

Controller for variable speed control pump system

N-ECST ECO SERVO Series



New ECO SERVO controller for Twin actuators

ECO SERVO electrically controls the flow rate of hydraulic pumps and maintains the optimal operating conditions, providing solutions to the problems that industrial machine systems need to address, such as high capacity, high efficiency, and energy saving.

System configuration



Hard specification

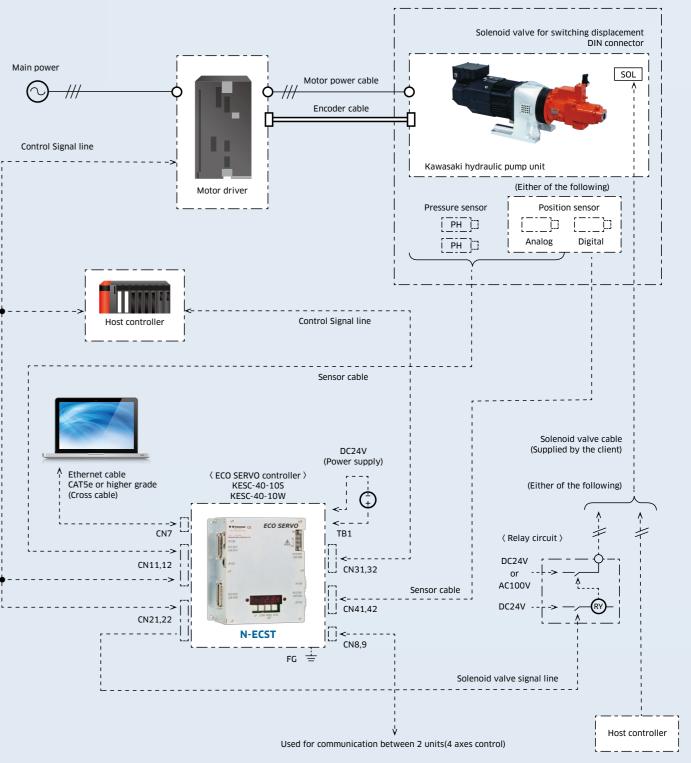
- The standard 1-axis type, and 2-axis type of the 2 pieces I/O boards structure can be selected.
- Up to 4-axis control is possible through the communication with other N-ECST controller.
- All the DI/DO terminals serve as both sink type (minus common) / source type (plus common) circuits.

Software tool and function

- Parameter edition and monitoring of internal variables are possible to connect with PC.
- Various signals can be logged and downloaded to PC with the maintenance tool.
- Digital type positional signals can respond to both binary and gray codes.

Control function

- Automatic adaptive control can adjust control parameter automatically in position and pressure control.
- 2-axis type, synchronous control and back pressure control are applicable.
- Pressure control target (actual pressure in the cylinder head or rod side) is changeable.



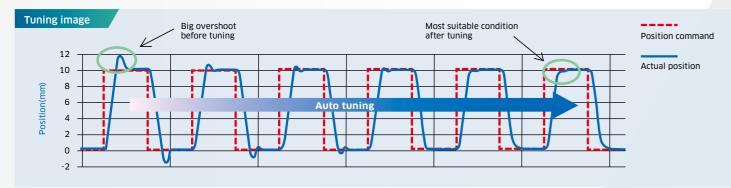


A variety of high-performance control function

Substantial application softwares and maintenance functions

Automatic adaptive control

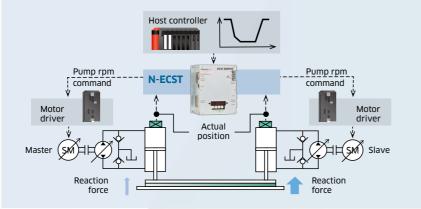
Our original control logics are installed, which is based on a simple adaptive control(SAC). With only setting a response speed, it enables self-adjusting the control gain.



Synchronous control

2-axis type controller has synchronous control between the two actuators.

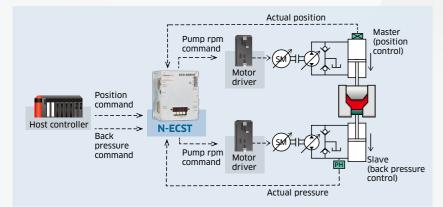
Even when different reaction forces acting on the cylinders, synchronous control of the two cylinders is achieved easily.

