

GV7

Fuel Injection Valve for Automotive Engines

Application

The GV7 injector has been designed for automotive gaseous ported fuel injection applications. The GV7 has been specially adapted to operate with hydrogen but can be used for any variety of methane-based gaseous fuels. The GV7 installation geometry has also been designed to reduce the transfer of noise-causing vibration from the injector to the intake manifold, resulting in reduced ambient noise.

Construction

Materials The housing is manufactured from high strength anodized aluminium.

All parts exposed to the gas are resistant to corrosion and stress corrosion cracking.

Mounting The GV7 can be mounted in any orientation; however a vertical (outlet down) is preferred. Orientation and position of GV7 should be designed to minimize the risk of condensates flowing back into the valve.

Gas Inlet Hole Diameter 6mm (0,24in)

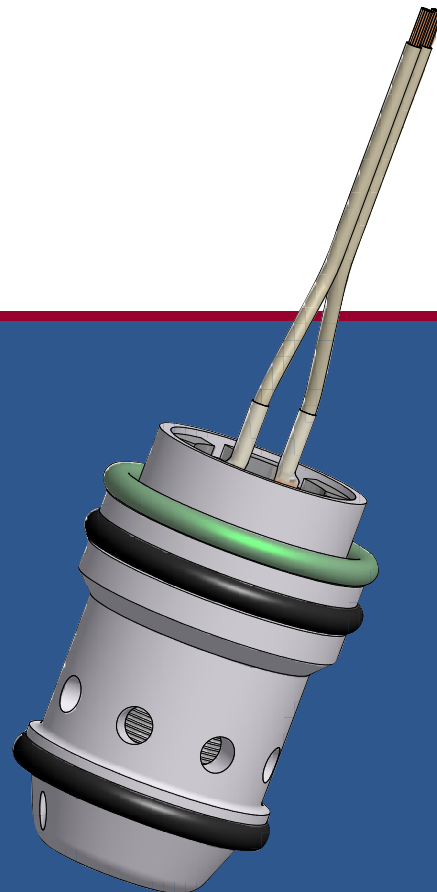
Gas Outlet Hole Diameter 11mm (0,43in)

Specifications

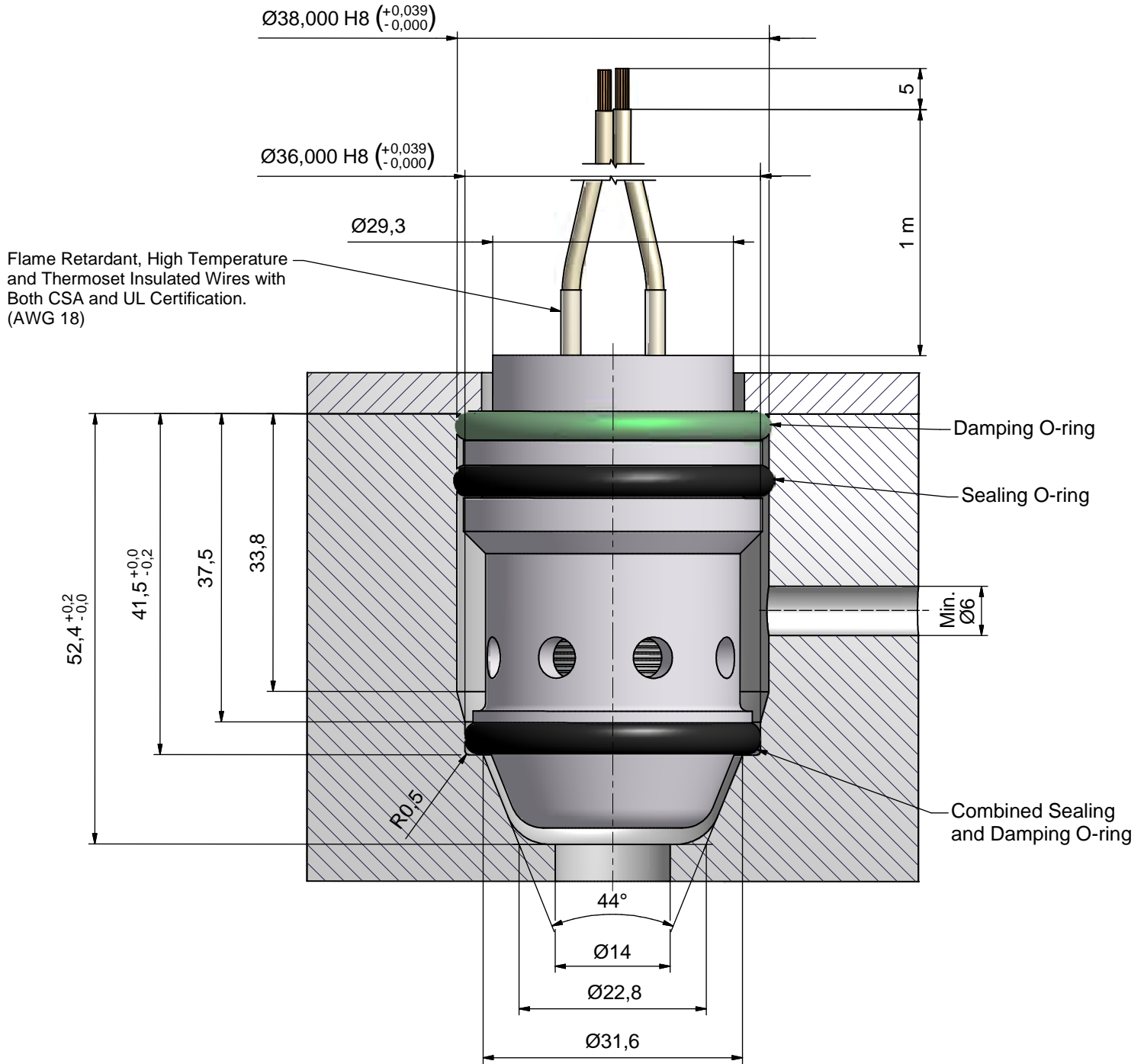
Equivalent Flow Area	7mm ²
Steady State Flow-Rate	3.0g/s H ₂ @ P ₁ =6barg,
(Contact Hoerbiger for specific application)	P ₂ =ATM
	8.4g/s NG @ P ₁ =6barg
Internal Leakage.....	<0.2% of steady state flow-Rate
Nominal Differential Pressure	6barg (87psig)
Maximum Differential Pressure	10barg (145psig)
Maximum Backfire Pressure Spike	2barg (29psig)
(without backflowing through valve)	
Maximum Housing Pressure	20barg (290psig)
(non operating)	
Opening Time of Valve	1ms*
Response Time.....	1ms*
Voltage Supply	12V–24V
Peak Current	9amps
Hold Current	2amps
*(assumes the use of a HOERBIGER SDM (Solenoid Driver Module) or Provebo bench test hardware)	
(Boost Voltage 90-110V; Peak time 0,7ms)	
Max. particle size within fuel gas.....	<5µm
Max. particle concentration:	1ppm
Ambient Temperature:	-20–95°C (-4–203°F)
Fuel Gas Temperature:	-20–85°C (-4–185°F)



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Dimensions



altronic

HOERBIGER Engine Solutions

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