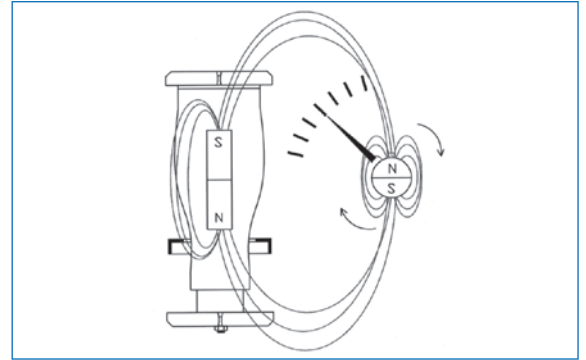


METAL TUBE FLOW METER BF300



Principle

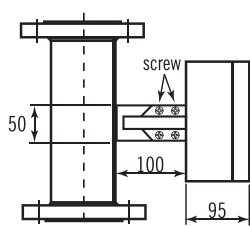
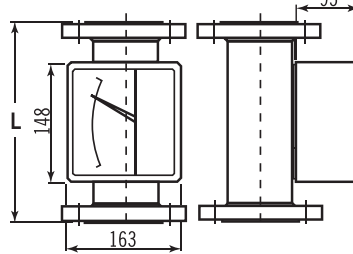


Dimensions-mm

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:



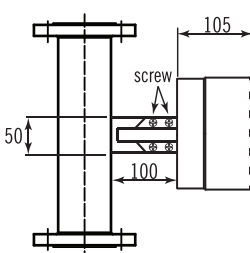
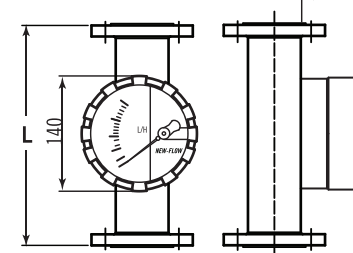
(A1)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
L	250	250	250	250	250	250	250	250	250	300

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

IP66 Case Type: (A-2) & (B) Round Screw Tight Type
Housing Material: (A-2) Aluminum alloy, (B) SS316

1. Up to 200°C:

2. Up to 400°C c/w cooling element:



(A2 / B)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
L	250	250	250	250	250	250	250	250	250	300

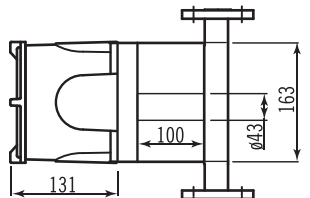
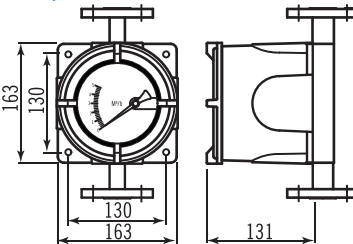
• Flange rating is ANSI 150LB; please consult with the manufacturer for others flange rating and customized L length is on request.

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)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
L	250	250	250	250	250	250	300	300	300	300

(D / D1)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	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.

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: 1/4"~6"

Mounting: Vertical mounting only

Mounting Length: 250mm standard for size 1/4"~5", 300mm standard for size 6"; Special length is on request

Protection Class: Weather Proof IP66 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:

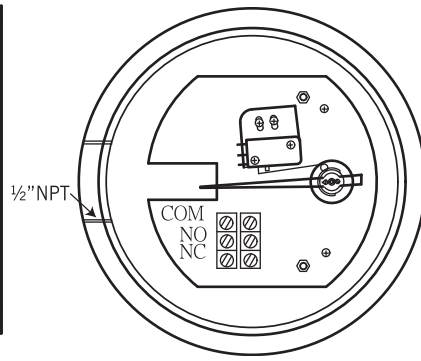
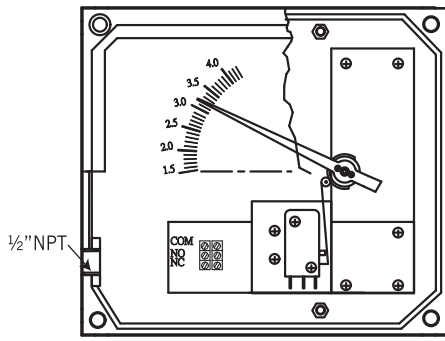


