

ValvePAC™ Calibration For Models 760P1 and 760E1




Calibration of a Model 760 Valve Positioner is described below. For additional details, refer to SD760, the Model 760 Installation And Service Instruction. SD760 is supplied on the Siemens Process Instrumentation User Manual CD that accompanies each positioner. To access SD760, perform the brief procedure below. The manual is in Portable Document Format (PDF). A link for downloading the free Adobe® Reader® is provided.

1. Place the CD in your computer's CD drive.
2. If autorun is enabled, a menu of available manuals will appear. Click on the link to the desired manual.
3. If autorun is not enabled, go to Start > Run and browse to the CD. Double click on Autorun.exe and then click Run to display the menu of available manuals.

To download the latest revision of SD760 from the Siemens Internet site, refer to Customer/Product Support below.

POSITIONER CALIBRATION

Calibrate the positioner before placing into service, after field installing an output option kit(s), and after repair.

 WARNING		
	<p>Electrical shock hazard Explosion hazard</p> <p>Can cause death, serious injury or property damage</p> <ul style="list-style-type: none"> • Remove power from all wires and terminals before working on equipment. • In potentially hazardous atmosphere, remove power from equipment before connecting or disconnecting power, signal, or other circuit. • Observe all pertinent regulations regarding installation in a hazardous area. 	

Equipment Required: Pressure regulator 0-30 psig (760P1 ONLY)
 Test Gauge, 0-30 psig (760P1 ONLY)
 4-20 mA current source (760E1 ONLY)
 Small straight-slot screwdriver
 SD760, Installation and Service Instruction for Series 760 ValvePAC Valve Controller

1. CAM IDENTIFICATION AND INSTALLATION

Mount the positioner on the actuator before proceeding. Refer to Installation and Service Instruction SD760 as needed.

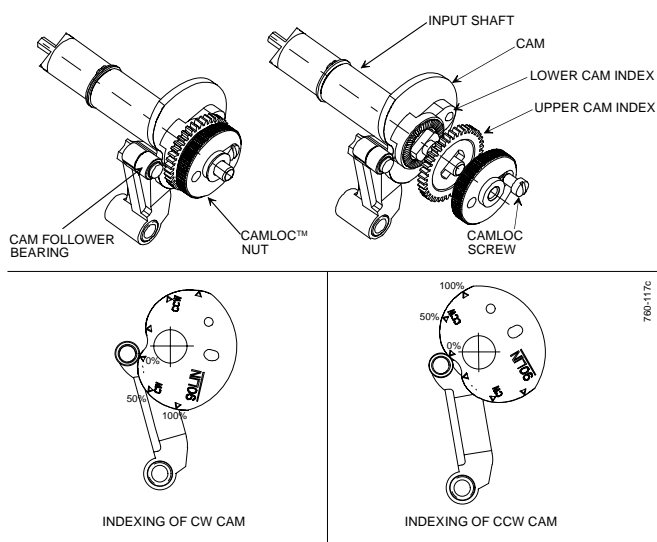
The Model 760 is shipped with a linear cam installed unless otherwise specified on the order. Use the following to install another cam or to confirm that the desired cam is installed.

Cam Identification: Three standard cam profiles are supplied: "LIN" = linear, "EP" = equal percent, "QO" = quick opening. The profile designation is stamped on each cam along with "CW" or "CCW" to denote the lobe of the cam to be used based on direction of cam/input shaft rotation with an increasing input signal. Cam rotation (60° or 90°) is also stamped on the cam.

Note: The cam is designed to allow 10% over/under range. However, if under range is used, zero and span are slightly interactive.

Installing and Indexing a Cam: Refer to the adjacent figures to identify referenced components.

- 1 – Seat valve actuator in the position corresponding to zero percent input signal. Remove supply pressure and electrical power from positioner and actuator to prevent unexpected movement and possible personal injury or equipment damage.
- 2 – Remove positioner cover.



- 3 – If installed, remove beacon or flat indicator, extension shaft, and compression washer. Save removed components.
- 4 – Loosen camloc™ screw.
- 5 – Loosen and remove cam locking assembly (camloc nut and upper and lower cam indexes).
- 6 – Remove installed cam.
- 7 – Install desired cam with cam type and lobe text visible when cam is installed. Install lower cam index. Align 0% tick mark (triangle) on cam with cam follower bearing.
 - Use lobe marked CW for clockwise cam rotation with increasing input signal.
 - Use lobe marked CCW for counterclockwise cam rotation with increasing input signal.
- 8 – Hold cam in position; install upper cam index so it engages lower cam index teeth. Thread knurled camloc nut onto input shaft. Tighten knurled camloc nut.
- 9 – Tighten camloc screw.

2. CALIBRATION

Note: Elevating the zero (turn zero screw CW) and suppressing the span (turn span adjustment screw CCW) will increase valve seating force and ensure a fully open valve.

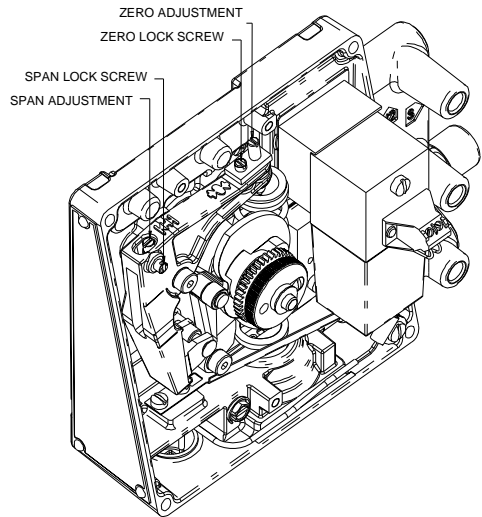
Refer to the adjacent figure for location of calibration adjustments.

Zero Adjustment:

- 1 – Apply supply pressure to positioner. Supply pressure must not exceed pressure rating of positioner or actuator.
- 2 – Set input signal to 0% (e.g. 3 psig for 760P1 or 4 mA for 760E1).
- 3 – Loosen the zero lock screw.
- 4 – Turn zero adjustment screw to achieve desired zero valve position.
- 5 – Tighten zero lock screw.

Span Adjustment:

- 1 – Set input signal to 100% (e.g. 15 psig for 760P1 or 20 mA for 760E1).
- 2 – Loosen span lock screw.
- 3 – Turn span adjustment screw until the valve is at desired 100% position.
- 4 – Tighten span lock screw.
- 5 – Set input control signal to 0%. Verify 0% has not changed. Adjust as necessary.
- 6 – Reassemble the positioner. Refer to SD760 as needed.



CUSTOMER/PRODUCT SUPPORT

For customer/product support, visit the Siemens Process Instrumentation product support page at <http://www2.sea.siemens.com/Products/Process-Instrumentation/Support/Custom-Support.htm>. Select the desired type of support (e.g. application, product selection, sales, technical – see below).

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