

Model Selection

Type	1	2	3	4	5	6	7	8	9	10	11	12	Instructions
	DN	Counter	PN	Character	Material	Operation temp	Signal Generator	Accuracy	Country Code	System Language	Explosion proof	Flange Standard	
ABR	-												Birotor Flowmeter
	008												8mm
	xxx												15A/15B/025/040/050/080/100/150/200/250/300
	400												400mm
	J												Pointer Counter+Accurate Correction
	J1												Pointer Counter+Accurate Correction
	J2												Large Character Counter + Accurate Correction
	DA												Encoder Electronic Counter
	DB												Transmitter Electronic Counter
	M												Large Character Counter
	1.6												PN:1.6MPa
	2.5												PN:2.5MPa
	4.0												PN:4.0MPa
	6.3												PN:6.3MPa
	2.0												Class 150
	5.0												Class 300
	P												Basic type
	Q												Gasoline and liquefied gas type
	G												Cast Steel
	2Cr13												Rotator Material 2Cr13 Stainless Steel
	S304												Rotator Material 304 Stainless Steel
	S316												Rotator Material 316 Stainless Steel
	SS304												All Material 304 Stainless Steel
	SS316												All Material 316 Stainless Steel
	A												Operation temp:-20 ~ +100°C
	B												Operation temp:-20 ~ +250°C
	F												LPJ Pulse Output
	I												LPJ 4~20mA Output
	F1												Electrical Counter Pulse Output
	I1												Electrical Counter 4~20mA Output
	0.5												±0.5 %
	0.2												±0.2 %
	0.1												±0.1 %
	US												America
	CN												China
	RU												Russia
	E												English
	C												Chinese
	R												Russian
	S												Spanish
	X												None
	ATX												ATEX for Europe
	UL												UL for American
	IEC												IECEX for International
	NPS												NEPSI for China
	A												ANSI
	D												DIN
	G												GB
	GT												GOST

Example: ABR-100DA6.3PS304A110.2USEXA

Means: ABR Birotor Flowmeter, DN100, Encoder Electronic Counter, PN6.3MPa, Basic type, Rotator Material is 304 Stainless Steel, Operation temperature (-20 ~ +100)°C, Electrical Counter 4~20mA Output, accuracy: ±0.2 %, the American client, system language is English, none Explosion-proof, the flange is ANSI Standard.



Global supplier of fluid measurement solutions

ABR Birotor Flowmeter

- High accuracy, Good reliability
- Stable in running with low noise
- Strong applicability to viscosity changes
- Ultra large caliber customized
- Long service life



Introduction

ABR Series Birotor Flowmeter (named below as ABR) is a volumetric flowmeter independently developed by our company, used for liquid flow measurement and process control in pipelines. As a mature instrument with high measurement accuracy, stable operation, low noise, and long service life, it is widely used in industries such as petroleum, chemical industry, metallurgy, power, ships, transportation, docks, food, etc. It is particularly suitable for commercial transaction measurement and engineering automation measurement management control of crude oil, high pour point oil, petroleum products, chemical solutions, and water.

According to the different meter heads and sensors, ABR can be divided into two types: mechanical counter type and electronic counter type. The mechanical counter type is further divided into pointer counter type and large character return to zero counter type, which can be directly read on site or configured with photoelectric pulse/current converters to achieve remote transmission of pulse and current. Electronic counter type can not only read instantaneous and cumulative flow in real-time, but also output pulses, currents, and RS485 communication.



Electronic counter type



Mechanical counter type

Feature

- High accuracy, up to 0.1%
- Stable in running with low voice
- Good anti-interference performance
- Diameter complete
- Long service life
- Strong applicability to viscosity changes
- High pressure resistance level, up to 11MPa
- Customizable according to user needs

ACCURA INSTRUMENT (SHANGHAI) CO., LTD

No. 257 Chunlin Road, Songjiang District, Shanghai, China, 201612
Tel: +86 17187108675 Email: eric@accurainstrument.com

