

GV50

Fuel Admission Valve for Mid-sized Industrial Engines

Applications

The GV50 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 then injects fuel based on electronic control signals directly into the intake manifold.

An EFC application uses a GV50 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 Diameter23mm (0,91in)

Gas Outlet Hole Diameter30mm (1,18in)

Specifications

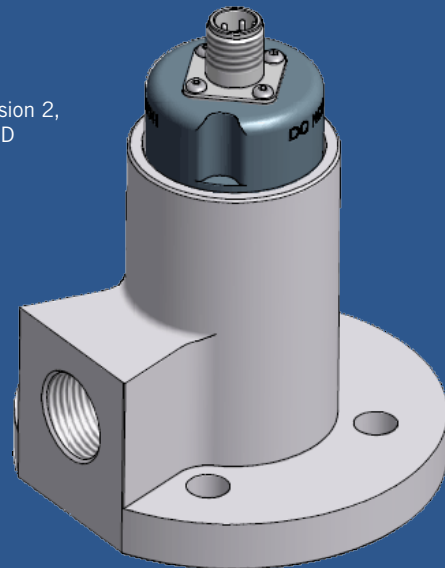
Equivalent Flow Area	50mm ²
Steady State Flow-Rate	53.7g/s CNG @
(Contact Hoerbiger for specific application)	P1=4.8barg, P2=ATM
Internal Leakage.....	<0.25% of steady state flow-Rate
Nominal Differential Pressure*	4,8barg (70psig)
Maximum Differential Pressure*	6,9barg (100psig)
Max. Gas Supply Pressure (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)

