

# Electromechanical Valves for Fuel Gas Shutoff M25 & M50 Series

These fuel shutoff valves are semi-automatic devices for shutdown of natural gas-fueled engines. The valve is opened manually and closes when the electromagnet is energized and trips the latch. The valve can be closed manually by turning the disconnect knob. A normally energized model is available that holds the valve open electrically and closes when the coil is de-energized. A vent in the valve body relieves trapped gas when the valve closes. A pop-out indicator button informs you when the valve is open or closed.

The valve's tripping power is provided by an engine ignition system or battery. Models are available for magneto, CD ignition or 24-V battery.

The **M2582** is a 1-inch (25 mm) valve with one NPT connection. It has one SPDT snap-switch. The valve body is made of sandcast aluminum. It does not include the open/close indicator button.

The **M5081** is a 2-inch (51 mm) valve with two NPT connections. It has two SPDT snap-switches. The valve body is available in sandcast aluminum or cast steel (optional).

The **M5081FS** is the same as the M5081 but has a normally energized circuit. This circuit allows the valve to be held open electrically and close by interruption of the coil's power circuit. A manual disconnect/trip knob is not available on this model.

## Options & Accessories

### Magnetic Switch Adapter

As ignition systems wear from usage, their power output becomes less and less. Ignition may not have the capacity to reliably trip the fuel valve. Therefore, the use of a Magnetic Switch Adapter for CD ignition systems is recommended. The adapter stores energy from the CD ignition to trip the fuel valve.

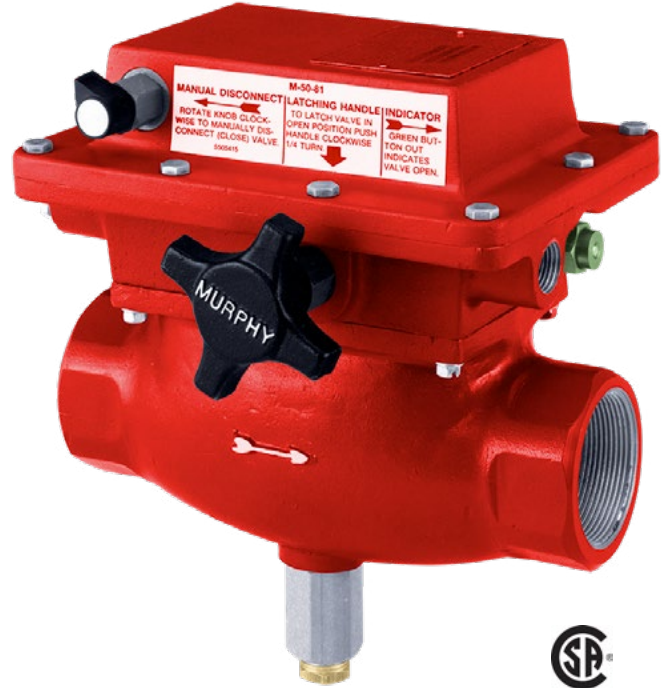
Two models are available:

**65700053 (65020126):**

For Negative Ground CD Ignitions up to 240 VDC

**65700055 (65020155):**

For Negative Ground CD Ignitions 240 VDC to 450 VDC



## Specifications

**Valve Body:** Sandcast aluminum, painted red (corrosion resistance). Optional cast steel available for M5081 and M5081FS models only.

**Valve Seat:** Buna-N

**Maximum Pressure Rating:**

- M2582: 80 psig (552 kPa) [5.52 bar]
- M5081: 100 psig (689 kPa) [6.89 bar]
- M5081FS: 100 psig (689 kPa) [6.89 bar]

**Coil Rating:** Intermittent duty; coil type must match power source;

- CD ignition coil resistance: 72  $\Omega$
- CD primary voltage current: 1.38 to 3.8 A
- M5081FS model: Energized to run (continuous-duty coil) coil resistance:
  - 24 Volt model: 136  $\Omega$  (0.17 A)
- Magneto ignition coil resistance: 0.5  $\Omega$
- Magneto primary voltage current: 1 to 5 A
- Battery coil resistance: 7  $\Omega$
- 24 VDC: 1.2 to 2.4 A