WhatsApp: +86 17187108675

Specification

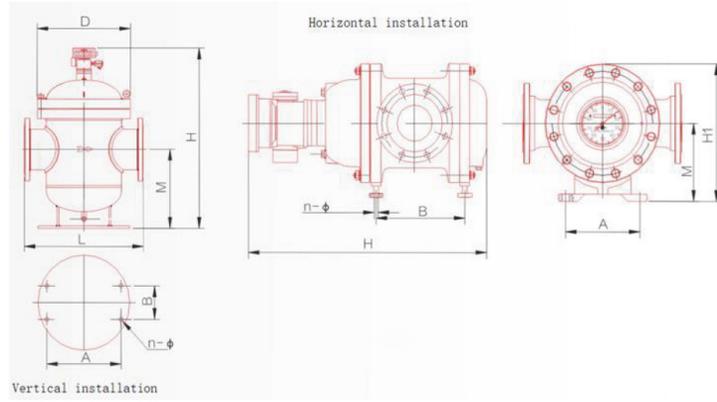
DN(mm)	15,25,40,50,80,100,150,200,250,300,400
Medium-temp	(-20~+100)°C, (-20~+250)°C
Power supply	DC(12~24)V
Viscosity	0~20000mPa.s
Ambient-temp	(-20~+70)°C
Output Interface	RS485 Modbus
Nominal Pressure (MPa)	1.6 2.5 4.0 6.3 (11MPa can be customized)
Signal output	Pulse output, (4-20)mA
Flange	HG/T 20592-2009 AMSN B16 5-2009 (can be customized)
Accuracy	0.1%, 0.2%, 0.5%
Explosion proof	Exdb II CT6 Gb
Protection	Ip67

Flow Range

DN (MM)	Mechanical counter type (DN15-400)												Electronic counter type (DN40-400)				Accuracy 0.5%,0.2%	Tempp:-20- +150°C	liter/P ulse		
	0.32-0.8mPa.s		0.8-2mPa.s		2-5mPa.s		5-400mPa.s		400-2000mPa.s		2000-20000mPa.s		0.001								
	Gasoline/ LPG	Kerosene	Diesel Oil	Heavy/Crude oil	High viscosity Liquid	Extreme Viscosity Liquid	0.5%	0.2%	0.5%	0.2%	0.5%	0.2%									
15	0.6~3		0.4~4	0.4~4	0.4~4		0.4~4		0.3~2.4	0.3~2.4											
25	3~8		1.5~10				1~10		1~8												
40	4~20	8~20	2.7~22	5.5~22	2.5~25	5~25	2.5~25	5~25	2.5~18	4~18	1.5~12	3~12				0.01					
50	7~28	9~28	4.5~36	9~36	4~40	8~40	4~40	8~40	2.8~24	6~24	2.2~18	4.5~18									
80	8~40	12~50	8~60	12~60	7~70	14~70	7~70	14~70	5~50	10~50	4~40	8~40									
100	20~80	25~80	13~100	25~100	12~120	24~120	12~120	24~120	10~72	14~60	6~50	12~50									
150	54~216	70~210	30~250	60~250	25~250	50~250	25~250	50~250	18~150	36~150	12~100	24~100									
200	80~320	100~320	50~350	90~360	40~400	80~400	40~400	80~400	30~250	60~250	30~270	75~300									
250	130~52	160~48	100~60	150~50	120~60	60~600	120~60	60~600	40~360	80~360	60~300	125~40				0.1					
300	200~80	260~80	180~90	200~90	100~10	200~10	100~10	200~10	100~80	200~80	80~700	150~70									
400	400~16	540~1600	360~16	400~16	180~18	360~18	180~18	360~18	130~11	260~11	100~90	200~90									
	Electronic counter type (DN8-)												Flow range (m3/h)				Accuracy 0.5%,0.2%		Tempp:-20- +150°C		0.01
8	0.06~0.3	0.1~0.3	0.05~0.3	0.07~0.3	0.03~0.3	0.06~0.3	0.03~0.3	0.06~0.3	0.03~0.27	0.06~0.27	0.03~0.24	0.06~0.24									
15A	0.2~0.8	0.27~0.8	0.1~1	0.2~1	0.1~1.5	0.1~1	0.1~1.5	0.1~1	0.1~0.8	0.16~0.8	0.08~0.7	0.15~0.7									
15B	0.25~1.5	0.33~1.5	0.25~1.5	0.25~1	0.25~3	0.3~3	0.3~3	0.4~3	0.1~1.5	0.2~1.5	0.1~1.2	0.2~1.2									
25	1.5~6	2~6	1.2~6	1.5~6	0.6~10	1.2~10	0.6~10	1.2~10	0.6~6	1.2~6	0.6~5	1.2~5				0.1					

