

# GV50.3

## Fuel Admission Valve for Mid-sized Industrial Engines

### Applications

The GV50.3 is designed for OEM PFI (Ported Fuel Injection) applications but can also be used as a retrofit PFI or EFC (Electronic Fuel Control) application.

In the case of retrofit PFI applications, the mechanical fuel system is disabled/removed and one or more PFI valves is mounted just before the engine intake on the air manifold. The GV50.3 then injects fuel based on electronic control signals directly into the intake manifold.

An EFC application uses a GV50.3 valve in addition to the mechanical fuel system to electronically control injection timing.

### Construction

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

**Mounting** May be mounted in any configuration, however, a vertical orientation (valve inlet facing upwards) is preferred.

Gas Inlet Hole Diameter ..... 23mm (0,91in)

Gas Outlet Hole Diameter ..... 30mm (1,18in)

### Specifications

Equivalent Flow Area .....	50mm <sup>2</sup>
Steady State Flow-Rate .....	53.7g/s CNG @
(Contact Hoerbiger for specific application)	P1=4.8barg, P2=ATM
Internal Leakage.....	<0.25% of steady state flow-Rate
Nominal Differential Pressure* .....	4,8barg (70psig)
Maximum Differential Pressure* .....	6,9barg (100psig)
Max. Gas Supply Pressure (P1) .....	12barg (170psig)
Max. Air Manifold Pressure (P2).....	4barg (58psig)
Maximum Backfire Pressure Spike .....	0,5barg (7psig)
(without backflowing through valve)	
Maximum Housing Pressure .....	15barg (214psig)
(non operating)	
Opening/Closing Time** .....	0,8ms–1,2ms**
Response Time** .....	0,5ms
Voltage Supply .....	12V–24V (110V boost)
Peak Current** .....	14-18amps
Hold Current** .....	1,5-3,0amps
Max. particle size within fuel gas.....	<10µm
(integrated protection filter: 20µm)	
Max. particle concentration: .....	1ppm
Ambient Temperature: .....	-20–95°C (-4–203°F)
Fuel Gas Temperature: .....	-20–80°C (-4–176°F)

\* Pressure differential between fuel gas and intake manifold

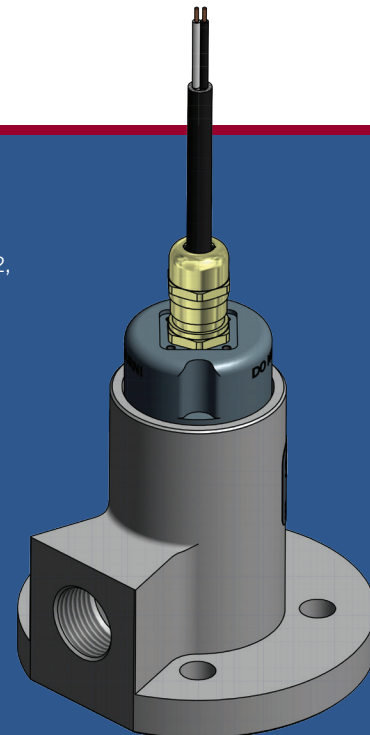
\*\* Is differential pressure dependant and assumes the use of a HOERBIGER SDM (Solenoid Driver Module)

