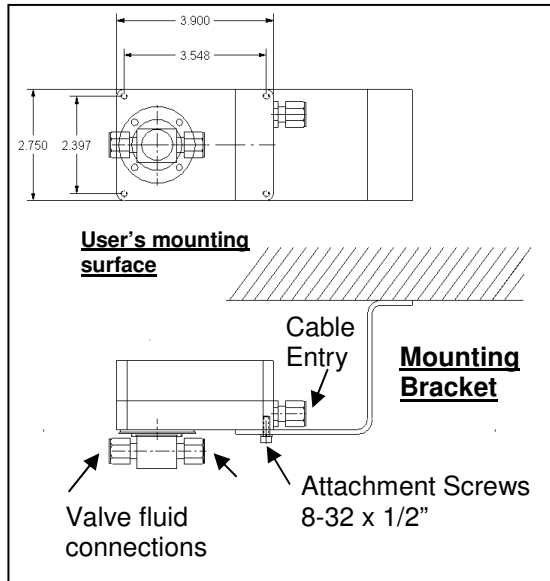


MDM-0-DT-TT4.02**Connections and Settings****Install Actuator:**

Usually, the actuator has to be mounted and supported as shown in the picture to the left. Exceptionally, and only if the application is absolutely vibration free and the tubing is minimum 1/4" dia. stainless, the actuator may be suspended on the tubing itself.

Actuator connection cable:

Select a connection cable with 6 leads if you plan to use the feedback signals and 4 leads if you ignore the feedback.

The liquid tight strain relief on the base of the actuator is designed to accommodate a cable of **O.D. 2.5 - 6.5mm (0.10 - 0.26in)**. Be sure to not use a cable with an OD that is bigger than this!



1.- Remove the liquid tight fitting from the actuator casing and insert the cable into it.



2.- The cable has to be stripped of its jacket for 2 inches (50mm) and the wires need 1/8" (3mm) stripped ends



3.- Bend the wires so that insertion becomes easy



4.- Insert the cable into the actuator base



5.- Put the liquid tight fitting back and tighten (lightly with tool)



6.- Hand tighten the liquid tight fitting to establish seal



7.- Connect wires according to your application (see next page)

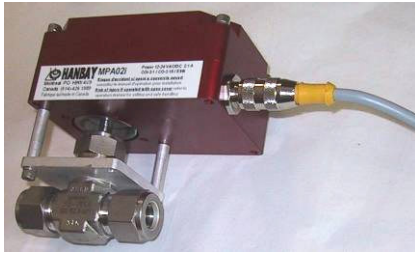


8.- Mount actuator cover and tighten 4 screws



OR, if you have ordered the “Turck” cable option:

you can simply cut the cable to the length required and then connect according to the following wire color schematic:

**wire color schematic for “Turck” cable:**

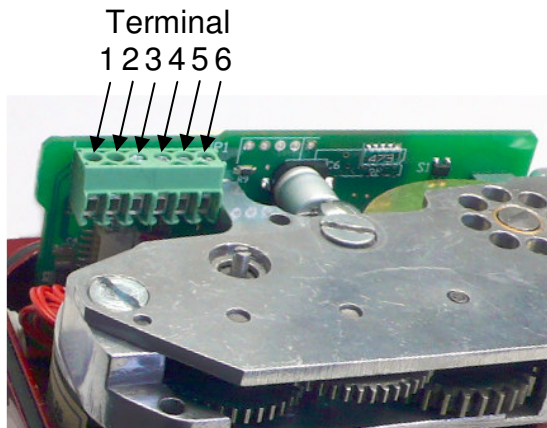
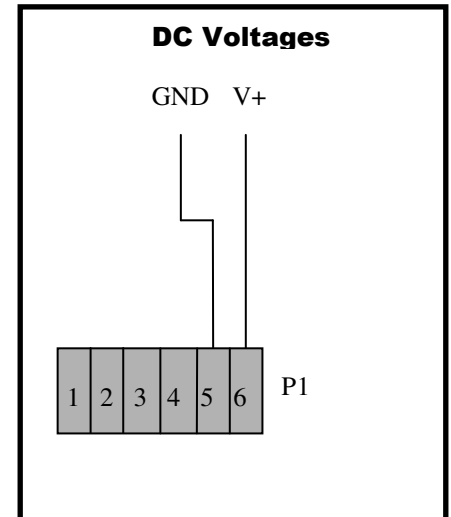
	DC Power Supply	AC Power Supply
Grey ->	N/C	24VAC
White ->	+24VDC	24VAC
Black ->	Power Gnd	Power Gnd
Brown->	Signal TT1	Signal TT1
Blue ->	Signal TT2	Signal TT2

