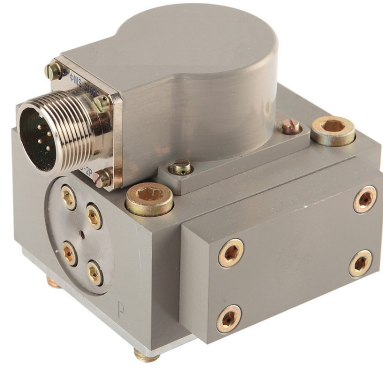


### Features

- High Static precision and dynamic response up to 170hz
- For high dynamic or high position accuracy applications.
- Reliable long life operation
- Die forged aluminum body, compact and light weight
- Mechanical null adjustment
- Flapper Nozzle design
- Maximum rated pressure to 280 bar (4000psi)
- Nominal flow rating of 7, 17, 33, 50, 65 and 100lpm



## Ordering Details

V
S
S
I4-
C-
33-
40
4P-
1

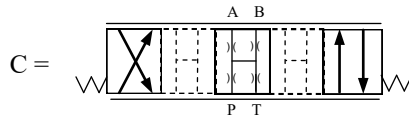
Valve

Subplate Mount

Valve Type: Servo

Mounting Size: ISO 10372-04-04-0-92 (Reference page 3)

Spool Configuration:



Spool Flow  
(at 210bar pressure drop)

Code/Flow (lpm)
7
17
33
50
65
100

Command Signal: 40 = +/-40mA

Electrical Connector = 4P = 4-Pin round connector according to 654-MS3106F14S-2S

Series

Example Part Number: VSSI4-C-33-404P-1

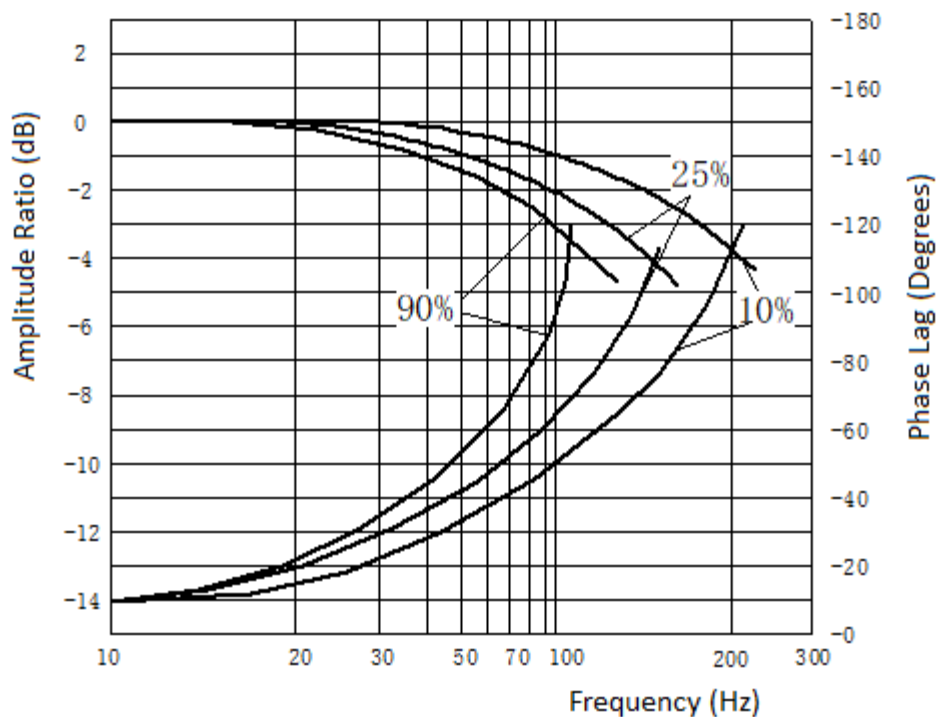
# Technical Data

Mechanical Data		Valve Size (lpm)					
Description	Units	7	17	33	50	65	100
Nominal Supply Pressure range	Bar	14-210 (280 Max.)					
Nominal Rated Supply Working Pressure, Ps	Bar	210 (280 Max.)					
Rated Flow at 210bar pressure drop, Qn	LPM	6.5	16.5	32.5	50	65	100
Rated Flow at 70bar pressure drop	LPM	3.7	9.5	18.8	28.9	37	57.7
Rated Current, In	mA	15	15	15	15	40	40
Hysteresis	%	≤ 3					
Threshold	%	≤ 1					
Linearity	%	≤ 7.5					
Symmetry	%	≤ 10					
Pressure Gain, %Ps/1% In	%	> 30					
Internal Leakage, at 210bar	LPM	≤ 0.7	≤ 0.9	≤ 1.4	≤ 2.0	≤ 2.27	≤ 3.0
Null Bias	%	≤ +/-3					
Null shift with supply pressure of 80-110%Ps	%	≤ +/-2					
Null shift with return pressure of 0-20%Ps	%	≤ +/-2					
Null shift with temperature of 56°C	%	≤ +/-4					
Frequency Response at amplitude ratio -3db, +/-10% opening	HZ	≥ 100	≥ 100	≥ 100	≥ 70	≤ 170	≥ 50
Frequency Response at phase lag of -90°, +/-10% opening	HZ	≥ 100	≥ 100	≥ 100	≥ 70	≤ 150	≥ 50
Working Temperature	°C	-30 to +100					
Net Weight	KG	1					

