

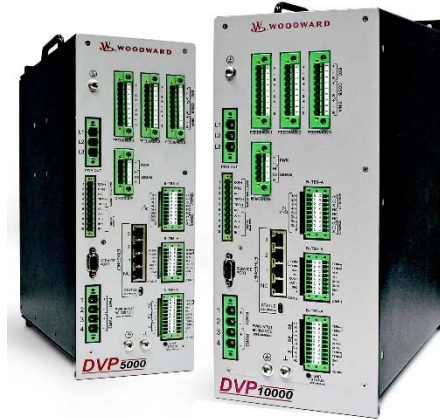
High Output Digital Valve Positioner

DVP5000 and DVP10000

Applications

The second-generation Woodward DVP is the state-of-the-art driver for Woodward electric actuation. It features a rugged and compact rack-mount design for use with various Woodward valves and actuators. It provides precise positioning based on multiple input configurations to offer end users flexibility when connecting to industrial control systems.

The choice of DVP is dependent on the valve/actuator chosen for the application. Please consult Woodward for recommendations.



Description

The High Output DVP is designed to control valves and actuators with brushless DC (BLDC) motor types. The driver positions based on resolver feedback located on the valve or actuator. The DVP uses the latest in Woodward control architecture to provide high-speed precise valve control in challenging applications.

The DVP is designed for plug-and-play installations on many valve types. Woodward has integrated smart technology into the new generation of valves and actuators called an ID (identification) module. Upon connection to a valve or actuator equipped with an ID module, the DVP automatically reads critical product-specific information to set up the driver. After this auto-detection and customer configuration, the DVP is ready for use.

The DVP is available in multiple configurations:

- Connector or terminal block outputs
- 90–300 Vdc input voltage
- 5000 W output power with 90–300 Vdc
- 10 000 W output power with 200–300 Vdc
- EGD (Ethernet), CAN open or Analog (4–20 mA or 0–5 Vdc)
- 5 discrete inputs and 2 discrete outputs
- 2 X 24 V, 0.25 A outputs for general purpose use
- SIL certified independent shutdown (-s models)
- Pre-manufactured cables with connectors are available.

- Electric actuator driver
- 70 °C ambient continuous operation
- Triple redundant EGD (Ethernet) or dual redundant CANopen digital communication options
- IP20 rack mount enclosure
- ID module compatibility for plug-and-play operation
- Connector or terminal block options
- Certifications for CE – European, CSA – North American

