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Open Loop Control Driver (for DC Power Supply)



Features

- Optimize the control of solenoid operated proportional control valves with an open loop control type.
- The constant current characteristics suppress the power supply voltage fluctuation, and the output current fluctuation due to temperature rise of the solenoid, to almost zero.
- The output current waveforms (dither frequency, amplitude) are set to optimize the hysteresis and resolution of solenoid operated proportional control valves.
- The PWM (pulse width modulation) control of electrical current minimizes heat generation from the driver.
- The response time adjustment function that smoothly changes output current in response to stepped changes in command inputs enables shockless change of hydraulic output. The response time can be adjusted independently for the rising and falling edges.

Nomenclature

ZH-6 - 10 - ※

1

2

3

1 Model No.

ZH-6: Open loop control driver (for DC power supply)

2 Design No. (The design No. is subject to change)

3 Option code

No designation: Standard

N: Without case

Specifications

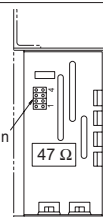
Power supply voltage	DC 24 V	
Permissible voltage fluctuation	-20 to +30% (ripples included)	
Applied load	Proportional solenoid (DC 12 V)	
Command input	DC 0 to 5 V or 1 kΩ potentiometer	
Output current	0 to 1700 mA (mean value indication)	
Power consumption	52 VA maximum	
Input impedance	72 ±5 kΩ	
Trimmer adjustment	MIN	0 to 600 mA minimum (at 0 V input)
	MAX	1700 to 600 mA maximum (at 5 V input)
Dither selection	Four kinds (by replacing internal socket pins)	
Response time adjustment range	TMU	0.05 to 3.0 seconds (at maximum output)
	TMD	0.05 to 3.0 seconds (at maximum output)
Operating ambient temperature	-20 to 55°C	
Operating ambient humidity	25 to 95%RH	
Vibration resistance	6.8 G (66.6 m/s ²) Total amplitude: 3 mm Frequency: 33.3 Hz Vertical direction: 4h Front and rear, left and right :2h	
Mass	0.4 kg	

Dither selection guide

Valve model code	Pin code	Valve model code	Pin code
JRP-G02	S4	MEV12	S3
JRPL-G02		MEV16	
C2RP-G※※		MEV20	S2
C2RLP-G03		MEV25	S1
C2GLP-G03		MEV32	

Note: Set to S3 at shipment

Dither selection pin (S1 to S4 from bottom to top)



Part layout schematic for ZH-6-10, viewing the left side with the side cover removed