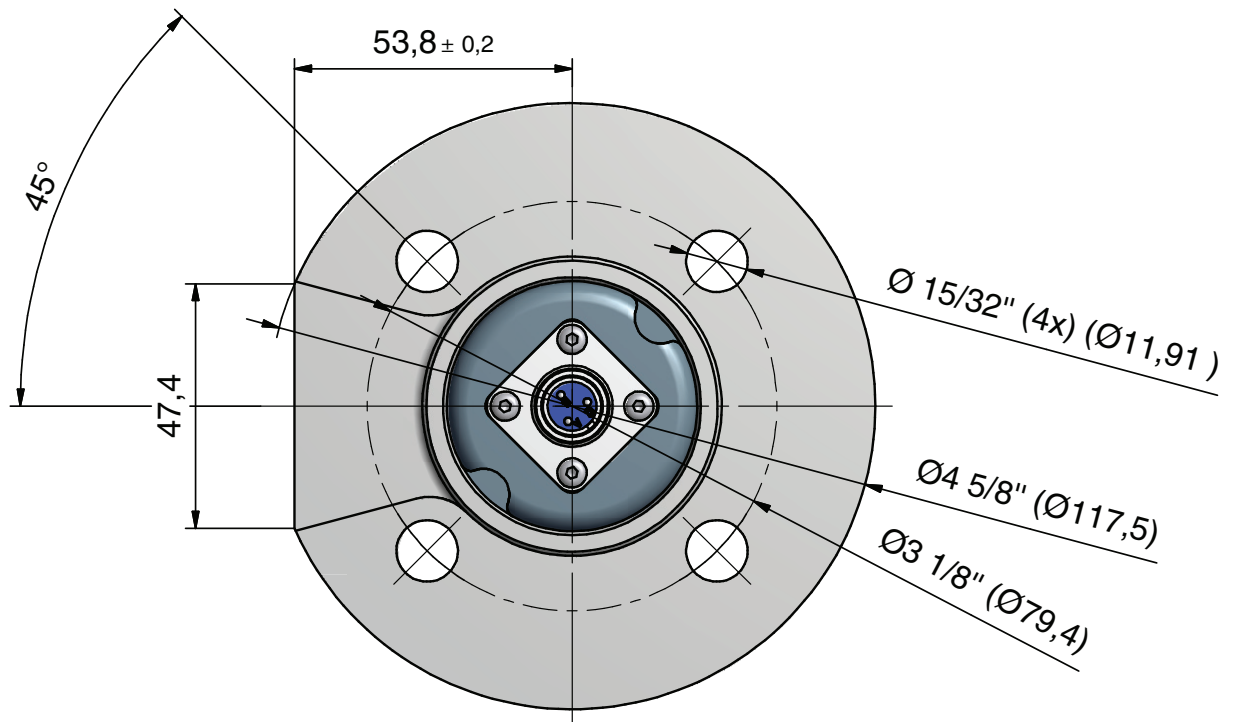
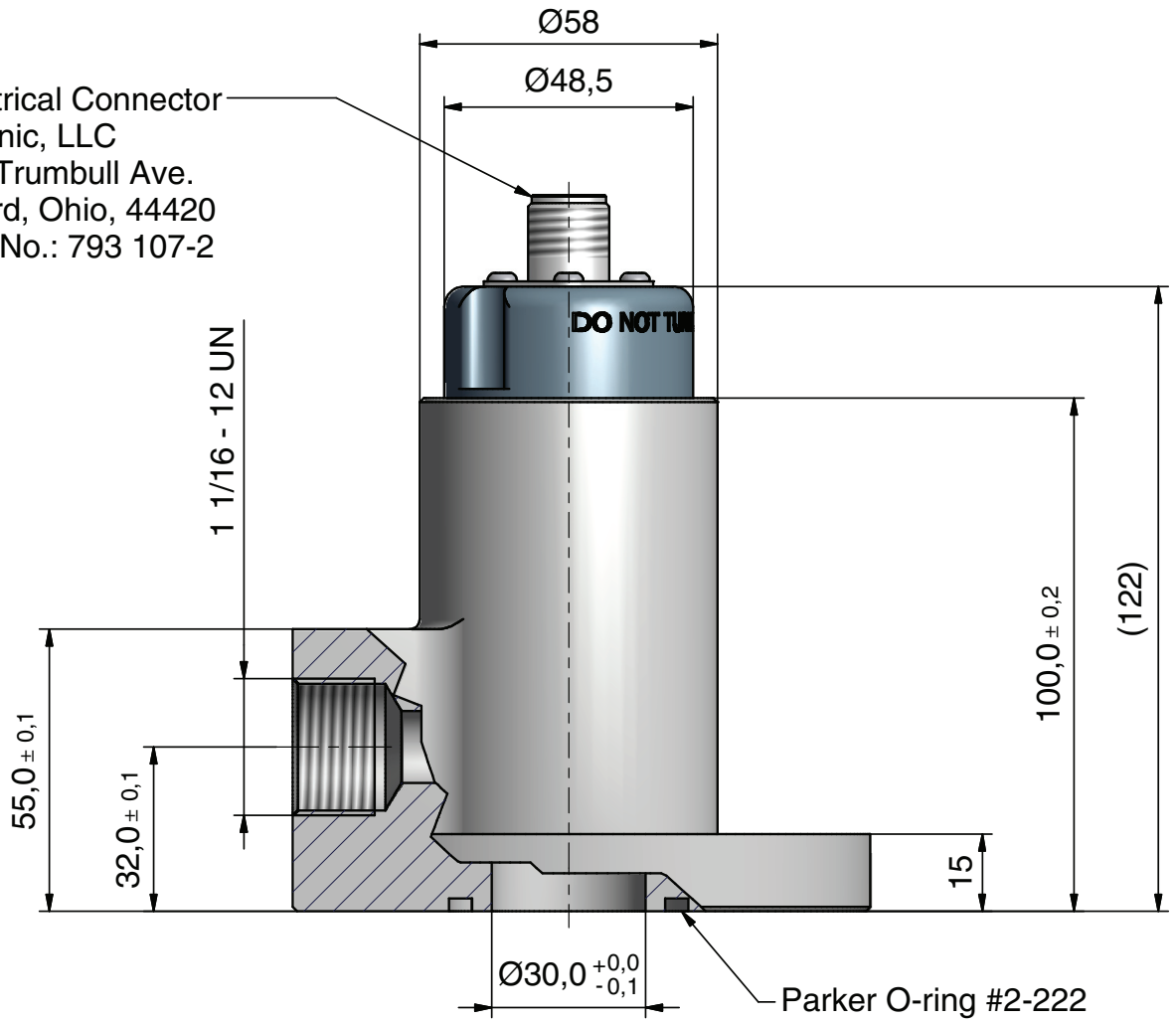
Regulatory Compliance

