55	0.17 ~ 1.7	≤750	½"	±5% F.S
BF3004	8 ~ 80	0.2 ~ 2	≤750	½"	±2% F.S
BF3005	16 ~ 160	0.5 ~ 5	≤750	½"	±2% F.S
BF3006	18 ~ 180	0.6 ~ 6	≤750	½"	±2% F.S
BF3007	30 ~ 300	1 ~ 10	≤750	½"	±2% F.S
BF3008	50 ~ 500	1.5 ~ 15	≤750	½"	±2% F.S
BF3009	60 ~ 600	1.8 ~ 18	≤750	½"	±2% F.S
BF3010	70 ~ 700	2 ~ 20	≤750	½"	±2% F.S
BF3010-1	100 ~ 1000	3 ~ 30	≤750	½"	±2% F.S
BF3011	100 ~ 1000	3 ~ 30	≤750	¾"	±2% F.S
BF3011-1	240 ~ 2400	8 ~ 80	≤750	¾"	±2% F.S
BF3012	120 ~ 1200	4 ~ 40	≤750	1"	±2% F.S
BF3013	160 ~ 1600	5 ~ 50	≤700	1"	±2% F.S
BF3014	200 ~ 2000	6 ~ 60	≤700	1"	±2% F.S
BF3015	240 ~ 2400	7 ~ 70	≤700	1"	±2% F.S
BF3016	280 ~ 2800	8.5 ~ 85	≤700	1"	±2% F.S
BF3017	320 ~ 3200	9 ~ 90	≤700	1"	±2% F.S
BF3018	350 ~ 3500	10 ~ 100	≤700	1"	±2% F.S
BF3018-1	500 ~ 5000	15 ~ 150	≤700	1"	±2% F.S
BF3019	500 ~ 5000	14 ~ 140	≤650	1½"	±2% F.S
BF3020	600 ~ 6000	15 ~ 150	≤650	1½"	±2% F.S
BF3021	700 ~ 7000	20 ~ 200	≤650	1½"	±2% F.S
BF3022	800 ~ 8000	24 ~ 240	≤650	1½"	±2% F.S
BF3022-1	1100 ~ 11000	24 ~ 240	≤650	1½"	±2% F.S
BF3023	1000 ~ 10000	30 ~ 300	≤650	2"	±2% F.S
BF3024	1200 ~ 12000	35 ~ 350	≤650	2"	±2% F.S
BF3025	1400 ~ 14000	40 ~ 400	≤650	2"	±2% F.S
BF3026	1500 ~ 15000	45 ~ 450	≤1000	2"	±2% F.S
BF3026-1	1800 ~ 18000	45 ~ 450	≤1000	2"	±2% F.S
BF3027	1800 ~ 18000	60 ~ 600	≤800	2½"	±2% F.S
BF3028	2000 ~ 20000	75 ~ 750	≤800	2½"	±2% F.S
BF3028-1	3000 ~ 30000	75 ~ 750	≤800	2½"	±2% F.S
BF3029	2300 ~ 23000	90 ~ 900	≤850	3"	±2% F.S
BF3030	2500 ~ 25000	120 ~ 1200	≤1000	3"	±2% F.S
BF3031	2800 ~ 28000	-----	≤1100	3"	±2% F.S
BF3032	3000 ~ 30000	-----	≤1200	3"	±2% F.S
BF300c	4000 ~ 40000	120 ~ 1200	≤2000	3"	±2% F.S
BF300d	6000 ~ 60000	180 ~ 1800	≤2200	3"	±2% F.S
BF3033	3500 ~ 35000	-----	≤1000	4"	±2% F.S
BF3034	4000 ~ 40000	-----	≤1000	4"	±2% F.S
BF3035	5000 ~ 50000	-----	≤1200	4"	±2% F.S
BF3036	6000 ~ 60000	-----	≤1500	4"	±2% F.S
BF300e	8500 ~ 85000	260 ~ 2600	≤2000	4"	±2% F.S
BF300f	10000 ~ 90000	300 ~ 2900	≤2200	4"	±2% F.S
BF300g	8000 ~ 80000	240 ~ 2400	≤2000	5"	±2% F.S
BF3037	10000 ~ 100000	300 ~ 3000	≤2000	5"	±2% F.S
BF300h	12000 ~ 120000	360 ~ 3600	≤2000	5"	±2% F.S
BF300i	15000 ~ 150000	450 ~ 4500	≤2500	6"	±2% F.S
BF300j	20000 ~ 200000	500 ~ 5400	≤2500	6"	±2% F.S

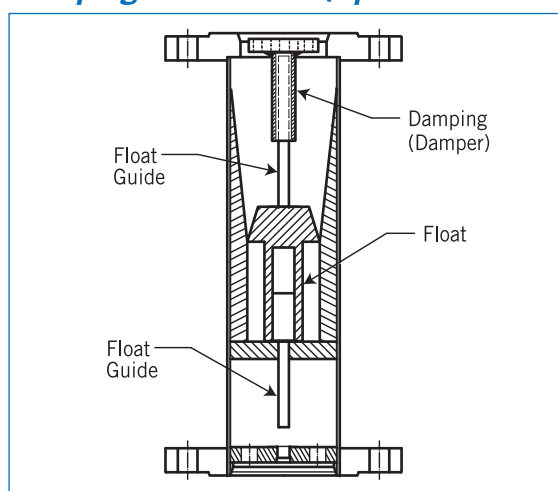
B. Float Material: PVDF (only SS316+PTFE lining wetted parts available)