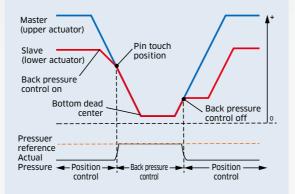


Back pressure control

Pressure control correction of a slave axis is performed by a speed calculated from position results of a master axis.

Pressure control in the moving state is achieved with high precision and high response.





Ithernet communication

The logging function effective to analysis of abnormal condition and driving data management.

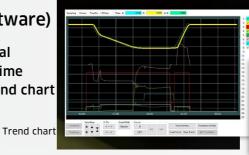


Maintenance Tool (Software)

Lumping edit of parameters, preservation and individual edit are possible. Logging data (CSV file) download

RTM (Software)

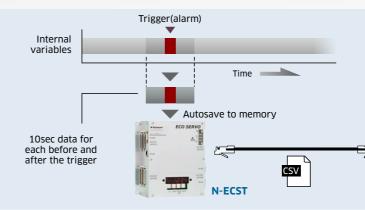
Monitoring internal variables in real time Indication of a trend chart



Data Logging Function

Data before and after a trigger(alarm) occurred will be saved in a logging area.

The data can be uploaded by the maintenance tool, and it can be preserved by a file in CSV format.







Application software convenient for start adjustment and maintenance.

		Current	Set
0		Get	Set
g time 90		Minimum Maxir	um Average no Get
	Parameter file receve	Parameter file send	
ontrol Mode	To Control Mode		То дего рогл војистен

Parameter

•Control gain •Function setting

Operation panel

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1 V1000 Devices if a litere		36 V1153_Aut or
2 Yibii Minor failure		- 87
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7 1100 Rel pressure person press		42 11214 Press
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8 F1801 Prolition_control_comment_error		44 (11)03 Fran
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11000 Sectoreau pertiral jerror		40 10211 2015
2 Y1931 Dwalt arror	1	47 V1221 Frank
2 Y1820 Bullar Joide		40 17221.Free
4 VI821 Sentrol ande	1	40 (125) Adm
5		50
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7 1110 Adual pecilian	1	42 10301 Fine
# 1102 Parities partnet deviation	1	55 17392 Acta
9 91102 Seed, count	1	54 17303 Fire
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1 1110 Actual poolition (Poolition,differential)	1	54 11105 First
2 V110 (deed control deviation	1	57 11205 Flow
11 V1107 See London Long Control (2010) 20	1	68 V1010,Flox.
4 VIII) Send converting a line income located with a line income and a line incom		\$8 VIII Fine
5 11105 Swed control patent	1	48 11112 flax

Internal varia<u>bles</u>

- •Any command data •Actual position/pressure
- Internal variables monitor

Logging spec

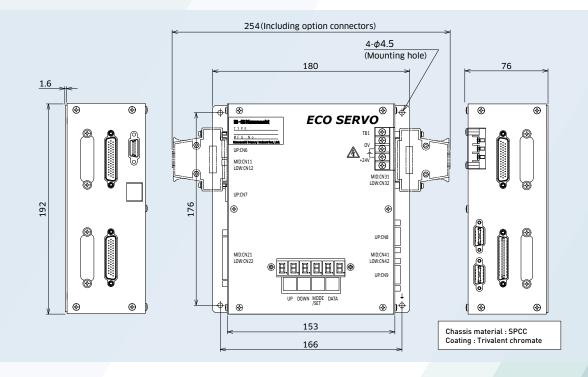
Number of channels	16ch
Sampling cycle	10msec
Sampling time	20sec
Saving number	10

-1

Specification table

Item	For 1 axis	For 2 axes	
Model	KESC-40-10S	KESC-40-10W	
Control object	1 axis	2 axes	
Mass	1.65kg	1.8kg	
Internal configuration	CPU board + IO board	CPU board + 2x IO board	
Analog input/output	8ch 16bit ±10V	16ch 16bit ±10V	
	Control signal x13	Control signal x26	
Digital input	Position sensor x18	Position sensor x36	
	Position command x19	Position command x38	
	Control signal x8	Control signal x16	
Digital output	Position sensor x1	Position sensor x2	
	Actual position x19	Actual position x38	
Communication	RS232C x1ch, Ethernet x1ch, CAN x2ch		
Indicator	7 segment LED x6		
Switch	Push button switch x4		
Input power	+24V (Recommended power capacity≧30W)		
Operating temp.	-10~+55℃		
Relative humidity	~95% (No condensation)		

// Size



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