

# H-ITVR

## HYDROGEN FUEL DELIVERY MODULE

### Key Features

The H-ITVR simplifies fuel cell systems and reduces costs by providing a regulated low pressure output directly from the tank. The two stage regulator architecture provides stable and precise outlet pressure and the solenoid-operated valves are engineered for reliability in a safety critical system.

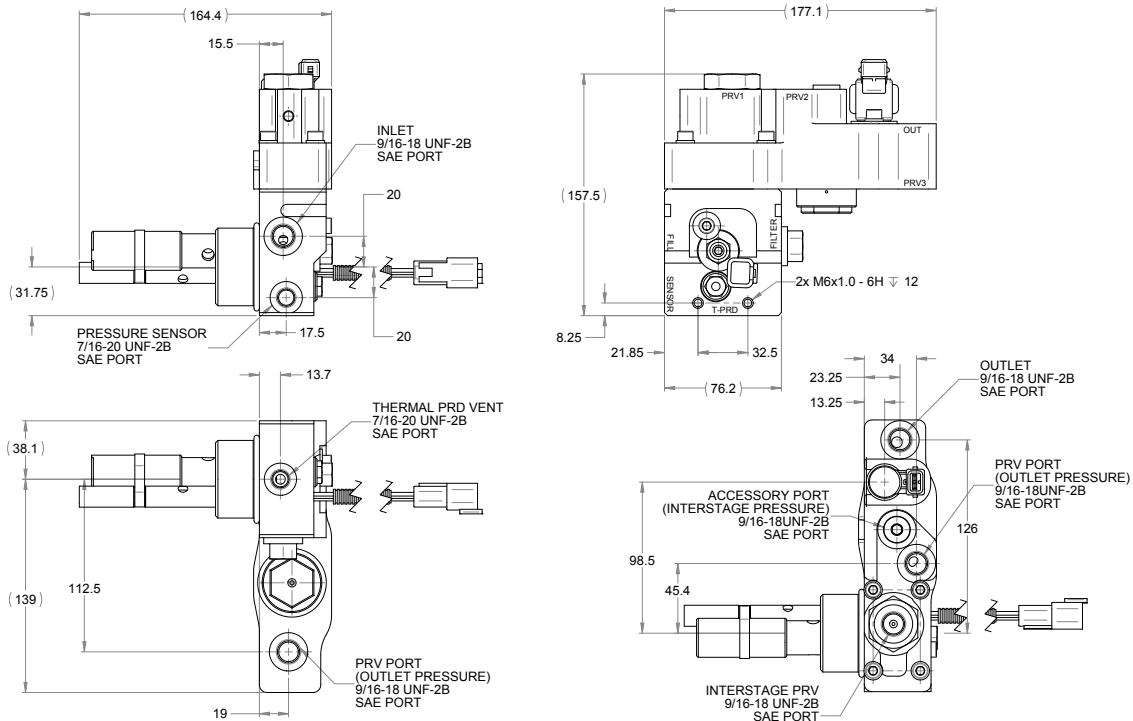
- Regulated low pressure output direct from tank.
- Low and high pressure solenoid-operated valves.
- Includes Thermally Activated Pressure Relief Device (T-PRD).
- Includes in-tank temperature sensor for fast-fill.
- Includes manual valve for service flexibility.
- Multiple SAE J1926 ports available for optional pressure relief valves and sensors.
- Serviceable regulator.
- Serviceable high pressure filter.
- 12V or 24V options available.



# SPECIFICATIONS

## H-ITVR

GENERAL INFORMATION				
FUEL TYPE	Compressed Hydrogen			
PERFORMANCE				
TANK VALVE SERVICE PRESSURE	35 MPa (5,000 psi)			
MAX TANK VALVE WORKING PRESSURE	43.5 MPa (6,250 psi)			
REGULATOR MINIMUM INLET PRESSURE	1,000 kPa (145 psi)			
REGULATOR ARCHITECTURE	Dual stage: piston + diaphragm			
REGULATOR OUTLET PRESSURE SETPOINT	85 kPa standard; 50 to 200 kPa available			
REGULATOR OUTLET FLOW RATE	0-0.4 g/s (Hydrogen) standard; up to 1.6 g/s available			
TEMPERATURE-PRD ACTIVATION	110° C +/- 5° C			
TEMPERATURE-PRD ORIFICE DIAMETER	up to 6.0 mm			
SERVICE TEMPERATURE	-40° C to 85° C (-40° F to 185° F)			
VIBRATION	As per HGV 3.1-2015			
ENDURANCE	Regulator: 500,000 operational cycles Tank valve: 50,000 fill cycles			
COIL MODEL	High pressure SOV		Low pressure injector (PWM req'd)	
NOMINAL VOLTAGE	12 V	24 V	12 V	24 V
NOMINAL CURRENT DRAW	0.62 A	0.33 A	(0.63 A)	(1.25 A)
CONNECTOR	Deutsch DTM06-4S OR bare leads		AMP 282189	
TEMPERATURE SENSOR	2,700 Ω +/- 2% @ 25° C NTC curve Y			
INTERNAL LEAKAGE	<10 <sup>-3</sup> mBar l/s Helium			
EXTERNAL LEAKAGE	<10 <sup>-4</sup> mBar l/s Helium			
FILTRATION SIZE	40 μm			
EFFICIENCY	99.9%			
MASS	1.9 kg			
APPROVALS				
CERTIFICATIONS	Designed to HGV 3.1-2015			



ISO/TS 16949:2009 registered<sup>1</sup>  
 ISO 9001:2008 registered<sup>2</sup>  
 ISO 14001:2004 registered<sup>3</sup>

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