

## SZ and Q Series Turbine Meter Installation Instructions

### Piping Recommendations:

Isolation valves upstream and downstream of the meter are recommended. A by-pass will facilitate maintenance or calibration. A “tee” or gasket strainer can be installed upstream of the meter run for added protection. SZ and Q-Series meters can be installed in vertical or horizontal piping. The index on the meters is able to be rotated 360° and the meter can be installed with index facing any direction except facing the ground.

A minimum of 3 pipe diameters upstream & 2 pipe diameters downstream of straight unobstructed pipe of the same diameter is recommended.

*For example: If the meter is a 3" meter, it needs 9" of straight 3" pipe upstream and 6" of straight 3" pipe downstream.*

### Installation Considerations:

- SZ Series Turbine Meters should only be installed indoors
- Q Series Turbine Meters can be installed indoors or outdoors
- Before installation, check that the turbine can move freely by blowing onto the vanes

### Start-Up:

Pressurize and depressurize very **SLOWLY**.

To prevent over-speeding, the downstream valve should be closed when pressurizing the meter.

When meter is under full pressure, open the downstream valve **SLOWLY**.

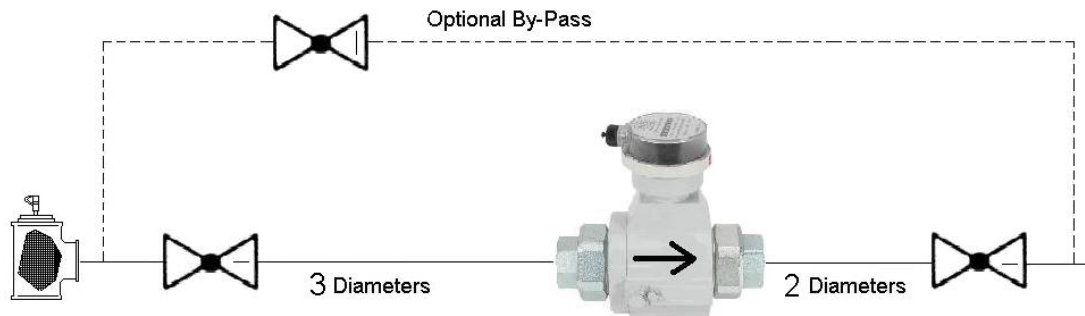
### Maintenance:

The SZ Quantometer is maintenance free if the meter is operated within capacities and supply gas is clean. Meter should be inspected every 5 to 8 years by IMAC Systems, Inc. and the meter also should be sent back for evaluation and calibration if damage is suspected. Bearings are permanently lubricated.

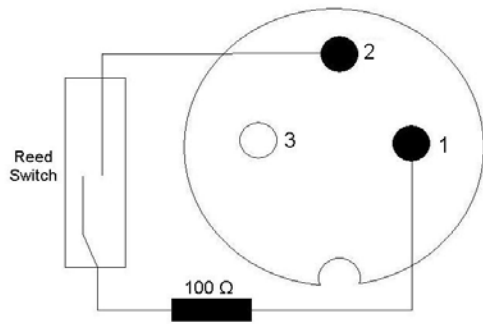
### Pulse Output:

SZ Series: Two connectors that allow for low frequency (E1 – reed switch) and high frequency (E200 – proximity sensor)

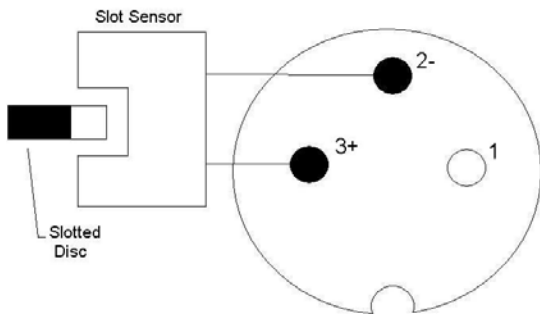
Q-Series: Pulse output that snaps into place on meter index. This low frequency pulser is (2) form A reed switches actuated by a magnet.



**SZ- Turbine Meter Wiring Diagram:**



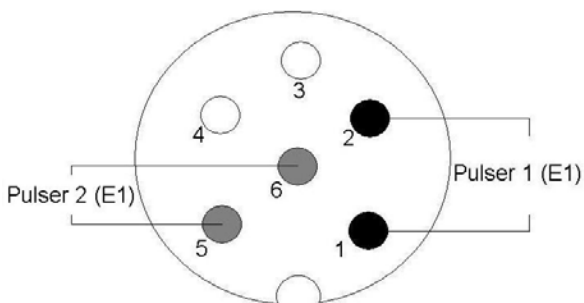
E1 Series Reed Contact  
 Max Voltage: 24 V DC  
 Max Current: 50 mA  
 Max Capacity: .25 Watts  
 Resistance: 100Ω ±20%



E200 Series Pulser  
 Standard Voltage:  $U_n=8V$  DC  
 Current Consumption:  
 Active surface open  $I \geq 2.1$  mA  
 Active surface closed  $I \leq 1.2$  mA

SZ Pulse Output	SZ-1	SZ-2	SZ-40	SZ-65	SZ-100	SZ-160	SZ-250
E1 (Cubic Ft / Pulse)	1	1	10	10	100	100	100
E200 (Pulses/Cubic Ft)	50	50	25	25	2.5	2.5	2.5

**Q-Series Turbine Meter Wiring Diagram:**



E1 Series Reed Contact  
 Max Voltage: 24 V DC  
 Max Current: 50 mA  
 Max Capacity: .25 Watts

**These installation instructions as well as many other useful products (including tee and gasket strainers can be found at [www.imacsystems.com](http://www.imacsystems.com)**