Electromagnetic Flowmeter FM260

KATU 卡图

Product overview

According to Faraday's principle of electromagnetic induction, when a conductor passes vertically through magnetic field B, it will induce a voltage. U In the measurement of the flowmeter, the moving conductor is a flowing conductive medium, the magnetic field B is emitted from the direction perpendicular to the flowing medium, and the induced electromotive force U on the two electrodes E1 and E2 is directly proportional to the flow rate V of the medium.

U=K×B×V×D
K- Meter constant
D- Internal probe spacing
After further processing, the induced electromotive force U is converted into a standard electrical signal output or display

Functional characteristics

- Compact design saves installation space
- Anti-corrosion sensor technology
- All electronic design without viscosity of moving parts
- Automatic temperature compensation
- Pulse output/analog output /RS485 communication optional
- Low pressure loss
- Strong anti-fouling ability

Technical parameter

◇Measurement range:	Refer to the range table	◇Ambient temperature:	-25..85℃
◇Applicable pipe diameter:	DN4... DN25 (refer to the selection table)	◇Medium temperature:	-40...120 without thermal shock (optional high temperature of 140℃)
◇Measured medium:	Conductive liquid (conductivity > 20 uS/cm)	◇Materials	
◇Accuracy:	≤±0.5% range	Electrode:	HC
◇Reproducibility:	≤±0.2% range	Process connection:	Stainless steel 304
◇Pressure resistance:	16 bar	Measurement tube:	PEEK
◇Power supply voltage:	24±10%Vdc	Sealing:	EPDM
◇Current consumption:	≤80mA	Shell:	Stainless steel 304
◇Electrical protection:	Anti-polarity protection, short circuit protection	◇Electrical connection:	M12×1 connector
◇Output		◇Process connection:	External thread / Internal thread / Sanitary chuck optional
Pulse output:	NPN output, pull-up resistor 2K	◇Response time:	＜100ms
Analog output:	4...20mA, current limiting 26mA, load resistance < 250Ω		

Wiring diagram

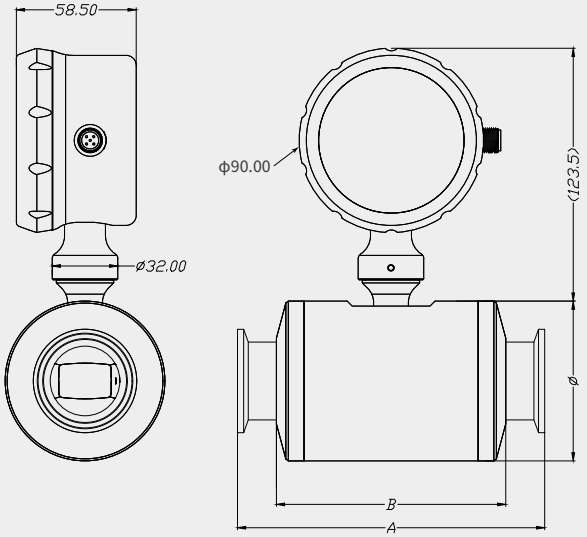
8-core wire

line	color	Feature
2	BN	power supply(+)
7	BU	power supply(-)
8	RD	RS485(A)
4	YE	RS485(B)
6	PK	pulse（+)
1	WH	pulse（-)
3	GN	electric current（-)
5	GY	electric current（+)

5-core wire

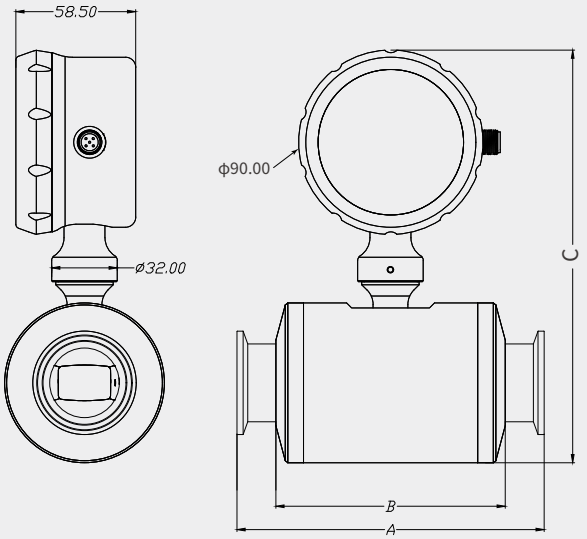
line	color	Feature
1	BN	power supply(+)
3	BU	power supply(-)
5	GY	Analog signal（mA)
2	WH	RS485（A)
4	BK	RS485（B)

