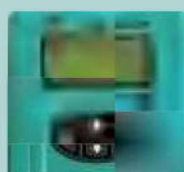
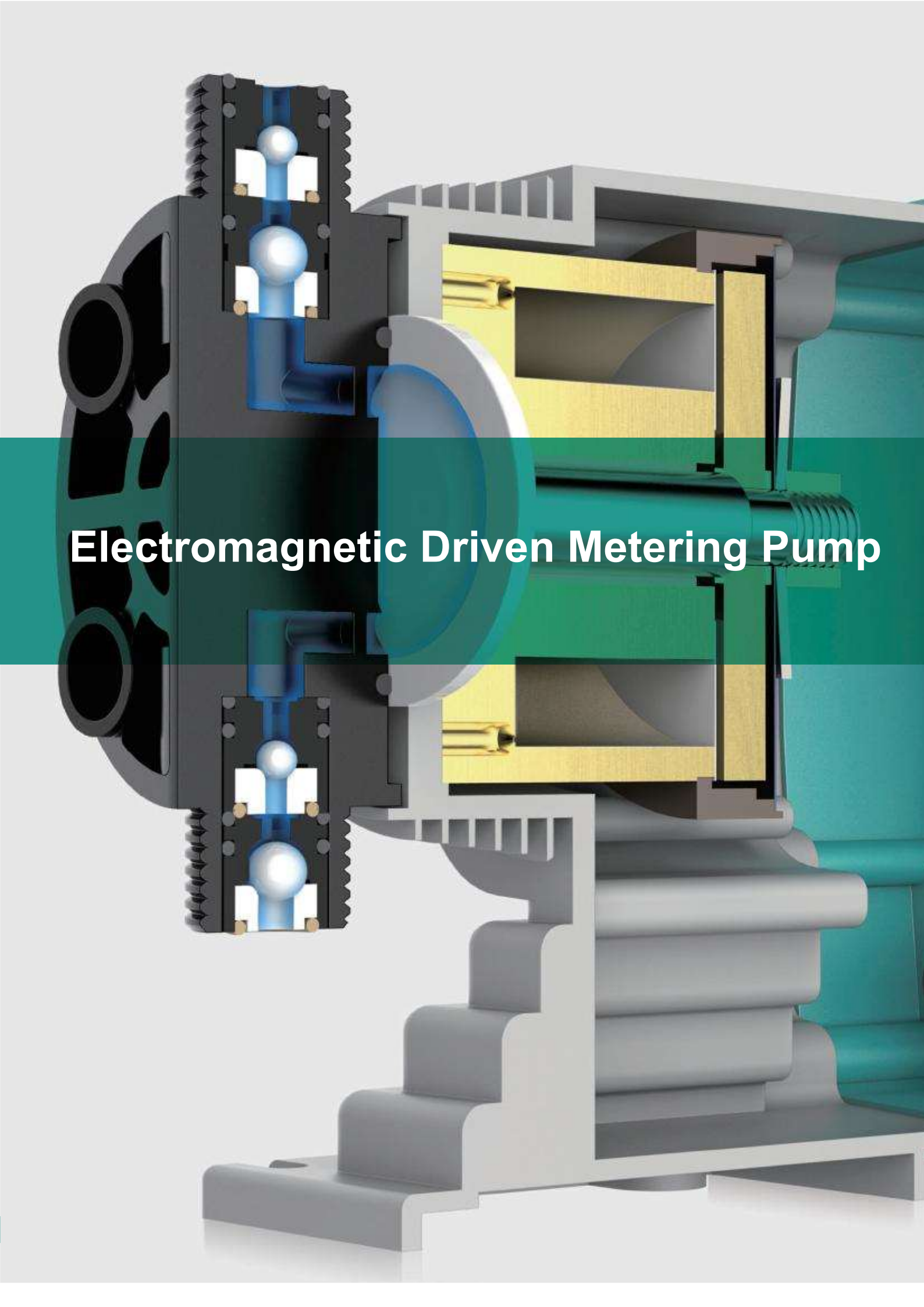




