

Series 760 P/E Valve Positioners

The Series 760 Valve Positioners provide a cost effective, universal approach to your valve control. Their modular concept allows all models to be built on the base pneumatic unit (Moore 760P). The electro-pneumatic model (Moore 760E) is created by adapting an I/P Transducer to the base, and a wide range of accessories is easily installed inside the unit.

The 760 base pneumatic unit provides cam characterization, split ranging, direct or reverse action, and single or double acting without requiring additional parts. Key design features include non-interaction of the zero and span adjustments.

Series 760 Valve Positioners include provisions for internal limit switch mounting and position feedback devices without requiring additional housings. Thus, the need to stack housings that impede access to the main enclosure are eliminated.

A spool valve is used to load the actuator for positioning in response to an input signal. A characterized cam provides mechanical feedback. There

are linear, equal percentage and quick opening operation cam profiles, and a blank profile cam is available for custom applications. Rectilinear action length can range from 1/2" to 6".

The feedback shaft and characterized cam can be replaced in the field to

configure the positioner for use with either a rectilinear or rotary actuator. No additional parts are necessary to change between single or double acting actuators or direct or reverse action.



Model 760 P/E Design Level B

SIEMENS

FEATURES & BENEFITS

- ▶ Universal design and choice of interchangeable NAMUR IEC 534-6 rectilinear or VDI/VDE 3845 rotary mountings provide wide application flexibility
- ▶ Double-acting or single-acting service and split ranging afford application versatility in a single unit
- ▶ NACE MR-01-75-compliant material ensures operation in harsh industrial environments
- ▶ Non-interaction of the zero and span adjustments and positive cam locking mechanism significantly reduce the calibration and setup
- ▶ Modular design reduces inventory because it allows interchangeable spare parts
- ▶ Comes standard with 3 cams, linear, quick opening and equal % for application versatility

SPECIFICATIONS

FUNCTIONAL SPECIFICATIONS

Temperature Range

760P: -40 to 185°F (-40 to 85°C)
-4 to 185°F (-20 to 85°C)

Optional: 300°F (148°C)

760E: -40 to 167°F (-40 to 75°C)
-4 to 167°F (-20 to 75°C)

Ingress

NEMA 4X IP 65

Connections

Pneumatic – 1/4" NPT
Gauge – 1/8" NPT
Electrical – 3/4" NPT, 25 mm
Exhaust – 1/4" NPT

Finish

Epoxy/Polyester Powder Coat

Output Configuration

Single or Double Acting

Action

Direct or Reverse

Supply Pressure

150 psig max.

Air Consumption

Standard Spool = 0.5 scfm

Low Gain Spool = 0.5 scfm

High Flow Capacity Spool = 1.0 scfm (typical)

Flow Capacity (at 60 psi with 25% drop)

9.0 scfm (Cv = 0.3) Standard

20.0 scfm (Cv = 0.6) Optional

Input Signal

760P: 3-15 psig, 3-27 psig, 50% split range

760E: 4-20 mA, 50% split range

Mechanical Feedback

90°, rotary std.

1/2" to 6" rectilinear optional

Characterization

Equal %; Quick Opening; Linear

Pressure Gain

160:1 @ 60 psig standard

Span

Adjustable -60% to +25% of normal span

Zero

Adjustable -10% to +60% of normal span

PERFORMANCE SPECIFICATIONS

Linearity (Independent)

760P: 0.5% of normal span (typical)

760E: 0.75% of normal span (typical)

Hysteresis

760P: 0.75% of normal span (typical)

760E: 1.0% of normal span (typical)

Deadband

Less than or equal to 0.25% of span

Repeatability

Within 0.5% of span

Supply Pressure Effect

Less than 0.2% of span for a 5 psi change in supply pressure

Hazardous Area Class Approval

Series 760 Approvals & Certifs.

