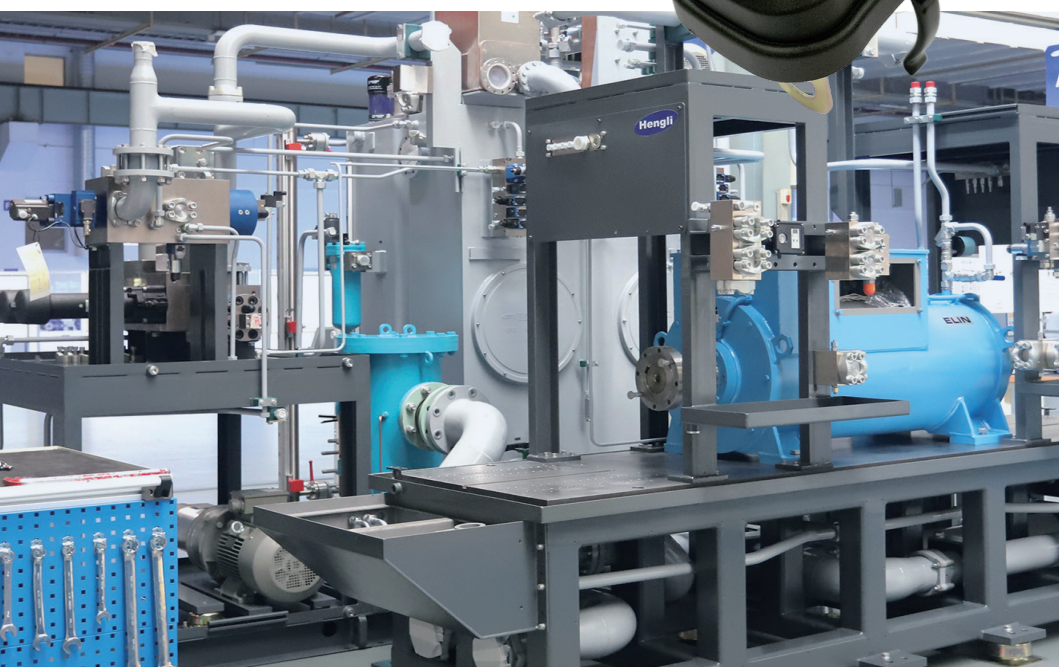


Electro-hydraulic proportional controller

Widely used in the control of electronic and hydraulic actuators

HDA-xx series



Efficient - Quality - Reliable

www.henglihydraulics.com

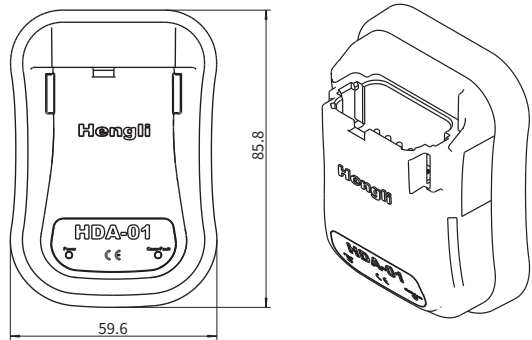


Official Website

1. Summary

HDA-xx control module is a compact and microprocessor-based digital electro-hydraulic proportional controller for mobile and industrial equipment.

HDA-xx features a proportional valve to achieve pressure and flow control; the HDA-xx controller can be set in the computer to output a linear current or multi-point fitting curve current, in order to provide a fast and reliable solution for various application requirements.



2. Technical indicators

2.1 Operating parameters

Operating parameters	
Working voltage	9-32VDC(Power anti-reverse function)
Operating current	3A max
Weight	140g
Appearance	86.2x59.5x36.2mm
Protection grade	IP67

2.2 CAN communication function

CAN communication function	
CAN	2.0B
Baud rate	125Kbit/s, 250Kbit/s(default), 500Kbit/s
Communication protocol	SAEJ1939

2.3 Input signal : HDA-01 single input, HDA-02 double input

Input signal : HDA-01 single input, HDA-02 double input		
Model	Effective range	Remark
0-5VDC	0-5V	
0-10VDC	0-10V	
4-20mA	4-20mA	Permissible maximum: +22mA ; Input impedance: Z=~200ΩZ=~200Ω
Pulse input	60Hz-10kHz	Vpp=5V,
PWM input	60Hz-10kHz	Vpp=5V
CAN input	0-65536	

2.4 Output signal

Output signal	
PWM output	HDA-01: 0-3A/DC(One-way continuous), -40°C~ +75°C HDA-02:0-2.7A/DC(Two-way continuous), -40°C~ +75°C
Current resolution	±1mA(When greater than 35mA)
PWM frequency	33Hz ~ 50kHz
Dither frequency	33Hz ~ 500Hz
Dither amplitude	0-25%PWM cycle
Diagnostic signals	Open circuit and short circuit diagnosis
Ramp time	0-65s, 1mS increment
Reference output	5Vdc, ±0.2Vdc(Load 250mA)

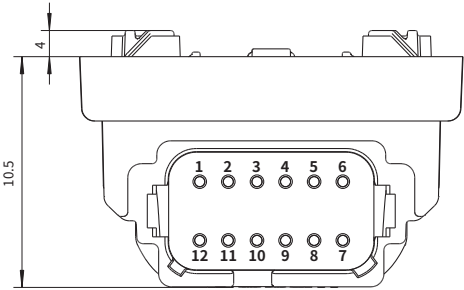
2.5 Environmental adaptability

Environmental adaptability			
Working temperature	-40°C~ +85°C	EMC/EMI	GB/T 17626.2、GB/T 17626.3、GB/T 17626.4、GB/T 17626.5、GB/T 17626.6、GB/T 17618
Storage temperature	-40°C~ +120°C		
Vibration	33Hz, 6.8g		
Impact	49g		

