

AM200/300

电磁流量计 Magnetic Flowmeter

一般规格说明 General Specifications



AM200/300 系列电磁流量计具有优良的结构设计。双腔结构使电子系统免于周围环境干扰。它采用低频方波励磁，有良好的输出稳定性。它的励磁方式和多种衬里，决定了它有广泛的应用范围。

AM200/300 is the advanced engineering designed magnetic flowmeter, It has a dual cavity housing providing ease of wiring while isolating the electronics from the environment. AM200/300 continues the use of low frequency excitation, which provides noise free output. AM200/300 excitation method and multiform lining allow this magnetic flowmeter to be applied to an even greater range of applications.

■ 特点 FEATURES

- 快速响应，并有好的稳定性

Fast response and high stability

- 高精度，特别标定可达0.5%

High Accuracy, 0.5% of flowrate.

- 双腔结构把电气部分与接线端隔开

Dual cavity housing to separate electronics part from

wiring part.

- 超低EMI开关电源，适用电源电压范围大

AC power supply common use (80/264V).

- 高清晰度背光宽温型LCD显示，便于操作

High visible backlit LCD for easy operation.

- 具有RS485、RS232C、HART、Profibus、MODBUS等总线数字通讯输出

With multiform communication e.g. RS485、RS232C、HART、Profibus、MODBUS etc.

- 能进行双向流量测量、双向总量累计

Bi-direction measuring and totalizing

■ 性能指标 STANDARD SPECIFICATIONS

■ 转换器 Converter

流量测量范围 Measuring Range

与传感器配套，流量测量范围上限值的流速可在0.3m/s~15m/s范围内选定，下限值的流速可为上限值的1%

The velocity range is 0.3m/s to 15m/s. The minimum measurable speed can be one percent (1%) of the full range.

流量计精确度 Accuracy

通径 DN mm	量程 Velocity m/s	精确度 Accuracy
25 ~	0.1~0.3	±0.25%FS
	0.3~1	±0.5%R
400	1~15	±0.3%R

%FS: 相对量程的; %R: 相对测量值的。

电流输出 Analog Output

电流输出信号: 全隔离 0~10mA / 4~20mA



负载电阻: 0~10mA 时, 0~1.5kΩ; 4~20mA 时, 0~750Ω

基本误差: 在上述测量基本误差基础上加±10μA

Current output: fully-isolated 0 - 10mA / 4 - 20mA

Load resistance: 0 to 1.5kΩ at 0 - 10mA; 0 to 750Ω at 4 - 20mA

Base error: add ±10μA on top of the measurement error

频率输出 Frequency Output

输出频率上限可在1~5000Hz内设定。频率输出为带光电隔离的晶体管集电极开路输出。外接电源不大于35V，导通时集电极最大电流为250mA

Frequency output is proportional to the flow percentage of the full range. It provides fully isolated transistor open collector frequency output ranged from 1 to 5000 Hz. The external DC power supply should not exceed 35V and maximum collector current is 250mA.

脉冲输出 Pulse Output

输出脉冲上限可达5000cp/s。脉冲当量为0001~9999p/L、0001~9999p/m³或0001~9999p/kg、0001~9999p/t。如果脉冲频率小于30Hz，脉冲输出的宽度固定为33ms，频率高于30Hz时则自动转换为方波。脉冲输出为带光电隔离的晶体管集电极开路输出。外接电源不大于35V，导通时集电极最大电流为250mA。The converter can output up to 5000cp/s pulse series, which is dedicated to external totalization. Pulse factor is defined as pulse count per unit volume or mass. It can be set to 0001-9999p/L, 0001-9999p/m³, 0001~9999p/kg or 0001~9999p/t. Pulse width is selectable from 16ms, 33 ms, 66ms, 99ms or auto square wave. Photo-coupler isolated transistor open collector circuit is used for pulse output. The external DC power supply should not exceed 35V and maximum collector current is 250mA.

流向指示/量程指示输出 Showing Flow Direction & Range

本流量计可测正反方向的流体流动流量, 并可以判断出流体流动的方向。规定显示正向流量时输出 0V 低电平, 反向流体流动输出+12V 的高电平。

在自动双量程切换应用中, 第一量程(高量程)输出+12V高电平, 第二量程(低量程)输出0V低电平。

The converter is capable of measuring both forward and reverse flow and recognizing its direction. The converter outputs 0V low level for forward flow, while +12V high level for reverse flow.