FM Approvals:

Intrinsically Safe:

- Class I, Division 1, Groups A, B, C, D
- Class II, Division 1, Groups E, F, G
- Class III, Division 1

Non-incendive:

- Class I, Division 2, Groups A, B, C, D
- Suitable for:
 - Class II, Division 2, Groups F, G
 - Class III, Division 2

CSA Certification

Intrinsically Safe:

- Class I, Division 1, Groups A, B, C, D
- Class II, Division 1, Groups E, F, G
- Class III, Division 1

Suitable for:

- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups E, F, G
- Class III, Division 2

CENELEC:

EEx ia IIC T4/T5/T6

SCS (Sira Certification Services):

- Rating: Ex N IIC T5
- Suitable for Zone 2

Enclosure:

- Type 4X, in accordance with NEMA Std. 250
- Type IP65, in accordance with IEC Std. 529

BASIC MODEL NUMBER

76 Valve Controller (Positioner)
 0 Standard Product - No Private label
 A to Z Reserved for OEM Private Label Products PP 760 OEM (Consult Factory)

Input signal
 E1 4 to 20 mAdc (Not available with High Temp. Option)
 P1 3 to 15 psig
 P2 3-27/6-30 psig
 P4 20 to 100 kPa
 P5 0.2 to 1.0 Bar
 P6 0.2 to 1.0 kg/cm²

Action (Rising Stem/Linear or Rotary)
 1 1/2 to 4 inch stroke lever with set of (3) 60° cams
 2 2 to 6 inch stroke lever with set of (3) 60° cams
 3 1/4 turn - 1/2 inch square shaft with set of (3) 90° cams
 4 1/2 to 2 inch stroke lever with set of (3) 60° cams
 5 1/4 turn NAMUR style shaft end with set of (3) 90° cams
 E 1/2 to 4 inch stroke lever with (1) 90° linear cam
 F 2 to 6 inch stroke lever with (1) 90° linear cam
 S 1/4 turn NAMUR shaft with set of (3) 60° cams

For additional restricted OEM Action selections Consult Factory

Enclosure Type 4X/IP65 (with 3/4 inch NPT Conduit Connection)
 A Standard
 B With 90° Beacon Indicator (Not available with High Temp. Option)
 C With Stroking Speed Adjusters
 D With Stroking Speed Adjusters & 90° Beacon Indicator (Not avail. with High Temp. Opt.)
 J With 60° Flat Indicator (Not available with High Temp. Option)
 K With 90° Flat Indicator (Not available with High Temp. Option)
 L With Stroking Speed Adjusters & 60° Flat Indicator (Not avail. with High Temp. Option)
 M With Stroking Speed Adjusters & 90° Flat Indicator (Not avail. with High Temp. Option)

Enclosure Type 4X/IP65 (with M25 Conduit Connection) (Electrical Certification "N" & "8" only)
 E Standard
 F With 90° Beacon Indicator (Not available with High Temp. Option)
 G With Stroking Speed Adjusters
 H With Stroking Speed Adjusters & 90° Beacon Indicator (Not avail. with High Temp. Opt.)
 N With 60° Flat Indicator (Not available with High Temp. Option)
 P With 90° Flat Indicator (Not available with High Temp. Option)
 R With Stroking Speed Adjusters & 60° Flat Indicator (Not avail. with High Temp. Option)
 S With Stroking Speed Adjusters & 90° Flat Indicator (Not avail. with High Temp. Option)

Flow Capacity
 A Standard Capacity Spool Valve Ass'y (Cv = 0.3)
 B High Flow Capacity Spool Valve Ass'y (Cv = 0.6)
 C Low Flow Gain Spool Valve Ass'y (Used on small volume actuators, i.e. piston diameter less than 4 inches)

Environmental Construction Options
 A Standard Temperature (-40°F to +185°F) (-40°C to +85°C)
 C High Temp. (-20°F to +300°F)(-29°C to +149°C) only avail. on 760P with no electrical options
 E Ozone Resistant with Viton dynamic elastomers and iso-elastomeric spring
 F Ozone Resistant with Viton dynamic elastomers and standard spring

