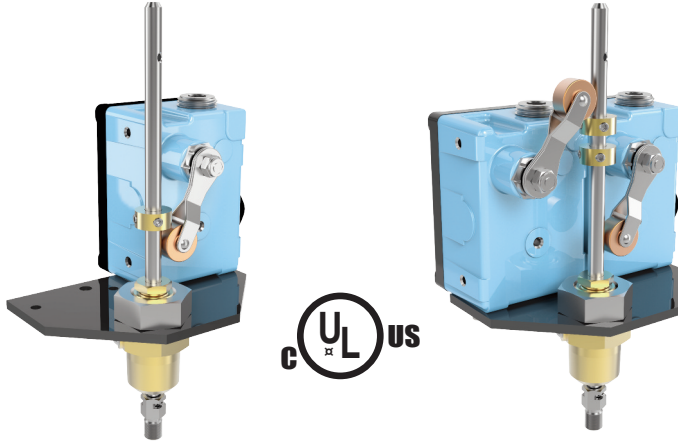




— MODELS — **X105L**  
**X105L2**

# Limit Switch Assemblies

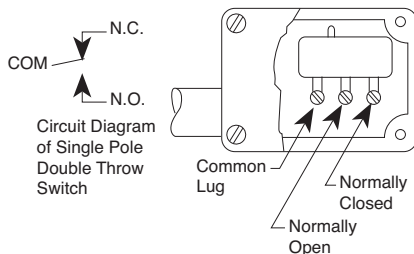


- **UL/ULC Listed**
- **Positive Action**
- **Rugged and Dependable**
- **Weather Proof or Explosion Proof**
- **Easy To Adjust**

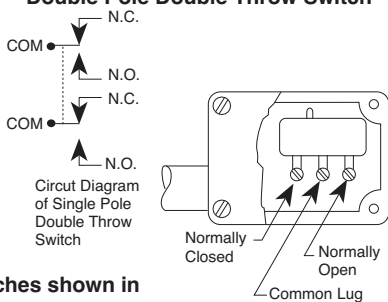
The Cla-Val Model X105L/X105L2 Limit Switch Assembly is a rugged, dependable and positive acting switch assembly actuated by the opening or closing of a Cla-Val control valve on which it is mounted. The single pole, double throw micro switch can be connected either to open or to close an electrical circuit when actuated. By loosening the allen screw on the actuating collar and raising or lowering the collar on the stem, the X105L is easily adjusted to signal that the valve has fully reached the desired position (open or closed).

## Installation

### Single Pole Double Throw Switch

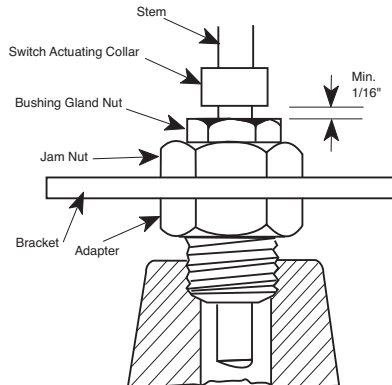


### Double Pole Double Throw Switch



Switches shown in unactivated position.

1. Remove plug in top of valve cover.
2. Screw actuating stem into main valve stem.
3. Slip adapter down over stem and screw into place on valve cover.
4. Attach micro switch housing and bracket to adapter with jam nut.
5. Bring electrical supply circuit into unit through the 1/2" tapping in micro switch housing.
6. Adjust switch collars. (Set collar to trip switch after valve is positioned fully open or fully closed)