报警输出 Alarm Out:

两路带光电隔离的晶体管集电极开路报警输出。外接电源不大于35V, 导通时集电极最大电流为250mA。报警状态: 流量上限报警、下限报警

Two channels of photo-coupler isolated open collector circuit are used for alarm signal output. There are two alarm outputs: high limit alarm and low limit alarm. The external DC power supply should not exceed 35V and maximum collector current is 250mA.

通信 Communication:

可选RS232C、RS485、HART、Profibus和MODBUS通信可选, 可选防雷击保护

The RS485, RS232C, HART, Profibus, MODBUS communication interface are embedded in the converter. Surge absorber is optional to protect the interface and converter.

阻尼时间 Damping Constant:

在0~100s (90%时) 间分档可选

Damping time is optional from 0.2 to 100s.

接点输入 Input Contact

外部接点 ON(接通)或 OFF(断开)信号能够远程控制转换器内部计数器累计流量的开始与停止。也能够起到远程清零计数器。

External contact ON (close) or OFF (open) signal can be used to remotely control the start/stop or reset of internal counter.

显示功能 Display Function:

能显示瞬时流量、流量百分比和两个方向的流量积算值

Flow rate can be displayed either in engineering units or in percent of span. Totalized volume in any engineering unit can be displayed by setting a totalizing factor.

自诊断功能 Self Diagnostics Function:

转换器故障, 测量管故障等能知道并显示出来

Converter failure, flow tube failure, erroneous setting, etc. can be diagnosed and displayed.

断电保护数据 Data Security During Power Failure:

数据储存在EEPROM中, 无须备用电池

Data storage by EEPROM - no back-up battery required.

电气接口 Electrical Connection:

M20×1.5内螺纹

ISO M20×1.5 female.

接线螺钉 Terminal Connection:

M4螺钉

M4 size screw terminal.

转换器壳体材料 Case Material:

铝合金

Aluminum alloy.

涂层 Coating:

聚氨酯防腐涂层。盖颜色是深海苔绿, 本体颜色为霜白

Polyurethane corrosion-resistant coating.

Cover; Deep sea moss green (Munsell 0.6GY3.1/2.0)

Case; Frosty white (Munsell 2.5Y8.4/1.2)

防护等级 Protection:

IP67, NEMA4X

■ 测量管 Magnetic Flow Tube**传感器公称通径 Nominal Diameter:**

内衬 Lining	橡胶 Rubber	特氟龙 PTFE	特氟龙 PFA
通径 (mm) DN	25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400	25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400	25, 32, 40, 50, 65, 80, 100

防护等级 Protection: IP67, NEMA4X

涂层 Coating:

接线盒: 聚氨酯防腐涂层

Terminal box: Polyurethane corrosion-resistant coating.

盖: 深海苔绿

Cover: Deep sea moss green

壳体: 霜白

Case: Frosty white

本体 Body:

通径 2.5~100: 无涂层(不锈钢)

Size 2.5 to 100: No coating (Stainless steel surface)

通径150~400: 聚氨酯防腐涂层(霜白)

Size 150 to 400: Polyurethane corrosion-resistant

coating (Frosty white)

测量管材料 Flow Tube Material:

Size 25 to 100 mm

Housing: Stainless steel (SUS304)

Flange: Stainless steel (SUS304)

Pipe: Stainless steel (SUS304)

Size 150 to 400 mm

Housing: Carbon steel (SPCC)

Hastelloy C, Titanium, PFA lining + Earth electrodes

Flange: Carbon steel (SS400)

■ 正常工作条件

Pipe: Stainless steel (SUS304)

NORMAL OPERATING CONDITIONS

接触介质材料 Wetted Part Material:

环境温度 Ambient Temperature: -20 to 60°C

内衬: 橡胶、PTFE和PFA

环境湿度 Ambient Humidity: 5 to 95%RH

电极: 316L不锈钢、哈氏合金C、钛、钽和铂

电源电压 Power Supply Voltage: 80 to 264 V AC

接地环/接地电极: 316L不锈钢、哈氏合金C、钛、钽和铂

电源频率 Power Supply Frequency: 47 to 63 Hz

Lining: Rubber, PTFE or PFA

流体电导率 Fluid Conductivity:

Electrode: Stainless steel (SUS316L), Hastelloy C, Titanium,

20μS/cm以上

Tantalum, Platinum

20μS/cm or larger

Earth Ring/Earth Electrode: Stainless steel (SUS316),

■ 型谱系列 MODEL AND SUFFIX CODE

型号 Model	后缀 Suffix Code	说明 Description	使用内衬 Use Lining			备注 Note
			R	P	A	
AM202	.....	DN25	△	△	△	
AM203	.....	DN32	△	△	△	
AM204	.....	DN40	△	△	△	
AM205	.....	DN50	△	△	△	
AM206	.....	DN65	△	△	△	
AM208	.....	DN80	△	△	△	
AM210	.....	DN100	△	△	△	
AN212	.....	DN125	△	△	-	
AM215	.....	DN150	△	△	-	
AM220	.....	DN200	△	△	-	
AM325	.....	DN250	△	△	-	
AM330	.....	DN300	△	△	-	
AM335	.....	DN350	△	△	-	
AM340	.....	DN400	△	△	-	
型式 Type	-AA..... -NN.....	一体型 Integral Type 分离型 Remote Type	△ △	△ △	△ △	
内衬 Lining	-R..... -P..... -A.....	橡胶 Rubber PTFE PFA	△ - -	- △ -	- - △	
过程连接 Process Connection	-W..... -D1..... -D2..... -D3..... -D4.....	夹持型 Wafer 1.0MPa 法兰型 Flange 1.6MPa 法兰型 Flange 2.5MPa 法兰型 Flange 4.0MPa 法兰型 Flange	△ △ △ △ △	△ △ △ △ △	△ △ △ △ △	
电极材料 Electrode Material	-L..... -P..... -H..... -T..... -V.....	316不锈钢 Stainless Steel (SUS316L) 铂 Platinum 哈氏合金 Hastelloy C276 equivalent 钽 Tantalum 钛 Titanium	△ △ △ △ △	△ △ △ △ △	△ △ △ △ △	
接地环/接地电极 材料 Earth Ring/Earth Electrode Material	S..... P..... H..... T..... V.....	316不锈钢 Stainless Steel (SUS316) 铂 Platinum 哈氏合金 Hastelloy C276 equivalent 钽 Tantalum 钛 Titanium	△ △ △ △ △	△ △ △ △ △	△ △ △ △ △	
电气接口 Electrical Connection	M.....	内螺纹 ISO M20*1.5 female	△	△	△	
防爆 Exproof	/Ex.....	防爆等级 Ex d IIB T4	△	△	△	
特殊选项 Optional Code	/□					

专用信号电缆Dedicated Signal Cable:

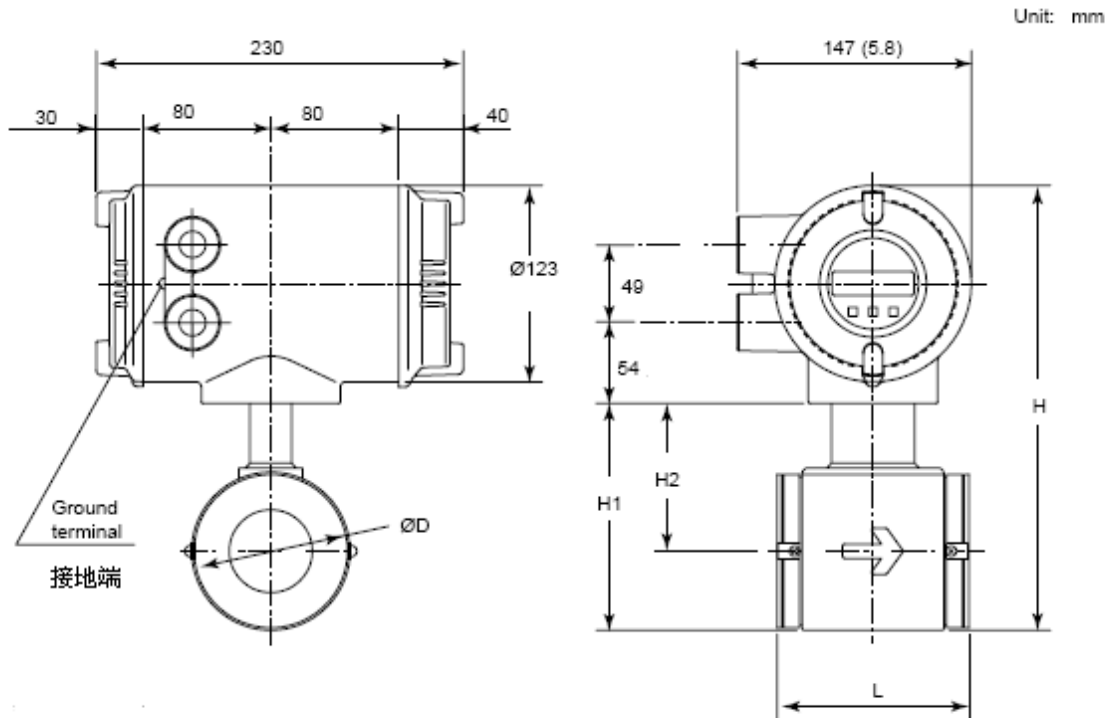
型号Model	后缀 Suffix Code	说明 Description
AM011	.....	Special cable for magnetic flowmeter
末端处理 End treatment	-0..... -1.....	未处理Non termination 处理 Terminated
电缆长度 Cable length	-L□□.....	电缆长度 (米, 最长30米) Enter the length in m (Max 30m)