–Galvanic Isolation

–Suitable for application in SIL 2 installations

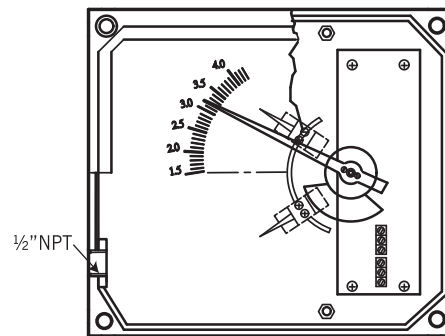
Alarm / Analog Output

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)

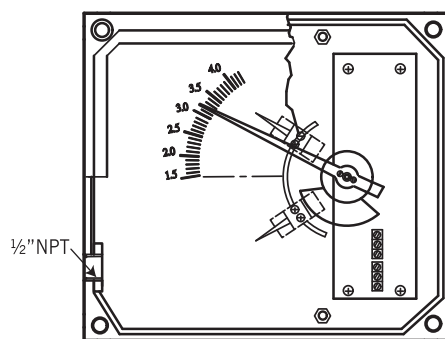


Alarm Switch: One or Two setting point, form A bistable type (N.O Type)
Hysteresis: ±10% F.S (Dead Band)
Switch Rating: AC 125V 0.5A / DC 100V 10W / Max. DC 250V < 40mA

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)



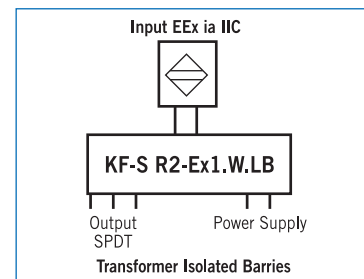
Adjustable Inductive Alarm Switch
Hysteresis: ±1% F.S (Dead Band)
Inductive Sensors Slotted Type: 3.5 mm Slot Switch

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

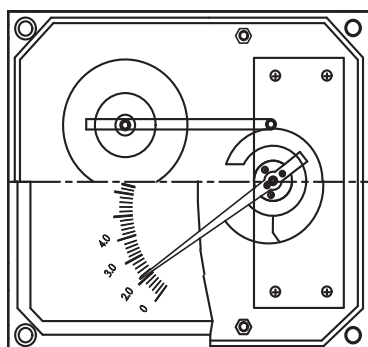
Isolated barriers output relay for inductive sensor
 – Rail Mounting
 – Control Circuit EEx ia IIC
 – EMC acc to NAMUR NE21
 – Contact Loading 250 VAC 2A SPDT 40 VDC 2A

1 adjustable alarm
 Contact setting point should be within 10% to 100% of F.S
 For
 24VDC : KFD2-SR2-Ex1.W
 115VAC: KFA5-SR2-Ex1.W
 230VAC: KFA6-SR2-Ex1.W

2 adjustable alarm
 The second setting point should be a gap 65% from first setting point
 For
 24VDC : KFD2-SR2-Ex2.W
 115VAC: KFA5-SR2-Ex2.W
 230VAC: KFA6-SR2-Ex2.W

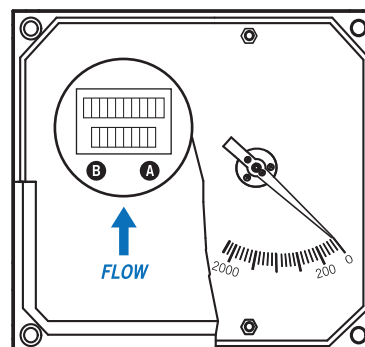


BF-300 / GT (Analog Output)



