

Heavy Duty Natural Gas Vehicle Regulator

The New HPNGV4 Series CNG Regulator incorporates the same robust design and manufacturing characteristics as the HPNGV2 Series, and offers improvements in value by offering an optional inlet sensor and/or solenoid (high pressure shut-off) integrally mounted into the regulator. Over a decade of service in the most demanding applications has proven the HPNGV Series Regulator is the choice for OEM vehicle, engine and fuel systems. Certified to ECE R110, the HPNGV Regulator is proven to be a safe and reliable pressure control element. Certifications and Approvals pending are for ISO15500, ANSI/AGA NGV3.1 and ARAI Type Approval AIS-037.

Standard Specifications

Regulated Media:

Compressed natural gas

Inlet Pressure:

250 to 3600 psig (1.72 MPa to 24.84 MPa) to meet all performance specifications.

Nominal Output Pressure Range: Factory preset 45-150 PSIG (0.31-1.03 MPa) Set Point. The typical range of delivery pressure is +15 / -10 psi from specified setting throughout the range of inlet pressure, temperature and flow.

Gas Flow Rate:

Up to 165 lb/hr (0-82 kg/hr) (flow varies by application, consult the factory for data)

Internal Filtration:

40 Micron Corrosion Proof Sintered Element

Leakage (Ambient and Valve):

Bubble Tight

Moisture Tolerance:

To 7 lbs Water per Million Standard Cubic Ft.

Temperature Range (Ambient, Inlet and Coolant):

-40°F to +257°F (-40°C to 125°C)

Vehicle Applications:

Normally aspirated or Turbocharged EFI Spark Ignition Engines

Porting:

Gas Inlet:

SAE-6 (9/16-18 Thread) per SAE Specification J1926

Gas Outlet:

SAE-8 (3/4-16 Thread) per SAE Specification J1926

Standard Coolant:

3/8" Hose Connection per SAE Specification J962

Mounting Threads:

M8 x 1.25 x 18mm, 2 Places 45.7mm Apart Suitable for 20mm Bolts

Weight:

Refer to the table on page 4

Approvals:

ECE R110

Pending:

ISO15500
ANSI/AGA NGV3.1
ARAI Type
Approval AIS-037

U.S. Patents:

5,890,512
and 5,443,083



Ordering Sequence — Select desired option for each category

REGULATOR MODEL BREAKDOWN (CEO CODE)

TEXT POSITION	OPTION CODE	DEFINITION OF CHARACTER
1 through 6	HPNGV4	Natural Gas Vehicle Fuel Pressure Regulator

7	S	REGULATOR BONNET OPTIONS Standard Bonnet (No Map Bias Fitting)
	C	Captured Bonnet (3/16" Straight Hose Barb Bias Fitting)
	E	Captured Bonnet (1/4" Hose Elbow (Polyflo Tubing Type) Bias Fitting)

8 - 9	03	SENSOR / SOLENOID OPTIONS 12v Solenoid/SAE-3 Sensor Port (Notes 1,2,3,4)
	04	12v Solenoid/SAE-4 Sensor Port (Notes 1,2,3,4)
	06	24v Solenoid/SAE-3 Sensor Port (Notes 1,2,3,4)
	08	24v Solenoid/SAE-4 Sensor Port (Notes 1,2,3,4)
	12	Solenoid Only - Normally Closed Lock Off Solenoid - 12 Volts DC (Note 4)
	24	Solenoid Only - Normally Closed Lock Off Solenoid - 24 Volts DC (Note 4)
	X2	Sensor - 0.25 to 4.75 Volt Sensor / 12 Volt Solenoid (Notes 2,3,4)
	X3	Sensor - 0.50 to 4.50 Volt Sensor / 12 Volt Solenoid (Notes 2,3,4)
	X4	Sensor - 0.25 to 4.75 Volt Sensor / 24 Volt Solenoid (Notes 2,3,4)
	X5	Sensor - 0.50 to 4.50 Volt Sensor / 24 Volt Solenoid (Notes 2,3,4)
	NOTES:	1. No Sensor Installed - Port Not Plugged. 2. See drawing for electrical connection. 3. Sensor output with 5.0 volt DC Excitement for 5000 psig span. 4. Maximum solenoid wattage: 24 watts.

