

Product overview

The NeoWave EMFM3 Electromagnetic Flowmeter is designed for a wide range of applications: large diameters for water supply and drainage projects, medium and small sizes for demanding industries such as steel, paper, chemical, and non-ferrous metallurgy, and small to micro sizes for food, pharmaceutical, and biochemical applications requiring strict hygiene standards.

Features

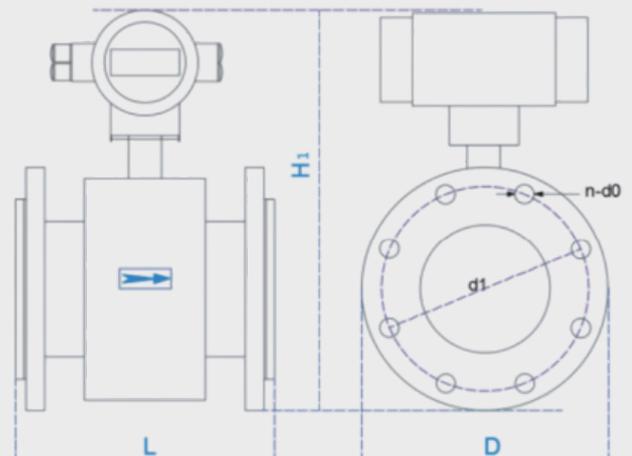
- Smooth measuring tube that prevents clogging, suitable for liquids with solid particles (pulp, mud, sewage).
- No pressure loss, ensuring energy efficiency.
- Accuracy unaffected by density, viscosity, temperature, pressure, or conductivity.
- Wide flow and diameter range.
- Suitable for corrosive fluids.

Applications

- Water supply and drainage projects.
- Steel industry (e.g., blast furnace cooling water).
- Non-ferrous metallurgy (ore pulp).
- Paper industry (pulp and black liquor).
- Chemical industry (corrosive liquids).
- Food, pharmaceutical, and biochemical industries (hygienic applications).
- Liquid-solid mixtures such as pulp, mud, and sewage.



Dimensions



Specification

Maximum velocity of flow	15m/s		
Accuracy	DN15 ~ DN600	±0.5% of the indicated value (flow velocity ≥ 1m/s), ±0.2%**	
		+3mm/s (flow velocity < 1m/s)	
	DN700 ~ DN3000	±0.5% of the indicated value (flow velocity ≥ 0.8m/s)	
		±4mm/s (flow velocity < 0.8m/s)	
Fluid Electrical Conductivity	≥50μS/cm		
Nominal pressure	DN10 ~ DN200	1.6MPa	
	DN250 ~ DN1000	1.0MPa	
	DN1200 ~ DN2000	0.6MPa	
	DN2200 ~ DN3000	0.6MPa	
Ambient temperature	Sensor	-25°C~ +60°C	
	Converter & Integrated type	-10°C~ +60°C	
Lining material & Fluid maximum temperature	Lining material	Separate type	Integrated type
	PTFE (Polytetrafluoroethylene)	120°C (special customization)	70°C
	PFA (Perfluoroalkoxy resin)	180°C (special customization)	70°C
	FEP (Fluorinated ethylene propylene)	160°C (special customization)	70°C
	Polychloroprene Rubber	80°C (special customization)	70°C
	PUR (Polyurethane)	80°C	70°C
Signal electrode form	Fixed type (DN15 ~ DN2600), scraper type (DN80 ~ DN3000)		
Signal Electrode & Ground Electrode Materials	Molybdenum-containing stainless steel, Hastelloy B, Hastelloy C, Titanium, Tantalum, latinumiridium alloy, stainless steel coated tungsten carbide		
Connection flange material	Carbon steel		
Grounding flange material	Stainless steel 1Cr18Ni9Ti		
Inlet protection flange material	DN15 ~ DN600	Stainless steel 1Cr18Ni9Ti	
	DN700 ~ DN3000	Carbon steel	
IP Rate	DN15 ~ DN150separable rubber or polyurethane lined sensor	IP65, IP68 (special customization)	
	DN200 ~ DN2600separable rubber or polyurethane lined sensor	IP68, 10 meters underwater	
	Other sensors and all converters	IP65	
Spacing (separate type)	The distance between the converter and the sensor is generally not more than 100m; if it exceeds 100m, special customization is required.		