Gauges (Not available with Hi Temp. Environmental Construction "C")
 N Not Required
 G Gauges (set of three gauges)

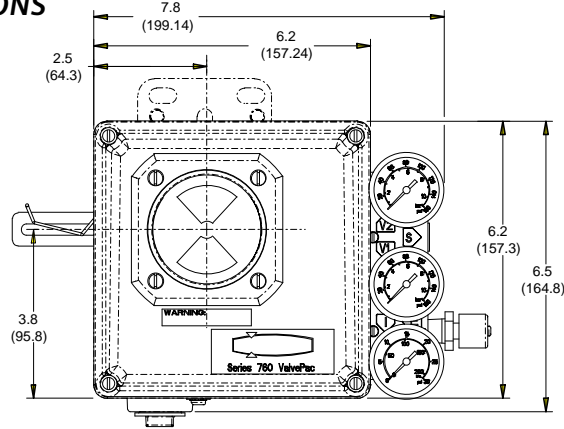
Limit Switches (Not avail. with Hi Temp Environmental Construction "C")
 N Not Required
 1 Mechanical Switches, (2) SPDT
 2 Proximity Switches (2) NAMUR type

Feedback Devices (Not avail. with Hi Temp Environmental Construction "C")
 N Not Required
 1 Potentiometer - 1K
 2 4 to 20 mAdc Feedback
 3 Potentiometer - 1K w/SS feedback gear
 4 4 to 20 mAdc Feedback w/SS feedback gear

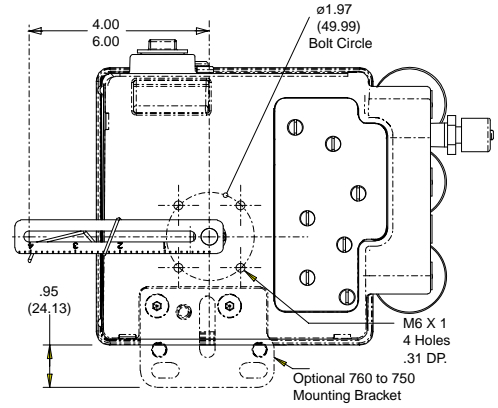
Design Level
 B
Electrical Approval
 N Non Approved
 7 FM/CSA/SIRA, Ex N /CENELEC, EEx ia (3/4 NPT Conduit)
 8 CENELEC, EEx ia/SIRA, Ex N (3/4 NPT or 25MM Conduit)
 R SAA

76 0 P1 5 B A A G N N B 7

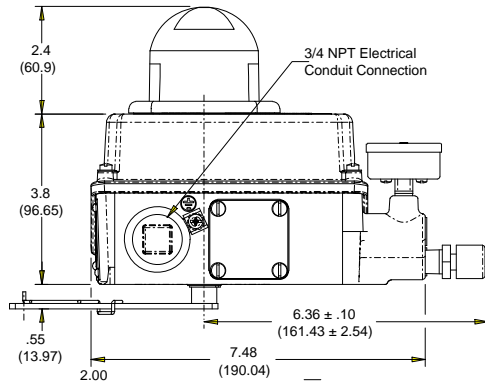
MOUNTING DIMENSIONS



Front View

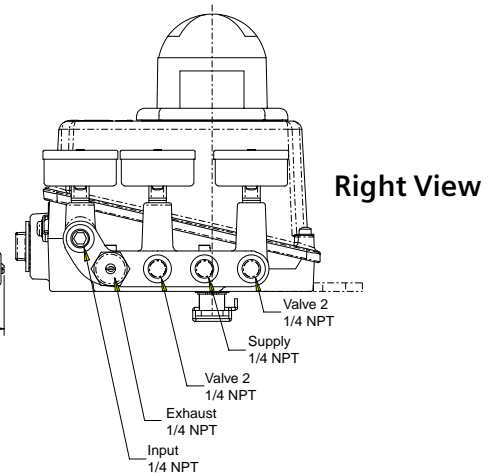


Back View



Bottom View

Note: Measurements are approximate



Right View

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