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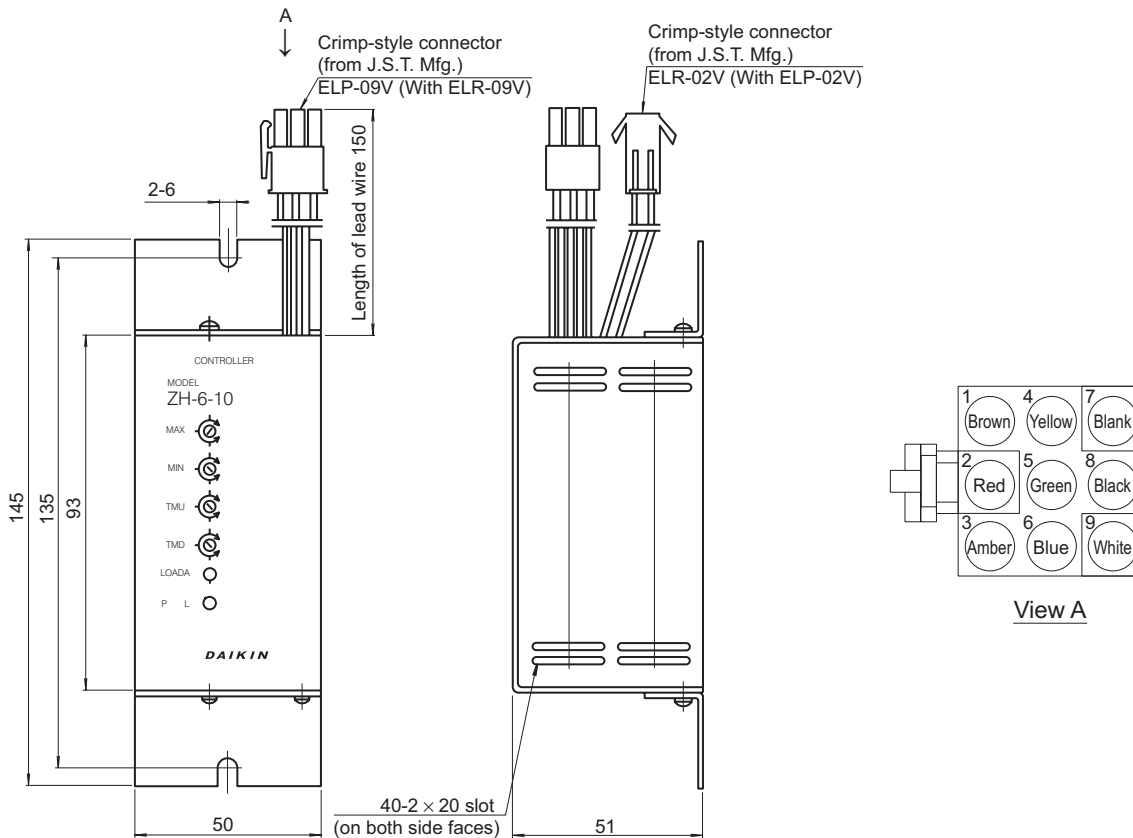
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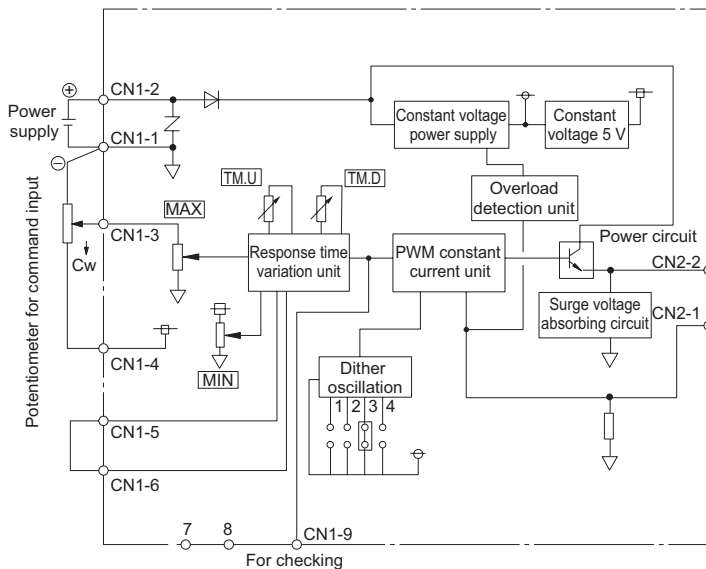
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External dimension diagram

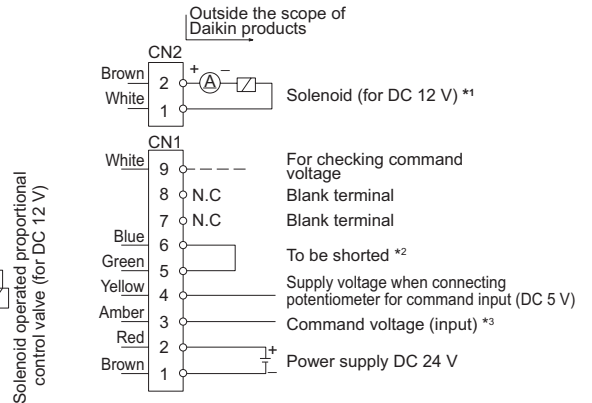


Note: Mating connectors ELR-09V and ELP-02V are supplied with the product.

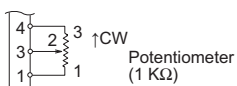
Circuit configuration diagram



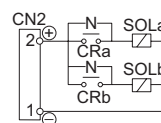
Wiring diagram



- *1 Connect an ammeter only if necessary. There is no polarity with proportional solenoids. Do not use a common terminal for the negative (-) terminal of the solenoid (1 of CN2) and the negative (-) terminal of the power supply.
- *2 Used when adjusting the electrical current response time from an external device. Be sure to short the terminals when they are not used. If they are not shorted, no current will be output.
- *3 When inputting command voltage from an external device, connect the positive (+) terminal to pin No. 3 and the negative (-) terminal to pin No. 1. When connecting a potentiometer for command input, follow the sample wiring below.



- * Example of selection among two or more solenoids



- Selecting solenoids using relay contacts CRa and CRb
- Insert a surge absorber or varistor (varistor voltage 100 V) in parallel to the relay contacts.