**Wiring (See Internal Wiring)**

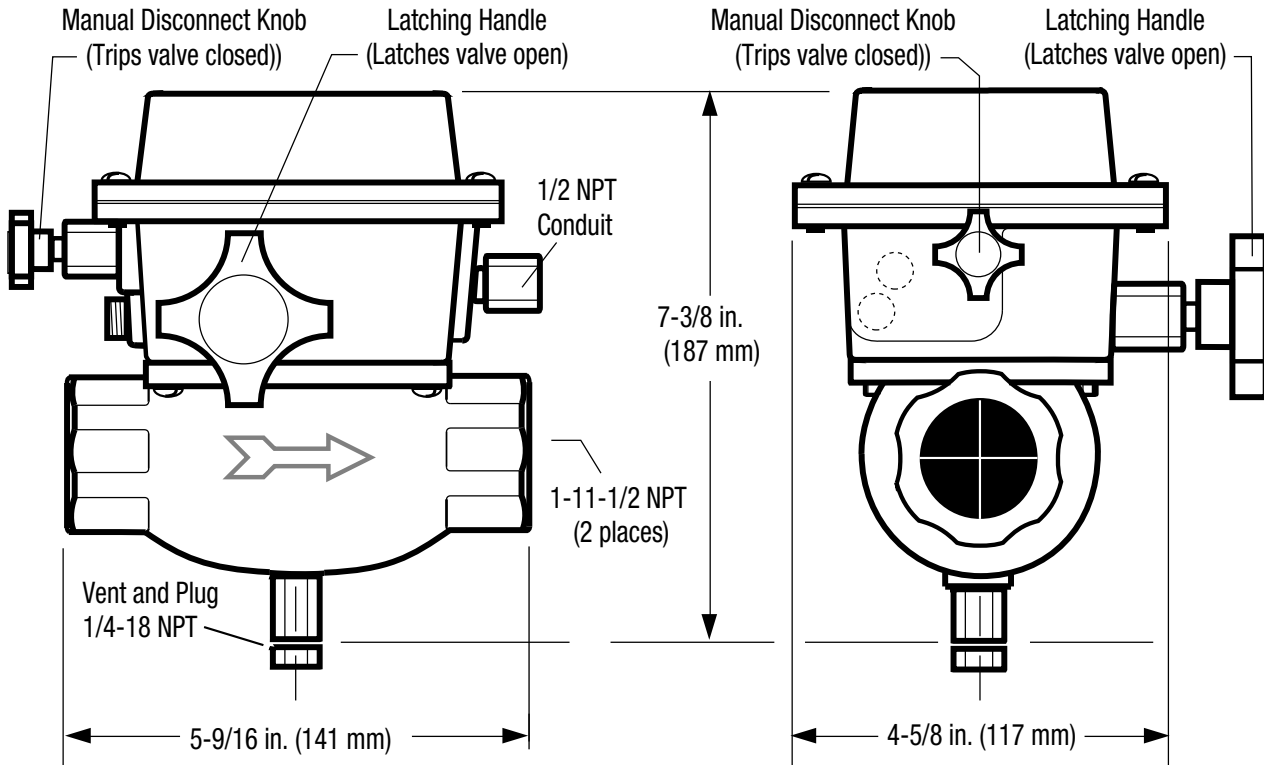
- M2582: Wire leads
- M5081 and M5081FS: Terminal blocks