■ 外形尺寸 EXTERNAL DIMENSIONS

一体型电磁流量计Integral Magnetic Flowmeter

DN25~100夹持型

25 to 100mm Wafer Type

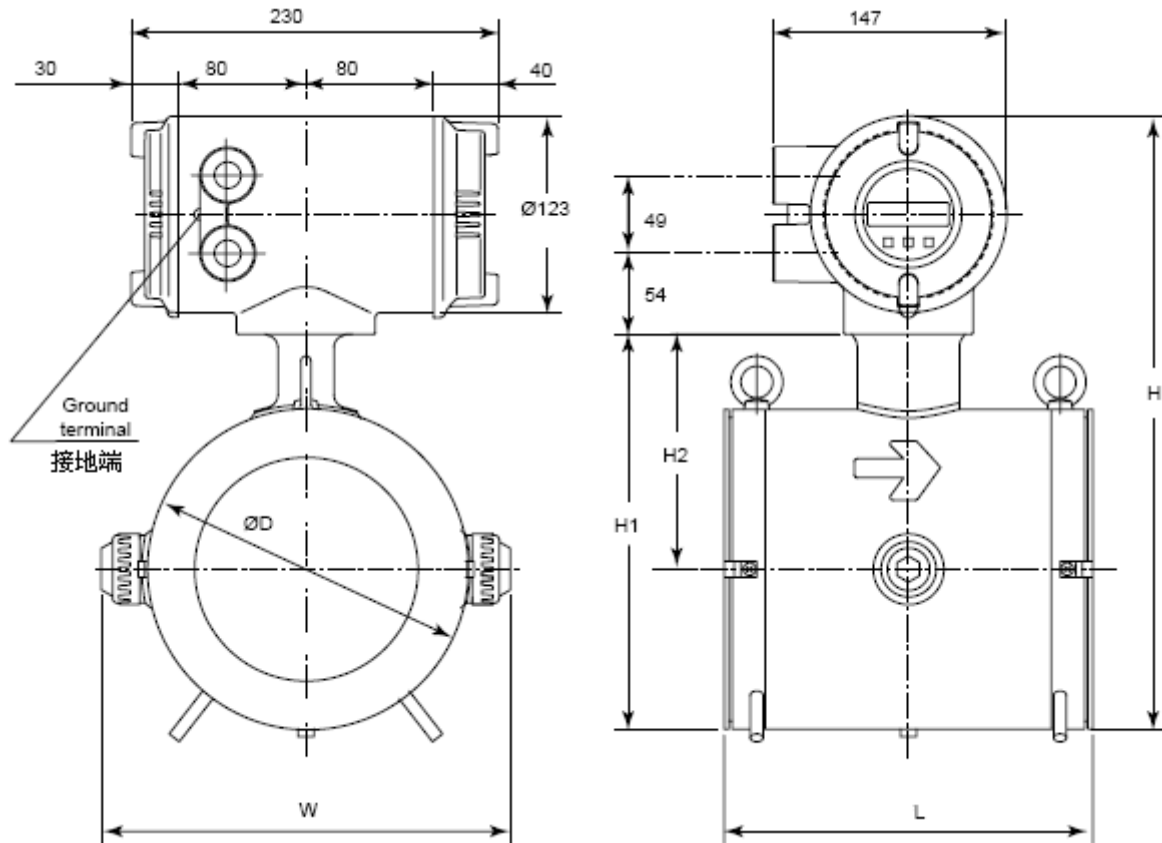


通径代码 Size code		AM202	AM203	AM204	AM205	AM206	AM208	AM210
面对面长度 Face-to-face length	L	93	100	106	120	140	160	180
外径 Outer diameter	D	67.5	80	86	99	115	129	155
高 Height	H	250.6	257	271	283.5	291.5	323.5	349.5
高 Height	H1	110.6	123	131	143.5	159.5	183.5	209.5
高 Height	H2	76.8	83	87.5	94	102	119	132
重量 Weight kg		4.6	5	5.5	6.5	8	9.6	12.5

* 以上数据随衬里的不同会有所变化

DN150~200夹持型

150 and 200mm Wafer Type



通径代码 Size code		AM215	AM220
面对面长度 Face-to-face length	L	229	299
外径 Outer diameter	D	200	250
高 Height	H	392	442
高 Height	H1	252	302
高 Height	H2	152	177
宽 Width	W	256	307
重量 Weight kg		20.2	30.7

* 以上数据随衬里的不同会有所变化

DN250~400法兰型

250 and 400mm Flange Type

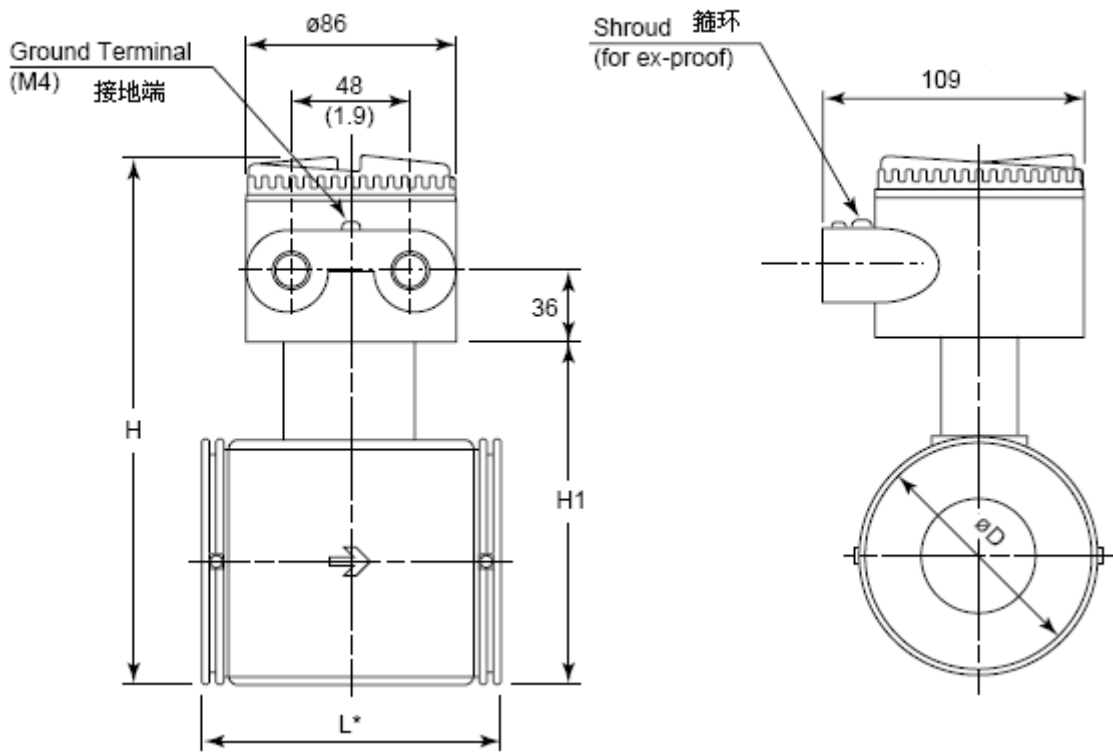
通径代码Size code		325	330	335	340
面对面距离Face-to-face	L	430	500	550	600
吊环孔直径 Eye bolt hole dia.	e	30	30	35	35
高度Height	H	553	616	662	721
	H1	461	537	597	660
	H2	206	245	270	302
	H	553	616	662	721
外径Out Dia.	ΦD	406	483	533	597
螺孔中心Pitch circle dia.	ΦC	362	432	476	540
螺栓孔数Number of holes	N	12	12	12	16
螺栓孔径Hole dia.	Φh	26	26	29	29
厚度Thickness	T	39	40	45	47
重量(普通)Weight (General) kg		72.3	92.3	112.3	147.3
重量(防爆)Weight (Exproof) kg		76.3	96.3	118.3	154.3

