

METAL TUBE FLOW METER

AI.BF300 Series



TECHNICAL DATA

Case Material: Aluminium alloy case with paint; SS316 available

Body Wetted Parts Material: SS316, SS316+PTFE Lining (PVDF float)

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

PVDF Float: - Water: 4 l/h up to 10,000 l/h

- Air: 0.13 Nm³/h up to 180 Nm³/h

Connection Type: Thread Type, Flange Type, Trip Clamp & Sanitary - **Connection Size:** 1/4" - 6"

Mounting: Vertical mounting only - **Mounting Length:** 250mm for size 1/4"-5", 300mm for size 6"

Protection Class: Weather Proof IP66/IP68 or Explosion proof - **Accuracy:** +/-2%F.S(+/-1.6% F.S option)

Max. Pressure: 40 kg/cm²; option: up to 100 kg/cm² - **Working Temp.:** -50 to 200°C, up to 400°C req.

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

LCD Display: - Totalizer 10 Digit (Top)/Flow Rate 8 Digital (Bottom)- Analog Output: 4-20mA (2-wires)

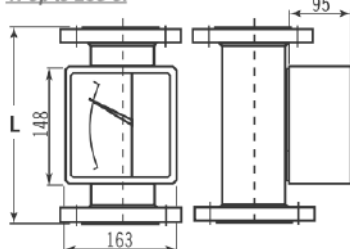
- Power Supply: 24 VDC

***HART Communication:** available

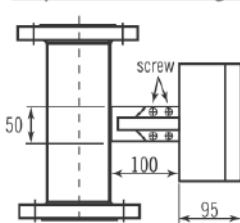
Two Wire Transmitter with HART Protocol: - Galvanic Isolation and Suitable for appl. SIL2 installations

DIMENSIONS

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:

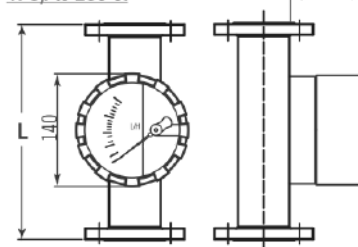


(A1)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
L	250	250	250	250	250	250	250	250	250	300

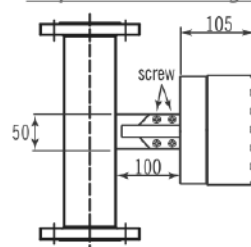
• Flange rating is ANSI 150LB; please consult with the manufacturer for others flange rating and customized L length is on request.

Case Type: (A-2) & (B) Round Screw Tight Type
Housing Material: IP66 (A-2) Aluminum alloy, IP68 (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

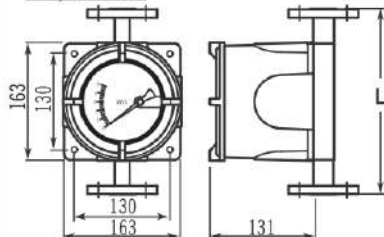
• Flange rating is ANSI 150LB; please consult with the manufacturer for others flange rating and customized L length is on request.

Explosion Proof

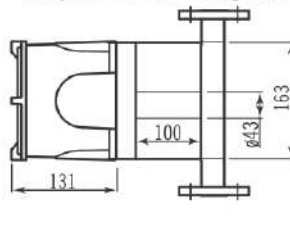
Case Type: (C) Explosion Proof Certificate on Housing only
(D) & (D1) Taiwan Explosion Proof Certification

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

1. Up to 200°C:



2. Up to 400°C c/w cooling element:

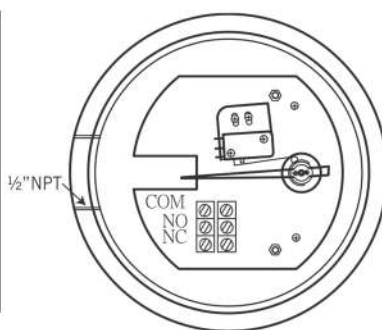
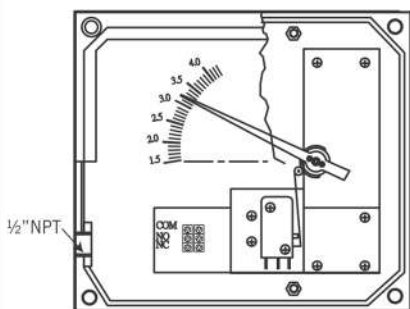