3. nstall

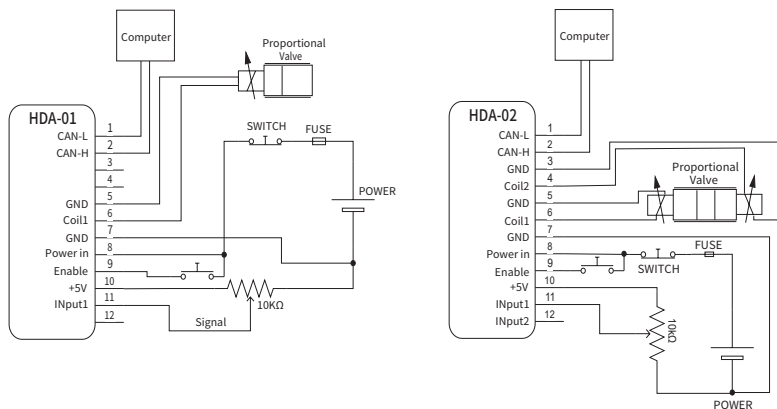
3.1 Pin definition

Pin	Definition
1	CAN_L
2	CAN_H
3	Ground (input/output)
4	Coil2
5	Ground (input/output)
6	Coil1
7	GND
8	Power in
9	Enable
10	+5V
11	Input 1
12	Input 2

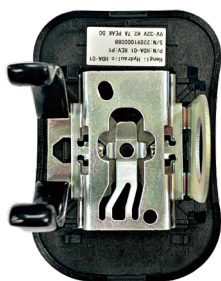
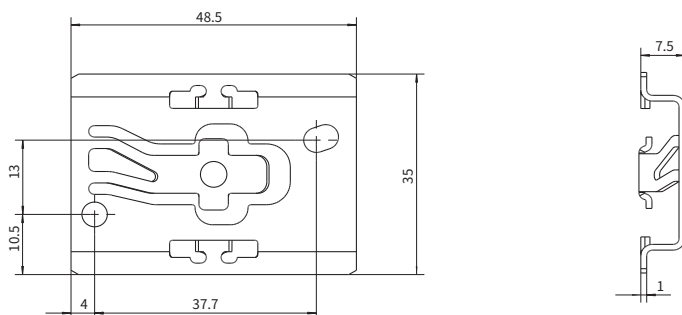


· Matching connector model:
DEUTSCH DT06-12S(210000392724)

Wiring mode: The following wiring diagram is for reference only



3.2 Mounting bracket



4. Display

4.1 Indicator light

Power:
Power indicator, it is normally on in green\during normal operation, and normally on in red whens under-voltage or over-voltage.

Comm/Fault:
Run indicator, flashes in green during normal operation, flashes inred when a fault is encountered.



Fault Indication Description		
Operating state	State	Describe
Output short circuit	■	The red light is always on
Output open circuit	■ ■ ■ ■ ■ ■ ■ ■	Be on for 125ms three times and off for 500ms
Command signal out of range	■ ■ ■ ■ ■	Be on for 500ms and off for 500ms

4.2 Parameter setting

The upper computer can set the parameters and can also provide online monitoring of operating status

Proportional Amplifier Maintenance Tool

Proportional Amplifier Maintenance Tool

Current Mode: HDA-01(1 IN--1 OUT)

Connection Status: ■

Serial Port Selection

OPEN

Reselect Mode

INPUT&OUTPUT

Parameter Configuration

Multi Point Fitting

Curve

First Signal

Parameter Information

INPUT TYPE:0~10V

INPUT VALUE:0.00mV

COIL:0.00mA

Supply Voltage

0.00V

FAULTS

OUTPUT A Open

OUTPUT A Short

INPUT A Over

Voltage Low

Parameter settings are shown in the figure below:

Proportional Amplifier Maintenance Tool

Hengli

Proportional Amplifier Maintenance Tool

Current Mode:

HDA-01(1 IN--1 OUT)

Connection Status:

Serial Port Selection

OPEN

Reselect Mode

INPUT&OUTPUT

Parameter Configuration

Multi Point Fitting Curve

PWM Frequency:

140

 Hz

Dither Frequency:

140

 Hz

Parameter Configuration

INPUT TYPE:

0-5V

Dither Amplitude:

0

 %

Input Min:

0

 mV

lead to---->>

Output Min:

0.00

 mA

Input Max:

5000

 mV

lead to---->>

Output Max:

590

 mA

UP_Ramp:

0.00

 ms

DOWN_Ramp:

0.00

 ms

Alarm Low:

-100

 mV

Alarm High:

5100

 mV

Read Settings

Confirm Settings

External Enable

Example of HDA-01 setting:
Parameter setting of single coil

HDA-01 controls pressure or flow through a single output, making HDA-01 suitable for controlling unidirectional flow pumps, hydraulic cylinders, etc.

Example of HDA-02 setting:
Parameter setting of double coils

HDA-02 controls pressure or flow through a dual output which can be configured into three modes through the upper computer: independent operation, simultaneous operation and two-way control.

We are looking forward to working with you !

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