Specification

*DN700 ~ DN3000, the accuracy of special order can reach +0.3% of the indicated value (flow velocity ≥ 1 m/s) or +3mm (flow velocity < 1 m/s).
 *Specially provide 0.2% accuracy flow meter.

Lining material	Main performance	Applications
PTFE(Polytetrafluoroethylene)	<ul style="list-style-type: none"> It is the material that has most stable chemical property among plastics: resistant to boiling hydrochloric acid, sulfuric acid, nitric acid and aqua regia, also resistant to concentrated alkali and various organic solvents, not resistant to corrosion by chlorine trifluoride, high temperature oxygen trifluoride, high flow rate liquid fluorine, liquid oxygen and ozone. Poor wear resistance. The ability to resist negative pressure is poor. 	<ul style="list-style-type: none"> 100°C, 150°C (special customization) Strong corrosive media such as concentrated acid and alkali. Hygienic media.
PCR(Polychloroprene Rubber)	<ul style="list-style-type: none"> It has excellent elasticity, high breaking force and good wear resistance. It is resistant to the corrosion of general low-concentration acid and alkali salt media, and not resistant to the corrosion of oxidative media. 	<ul style="list-style-type: none"> 80°C, 120°C (special customization) General water, sewage, weak abrasive mud, ore pulp.
PUR (Polyurethane)	<ul style="list-style-type: none"> Excellent wear resistance (equivalent to ten times that of natural rubber). Acid and alkali resistance is poor. It cannot be used for water mixed with organic solvents. 	<ul style="list-style-type: none"> $< 80^\circ\text{C}$ Neutral and strong abrasive slurry, coal slurry, mud, etc

Selection Help Guide

Selection Principles:

- The fluid must be conductive ($\geq 50 \mu\text{S/cm}$) and free from excessive bubbles or ferromagnetic substances.
- Pressure rating, lining, electrode, and structure should be selected according to fluid characteristics.

Path Selection:

- Normally, the meter diameter equals the pipeline diameter (range ratio up to 1500:1).
 - For fluids with solid particles: recommended velocity 1–3 m/s. A larger diameter can be used to reduce wear.
 - For pipelines with possible sediment: recommended velocity 2–5 m/s. A smaller diameter can be used to increase velocity and avoid sedimentation.
 - For low flow rates requiring high accuracy: a smaller sensor than the pipeline diameter can be used to increase velocity and precision.
- In cases (2, 3, 4), reducers must be installed upstream and downstream. The cone angle should be $\leq 15^\circ$, with a straight pipe section upstream at least 5× the pipeline diameter.



Selection Code

Code and description				Type
EMFM3				Electromagnetic flowmeter
DN	10-200 -3000			Drift diameter
1.6	(DN10-DN200)	0.6	(DN2200-DN3000)	Nominal pressure
1	(DN250-DN 1000)	XX	Special customization	
0.6	(DN1200-DN2000)			
1	Polytetrafluoroethylene (PTFE)	4	Fluorinated Ethylene Propylene(FEP)	Lining material
2	Neoprene rubber	5	Screening PFA	
3	Polyurethane			
1	316L stainless steel	4	Titanium	Electrode material
2	HB	5	Platinum	
3	HC	6	Tantalum	
			7	Stainless steel coated with tungsten carbide
1	IP65			Shell protection
2	IP68+IP65(sensor IP68+converter IP65)			
1	No			Explosion-proof sign
2	Ex db ib q IIC T6 Gb			
1	No			Accessory
2	Flanges			
1	85-250VAC			Power Supply
2	20-36VDC			
3	Battery powered			
MB	MB I Key button, double-row display, standard output, Rs485			Converter Type
LB	IKey button, double-row display, standard output, RS485"HART			