Connect the power:

The **MDM-O-DT** may be connected to voltages ranging from 12 – 24 VDC

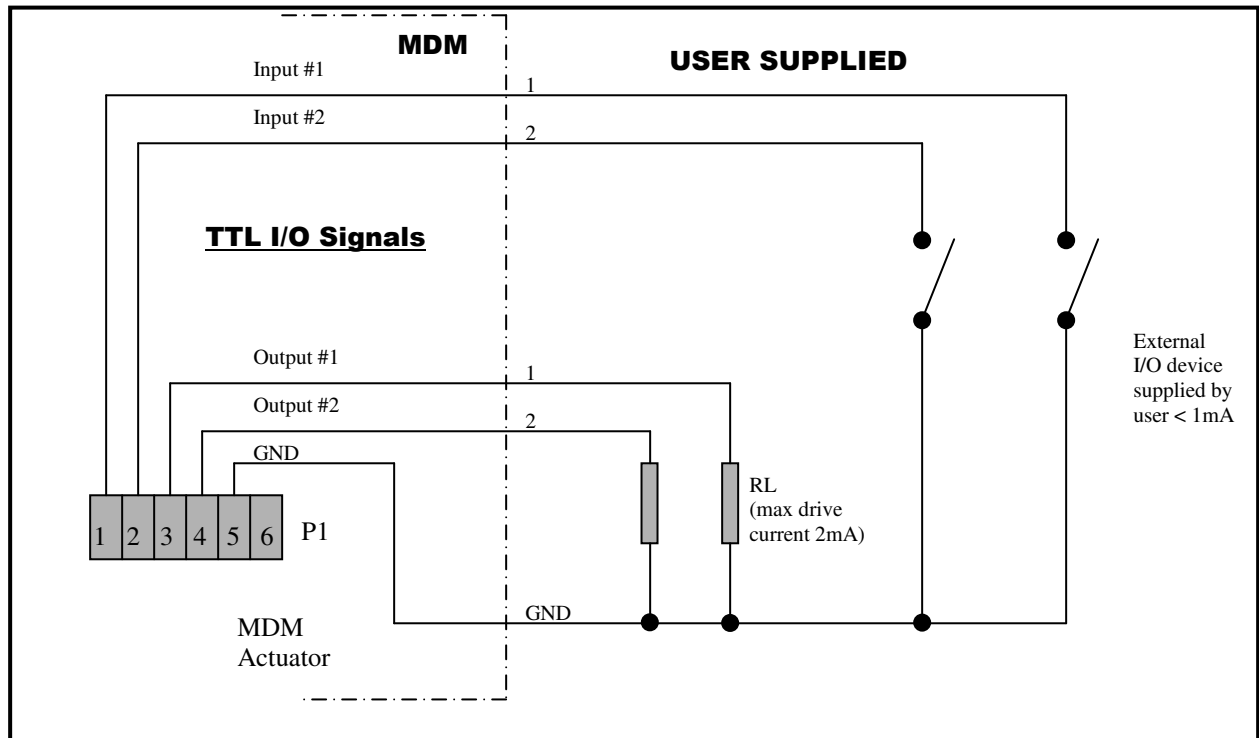
The power consumption will range from max. 3.0A to approx min. 100mA when the actuator is active. When not moving, the actuator draws less than 40mA.

Locate the correct connection terminals as shown in the picture below then connect according to the connection schematics to the right.