Tube	L/H 20°C Water	NM ³ /H Air 0°C 1.013bar	PmmWater	Connection	Accuracy (NOTE 1.)
BF3001P	4 ~ 40	0.13 ~ 1.3	≤750	½"	±5% F.S
BF3002P	5.5 ~ 55	0.17 ~ 1.7	≤750	½"	±5% F.S
BF3003P	8 ~ 80	0.2 ~ 2	≤750	½"	±2% F.S
BF3004P	16 ~ 160	0.5 ~ 5	≤750	½"	±2% F.S
BF3005P	28 ~ 280	0.9 ~ 9	≤750	¾"	±2% F.S
BF3006P	35 ~ 350	1.1 ~ 11	≤750	¾"	±2% F.S
BF3007P	40 ~ 400	1.3 ~ 13	≤750	¾"	±2% F.S
BF3008P	50 ~ 500	1.5 ~ 15	≤750	1"	±2% F.S
BF3009P	70 ~ 700	2 ~ 20	≤700	1"	±2% F.S
BF3010P	90 ~ 900	2.5 ~ 25	≤700	1"	±2% F.S
BF3011P	100 ~ 1000	3 ~ 30	≤700	1"	±2% F.S
BF3012P	120 ~ 1200	4 ~ 40	≤700	1"	±2% F.S
BF3013P	160 ~ 1600	5 ~ 50	≤700	1"	±2% F.S
BF3014P	200 ~ 2000	6 ~ 60	≤700	1"	±2% F.S
BF3015P	250 ~ 2500	7 ~ 70	≤650	1"	±2% F.S
BF3016P	300 ~ 3000	9 ~ 90	≤650	1½"	±2% F.S
BF3017P	350 ~ 3500	10 ~ 100	≤650	1½"	±2% F.S
BF3018P	450 ~ 4500	12 ~ 120	≤650	1½"	±2% F.S
BF3019P	450 ~ 4500	13 ~ 130	≤650	1½"	±2% F.S
BF3020P	500 ~ 5000	14 ~ 140	≤650	1½"	±2% F.S
BF3021P	650 ~ 6500	18 ~ 180	≤650	2"	±2% F.S
BF3022P	700 ~ 7000	-----	≤650	2"	±2% F.S
BF3023P	800 ~ 8000	-----	≤650	2"	±2% F.S
BF3024P	900 ~ 9000	-----	≤650	2½"	±2% F.S
BF3025P	1000 ~ 10000	-----	≤650	2½"	±2% F.S

NOTE.

- The accuracy ±5% F.S for tube BF300a/b and BF3001(P)~BF3003(P).
The accuracy ±2% F.S for tube BF3004~BF3037 and BF3004P~BF3025P;
option ±1.6% F.S on request.
- Performance Technical Data are effective with date of issue and are subject to change without prior notice.

Damping Mechanical (Option Function)



Ordering Information

BF300	Code	Type	Code	Connection Size		
SIL2 Certified	G	Indicating Only	4B	¼" BSP (Female)	4N	¼" NPT (Female)
	GS	Indicating + Switch	2B	½" BSP (Female)	2N	½" NPT (Female)
	GT	Indicating + 4~20mA (no alarm switch available)	6B	¾" BSP (Female)	6N	¾" NPT (Female)
	GTA	Hall Sensor Type / Indicating + 4~20mA (no alarm switch available)	10B	1" BSP (Female)	10N	1" NPT (Female)
	GTH	HART Type / Indicating + HART (no alarm switch available)	2F	¼" Flange		
		Code Alarm	4F	½" Flange		
	O	Without Alarm Switch	6F	¾" Flange		
	C1	One Inductive Alarm Switch	C2	Two Inductive Alarm Switches		
	10F	1" Flange				
	M1	One Micro Switch	12F	1½" Flange		
	R1	One Reed Switch	R2	Two Reed Switches		
	14F	1¼" Flange				
	20F	2" Flange				
	22F	2½" Flange				
	30F	3" Flange				
40F	4" Flange					
50F	5" Flange					
60F	6" Flange					
	Code	Transmitter Type, 4~20mA				
	G	General Type				
	O	Without Transmitter				
	Code	Fluid				
		(G) Gas (O) Oil (L) Liquid (S) Steam				
	Code	Range				
	S	Standard Range				
		Please direct fill out the flow range in the order code.				
	Code	LCD Display				
	D0	With LCD Display IP66, for A1 case only				
	D	With LCD Display Explosion Proof, (assemble with D-1000) NOTE.1				
	N	Without				
	Code	Damper				
	D	With				
	N	Without				
	Code	Conduit				
	N	Without				
	1	½" NPT(F)				
	2	¾" NPT(F)				
CE Mark Request : If stamp the CE2810 mark is necessary, please consult with the manufacturer.						

NOTE:

1. Custom-made flow range and flange size upon request.
2. Please fill in the ordering information and service condition, and fax this sheet along with your inquiry to 886-7-8225588.

Special Instruction, if any:

Service Condition:

Fluid name: _____
 Sp. Gr. (Density): _____
 Viscosity: _____
 Press.: _____
 Temp.: _____
 Full Scale: _____

NOTE.1 LCD Display:

Assemble with D-1000 Series