(C)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
L	250	250	250	250	250	250	300	300	300	300
(D / D1)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
L	250	250	250	250	250	250	250	250	250	300

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

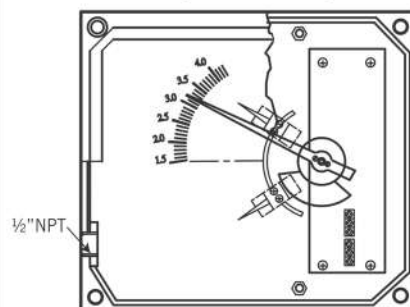
ALARM/ANALOG OUTPUT

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)

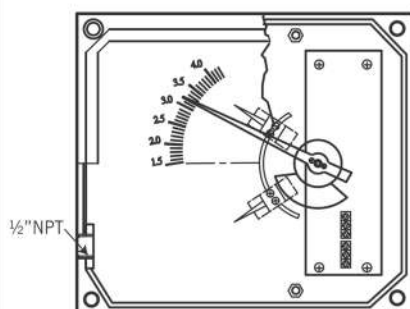


Alarm Switch: One or Two setting point, form A bistable type (N.O Type)
Hysteresis: ±10% F.S (Dead Band)
Switch Rating: AC 125V 0.5A / DC 100V 10W / Max. DC 250V < 40mA

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)



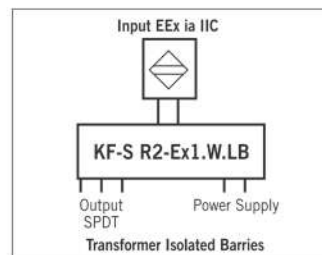
Adjustable Inductive Alarm Switch
Hysteresis: ±1% F.S (Dead Band)
Inductive Sensors Slotted Type: 3.5 mm Slot Switch

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

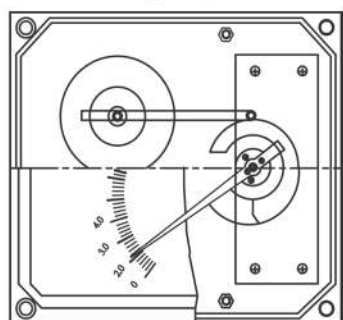
Isolated barriers output relay for inductive sensor
 - Rail Mounting
 - Control Circuit EEx ia IIC
 - EMC acc to NAMUR NE21
 - Contact Loading 250 VAC 2A SPDT 40 VDC 2A

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

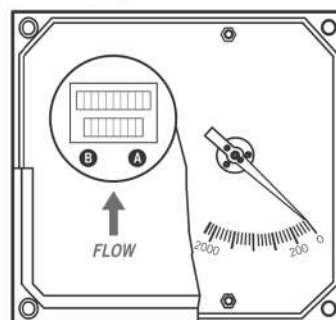


BF-300 / GT (Analog Output) / GTA (Hall Sensor)



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	NM³/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

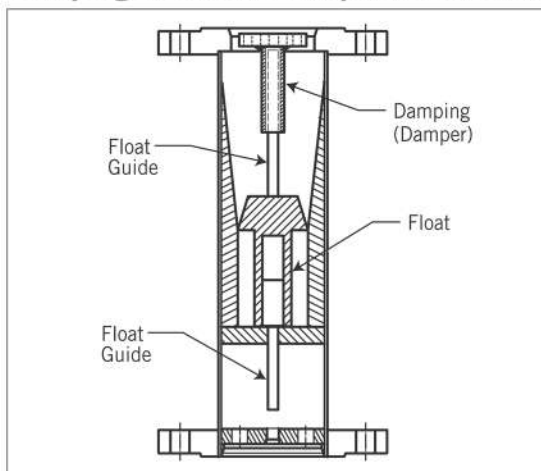
B. Float Material: PVDF (only SS316+PTFE lining wetted parts available)

Tube	L/H 20°C Water	NM³/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

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ASIT ITALIA S.R.L.

Sede operativa e Uffici
Via Quintino Sella, 6
10020 Riva presso Chieri (TO)
T (+39) 011 198 218 39 - F (+39) 011 198 371 06

INFO@ASIT-GE.COM

WWW.ASIT-GE.COM



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