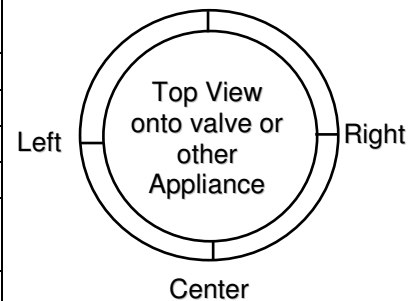


Connect the signal:

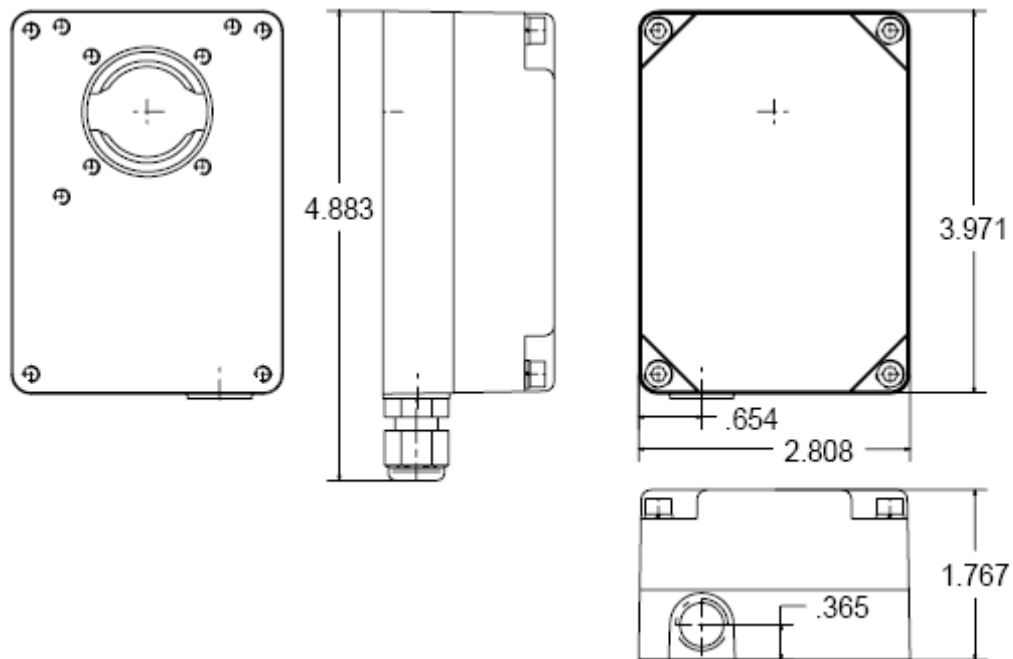
Locate the correct connection terminals as shown in the picture above then connect your input signal on pos. 1 and 2 and the output signals on 3 and 4 as shown below.

**Functionality of the MDM-0-DT**

Input#1 (Pin 1)	Input#2 (Pin 2)	Action taken
High	High	Moves to or remains in center position
Low	High	Moves to or remains in right position
High	Low	Moves to or remains in left position
Low	Low	Moves to or remains in right position (Input#1 has precedence over Input #2)
The feedback from the MDM-0-DT is as follows:		
Output#1 (Pin 3)	Output#2 (Pin 4)	Meaning
High	High	Actuator output is in center position
High	Low	In Right position
Low	High	In Left position
Low	Low	Actuator is moving, or has stalled and given up trying to reach a requested position You may retry to reach any position again by setting Input#1 and Input#2. I.E.: toggle Input #1 low for a few milliseconds and back to high if this was what you where asking for initially. If the problem persists, you have to trouble shoot the unit.



