

SFL212B Double nozzle baffle two-stage electro-hydraulic servo valve



□ Features

- Two-stage servo valve, flow control
- Adopt dry force motor and two-stage hydraulic amplifier structure
- Double nozzle baffle valve with no friction pair in front stage
- Mechanical feedback
- High resolution, low hysteresis, excellent performance, high dynamic response
- Suitable for closed-loop control of position, force and velocity
- Compact structure, small size and light weight

□ Main Parameter

General parameters		
Operating medium		Mineral oil or other fluids according to DIN 51524
Viscosity range	mm ² /s	15 to 380 (30 to 45 recommended)
Oil temperature range	°C	-20 to +80 (recommended +40 to +50)
Storage temperature	°C	-20 to +60
Operating ambient temperature	°C	-40 to +120
Oil cleanliness		Maximum permissible degree of contamination of the oil, Class 6 per NAS 1638
Filtration accuracy		Recommended filter minimum filtration ratio β ₅ ≥75
Seal material		Nitrile rubber, fluorine rubber, or other sealing materials according to user needs
Installation Requirements		Install at any position, and ensure that the pilot stage has sufficient pressure (≥2MPa) when the system starts
Weight	k g	1.3

Technical Parameters

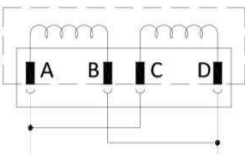
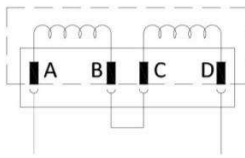
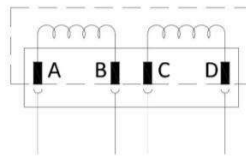
Work Pressure				
Oil mouth P, A, B	MPa	≤31.5		
Oil mouth T	MPa	≤21		
Rated flow (differential pressure ΔP=7MPa)	L/min	5	10	20
Zero bias	%	≤±2		
Hysteresis loop	%	≤4		
Resolution	%	≤1		
Non-linearity	%	≤7.5		
Asymmetry	%	≤7.5		
Endleak	L/min	≤0.8	≤1	≤2
Pressure Gain	%Pn/1%In	≥30		
Oil supply pressure zero drift (80~110%Pn)	%	≤±2		

Oil return pressure zero drift	%	≤±2
Temperature zero drift (every 40°C change in temperature)	%	≤±2
Amplitude bandwidth	Hz	≥100
Phase bandwidth	Hz	≥100
Valve body structure	Four-way, two-stage servo valve with spool and sleeve	
Pilot stage	Nozzle Flapper Valves	
Pilot oil supply method	Internal supply control oil, internal oil return	
Pilot Oil Filtration	With internal oil filter	