BELUNO

PRODUCT OVERVIEW





This 3D cutaway diagram illustrates the internal components of an electromagnetic driven metering pump. The pump is shown in a cross-section, revealing the internal mechanism. On the left, there are two inlet ports with black flanges. The internal flow path is highlighted in blue, showing two check valves (balls) that allow fluid to enter the pump chamber. The pump chamber is connected to a central shaft that passes through the pump body. The shaft is driven by an electromagnetic motor, which is shown in a cutaway view on the right. The motor's stator is yellow, and the rotor is green. The pump body is grey, and the motor housing is also grey. The entire assembly is mounted on a base. The text "Electromagnetic Driven Metering Pump" is overlaid on the image.

Electromagnetic Driven Metering Pump

Advantages and Features

01

High Efficiency

Accurate dosing, compact design: Benefiting from our independent circuit R&D ability and excellent electromagnetic design experiences, the pump realizes the output capacity the same as that of similar products by lower power and smaller volume to cut cost, and it's high efficiency.

02

Excellent Compact Structure

Adopt space technology to reinforce the strong corrosion resistance: Valve seat, made of PTFE material, has better overall tolerance of liquid contact part, not only guarantees the leakproofness but also protects the rubber ring valve seat against expansion and corrosion after longtime use, or the tightness would decrease and inaccurate dosing may be caused.

03

Optimized Pump Head Structure

Pump head, made of high modified material, full chemical compatibility: As verified in practice, the internal structure of pump head effectively avoids flash gas and cavitation inside pump head, meanwhile, optimizes the procedure of liquid flow, and drops the ultra-large shear force on liquid to maintain the conveying capacity and improve the overall efficiency of pump.



04

Ultra-low Maintenance Cost

Full pure PTFE diaphragm, five-year warranty: Diaphragm is made of full pure PTFE, with superexcellent tolerance and long service life, which will sharply cut the maintenance cost of product. Moreover, we provide five-year lifetime warranty for the diaphragm of dosing pump.

05

Idling to be Allowed

Unique idling capacity: With improved full pure PTFE diaphragm, the dosing pump can still work safely without damage upon diaphragm after quite a long time once the chemical liquid in dosing barrel is used out, and without timely feed or any misoperation occurs.



100% PTFE Diaphragm

06

Simplify Operation

Simple and visual digital display mode and clear parameter setting save time and cut cost, and guarantee the perfect connection of control process.

07

Convenient to Manage Stocking

Uniform valve group, made up of universal size one-way valves, reduces the confusion among parts and components.

08

Customizable Service

Reasonable and flexible internal design makes customization realizable. We can provide solutions for you according to user demand and special working conditions to avoid the embarrassing modification of process design upon the unsuitability of product. We stick to the principle of providing clients with more professional and quicker support all the time. Through the experience and accumulation in the past years, we have comprehended both pumps and the water treatment industry more profoundly. Our strong technical team can provide individualized products or compact dosing system centering on dosing pump for your production process according to your particular requirements.



Model Code

Code:

Control Version

BLD----Manual Operation

DM----Manual & Current Signal (4-20mA)

DP----Manual & Pulse Operation

DC----Manual & RS485 Communication Protocol

Capacity **L/h**

Pressure **Mpa**

Model **M/NX/LM/GX/L/X**

Dosing Head Material	Pump Head	Diaphragm	Valve Seat	Valve Ball	Seal Ring
PPV ----	PP	PTFE	PTFE	Ceramic	FKM
PVT ----	PVC	PTFE	PTFE	Ceramic	FKM
PTF ----	PTFE	PTFE	PTFE	Ceramic	--
SST ----	SS316	PTFE	SS316	SS316	FKM