Dimensional Drawing (mm) — Clamp Connection



■ ⩽25 Diameter

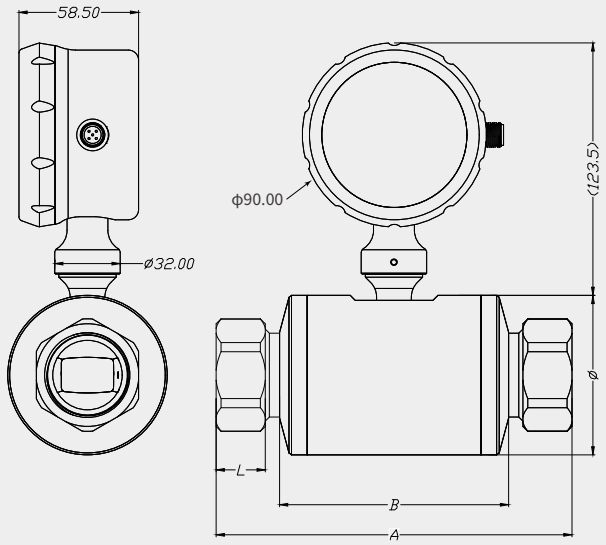
Model	Chuck Connection	Pipe diameter	A	B	ϕ	Measurement range
FM260-H04	25.4	DN4	90	60	45	0.1-10 L/min
FM260-H08	25.4	DN8	104	74	60	0.5-25 L/min
FM260-H12	50.5	DN12	120	90	70	1-60 L/min
FM260-H15	50.5	DN15	120	90	70	3-100 L/min
FM260-H25	50.5	DN25	150	112	78	4-200 L/min



■ ＞25 Diameter

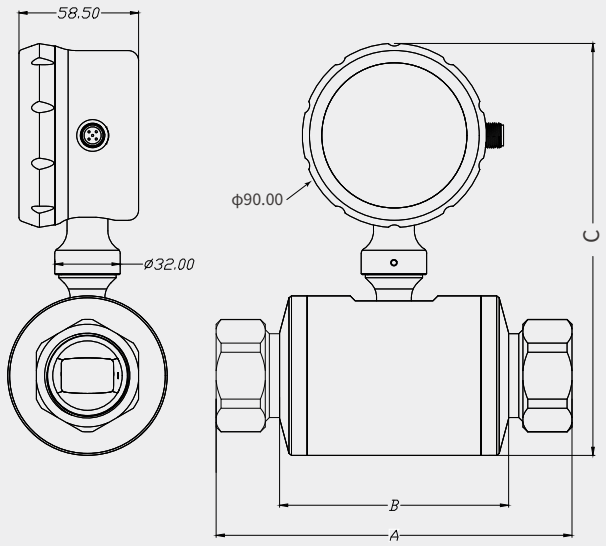
Model	Chuck Connection	Pipe diameter	A	B	C	Measurement range
FM260-H32	50.5	DN32	200	150	220	20-300 L/min
FM260-H40	64	DN40	200	150	250	4-30 m^3/h
FM260-H50	77.5	DN50	200	150	300	7-45 m^3/h

Dimensional Drawing (mm) — Internal Thread Connection



■ ≤25 Diameter

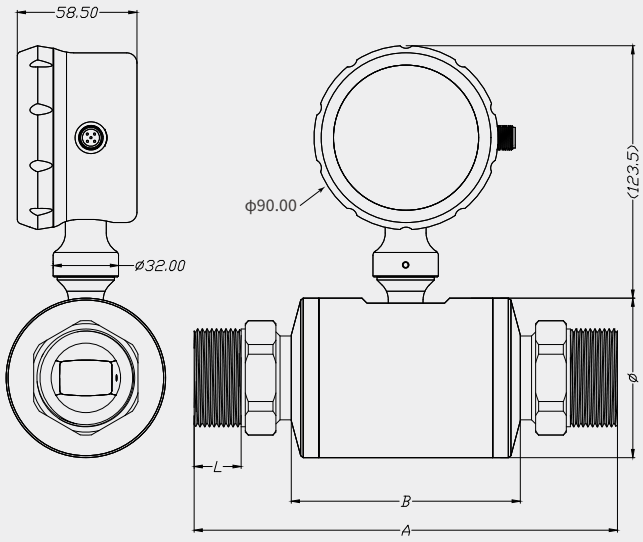
Model	Internal thread	Pipe diameter	A	B	ϕ	Effective screw thread(L)	Measurement range
FM260-GK04	GI/4"	DN4	90	60	45	13	0.1-10 L/min
FM260-GK08	G1/2"	DN8	122	74	60	13	0.5-25 L/min
FM260-GK12	G3/4"	DN12	142	90	70	15	1-60 L/min
FM260-GK15	G3/4"	DN15	142	90	70	15	3-100 L/min
FM260-GK25	G1-1/4"	DN25	174	112	78	20	4-200 L/min