通径代码Size code		325	330	335	340
面对面距离Face-to-face	L	430	500	550	600
吊环孔直径 Eye bolt hole dia.	e	30	30	35	35
高度Height	H	572	635	-	-
	H1	499	575	-	-
	H2	225	264	-	-
	H	572	635	-	-
外径Out Dia.	ΦD	445	521	-	-
螺孔中心Pitch circle dia.	ΦC	387	451	-	-
螺栓孔数Number of holes	N	16	16	-	-
螺栓孔径Hole dia.	Φh	29	32	-	-
厚度Thickness	T	56	59	-	-
重量(普通)Weight (General) kg		77.3	100.3	-	-
重量(防爆)Weight (Exproof) kg		81.3	104.3	-	-



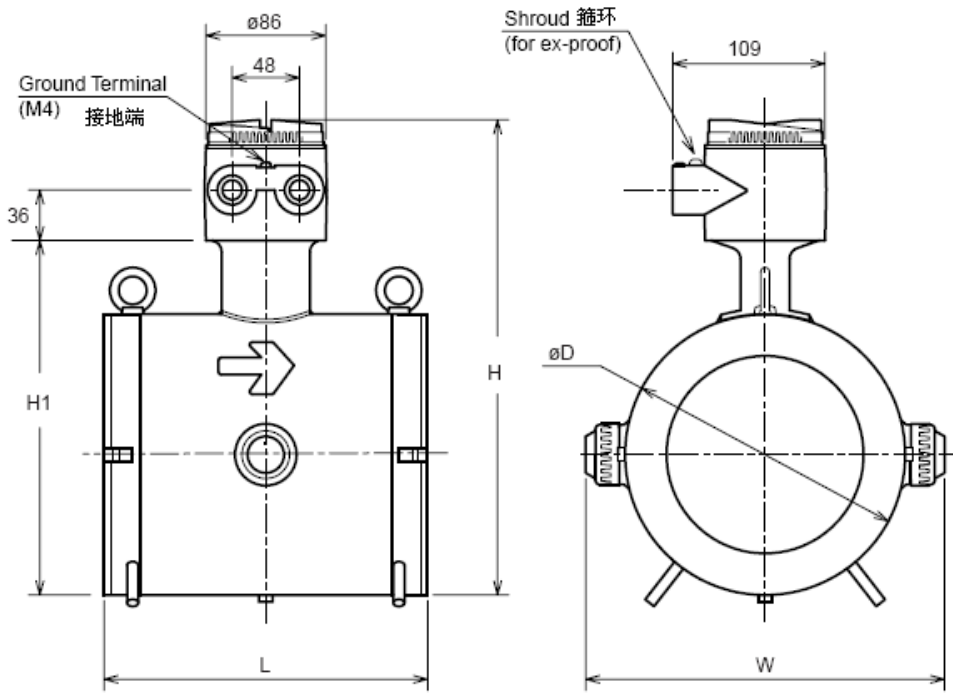
DIN	通径代码Size code		325	330	335	340
	面对面距离Face-to-face	L	430	500	550	600
	吊环孔直径 Eye bolt hole dia..	e	30	30	35	35
	高度Height	H	553	604	-	-
		H1	459	514	-	-
		H2	206	233	-	-
	外径Out Dia.	ΦD	405	460	-	-
	螺孔中心Pitch circle dia.	ΦC	355	410	-	-
	螺栓孔数Number of holes	N	12	12	-	-
	螺栓孔径Hole dia.	Φh	22	22	-	-
厚度Thickness	T	34	36	-	-	
	重量(普通)Weight (General)	kg	67.3	84.3	-	-
	重量(防爆)Weight (Exproof)	kg	71.3	88.3	-	-