10	T	REGULATOR COOLANT BOWL OPTIONS Thermostat
	H	No Thermostat
	NOTES:	Coolant connections are for 3/8" (9.5 mm) ID hose.

11	A	INTEGRAL PRESSURE RELIEF DEVICE (PRD) OPTIONS 200 PSI (± 40 PSI) PRD
	B	270 PSI (± 60 PSI) PRD
	C	350 PSI (± 60 PSI) PRD
	NOTES:	1. A 200 psi PRD is not recommended for regulator output pressures above 120 psig. 2. The regulator PRD is not suitable as a stand alone safety relief valve. Other downstream protection strategies must be employed for a robust system design.

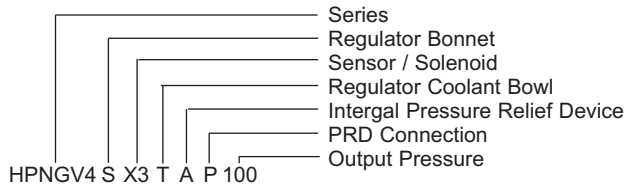
12	X	PRD CONNECTION OPTIONS PRD Vents to Atmosphere - Standard
	P	1/4" NPT Male Capture Pipe PRD
	T	1/2" Tube Stub PRD
	NOTES:	If regulator is located in a hazardous location, a PRD capture pipe must be used to route discharge gas to a remote location.

13 - 15	XXX	OUTPUT PRESSURE SELECTION Output pressure setting (psig). For values less than 100, use 0XX format. Regulator can be factory set from 45 to 150 psig.
	NOTES:	

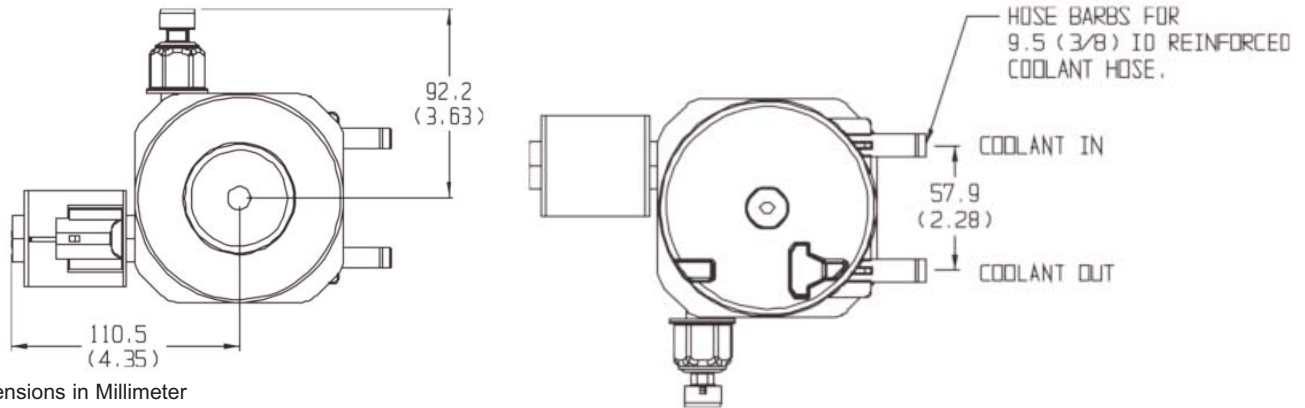
See next page for ordering example.