**Snap-switch Rating:** 5 A @ 480 VAC

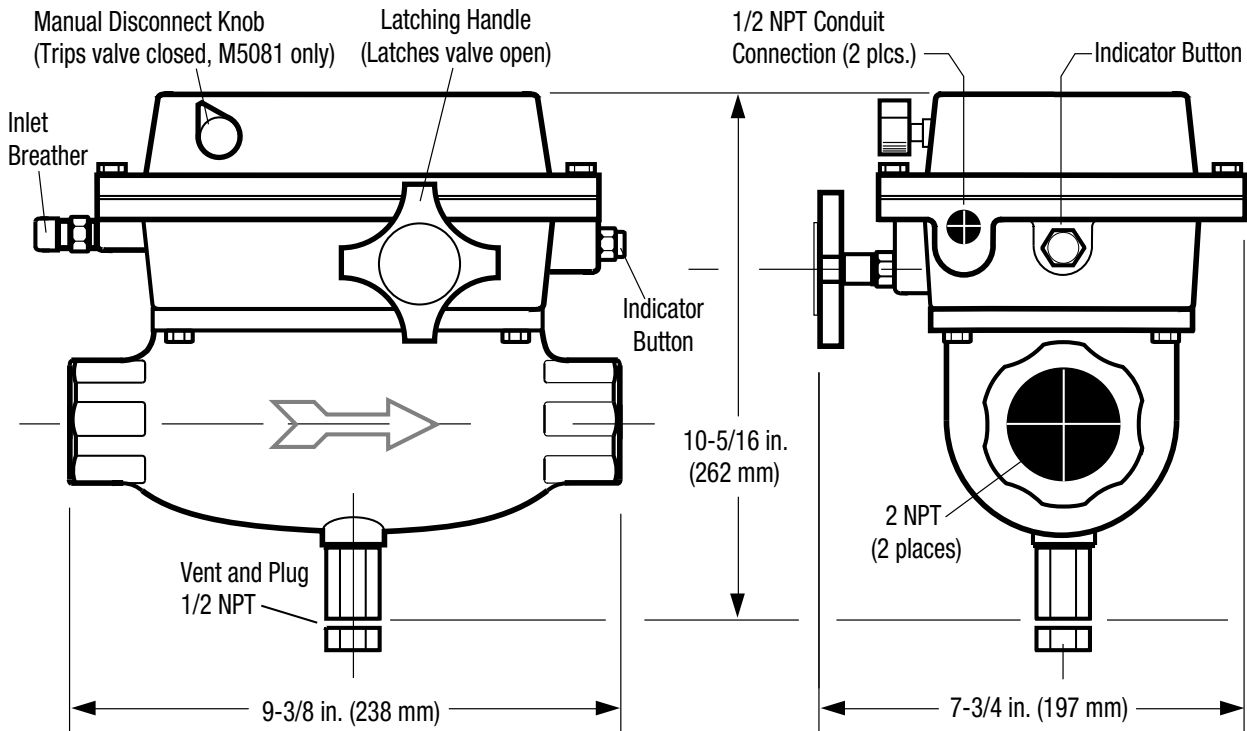
**Laboratory Approval:** CSA listed for Class I, Groups C and D Hazardous Locations. 5 amps maximum; intermittent duty; models M5081 and M5081-CD engine ignition powered and model M5081-B, 24 VAC or VDC; switch contacts rated 5 A @ 480 VAC maximum

# Dimensions

## M2582



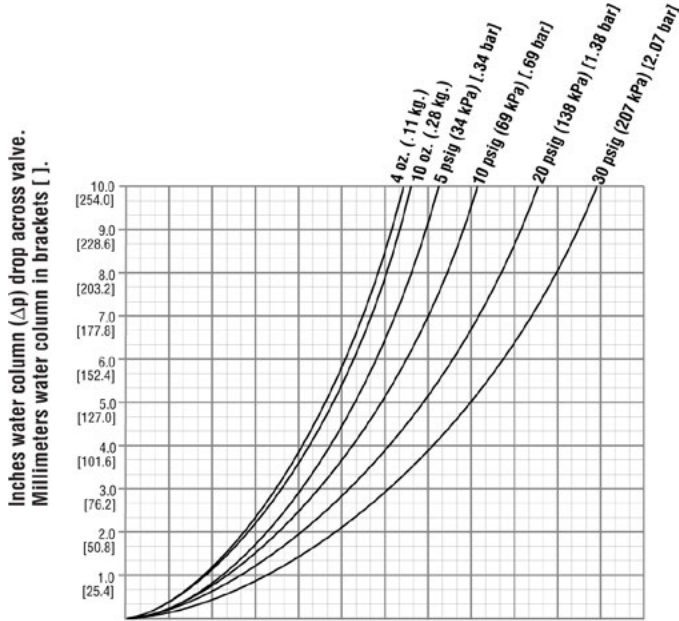
## M5081 & M5081FS



Use explosion-proof conduit seal at the 1/2 NPT conduit connection.  
Manual Disconnect Knob is not available on the M5081FS.

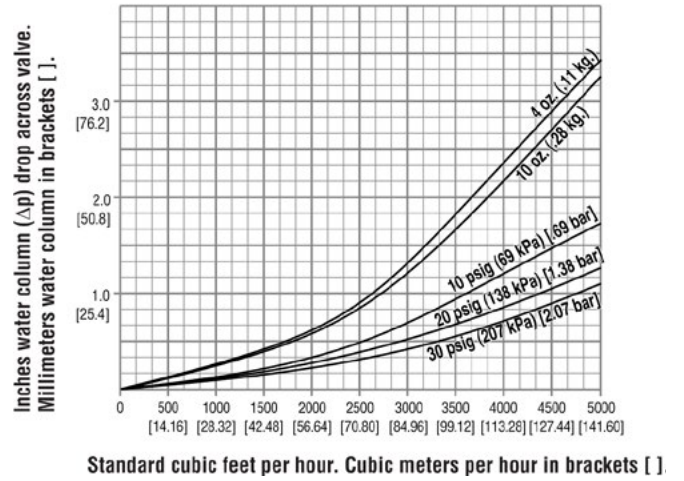
# Flow Rates

**M2582**



Standard cubic feet per hour. Cubic meters per hour in brackets [ ].