分离型电磁流量计 Remote Magnetic Flowmeter
 DN25~100夹持型 25 to 100mm Wafer Type



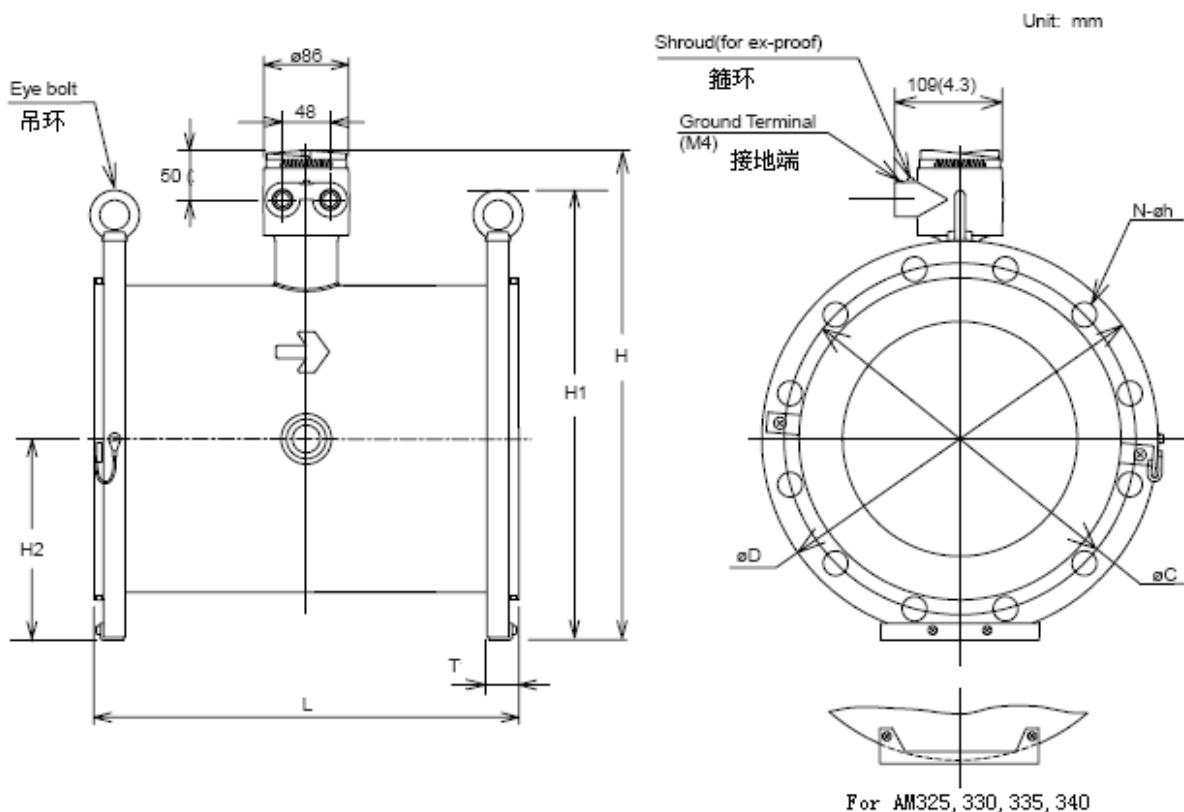
类型 Type		普通 General							防爆 Exproof						
通径代码 Size code		AM202	AM203	AM204	AM205	AM206	AM208	AM210	AM202	AM203	AM204	AM205	AM206	AM208	AM210
面对面长度 Face-to-face length	L	93	100	106	120	140	160	180	93	100	106	120	140	160	180
外径 Outer diameter	D	67.5	80	86	99	115	129	155	67.5	80	86	99	115	129	155
高 Height	H	197	210	217	230	246	270	296	195	208	214	228	244	268	296
高 Height	H1	111	124	131	144	160	184	210	109	122	128	142	158	182	208
重量 Weight	kg	2.3	2.8	3.2	4.2	5.8	7.3	10.2	2.3	2.8	3.2	4.2	5.8	7.3	10.2