Series HPNGV4

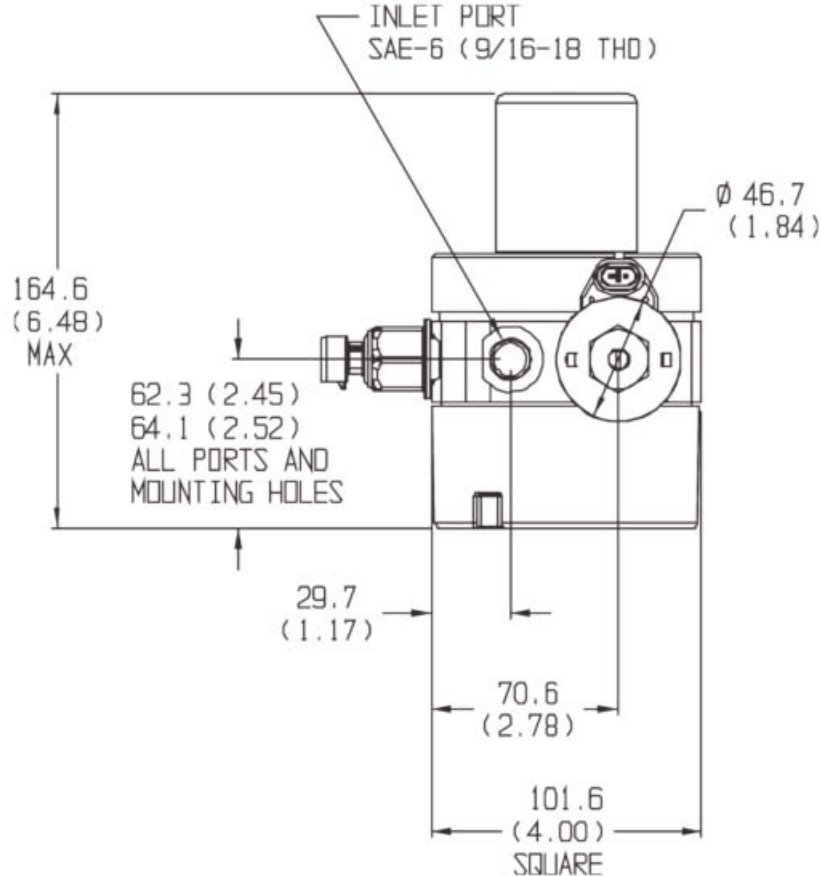
Example



Dimensional Views



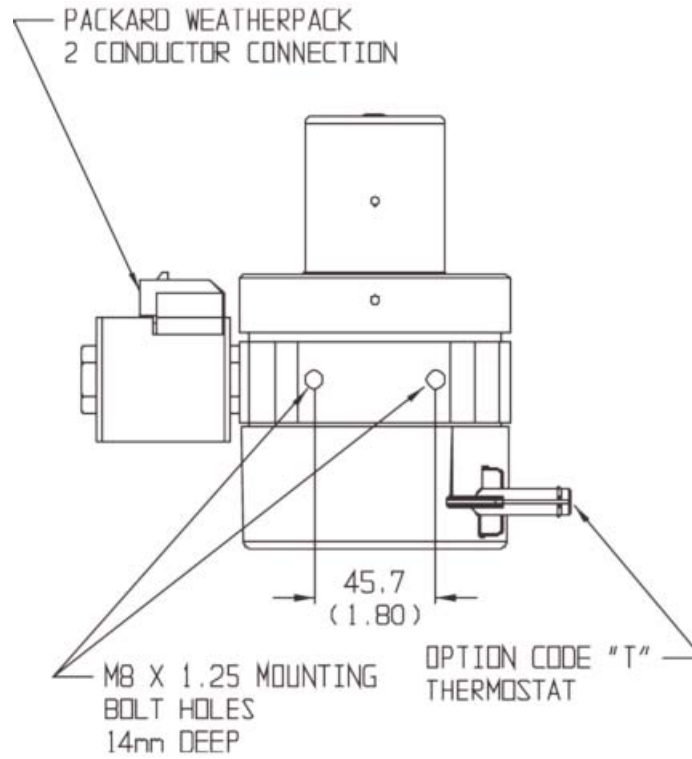
Dimensions in Millimeter
 (Dimensions in Inches)