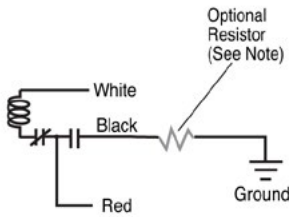
**M5081 & M5081FS**



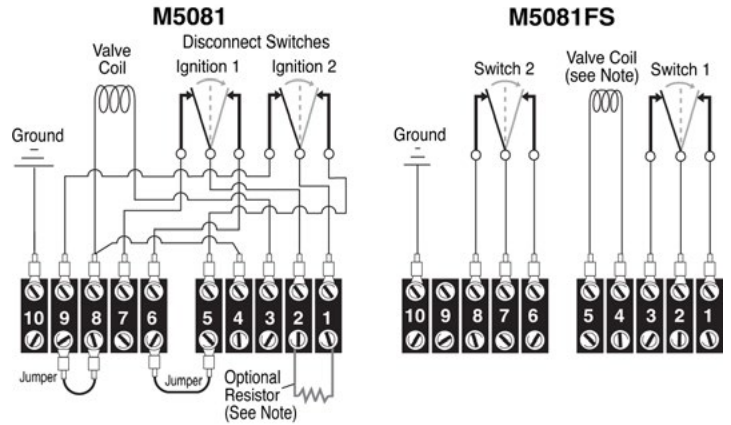
Standard cubic feet per hour. Cubic meters per hour in brackets [ ].

# Internal Wiring

**M2582**



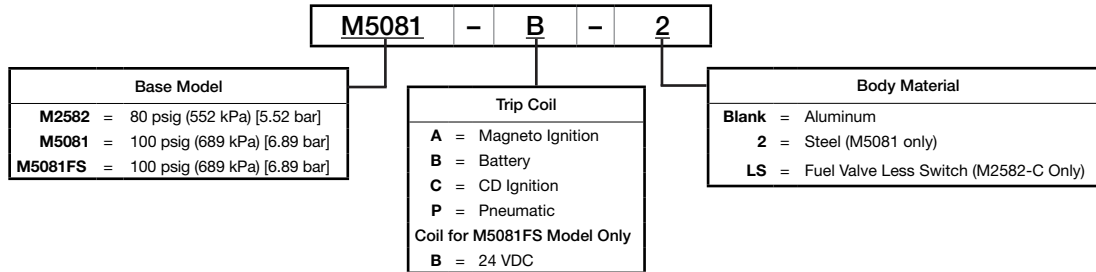
**M5081 & M5081FS**



» NOTE: An FW Murphy Magnetic Switch adapter must be used in addition to a 100 ohm, 2 watt resistor, for grounding the ignition (CD ignition models only) through the fuel valve's internal snap-switch (see How to Order).

# How to Order

Options listed below. All configurations may not be available. Call your sales representative or FW Murphy for more information.



Part Number			Description	Notes
65700053			Magnetic Switch Adapter (for M2582 and M5081)	For Negative Ground CD Ignitions up to 240 VDC
65700055				For Negative Ground CD Ignitions 240 VDC to 450 VDC
M2582	M5081	M5081FS	Service Parts	Notes
55000128	55000126	-----	Battery	Coil Assembly
55000129	55000127	-----	CD Ignition	
55000094	55000080	-----	Magneto Ignition	
55000095	55000074	-----	Latch Block Assembly	Latch Block Assembly
-----	55000118	-----	Latch Block Switch and Mounting Bracket Assembly	
-----	55000102	55000102	Handle & Latch Kit	
55000096	-----	-----	Handle Kit	
55000097	55000137	-----	Manual Disconnect Assembly	
55000098	55000072	-----	Snap-Switch Assembly	
55000093	55000075	55000075	Stem & Seat Kit	
55000146	55000131	55000194 (24V)	Top Works Complete Valve Less Body and Vent	
55000143	55000132	55000132	Vent Bushing Assembly	

Approximate Shipping Weight and Dimensions		
Model	Weight	Dimension
M2582	5 lbs 8 oz. (2.49 kg)	8 x 8 x 7 in. (203 x 203 x 178 mm)
M5081	14 lbs 8 oz. (6.58 kg)	12 x 12 x 9-5/16 in. (305 x 305 x 237 mm)
M5081-2	40 lbs (18.14 kg)	12 x 12 x 9-5/16 in. (305 x 305 x 237 mm)
M5081FS	14 lbs 8 oz. (6.58 kg)	12 x 12 x 9-5/16 in. (305 x 305 x 237 mm)