■ >25 Diameter

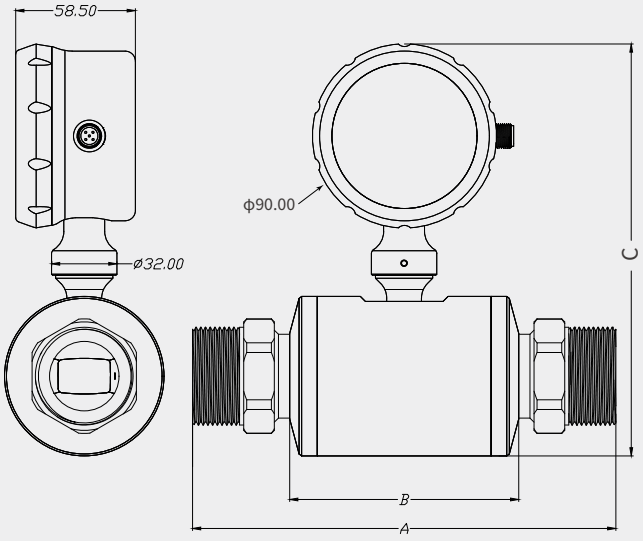
Model	Internal thread	Pipe diameter	A	B	C	Measurement range
FM260-GK32	1-1/2"	DN32	210	150	220	20-300 L/min
FM260-GK40	G2"	DN40	270	150	250	4-30^3/h
FM260-GK50	G2"	DN50	270	150	300	7-45^3/h

Dimensional Drawing (mm) — External Thread Connection



■ ⩽25 Diameter

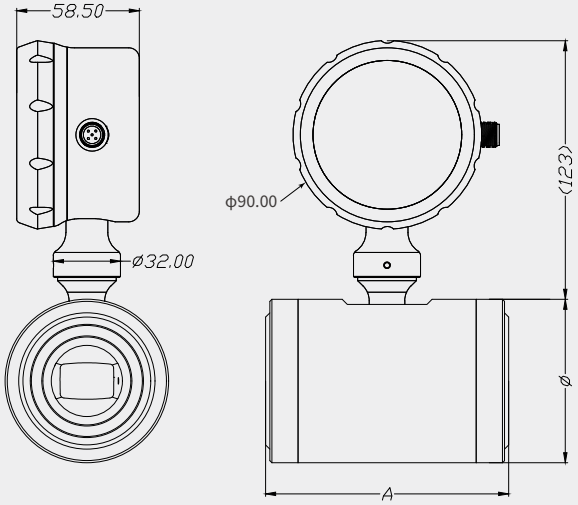
Model	External thread	Pipe diameter	A	B	ϕ	Effective screw thread(L)	Measurement range
FM260-GM04	Gl/4”	DN4	110	60	45	12	0.1-10 L/min
FM260-GM08	G1/2"	DN8	141	74	60	18	0.5-25 L/min
FM260-GM12	G1"	DN12	170	90	70	20	1-60 L/min
FM260-GM15	G1"	DN15	170	90	70	20	3-100 L/min
FM260-GM25	G1-1/2"	DN25	207	112	78	25	4-200 L/min



■ ＞25 Diameter

Model	External thread	Pipe diameter	A	B	C	Measurement range
FM260-GM32	G1-1/2	DN32	210	150	220	20-300 L/min
FM260-GM40	G2"	DN40	270	150	250	4-30 m^3/h
FM260-GM50	G2-1/2	DN50	270	150	300	7-45 m^3/h

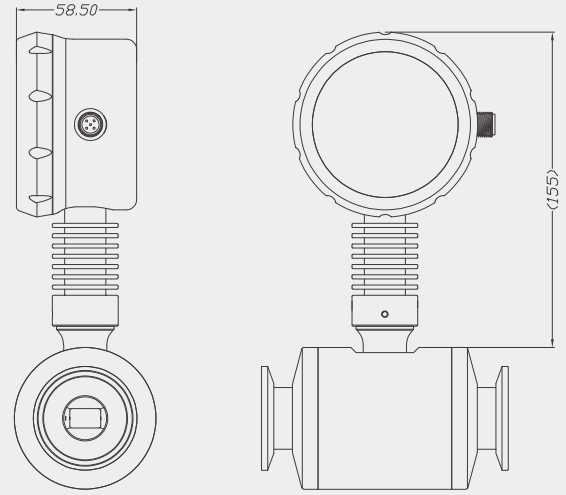
Dimension drawing (mm) - Flange clamp assembly connection