Electrical Parameters

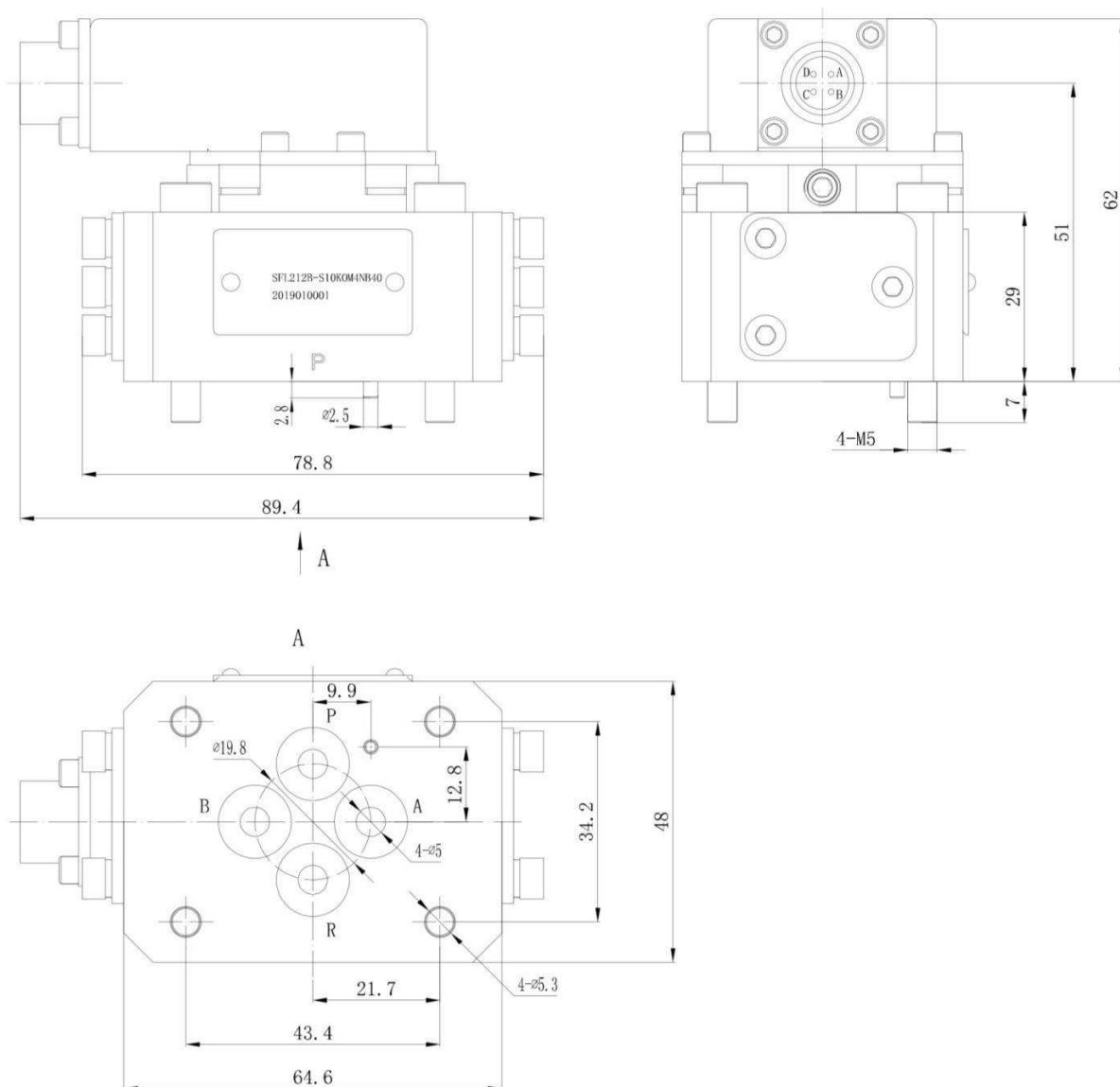
Valve protection type according to standard EN 60 529	IP65	
Signal type	Analog quantity	
Rated current per coil	m A	40
Each coil resistance	Ω	100 (according to user needs)
Socket	Standard electrical socket, mates with HB6 - 77 - 83 plug or other equivalent	
Servo Amplifier	External servo amplifier (Model: HTSA101, ordered separately)	

□ Electrical Wiring

	Parallel connection	In series	Single Coil
Coil connection form			
Coil resistor (Ω)	50	200	100
Rated current (mA)	40	20	40
Coil inductance (H)	0.5	2	1
Input polarity when valve is at P→B, A→T	A and C (+), B and D (-)	A (+), D (-), B, C are shorted	A(+), B(-), or C(+), D(-)

Note: The pilot stage must first establish oil pressure before inputting electrical signals.

□ **Dimensions and Interface**



— The roughness of the installation surface of the valve is not less than $\sqrt{1.6}$, and the flatness is less than 0.01mm.

— In order to ensure that the servo valve can work normally, the system must be flushed before trial operation.

□ **Spare Parts & Accessories**

Parts or Accessories	Size or Specification	Quantity
NBR O-rings		
For P, T, A and B ports	9×1.8	4
Configuration plug (degree of protection IP65)	HB6 - 77 - 83 plug	1
Mounting screw	M5×35	4
Protective base	PP or 2A12	1



Ordering Information

SFL212B —		•	•	•	•	•	•	•	•	•		
Valve response type		Signal current for fully open valve		Rated flow		Valve Socket		Seal material		Pilot valve control oil		
S	Standard Responses	10	±10 mA Parallel connection	When Pn=3.5MPa per section Qn[L/min]	A	The socket is facing the A port	N	Nitrile Rubber (NBR) Standard Type	4	Internal Control	The position of the spool when there is no control electric signal	
H	High frequency	15	±15 mA Parallel connection	05	B	The socket is facing the B port	V	Viton (FPM)			M	Centre position
		40	±40 mA Parallel connection	10	P	The socket is facing the P port		Customized on demand			A	P→B, A→T
			Customized on demand	20	T	The socket is facing the T port					B	P→A, B→T
Maximum Working Pressure and Body Material				Maximum Working Pressure and Body Material								
F	21 MPa Aluminum shell			F	21 MPa Aluminum shell							
K	35 MPa Steel shell			K	35 MPa Steel shell							
Valve Spool Type				Valve Spool Type								
O	Four-way, zero opening, linear flow gain			O	Four-way, zero opening, linear flow gain							
A	Four-way, 1.5% ~ 3% positive overlap, linear gain			A	Four-way, 1.5% ~ 3% positive overlap, linear gain							
D	Four-way, 10% positive overlap, linear gain			D	Four-way, 10% positive overlap, linear gain							
X	Customized on demand			X	Customized on demand							