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



Dimensions

Electrical Connector
Altronic, LLC
712 Trumbull Ave.
Girard, Ohio, 44420
Part No.: 793 107-2



Connector and Cable Specification

Connector Specifications

Type: Standard MIL-C-5015

Connection type: Threaded

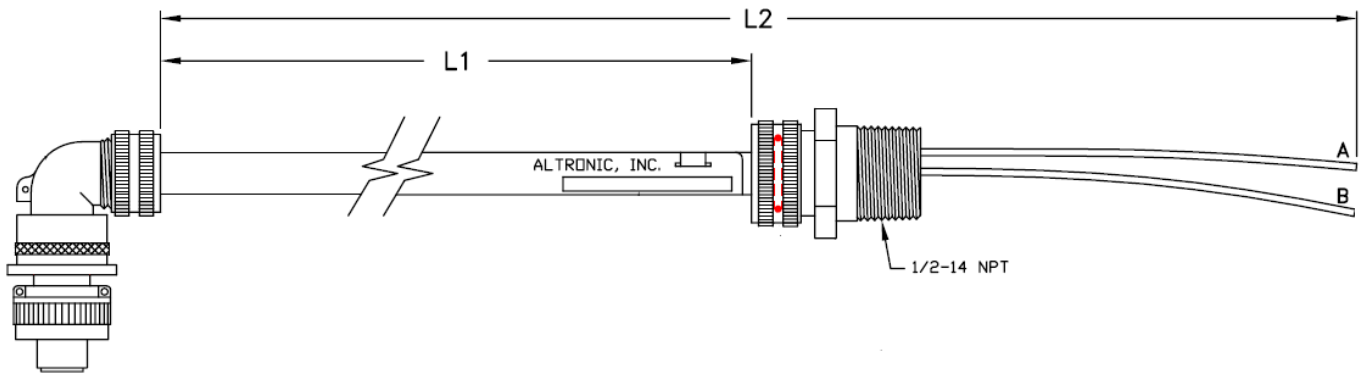
Tighten specification: Hand tight/lightly plier tightened

Connect Booster Output

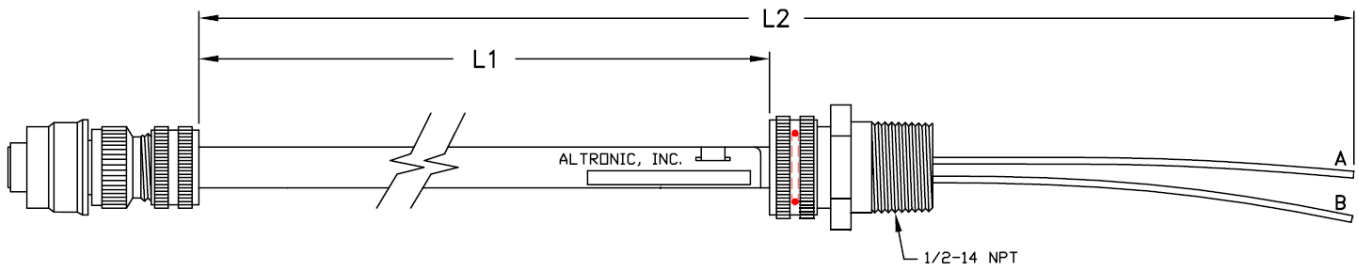
Pins A & B (polarity not relevant)

