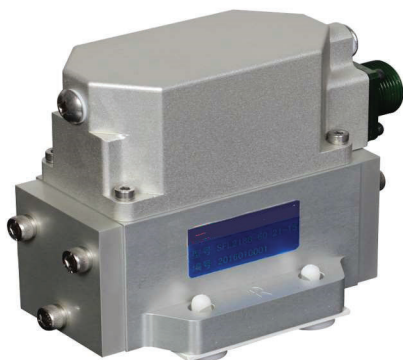


## SFL218B Double nozzle baffle two-stage electro-hydraulic servo valve



### □ 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
- The output stage is a four-way spool valve with a large driving force
- High Resolution, Low Hysteresis
- With external mechanical zero adjustment mechanism
- Suitable for position, speed, force (or pressure) servo control

### □ Main Parameter

#### General parameters

Operating medium	Mineral oil or other fluids according to DIN 51524		
Viscosity range	mm <sup>2</sup> /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 <sub>5</sub> ≥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	2.2	

#### Technical Parameters

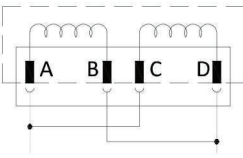
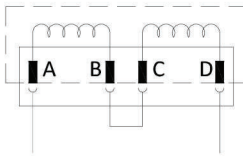
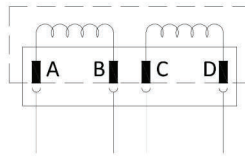
Work Pressure				
Oil mouth P, A, B	MPa	≤21		
Oil mouth T	MPa	≤14		
Rated flow (differential pressure ΔP=7MPa)	L/min	5;10	20	40;60
Zero bias	%	≤±2		
Hysteresis loop	%	≤5		
Resolution	%	≤1		
Non-linearity	%	≤10		
Asymmetry	%	≤10		
Endleak	L/min	≤2	≤3	≤4
Pressure Gain	%P <sub>n</sub> /1%I <sub>n</sub>	≥30		
Oil supply pressure zero drift (80~110%P <sub>n</sub> )	%	≤±5		

Amplitude bandwidth (3dB)	Hz	≥40
Phase bandwidth(-90°)	Hz	≥50
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	
Installation form	ISO 10372-06-05-0-92	