DN150,200夹持型 150 and 200mm Wafer Type



类型 Type		普通 General		防爆 Exproof	
通径代码 Size code		AM215	AM220	AM215	AM220
面对面长度 Face-to-face length	L	229	299	229	299
外径 Outer diameter	D	200	250	200	250
高 Height	H	338.5	388.5	336	386
高 Height	H1	252.5	302.5	250	300
宽 Width	W	256	307	256	307
重量 Weight kg		17.9	28.4	20.9	33.4

DN250~400夹持型 250 to 400mm Flange Type



	通径代码Size code		325	330	335	340
	面对面距离Face-to-face	L	430	500	550	600
	吊环孔直径 Eye bolt hole dia.	e	30	30	35	35
	高度Height	H	500	563	609	668
	H1	H1	461	537	597	660
		H2	206	245	270	302
	外径Out Dia.	φD	406	483	533	597
	螺孔中心Pitch circle dia.	φC	362	432	476	540
	螺栓孔数Number of holes	N	12	12	12	16
	螺栓孔径Hole dia.	φh	26	26	29	29
	厚度Thickness	T	39	40	45	47
	重量(普通)Weight (General) kg		70	90	110	145
	重量(防爆)Weight (Exproof) kg		74	94	116	152

	通径代码Size code		325	330	335	340
	面对面距离Face-to-face	L	430	500	550	600
	吊环孔直径 Eye bolt hole dia.	e	30	30	35	35
	高度Height	H	519	5825	-	-
	H1	H1	499	575	-	-
		H2	225	264	-	-
	外径Out Dia.	φD	445	521	-	-
	螺孔中心Pitch circle dia.	φC	387	451	-	-
	螺栓孔数Number of holes	N	16	16	-	-
	螺栓孔径Hole dia.	φh	29	32	-	-
	厚度Thickness	T	56	59	-	-
	重量(普通)Weight (General) kg		75	98	-	-
	重量(防爆)Weight (Exproof) kg		79	102	-	-

	通径代码Size code		325	330	335	340
	面对面距离Face-to-face	L	430	500	550	600
	吊环孔直径 Eye bolt hole dia.	e	30	30	35	35
	高度Height	H	495	544	595	652
	H1	H1	449	499	568	628
		H2	201	226	256	286
	外径Out Dia.	φD	395	445	505	565
	螺孔中心Pitch circle dia.	φC	350	400	460	515
	螺栓孔数Number of holes	N	12	12	16	16
	螺栓孔径Hole dia.	φh	22	22	22	26
	厚度Thickness	T	34	34	34	34
	重量(普通)Weight (General) kg		64	81	94	122
	重量(防爆)Weight (Exproof) kg		68	85	100	129

	通径代码Size code		325	330	335	340
	面对面距离Face-to-face	L	430	500	550	600
	吊环孔直径 Eye bolt hole dia..	e	30	30	35	35
	高度Height	H	500	551	-	-
	H1	H1	459	514	-	-
		H2	206	233	-	-
	外径Out Dia.	φD	405	460	-	-
	螺孔中心Pitch circle dia.	φC	355	410	-	-
	螺栓孔数Number of holes	N	12	12	-	-
	螺栓孔径Hole dia.	φh	22	22	-	-
	厚度Thickness	T	34	36	-	-
	重量(普通)Weight (General) kg		65	82	-	-
	重量(防爆)Weight (Exproof) kg		69	86	-	-