DVP 5000

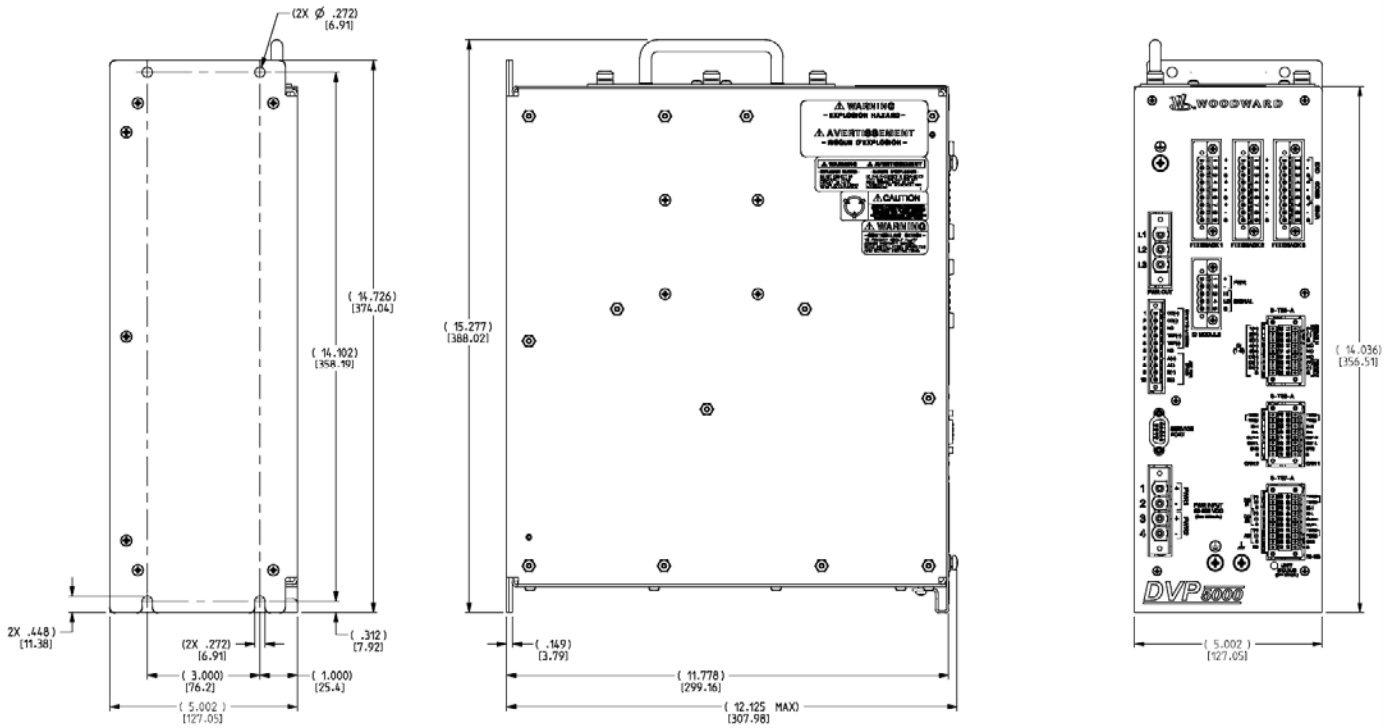
DVP 5000-S

DVP 10000

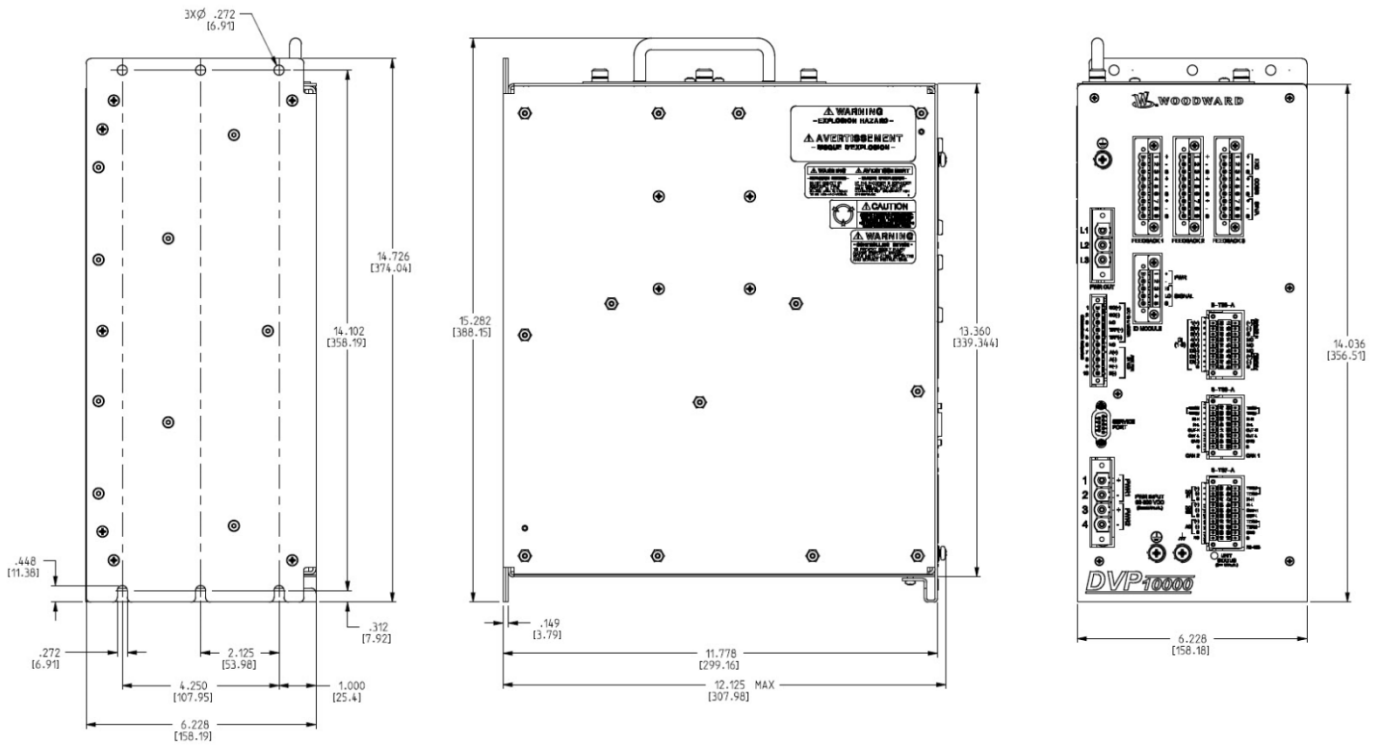
DVP 10000-S

Input Power to DVP Description	DVP 5000	DVP 10000
Input Voltage Range	90 Vdc to 300 Vdc	90 Vdc to 300 Vdc
Inrush Current	<50 A	< 50 A
Maximum Steady State Current	5 A continuous	5 A continuous
Transient Input Current (see manual)	40 A transient for 500 ms 20 A for 30 seconds	40 A for 30 seconds
Recommended Fuse	25 A, 300 V time delay	60 A, 300 V time delay
Recommended Circuit Breaker	25 A, 300 V minimum	60 A, 300 V minimum

Installation



9989-1236



9989-1246

Specifications

125 Vdc Operation

Description:	Digital Valve Positioner (DVP5000 and DVP10000) Models
Power Supply Input:	125 Vdc +20%, -28%
Current Draw DVP5000:	5 A steady state, 40 A peak for 200 ms, 25 A for 30 seconds (during rapid actuator transient) (Current draw includes actuator power)
Current Draw DVP10000:	5 A steady state, 40 A for 30 seconds (during rapid actuator transient) (Current draw includes actuator power)
Output Current:	25 A dc (17.7 A rms) continuous, 40 A peak for 200 ms
Package Heat Dissipation:	(With Ethernet Option) 45 W nominal, when the actuator is unpowered. 110 W (preliminary) typical with actuator powered 160 W (preliminary) @ maximum heat load (Without Ethernet Option) 40 W nominal, when the actuator is unpowered. 