**Electrical Parameters**

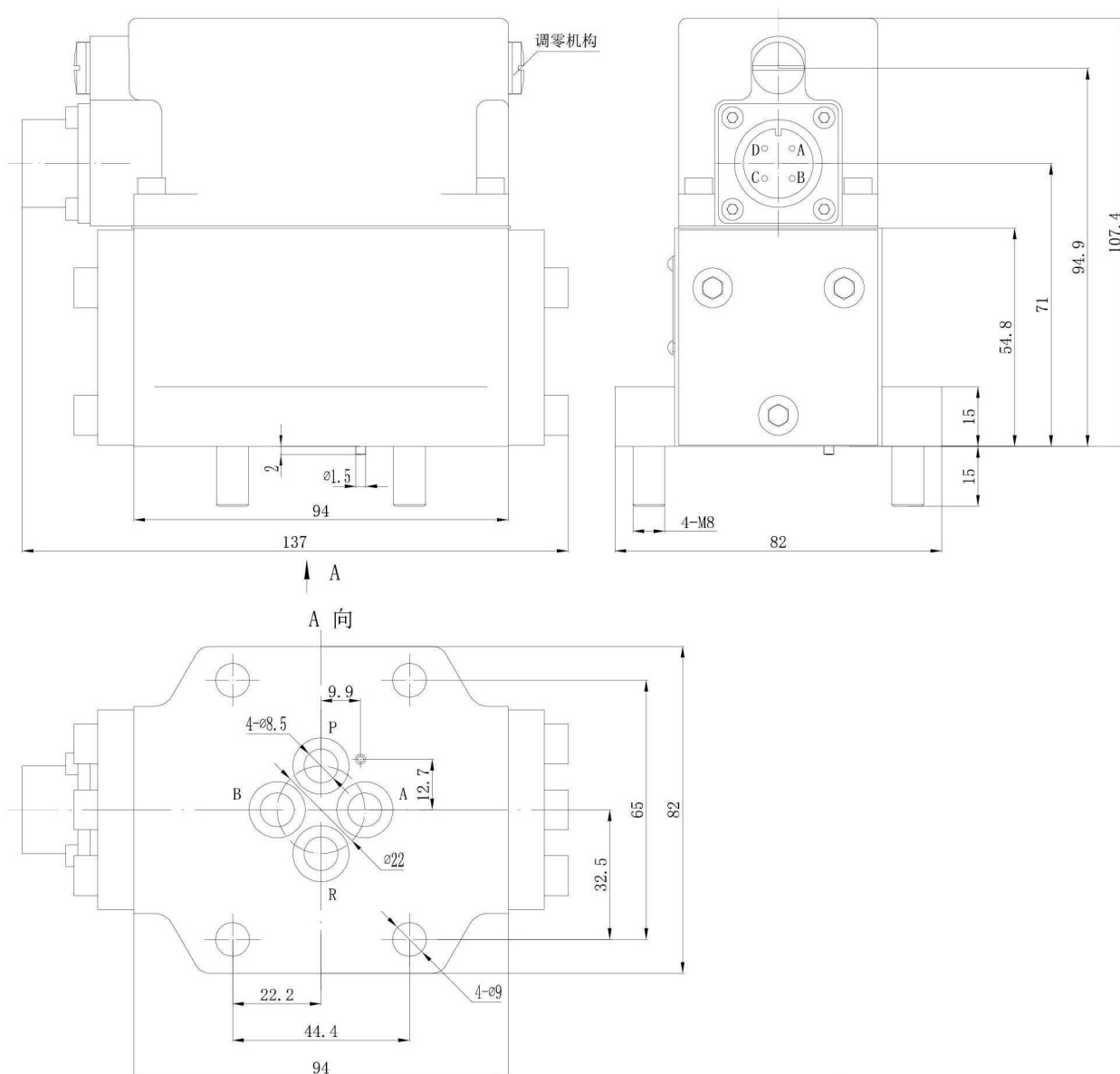
Valve protection type according to standard EN 60 529	IP65	
Signal type	Analog quantity	
Rated current per coil	m A	40
Each coil resistance	Ω	80 (according to user needs)
Socket	Standard electrical receptacle, mates with MS3106F14S-2S or other equivalent plug	
Servo Amplifier	External servo amplifier (Model: HTSA101, ordered separately)	

**□ Electrical Wiring**

	Parallel connection	In series	Single Coil
Coil connection form			
Coil resistor (Ω)	40	160	80
Rated current (mA)	40	20	40
Coil inductance (H)	0.36	1.44	0.72
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 installation surface of the valve complies with ISO10372 - 06 - 05 - 0 - 92, 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	10.6×1.8	4
Configuration plug (degree of protection IP65)	14S2S	1
Mounting screw	M8×30	4
Protective base	PP or 2A12	1

**□ Ordering Information**

SFL218B—



Valve response type	
S	Standard Responses

Rated flow	
When Pn=3.5MPa per section Qn[L/min]	
05	5
10	10
20	20
40	40
60	60

Maximum Working Pressure and Body Material		
F	21	MPa Aluminum shell

Valve Spool Type	
O	Four-way, zero opening, linear flow gain
A	Four-way, 1.5% ~ 3% positive overlap, linear gain
D	Four-way, 10% positive overlap, linear gain
X	Customized on demand

The position of the spool when there is no control electric signal	
M	Centre position
A	P→B, A→T
B	P→A, B→T

Signal current for fully open valve			
15	±15	mA	Parallel connection
30	±30	mA	Parallel connection
40	±40	mA	Parallel connection
50	±50	mA	Parallel connection
100	±100	mA	Parallel connection
Customized on demand			

Valve Socket	
A	The socket is facing the A port
B	The socket is facing the B port
P	The socket is facing the P port
T	The socket is facing the T port

Seal material	
N	Nitrile Rubber (NBR) Standard Type
V	Viton (FPM)
Customized on demand	

Pilot valve control oil	
4	Internal Control