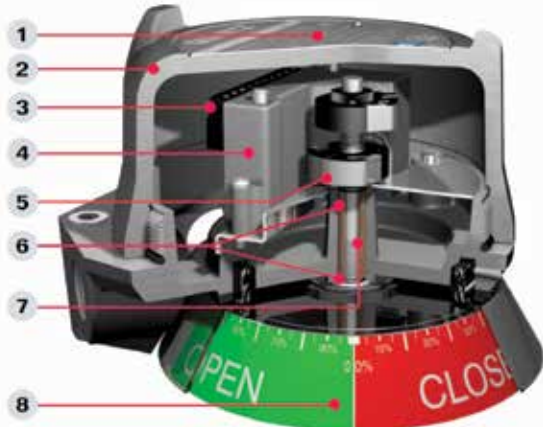


# ACTUATORS AND CONTROLS

## Stonel Quartz Limit Switch



The Quartz is available in explosion proof (QX), nonincendive and intrinsically safe (QN) and general purpose (QG) versions. The robust epoxy coated anodized aluminum construction makes this platform extremely durable and well suited for use in corrosive, heavy wash down environments. A broad range of switching, position transmitter and communication options may be selected to accommodate most applications.

This versatile platform adapts to a wide variety of valve systems. Attach the Quartz to quarter-turn actuators, manual operators, linear operators and positioners using readily available stainless steel mounting systems.

### 1. Enclosures Optimized for Environment

**QX:** Explosion proof, water tight and corrosion-proof enclosure is approved for use in div. 1/zone 1 hazardous areas.

**QN:** Nonincendive is approved for all div.2/zone 2 hazardous environments with proximity sensors using a clear cover. Intrinsically safe Namur sensors or passive switches are available for div. 1/zone 0 applications.

**QG:** General purpose features a clear Lexan cover with mechanical switches. All enclosures are rated NEMA 4, 4x, and 6.



### 2. Rapid Enclosure Access

Screw-on cover allows quick enclosure access, saving you valuable maintenance and set-up time. The cover provides a vapor tight seal and allows entry to internal components in less than five seconds.

### 3. Faster Wiring

Pre-wired and labeled terminal strip enables quick, convenient attachment of field wires.

### 4. Wide Variety of Switching & Communication

Switching options include dual module sensors and communication, Maxx-Guard proximity switches and mechanical switches. Continuous signal output is available in a 4 to 20 mA position transmitter.

### 5. Quick Set Cams are Easy to Adjust

Touch and Tune switch settings allow you to make adjustments in seconds without the use of tools.

### 6. Dual Shaft O-ring Seals Eliminate Corrosion

Top inner and bottom outer shaft o-rings seal the drive bushing from both external corrosives and internal contaminants that enter the enclosure.

### 7. Special Drive Bushing Assures Long Cycle Life

The oil impregnated bronze bushing maintains smooth operation and eliminates the potential for shaft seizure due to actuator shaft eccentricity.

### 8. Space Saving Visual Indication

Visual indicator offers excellent viewability without sacrificing accessibility or adding to space requirements. Indicators are also available with continuous percentage or three-way indication.



#### **Eliminate Seal Fittings in Division 2 and 2 Areas**

FMus ratings certify the Quartz QX series with proximity switches for use without seal fittings in all hazardous areas. By passing special pressure piling tests, the all aluminum enclosure was certified for this elite distinction. Now, a time-consuming procedure can be safely eliminated in division 1 and division 2 areas.