More information about accuracy of 0.1% can be found in the instruction manual and selection sample

Dimension



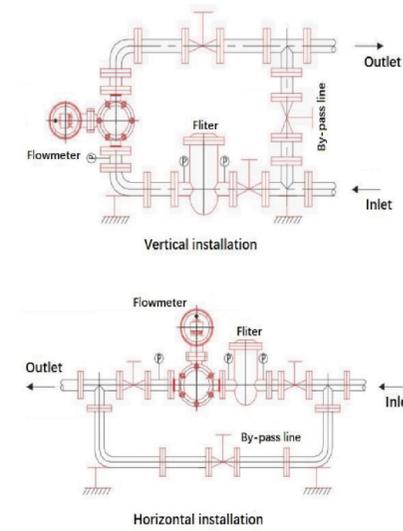
Vertical installation:

DN (mm)	Flange Distant(L)		Total Height (H)	Center Height (M)	Upper Dia. (D)	Install Dim. A × B	Bolt hole size n-φ	Weight (Kg)
	Standard	Special						
8	82*	150	210	50	108			6
15	180	200	260	50	108			8
25	200	250	300	60	150			14
40	250	300	500	126	185			40
50	360	360	580	150	235			60
80	400	450	650	220	310			110
100	450	500	780	270	325	340*215	4-φ23	150
150	560	650	828	318	415	450*240	4-φ23	205
200	700		1180	450	530	445×200	4-φ23	490
250	1000		1270	500	620	524×250	4-φ25	1000
300	1000		1540	640	780	645×300	4-φ25	1600
400	1200		1830	750	980	φ700	6-φ25	2000

Horizontal installation:

DN (mm)	Flange Distant(L)		Total Height (H)	H1	Center Height (M)	Upper Dia. (D)	Install Dim. A × B	Bolt hole size n-φ	Weight (Kg)
	Standard	Special							
8	82*	150	210	125	50	108			6
15	180	200	260	125	50	108			8
25	200	250	300	140	60	150			14
40	250	300	500	185	95	185			40
50	360	360	580	235	120	235			60
80	400	450	600	305	153	295			115
100	450	500	720	370	210	325	250*210	4 ~ φ20	150
150	560	650	780	465	255	415	250*210	4 ~ φ20	205

Installation



- The installation position of the flowmeter should avoid environments with high vibration, high temperature, and strong magnetic field interference as much as possible, and choose a location that is easy to maintain for installation.
- When install a flowmeter on the pipeline, In order to prevent impurities from entering the flowmeter, a section of pipe can be used instead of the flowmeter to clean the pipeline, and then replace with flowmeter.
- The flowmeter should be installed vertically on the main pipeline of the horizontal pipeline, and a bypass pipeline should be set according to the figure. The horizontal piping should leave space for disassembly and maintenance
- The arrow direction on the flowmeter body should be consistent with the direction of liquid flow.
- Install a filter at the front end of the flowmeter inlet. In order to ensure accurate measurement, the gas in the pipeline should be eliminated, and an air purifier should also be installed.
- The valve for regulating flow should be installed downstream of the flowmeter.
- When the on-site installation of the flowmeter is inconvenient for reading, the fastening screw of the meter head can be removed, and the meter head can be rotated to the position that is convenient for reading, and then tighten the screws. When conducting a water pressure test on a new pipeline, the valves in front and behind the flowmeter must be closed to prevent water from entering the flowmeter. If water enters the flowmeter, the residual water and air after discharge will corrode the internal parts of the flowmeter, causing the rotating parts of the flowmeter to rust and greatly reducing the accuracy and service life of the flowmeter.

Application