■ Flange clamp assembly connection

Model	Flange clamp	Pipe diameter	A	ϕ	Measurement range
FM260-F04	DN15	DN4	63	45	0.1-10 L/min
FM260-F08	DN25	DN8	80	60	0.5-25 L/min
FM260-F12	DN32	DN12	92	70	1-60 L/min
FM260-F15	DN32	DN15	92	70	3-100 L/min
FM260-F25	DN32	DN25	116	78	4-200 L/min

Dimension drawing (mm) - High-temperature type



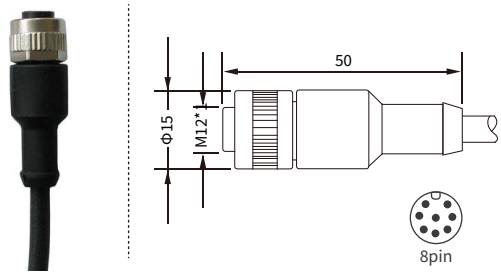
■ High-temperature type (≥80°)

Selection Table

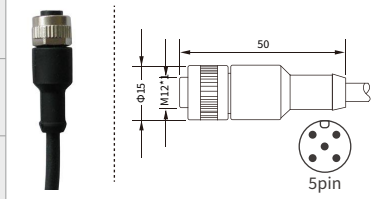
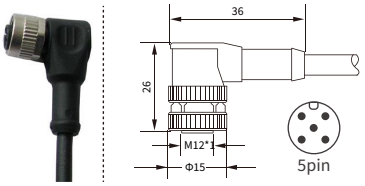
FM 260-	H	04	PR	-	-	Explanation
FM 260-						FM 260 Electromagnetic Flowmeter
	H					Process connection: Clamp connection
	GK					Process connection: G thread internal teeth
	GM					Process connection: G thread external teeth
	F					Process connection: Flange mounting
		04				Measurement diameter: DN4
		08				Measurement diameter: DN8
		12				Measurement diameter: DN12
		15				Measurement diameter: DN15
		25				Measurement diameter: DN25
		32				Measurement diameter: DN32
		40				Measurement diameter: DN40
		50				Measurement diameter: DN50
			PR			Output signal: Pulse/Current/RS485 (8-wire)
			RA			Output signal: RS485/Analog mA (5-wire)
				-		Medium temperature: -20...80℃
				H1		Medium temperature: -20...140℃
				H2		Medium temperature: -40...120℃
				H3		Medium temperature: -40...140℃
					-	Sealing material: Silicone (-40...120℃ coolant use)
					K	Sealing material: Perfluoroether
					E	Sealing material: Ethylene propylene diene monomer (EPDM)
					F	Sealing material: Fluoroceramic (0...120℃ use)
					N	Sealing material: Nitrile

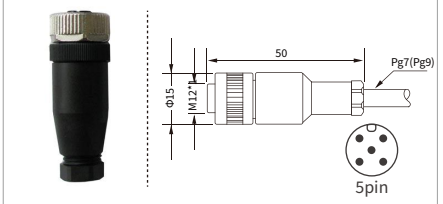
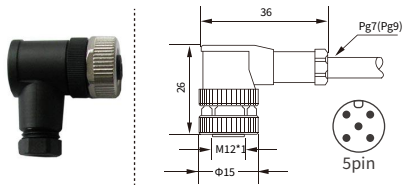
*Support customization of non-standard sizes

Optional accessories - Electrical accessories (M12*1-8Pin) :PR output signal wiring (Factory standard: ZL08-PC02G)

name	Outline drawing/dimension drawing (unit :mm)	material	Model number
M12*1-8Pin (2m cable)		PVC	ZL08-PC02G
M12*1-8Pin (5m cable)			ZL08-PC05G
M12*1-8Pin (10m cable)			ZL08-PC010G
M12*1-8Pin (2m cable)		PUR	ZL08-PU02G
M12*1-8Pin (5m cable)			ZL08-PU05G
M12*1-8Pin (10m cable)			ZL08-PU010G

Optional accessories - Electrical accessories (M12*1-5Pin) :RA output signal wiring (Factory standard: ZL05-PC02G)

name	Outline drawing/dimension drawing (mm)	material	model
M12*1-5Pin (2m cable)		PUR	ZL05-PU02G
M12*1-5Pin (5m cable)			ZL05-PU05G
M12*1-5Pin (10m cable)			ZL05-PU010G
		PVC	ZL05-PC02G
			ZL05-PC05G
			ZL05-PC010G
M12*1-5Pin (2m cable)		PUR	ZL05-PU02W
M12*1-5Pin (5m cable)			ZL05-PU05W
M12*1-5Pin (10m cable)			ZL05-PU010W
		PVC	ZL05-PC02W
			ZL05-PC05W
			ZL05-PC010W

M12* 1-5Pin self-connector/size drawing (mm)	model
	GL05 (5Pin joint)
	WL05 (5Pin joint)