Electric Transmitter BF-300/GT
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
BF3011	100 ~ 1000	3 ~ 30	≤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
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
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
BF3027	1800 ~ 18000	60 ~ 600	≤800	2½"	±2% F.S
BF3028	2000 ~ 20000	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

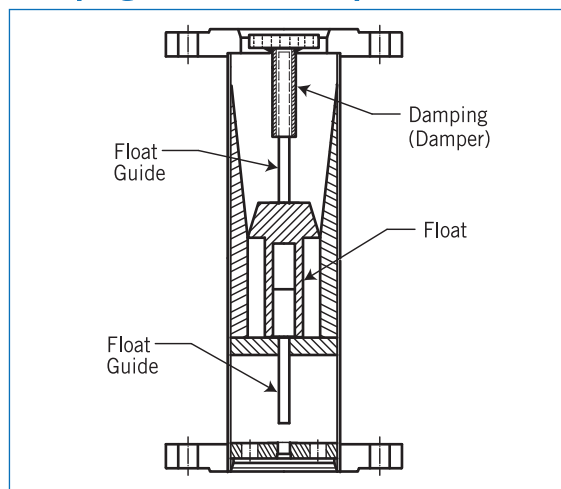
B. Float Material: PVDF (only SS316+PTFE lining wetted parts available)

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			
	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 [4~20mA/Intrinsically Safe (EExialICT6)] (no alarm switch available)	2F	¼" Flange			
		Code	Alarm	4F	½" Flange		
		O	Without Alarm Switch	6F	¾" Flange		
		C1	One Inductive Alarm Switch	10F	1" Flange		
		C2	Two Inductive Alarm Switches	12F	1½" Flange		
		M1	One Micro Switch	14F	1¾" Flange		
		R1	One Reed Switch	20F	2" Flange		
		R2	Two Reed Switches	22F	2½" Flange		
		Code	Housing Protection / Case Type / Material	30F	3" Flange		
		A1	IP66 / Rectangle Bolt Tight Type / Aluminum alloy	40F	4" Flange		
		A2	IP66 / Round Screw Tight Type / Aluminum alloy	50F	5" Flange		
		B	IP66 / Round Screw Tight Type / SS316	60F	6" Flange		
		C	(Ex. Certificate on Housing only) / Aluminum alloy Class I, Groups B, C & D; Class II, Groups E, F & G; NEMA 4, 7, 9	Code	Transmitter Protection		
		D	(Taiwan Explosion Proof Certification) / Aluminum alloy Ex d IIB + H2 T6 Gb	G	IP66 (General Type)		
	D1	(Taiwan Explosion Proof Certification) / SS316 Ex d IIB + H2 T6 Gb	Ix.	Intrinsically Safe (EExialICT6), IP66 (only for HART)			
	X	(Europe Union ATEX Certification) / Aluminum alloy II 2 G D Ex db IIB + H2 T6 Gb Ex tb IIIC T85°C Db	O	Without Transmitter			
	Code	Body & Wetted Parts Material	Code	Fluid			
	A	SS316, Standard	B	(G) Gas (O) Oil (L) Liquid (S) Steam			
	C	SS316+PTFE Lining (only PVDF float available)	S	Code			
	O	Option	Code	Range			
	Code	Float Material	S	Standard Range			
	A	SS316		Please direct fill out the flow range in the order code.			
	B	SS316L	Code	LCD Display			
	C	PVDF	D0	With LCD Display IP66, for A1 case only			
	O	Option	D	With LCD Display Explosion Proof, (assemble with D-1000)			
	Code	Connection Rating	N	Without			
	0	Thread Connection	Code	Damper			
	5	JIS 5K	D	With			
	10	JIS 10K	N	Without			
	20	JIS 20K	Code	Conduit			
	15	ANSI 150#	N	Without			
	30	ANSI 300#	1	½" NPT(F)			
	60	ANSI 600#	2	¾" NPT(F)			
	90	ANSI 900#					
	T	Other: _____					

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

