

ADVANCED LIQUID FUEL VALVE MODEL ALV10

Features

- Flow capacity up to 22,000 lbs/ hr (configurable to application)
- Flow Accuracy $\pm 3.0\%$ of reading or 0.5% of full scale
- 50 milliseconds response (10-90%)
- Temperature range $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$
- 24 VDC @ 6-amp power
- Built-in Position Sensor (LVDT)
- Built-in Turbine Flowmeter
- Built-in Acceleration Control (configurable)
- 10 Calibration Flow points for higher accuracy & repeatability
- Fail Safe Closed
- Fuel Demand Input (4-20 mA or 0-50 mA or 0-200 mA)
- 4-20 mA PCD (Built-In Acceleration Input)
- 4-20 mA Flow feedback
- 4-20 mA Position Feedback
- RS232 Serial Communication
- Certification:
CSA Class I Div 1 & 2
ATEX

The ALV10 is designed for Gas Turbine between 250Kw and approximately 48MW. It is the ideal complement to either the AGV10 or AGV50 gas valves to create a state of the art, fast, switch on the fly, dual fuel system.



The valve is failsafe closed so electronic failure, loss of power, or mechanical failures will all cause the valve to close. Utilizing the built in fuel measurement can provide very accurate and repeatable starts. This flow measurement can be reported back either serially via Modbus or on the 4-20ma fuel flow return signal. The ALV10 is a Servo Actuated electronic fuel valve that provides excellent accuracy, speed and near maintenance free operation.

It is possible by monitoring the compressor discharge pressure to build the turbines acceleration schedule into the ALV10. This embedded acceleration option allows the valve to be used on applications where there is an older turbine control system (such as CCC Black Boxes) that does not have the ability to schedule acceleration.

The ALV10 is an intelligent electronic Liquid Fuel Valve designed to meet the needs of all gas turbine applications. The ALV10 is a unique design with an on-board computer and internal flow meter. A unique differential pressure regulator incorporated in the fuel valve maintains a constant pressure drop across the valve so that the fuel flow at a given position of the fuel valve will always be constant.



SPECIFICATIONS

Flow Capacity:	22,000 lbs/hr (52.33 gpm)
Fuel	Diesel #2, Jet A, BioDiesel, NAPTA
Maximum Operation Pressure:	1600 psig
Minimum Filtration Requirement:	2-3 Micron Absolute
Operating Temperature:	-40° C (-40° F) to +85° C (+185° F) -20° C (-40° F) to +85° C (+185° F) [ATEX]
Response Time:	45 milliseconds 10% - 90% Stroke
Flow Accuracy:	±3.0% of reading or 0.5 % of full scale
Fuel Demand Signal [to Fuel Control Valve]:	4-20 mA (Standard) 0-50 mA (Optional), 0-200 mA (Optional)
Compressor Discharge Pressure (Pcd) Fuel Demand Signal [to Fuel Control Valve]:	4-20 mA (Standard for Imbedded Acceleration Schedule)
Fuel Feedback Signal [from Fuel Control Valve]:	4-20 mA Fuel Flow Feedback, 4-20 mA Position Feedback
Power Input:	18-30VDC, 5 Amp Max
Electrical Interface:	MS Connector (D3899/20FE99PN) or 3/4" Ridged Conduit, 84" Pigtail Wires
Communication Interface:	RS232 Modbus RTU
Valve Materials:	-Body: 6061-T6 Anodized Aluminum -Wetted Components: 300 Series Stainless Steel, 6061-T6 & 7075-T6 Anodized Aluminum, - Seals: Nitrile
Fuel Ports:	-12 SAE O-ring Ports
Dimensions:	20.1" L x 16.7"H x 9.3" W
Approximate Weight:	45 pounds
Certifications:	 Class I, Division 1 & 2, Group D: T4  II 2 G Ex d IIA, T4 Gb



+1(858)453-9880

info@continentalcontrols.com

7710 Kenamar Court, San Diego, CA 92121