105 W (preliminary) Typical with actuator powered 155 W (preliminary) @ maximum heat-load (This is the heat-load caused by the DVP and occurs when the associated actuator is driven at full output current.)
Mechanical Dimensions:	Rear Panel Mount DVP5000 388 x 308 x 127 mm (H x D x W) (15.26 x 12.125 x 5.0 inches) Rear Panel Mount DVP10000 388 x 308 x 158 mm (H x D x W) (15.26 x 12.125 x 6.23 inches)
DVP5000 Weight:	7.9 kg (17.4 lb)
DVP10000 Weight:	TBD

220 Vdc Operation

Description:	Digital Valve Positioner (DVP5000 and DVP10000) Models
Power Supply Input:	220 Vdc +36%, -15%
Current Draw DVP5000:	5 A steady state, 40 A peak for 200 ms, 25 A for 30 seconds (during rapid actuator transient) (Current draw includes actuator power)
Current Draw DVP10000:	5 A steady state, 40 A for 30 seconds (during rapid actuator transient) (Current draw includes actuator power)
Output Current:	25 A dc (17.7 A rms) continuous, 40 A peak for 200 ms
Package Heat Dissipation:	(With Ethernet Option) 40 W nominal 160 W (preliminary) @ maximum heat-load (This is the heat-load caused by the DVP and occurs when the associated actuator is driven at full output current.) (Without Ethernet Option) 40 W Nominal 155 W (preliminary) @ maximum heat-load (This is the heat-load caused by the DVP and occurs when the associated actuator is driven at full output current.)