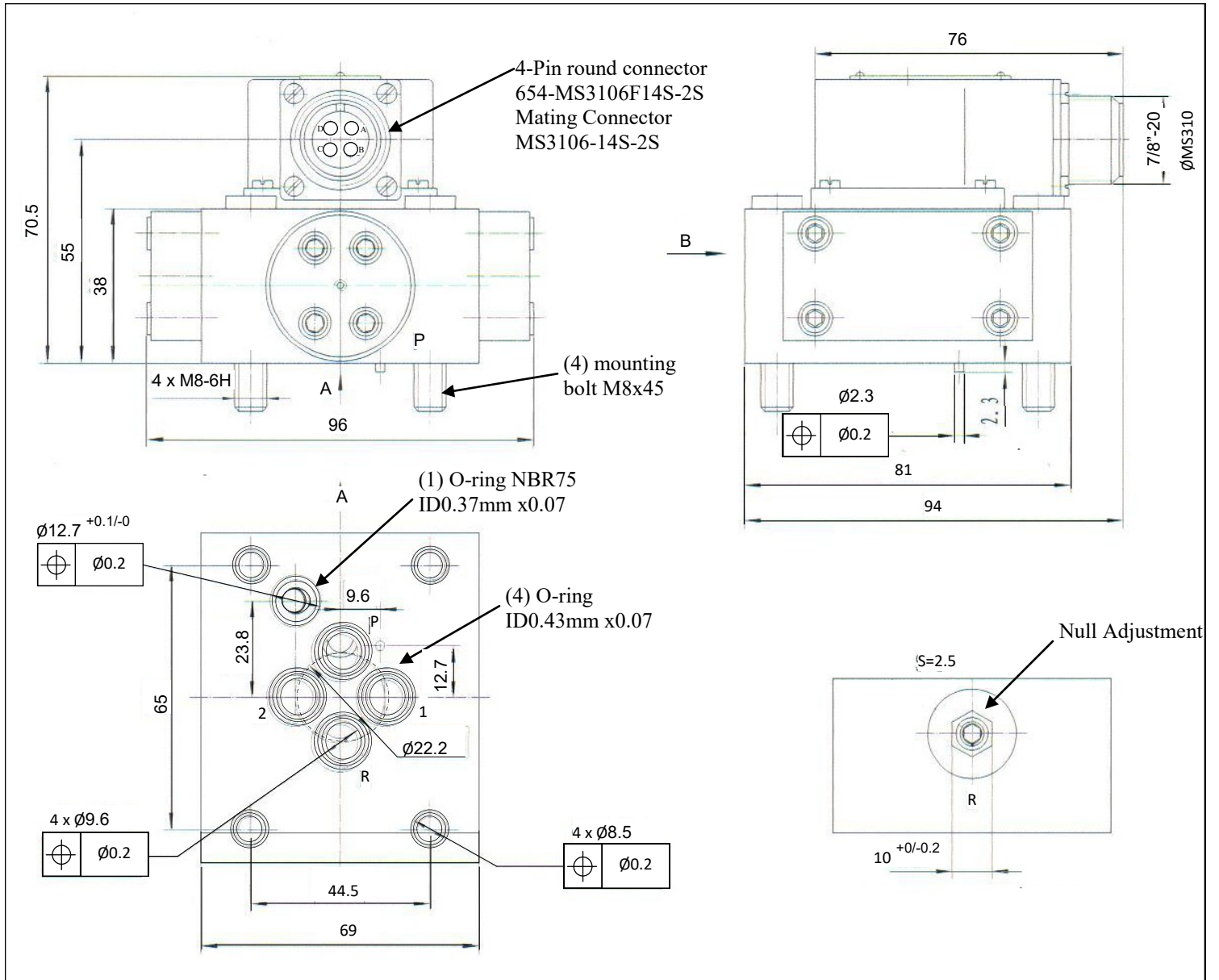
## Electrical Data

Description	Units	7	17	33	50	65	100
Resistance per coil at 20°C	Ohms	200	200	200	200	80	80
Rated Current: parallel coils	mA	15	15	15	15	40	40
Rated Current: series coils	mA	7.5	7.5	7.5	7.5	20	20
Coil Inductance, series coils	H	5.0	5.0	5.0	5.0	~2.0	~2.0