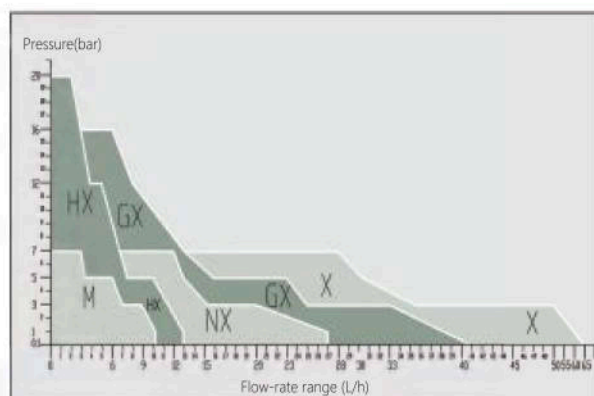
Electric Power Supply **A**----- 1ph 220V 50/60Hz

B----- 1ph 110V 50/60Hz

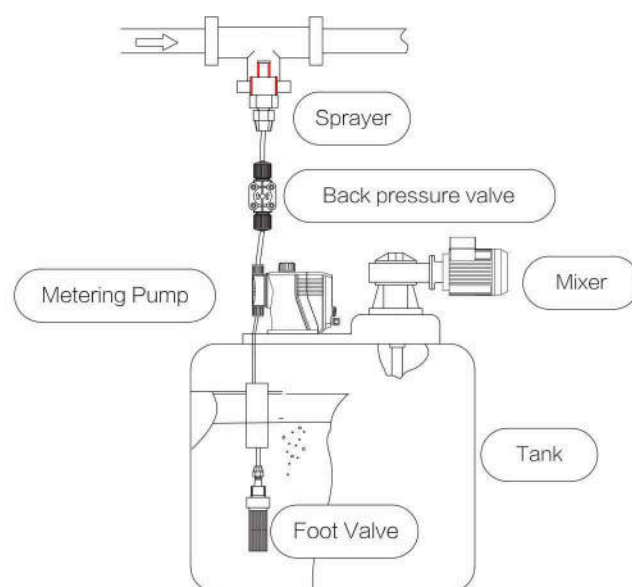
C----- Special requirements, otherwise noted

BLD0207XPPVA

Flow rate-pressure range diagram



Typical Installation Diagram



Code

Pump Series

BLD Manual operation

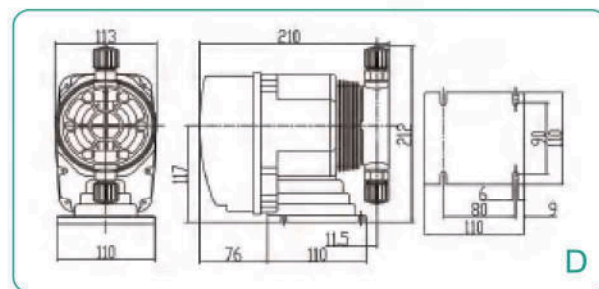
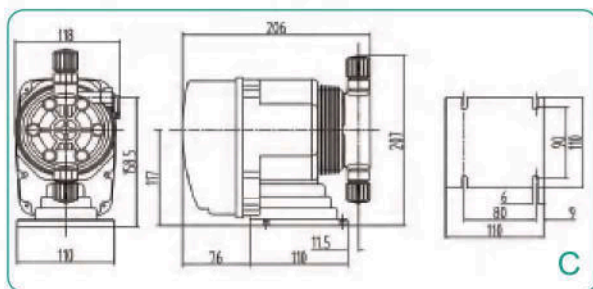
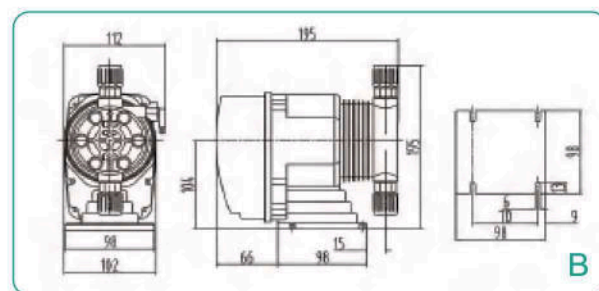
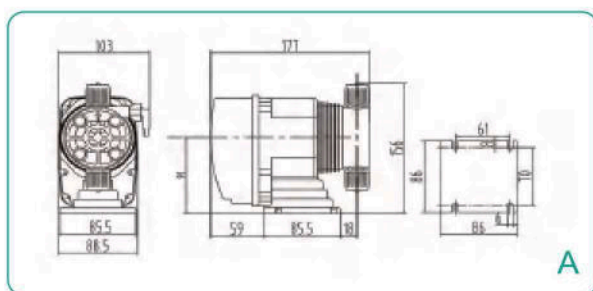
DP Pulse signal input, can be connected with ARK flow meter.