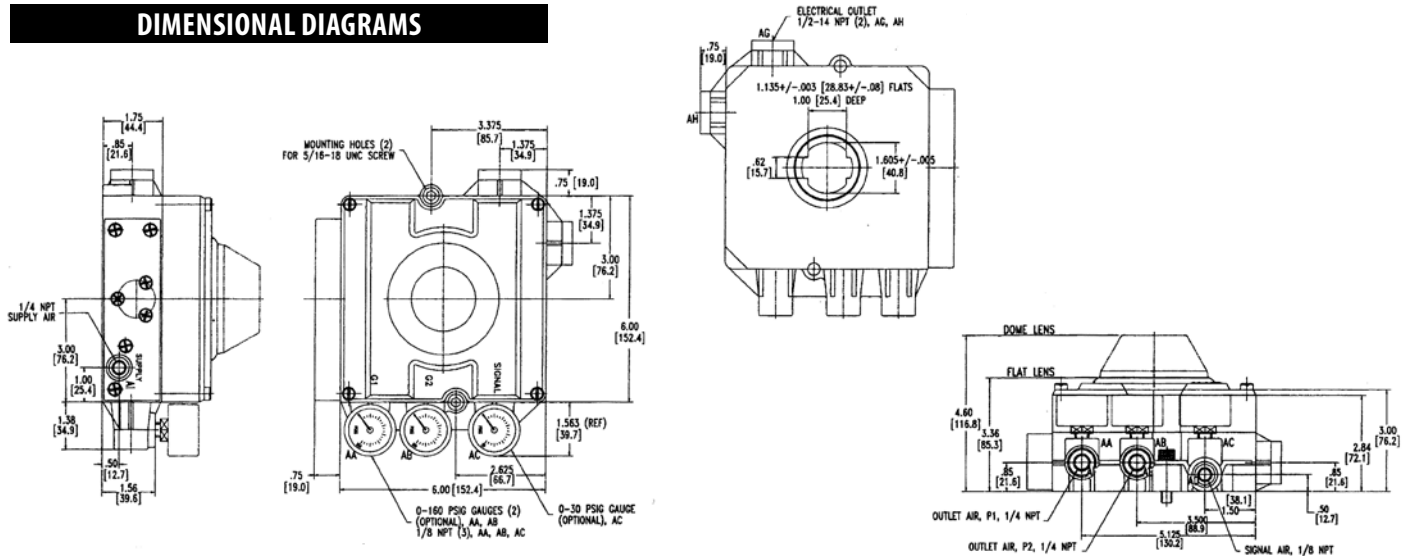
#### **Consolidate Your Components & Minimize Costs**

The Quartz design offers up to three conduit entries with extra wire terminations. By terminating solenoid valves in the switch enclosure, significant savings are realized by eliminating a junction box, wiring, conduit materials and labor.

# ACTUATORS AND CONTROLS

## VRC Positioners

### DIMENSIONAL DIAGRAMS



### CONSTRUCTION

| Part                            | Materials                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------|
| Enclosure                       | PPA Composite, 300 Stainless Steel Port Rings, Cover and Mounting Bolts                                   |
| Indicator Lens                  | LEXAN™                                                                                                    |
| Internals                       | PPA, PPS and PEEK Composites 300 Series Stainless Steel                                                   |
| Nickel Plated Brass Spool Valve | Carpenter 70 Grade Stainless Steel                                                                        |
| I/P Converter (VK02) VE Model   | PPA Composite, TEFLON™ Coated Carbon Steel, Nickel Plated Carbon Steel, High Density Polyethylene DELRIN™ |
| Signal Diaphragm/ O-Rings       | BUNA N                                                                                                    |

### PERFORMANCE

| Parameter                | Specification                                                                 |
|--------------------------|-------------------------------------------------------------------------------|
| Resolution               | 1.25% Maximum<br>0.10% Typical                                                |
| Repeatability            | 99.75% Minimum<br>99.90% Typical                                              |
| Hysteresis               | 0.50% Maximum<br>0.25% Typical                                                |
| Linearity                | 1.0% Maximum                                                                  |
| Gain @80 psig            | 250 Single Acting<br>500 Double Acting                                        |
| Air Consumption @80 psig | 0.25 SCFM – Standard Flow Spool Valve<br>0.45 SCFM – Maximum Flow Spool Valve |
| Temp. Range              | -40 to 150° F/-40 to 65° C                                                    |

## How to Order VRC Positioners

| POSITION INDICATOR & TYPE                                                                            | SPOOL VALVE                       | PORT GAUGES                                        | POSITION TRANSMITTER                                   | LIMIT SWITCH                                                   |
|------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------|
| 0 = Flat Pneumatic<br>1 = Flat Electro-Pneumatic<br>5 = Dome Pneumatic<br>6 = Dome Electro-Pneumatic | 7 = Standard Flow<br>8 = Max Flow | 3 = No Gauges<br>4 = Brass Gauges<br>5 = SS Gauges | 0 = No Transmitter<br>F = 4-20MA Current Output 2-Wire | 0 = No Switch<br>K = Mechanical Switch<br>M = Proximity Switch |

Note: See Price List for Apollo Part Numbers