Environmental Specifications (Rear Panel Mount)

Ambient Operating Temperature:	-40 to +70 °C (-40 to +158 °F)
Storage Temperature:	-40 to +105 °C (-40 to +221 °F)
Humidity:	0 to 100% non-condensing
Mechanical Vibration:	Woodward Specification RV5 (0.04 G ² /Hz, 10–500 Hz, 2 hours/axis, 1.04 Grms)
Mechanical Shock:	Woodward Specification MS2 (30 G, 11 ms half sine pulse)
EMC/EMI:	EN 61800-3: EMC Requirements and Test Methods for Adjustable Speed Electrical Power Drive Systems (Category 3, 2nd Environment); Woodward Spec: Conducted Low Frequency Immunity, 50 Hz to 10 kHz
Environmental Protection	IP20 per IEC 60529. Must be installed in enclosure or cabinet to provide a minimum IP54 level of protection against dust and moisture when used in Hazardous Locations.

Regulatory Compliance

European Compliance for CE Marking:

These listings are limited only to those units bearing the CE Marking.

EMC Directive: 2004/108/EC COUNCIL DIRECTIVE of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and all applicable amendments.

Low Voltage Directive: Declared to 2006/95/EC COUNCIL DIRECTIVE of 12 December 2006 on the harmonization of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits.

ATEX – Potentially Explosive Atmospheres Directive: Declared to 94/9/EEC COUNCIL DIRECTIVE of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres. Zone 2, Category 3 G, Ex nA IIC T4 X; IP-20

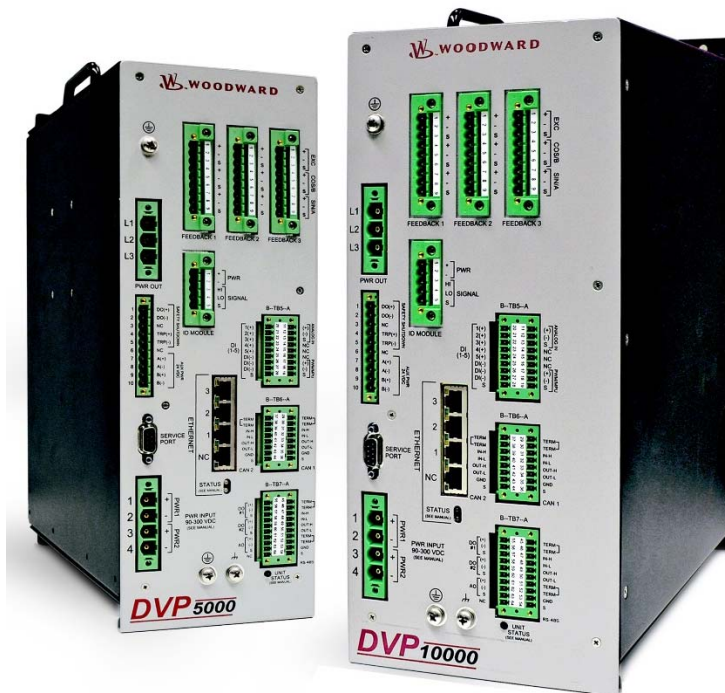
North American Compliance:

These listings are limited only those units bearing the CSA Identification.

CSA: CSA Certified for Class I, Division 2, Groups A, B, C, and D, T4 at 70 °C (3-Board Configuration) and 70 °C (2-Board Configuration) ambient, for use in USA and Canada, Certificate 160584-1682018

This product is certified as a component for use in other equipment. The final combination is subject to acceptance by the authority having jurisdiction or local inspection.

Alternative product certifications may be available. Please contact your Woodward representative for details.



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