DM 4-20mA current signal input, can be connected with ARK pH, ORP, Conductivity Meter.

DC RS485 communication protocol, can be connected with computer.

Series & Model					Flow Rate	Pressure	Stroke Capacity	Stroke Number	Tube Size	Consumption	Power Supply	Dimension	Weight	Carton Size
					Size	L/h	bar	ml/stroke	stroke/min	mm			W	kg
BLD	-	-	-	M	1	7	0.14	120	4*6	30	110V 50/60Hz 220V 50/60Hz	A	2.3	26x15x28
					2	7	0.28							
					3	7	0.42							
					6	5	0.56	180		40				
					9	3	0.83							
-	DP-LM	DM-LM	DC-L	LM, L	1	7	0.14	120		30		LM: Size B L: Size C	LM: 3.2 L: 3.8	
					2	7	0.28							
					3	7	0.42							
					6	5	0.71	140		40				
					9	3	0.94	160						
BLD	DP	DM	-	NX	4	12	0.56	120	40	220V 50Hz	B	3.2		
					5/6	10/8	0.69/0.83							
					9	7	0.94	160						
					12	7	1.25							
					15	4	1.25	200						
					20	3	1.67							
					25	2	2.08						6*9	
			GX	3	20	0.31	160	4*6	60	220V 50/60Hz	C	4		
				6	16	0.5	200							
				10	10	0.83								
				20	6	1.67		6*9				4.5		
				23	5	1.92								
				33	3	2.75								
				55	0.1	3.82	240							
				X	2	16	0.28	120				4*6	65	110V 50/60Hz 220V 50/60Hz
6	7	0.56												
9	7	0.83												
12	7	1.67												
15	3	2.08	160											
20	3	2.08												
30	3	3.13			6*9	220V 50/60Hz	D	4.5						
50	2	3.47	240											

Installation Dimension Drawing



Installation Fittings

1. Standard fittings



2m PVC inlet pipe



1.5m PE outlet pipe



Injector



Filter



Three-piece connection

2. Other optional accessories



Nonadjustable
back pressure valve



Adjustable back
pressure valve



Connector for DN15



High viscosity valves



Diaphragm



BLD Series—Manual Operation

- Manual operation
- Frequency numbers (1–maximum)
- Liquid level switch or time relay interface is optional.

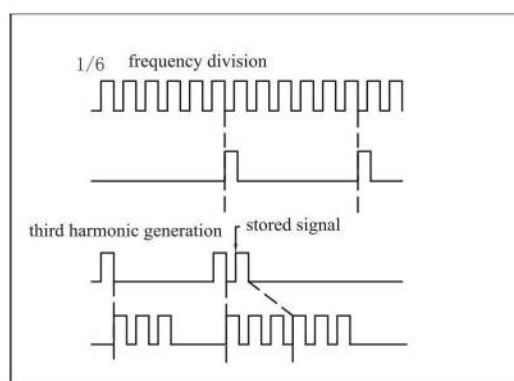
DP Series—Pulse signal

- Manual operation
- Dosing proportionally via external pulse signal.
- Division mode: the frequency division mode is used when input impulse frequency is bigger than maximum working frequency of the dosing pump.
- Multiplication mode: the frequency multiplication mode is used when input impulse frequency is smaller than maximum working frequency of the dosing pump.