Standard Connection Cables

90° connector – PN: 593027



Straight connector – PN: 593022



* Both cables CSA-Certified (LR#34575-6) Class 1, Group D, Division 2

** These products are not shipped with GV50 Valve

How to order

For 90° connector: 593027-XXX

For straight connector: 593022-XXX

XXX - Conduit length L1 as shown in following table

Available Lengths

L1 (inches)	6	9	12	15	18	24	30	36	42	48	54	60	72	84	96	108	120	135	138	150
L2 (inches)	42	42	42	42	42	42	42	60	60	60	60	96	96	96	180	180	180	180	180	180

Piping/Hose Size Recommendation

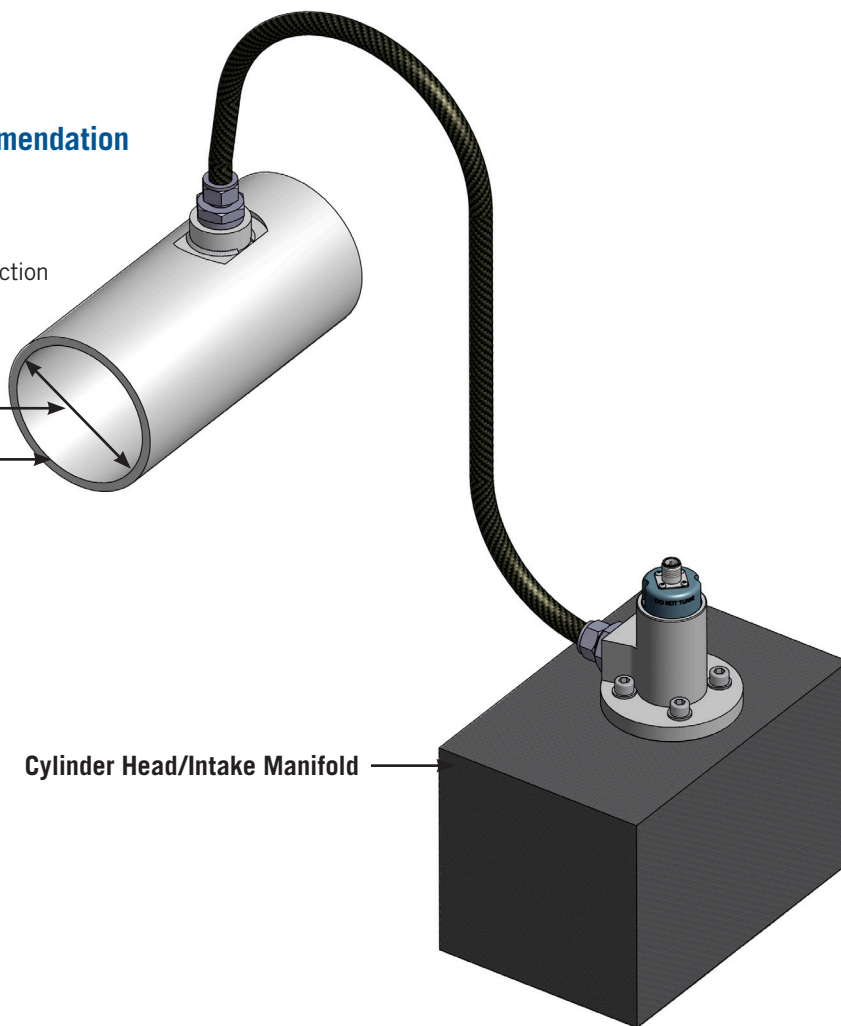
Hose Installation

Minimum hose: ID 12mm (1/2in)
Check minimum fitting cross section

Minimum 50mm (2in)

Dependent on cylinder count
and firing sequence

Main Fuel Supply Rail



altronic

HOERBIGER Engine Solutions

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Braunhubergasse 23, 1110 Wien, Austria
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E-mail: info-hvt@hoerbiger.com
<http://www.hoerbiger.com>

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