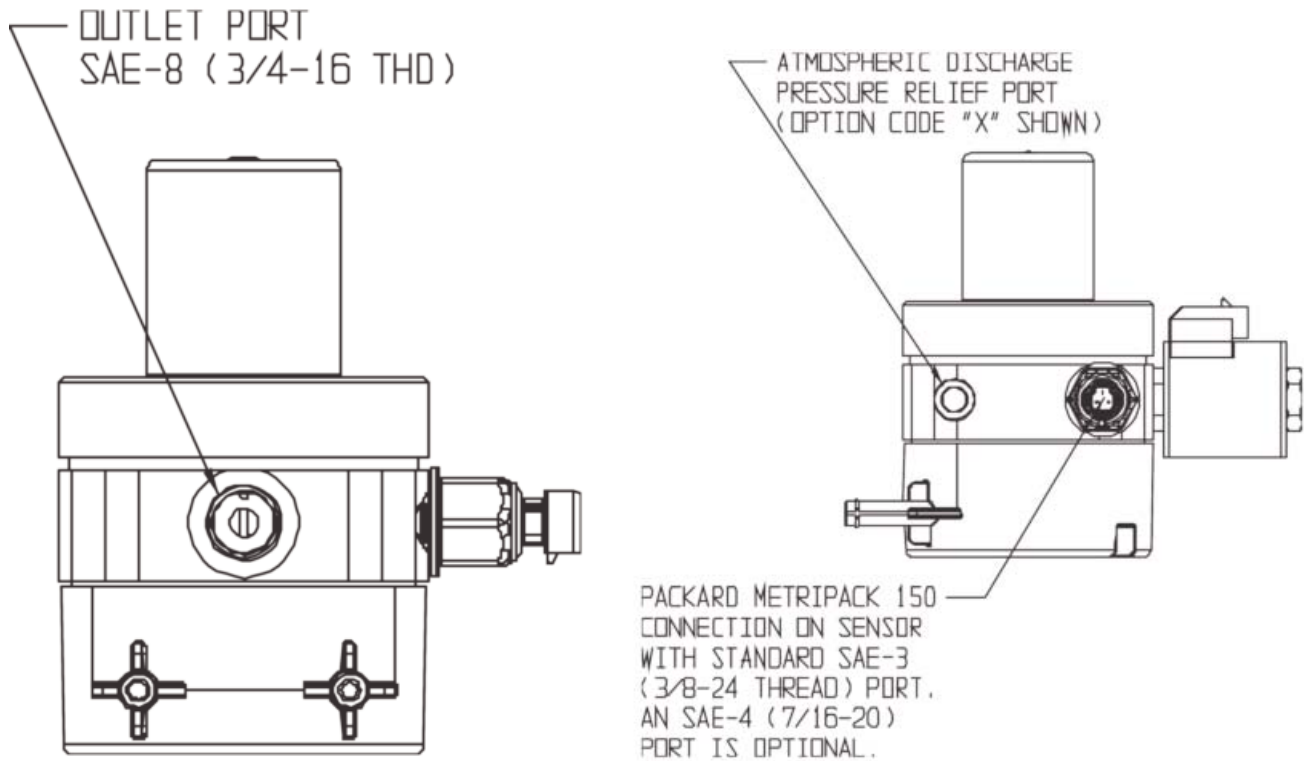
Dimensions in Millimeter
 (Dimensions in Inches)

Series HPNGV4

Dimensional Views



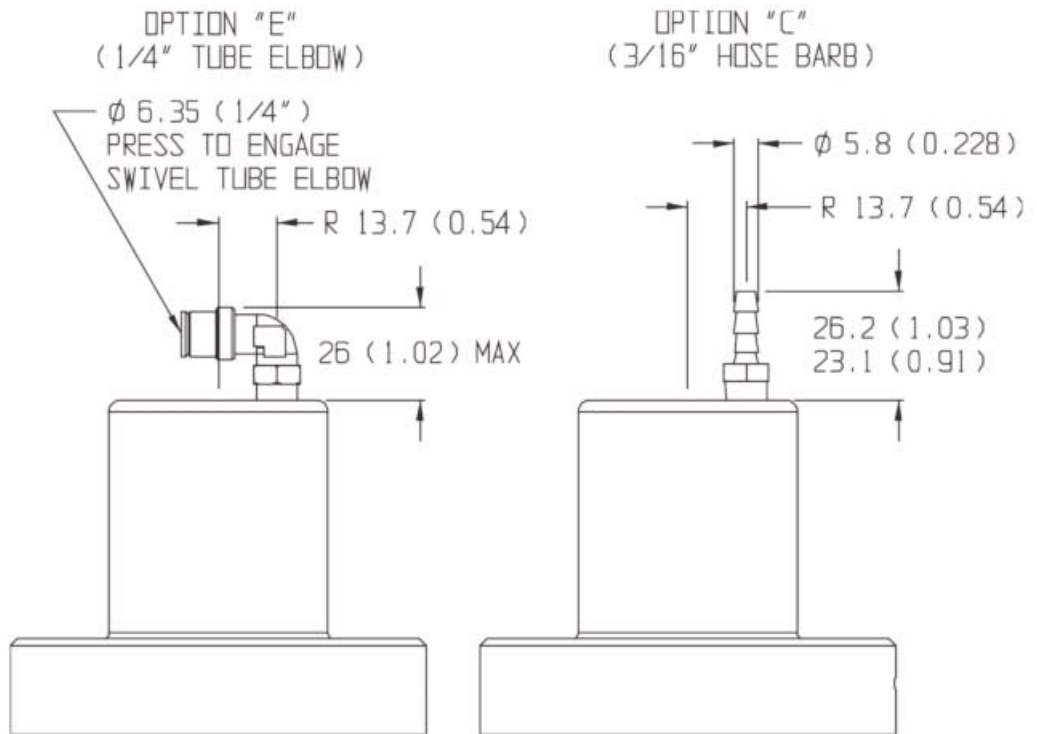
Dimensions in Millimeter
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Dimensions in Millimeter
(Dimensions in Inches)

Series HPNGV4

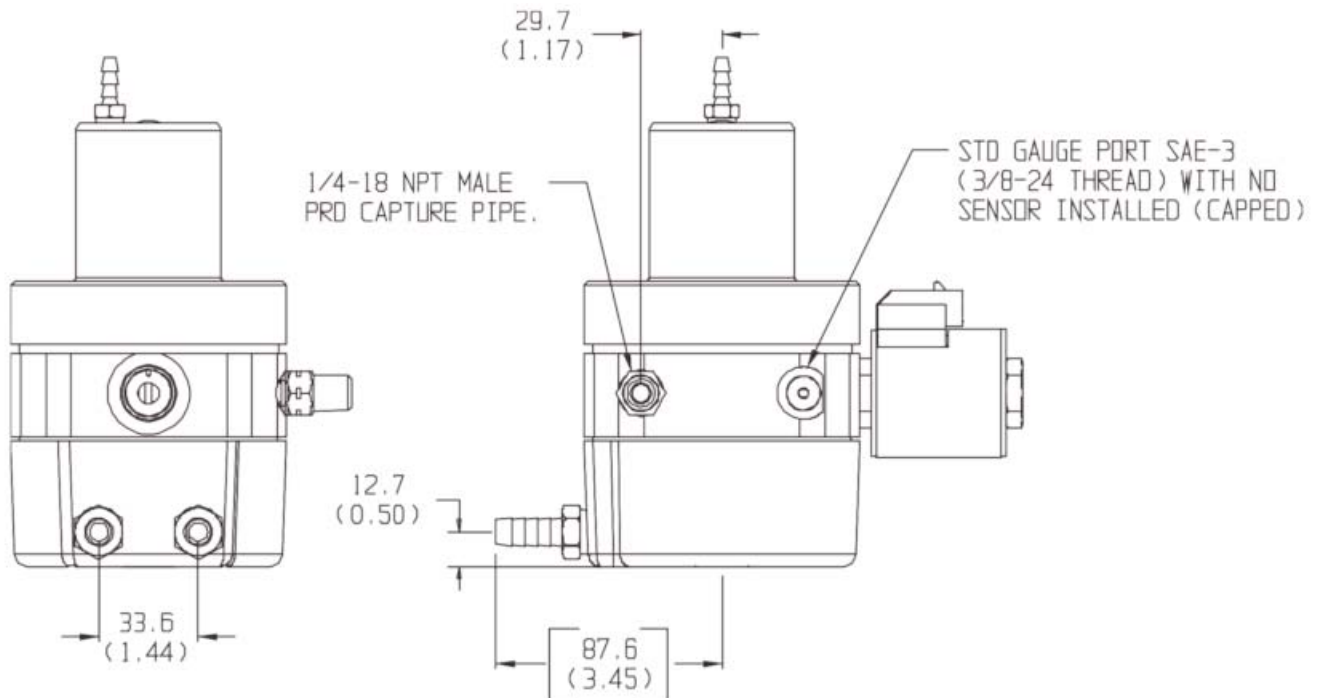
Dimensional Views - Manifold Bias



Dimensions in Millimeter
(Dimensions in Inches)

Dimensional Views - PRD and Coolant Bowls

HPNGV4 Regulator Weight	
HPNGV4 Regulator with solenoid	5.02 lb. (2.36 kg)
HPNGV4 Regulator with sensor and solenoid	5.46 lb. (2.48 kg)



Dimensions in Millimeter
(Dimensions in Inches)