Pulse signal control:

1. The impulse signals (square wave or dry contact signals) that any instruments directly sends out can be received.
2. DP pump has both manual control and automatic control mode. In manual mode, stroke frequency of the pump can be adjusted by means of a control button, no matter whether the pump is running or in stop state.
3. In automatic mode, two control modes can be set, named frequency division control and frequency multiplication control.
4. In the frequency division mode, when input impulse number is larger than maximum working frequency, the pump should be set as the frequency division mode. According to user's set, the pump identifies and receive the impulse signal, then dose chemicals in proportion.
5. In the frequency multiplication mode, when input impulse number is far less than maximum working frequency of the pump, the pump should be set as the frequency multiplication mode and the pump identify and receive the impulse signal, then dose chemicals in proportion depending on user's set. But when the received impulse interval is less than the interval time of the corresponding pump output, the signal received later will be stored (the pump could still work even though no signal received at this moment), the pump will not stop until it is consumed completely.



Division and Multiplication mode

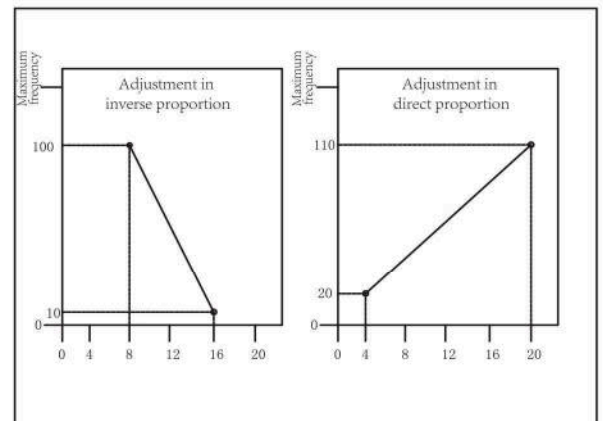


DM Series—4–20 mA Signal

- Manual and 4–20mA signal remote control mode.
- Flow rate can be adjusted Proportional or inverse proportional according to the current signal.
- Proportional adjustment: set when the input signal is 4mA, the stroke number set as A, when the input signal is 20mA, the stroke number set as B, $A < B$.
- Inverse proportional adjustment: set when the input signal is 4mA, the stroke number set as A, when the input signal is 20mA, the stroke number set as B, $A > B$.
- Liquid level switch interface is optional.

Current Signal Control (4–20mA):

1. Analog signal can be directly input into the dosing pump, without need of an extra control instrument.
2. DM pump has both manual control and automatic control modes. In manual mode, stroke frequency of the pump can be adjusted by means of a control button, no matter whether the pump is running or in stop state.
3. Set two points and their corresponding frequency within 4–20mA, so as to control dosage.
4. The mode could be set in direct and inverse proportions adjustment. The direct proportion means impulse frequency of a pump increases with increase of current signal; adjustment in inverse proportion: impulse frequency of a pump increases with decrease of current signal.



Division and Multiplication mode

DC Series——RS485 Communication Protocol

- Manual and RS485 communication protocol control mode.
- The communication with the upper computer can be achieved; online start and stop and control can be achieved; the pump is suitable for the high-automation production process under centralized control.
- A controller equipped with touch screen can be provided that a simple control system can control at most 128 DC dosing pumps simultaneously, to achieve quick and simple control, without need of complicated control instruments; state parameter of dosing pump is visually displayed;
- Liquid level switch interface is optional.



DC Pumps Application Case

Batch control of DC pumps

1. Nice and decent look, easy to monitor

Display screen replaces former old enclosure, bringing full feel of technology. Both working state and stroke frequency of pumps are easy to monitor.

2. Space saving, convenient installation

The size of control unit is minimized. Only need to make holes in the enclosure of equipment and put the screen in, so the equipment installation is quick and easy.

Simple operation, quick control

3. Pump start/stop and stroke frequency can be controlled by touch screen instead of adjusting by one side of pump, and the control response is quick and accurate.

Typical Installation Diagram