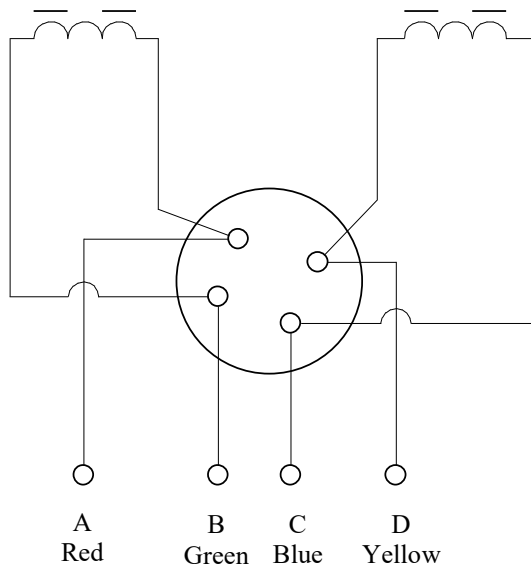
VSSI4C65 40P Valve Performance at 10%, 25% and 90% opening  
 Supply pressure 210bar (3045psi), fluid viscosity 32mm<sup>2</sup>/s, temperature 40°C (104°F)



## Dimensional Data



## Electrical Connection

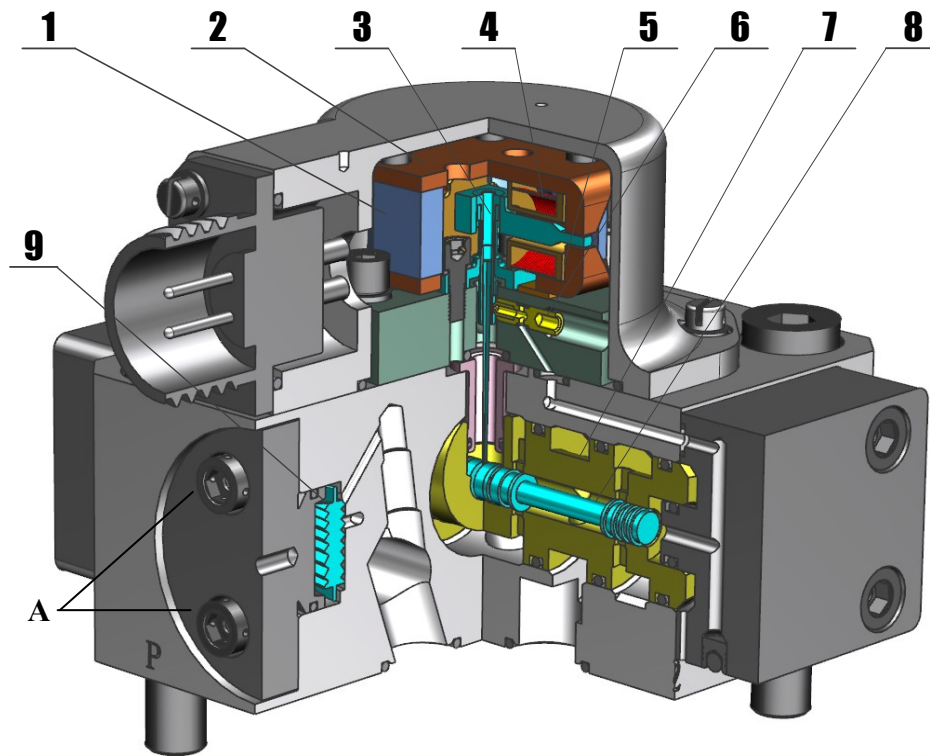


### Polarity:

Flow to Port 1: Positive current to pin B and negative to pin A.

Flow to Port 2: Positive current to Pin C and negative connected to pin D.

## Construction



The servo valve is constructed with a permanent magnet torque motor (first stage hydraulic amplifier) and output stage amplifier (second stage hydraulic amplifier)

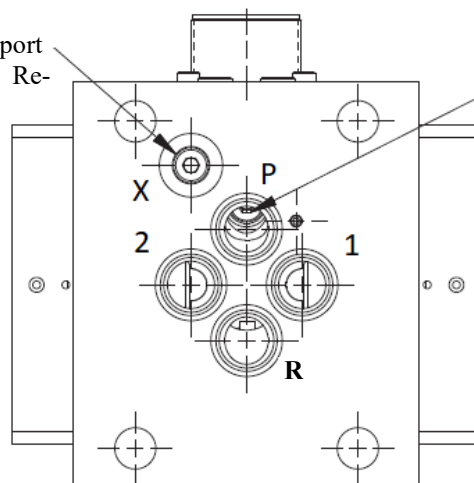
The permanent magnet torque motor consists of permanent magnet (1), upper pole piece (2), armature assembly (3), left and right coils (4), lower pole piece (5), 2 nozzles (6) and an internal oil filter (9). The armature assembly (3) is made up of an armature, flapper and feedback spring.

The output stage amplifier is made up of spool (8) and sleeve (7).

The filter (9) is easily replaced by removing the cap via 4 bolts (A). The filtration of the filter is  $\beta_{35} \geq 75$ .

### Converting from Internal pilot to External pilot (4th port to 5th port):

Valve comes standard with plug in X port for internal pilot oil supply (4th port): Remove using M3 hex (Allen) wrench.



Remove plug from X port and insert in bottom of P port for conversion to external pilot supply from X port (5th port)