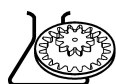
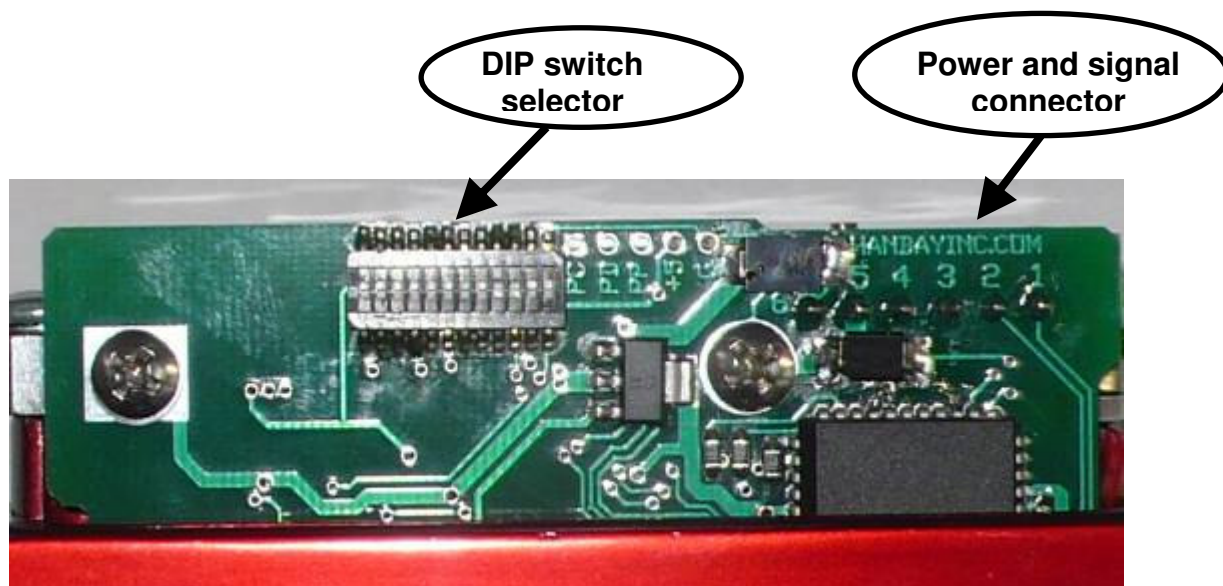
Main Dimensions



Speed and torque settings with the Dip switch:

With the dip switch settings, you can adjust the turning speed of the actuator.

As the actuator turns slower, it develops more torque as shown in the table on the next page:



Set the speed:

The max speed of the actuator can be set by using the first two positions of the **DIP switch selector** that is shown in the picture above. These settings will affect the max speed of the actuator. If the actuator cannot produce enough torque to reach these speeds, it will slow down. The torques listed below are at the specified speed and power. As the actuator slows down, it will create more torque.

*Permanent Power settings on DIP 10, 11 as shown below.

Dip1	Dip2	Time for 1/4 turn	Torque in in-lbs 1/6 Power		Torque in in-lbs 1/3 Power		Torque in in-lbs 2/3 Power		Torque in in-lbs 3/3 Power	
			12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC
OFF	OFF	4	7	15	13	30	27	60	40	90
OFF	ON	3	5	13	11	27	21	53	32	80
ON	OFF	2	4	12	7	23	15	47	22	70
ON	ON	1	N/A	11	N/A	22	N/A	43	N/A	65

Avoid the N/A area of the settings.

To convert in-lbs to Nm, divide the in-lbs value by 9

To accommodate different valves and other applications, with different torque requirements, the actuator can be set to apply different torque on the valve stem.

Please see the box to the right and the table above to select the power setting that is right for your application.

Permanent power settings:

Dip10	Dip11	Power
Off	Off	16%
Off	On	33%
On	Off	66%
On	On	100%

Centre Position Calibration:

The centre position calibration routine can be initiated by switching Dip9 momentarily on then off. This will cause the actuator to go through a series of movements to determine the proper center position.

This function is useful only if the actuators output gear gets manually rotated and can't properly realign to the center by itself.



Note: For high load applications, duty cycle must be reduced to 50% - 25% maximum to allow for cooling of the motor



Factory presetting:

We have set your actuator(s) at our factory after mounting the valve and for testing the assembly.

Invoice No.:

Item No.:

Valve Type:

Manufacturer:

Part Number:

Valve

Number of turns:

The Dipswitch settings we applied to your actuator are: (1="On", 0="Off")

Dip1	Dip2	Dip3	Dip4	Dip5	Dip6	Dip7	Dip8	Dip9	Dip10	Dip11	Dip12

Notes & recommendations:

