

SFL212B (FB) double nozzle baffle explosion-proof servo valve



□ Features

- Intrinsically safe, explosion-proof grade: Exib II C T4 Gb
- Passed explosion-proof certification, in line with GB3836.1-2010, GB3836.4 - 2010
- Product shell protection grade: IP66
- Adopt dry force motor and two-stage hydraulic amplifier structure
- Double nozzle baffle valve with no friction pair in front stage
- Excellent performance, high dynamic response
- Suitable for closed-loop control of position, force and velocity

□ 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

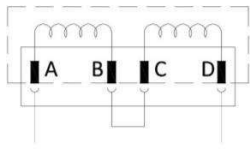
Work Pressure				
Oil mouth P, A, B	MPa	≤31.5		
Oil mouth T	MPa	≤21		
Rated flow (differential pressure ΔP=7MPa)	L/min	5	10	20
Zero bias	%	≤±2		
Hysteresis loop	%	≤4		
Resolution	%	≤1		
Non-linearity	%	≤7.5		
Asymmetry	%	≤7.5		
Endleak	L/min	≤0.8	≤1	≤2
Pressure Gain	%Pn/1%In	≥30		
Oil supply pressure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

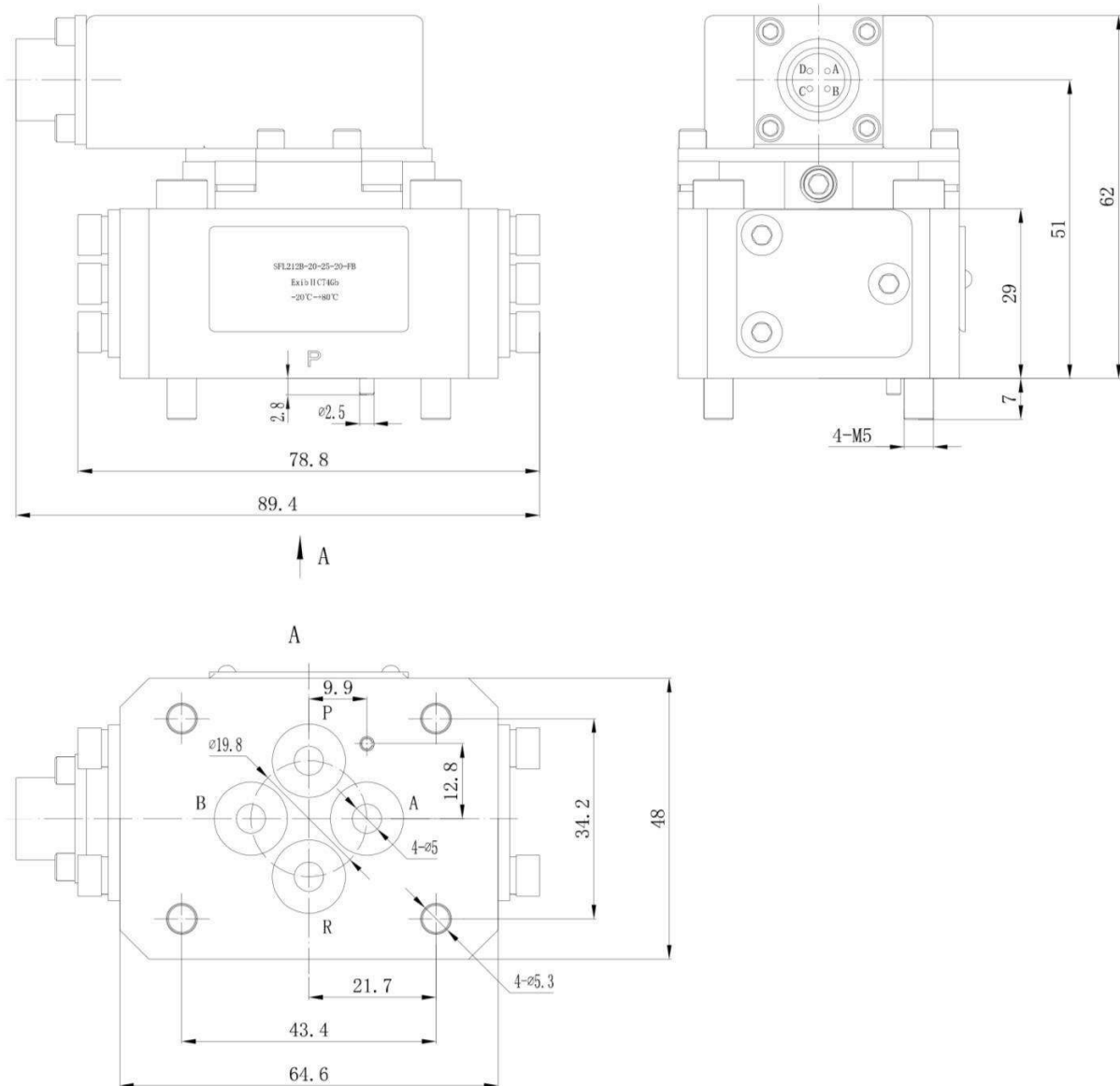
Enclosure protection class	IP66	
Signal type	Analog quantity	
Rated current of single coil	mA	20
Maximum Input Current	mA	35
Single coil resistance	Ω	270 (Custom coil resistance)
Rated voltage	V	5.48
Maximum Input Voltage	V	9.5
Rated power	W	0.11
Maximum input power	W	0.33
Maximum Coil Capacitance	pF	13.1
Socket	Standard electrical socket, mates with HB6 - 77 - 83 plug or other equivalent	
Servo Amplifier	External (model: HTSA101, ordered separately)	

□ Electrical Wiring

Main parameter	Technical indicators	
Coil Wiring		
Coil connection form	Series connection	
Coil resistor	Ω	270
Rated current	mA	20
Coil inductance	mH	9.5
Input polarity when valve is at P→B, A→T	A (+), D (-), B, C short circuit	

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 IP66)	HB6 - 77 - 83 plug	1
Mounting screw	M5×35	4
Protective base	PP or 2A12	1

□ Ordering Information

SFL212B —



Rated flow	
When Pn=3.5MPa per section Qn[L/min]	
05	5
10	10
20	20

Maximum Working Pressure and Body Material			
25	25	MPa	Aluminum shell
35	35	MPa	Steel shell

Special function	
FB	Explosion-proof

Current signal (series connection)		
20	20	mA