### Regulatory Compliance

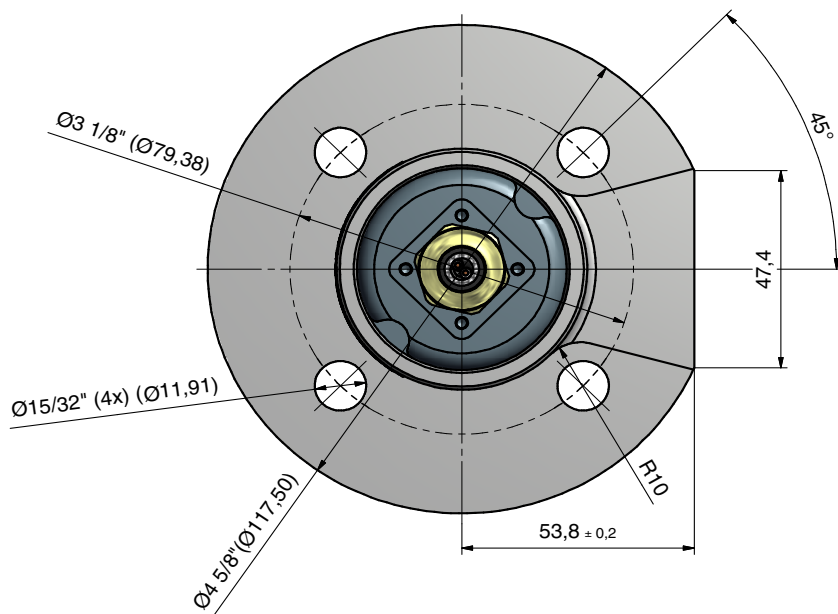
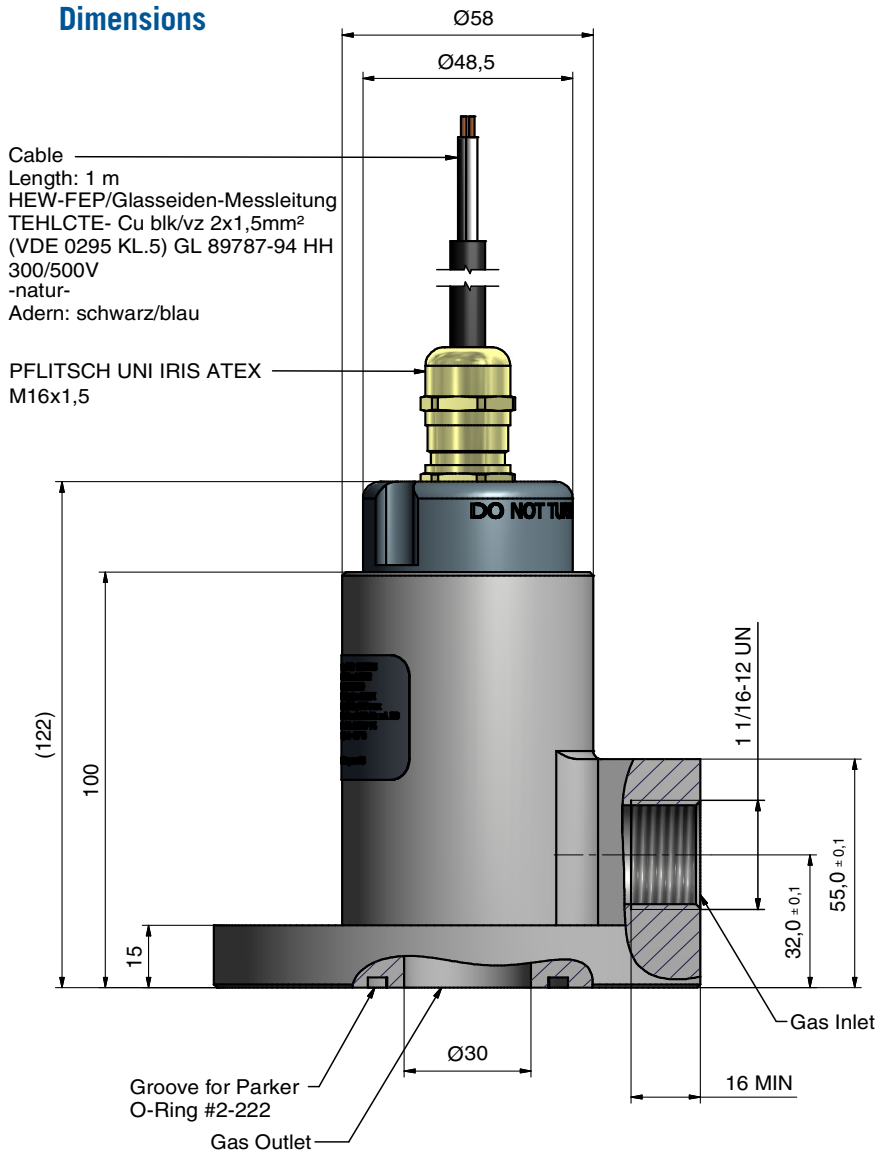
North America: CSA Class I, Division 2, Groups C & D



Class I, Division 2,  
Groups C & D



## Dimensions



## Piping/Hose Size Recommendation

### Hose Installation

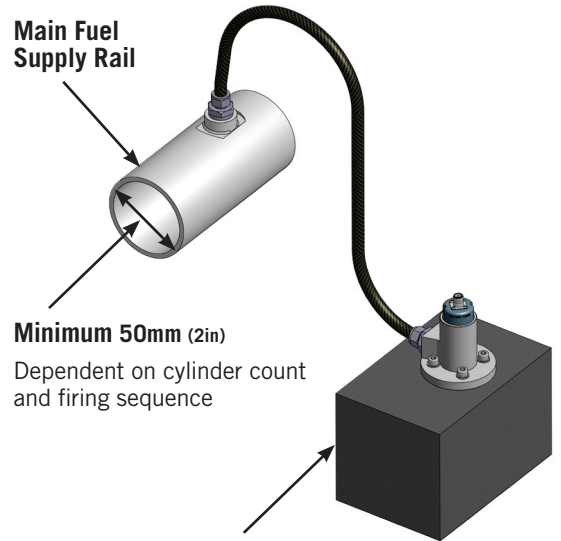
Minimum hose: ID 12mm (½in)  
 Check minimum fitting cross section

### Main Fuel Supply Rail

Minimum 50mm (2in)

Dependent on cylinder count  
 and firing sequence

### Cylinder Head/Intake Manifold



**altronic**

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