### Actuating Collar Adjustment Minimum Setting

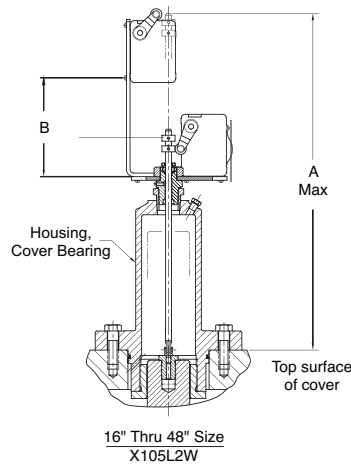
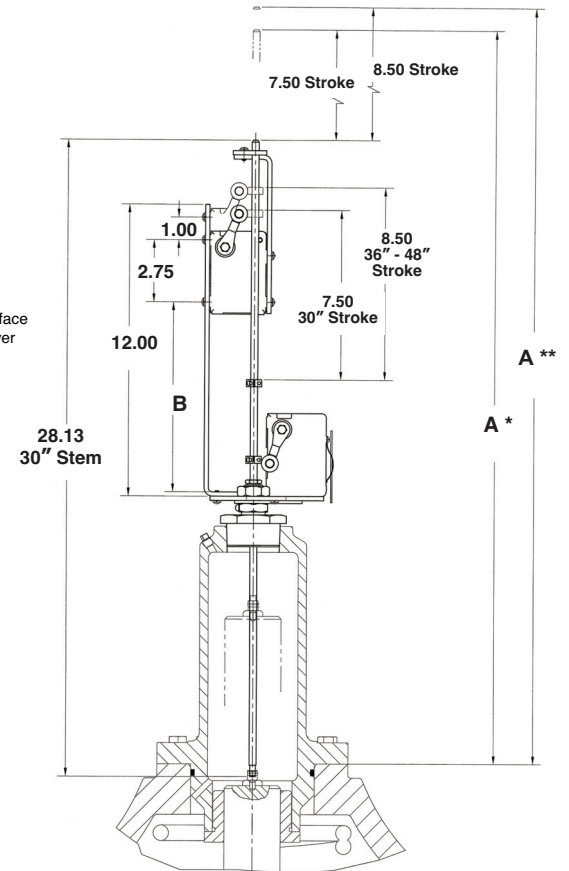
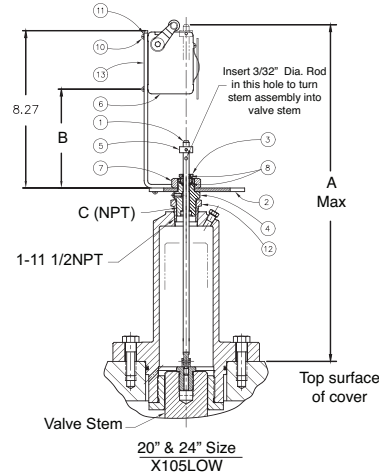
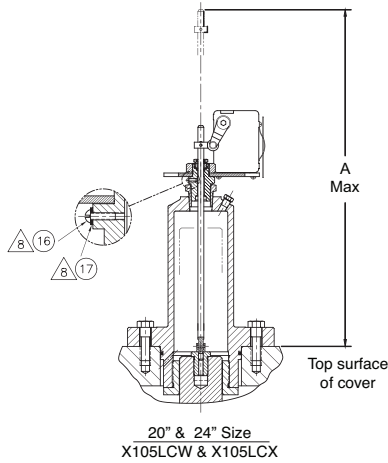
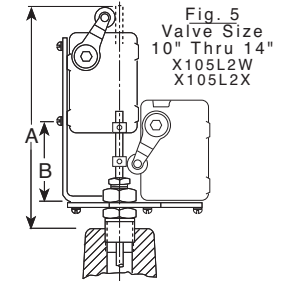
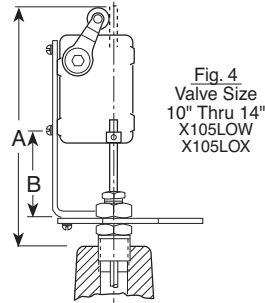
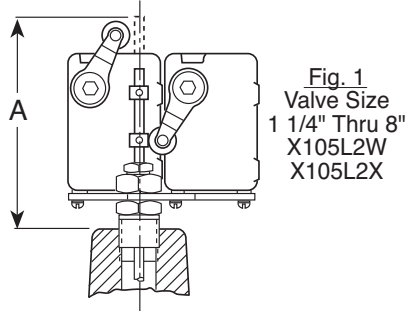
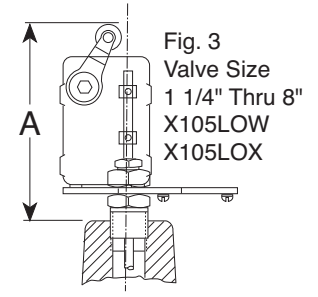
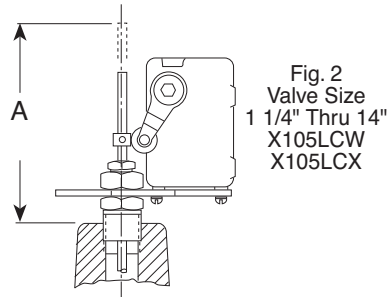
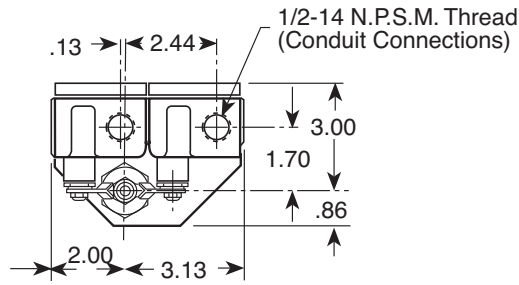
When adjusting actuating collar for proper switch action, a clearance of at least 1/16" (1/8" for 48" valve) must be provided between the collar and the bushing gland nut when valve is in the fully closed position.

## Purchase Specifications

The assembly shall be bracket-mounted to exterior of an adapter attached to the center of the main valve cover. A stainless steel actuating stem with a swivel adapter shall be fastened directly to the main valve stem and move vertically through an adapter and gland with two O-ring seals as the valve moves. An adjustable collar located on the actuating stem shall actuate the sensor arm of a switch when valve has fully reached the open or closed (specify) position. The rotary-type position sensor arm shall actuate SPDT or DPDT type (specify) micro-switches mounted inside protective housing either weather-tight or explosion-proof NEMA rated (specify).

Provisions shall be made for bleeding air from valve cover through a small bleed screw and washer located on one wrench flat of adapter. All assemblies shall be capable of accommodating up to three switches. Standard materials in contact with operating fluid are brass, stainless steel, Monel and Buna-N.

A conduit hub opening in the switch enclosure shall be provided for attaching protective weatherproof conduit for the electrical switch wires (wiring and conduit supplied by others). A sealing plug shall be provided to protect conduit opening during shipping or storage.



**X105 Series Dimensions** (In Inches)

A\* - 30" • A\*\* - 36", 42" & 48" Size

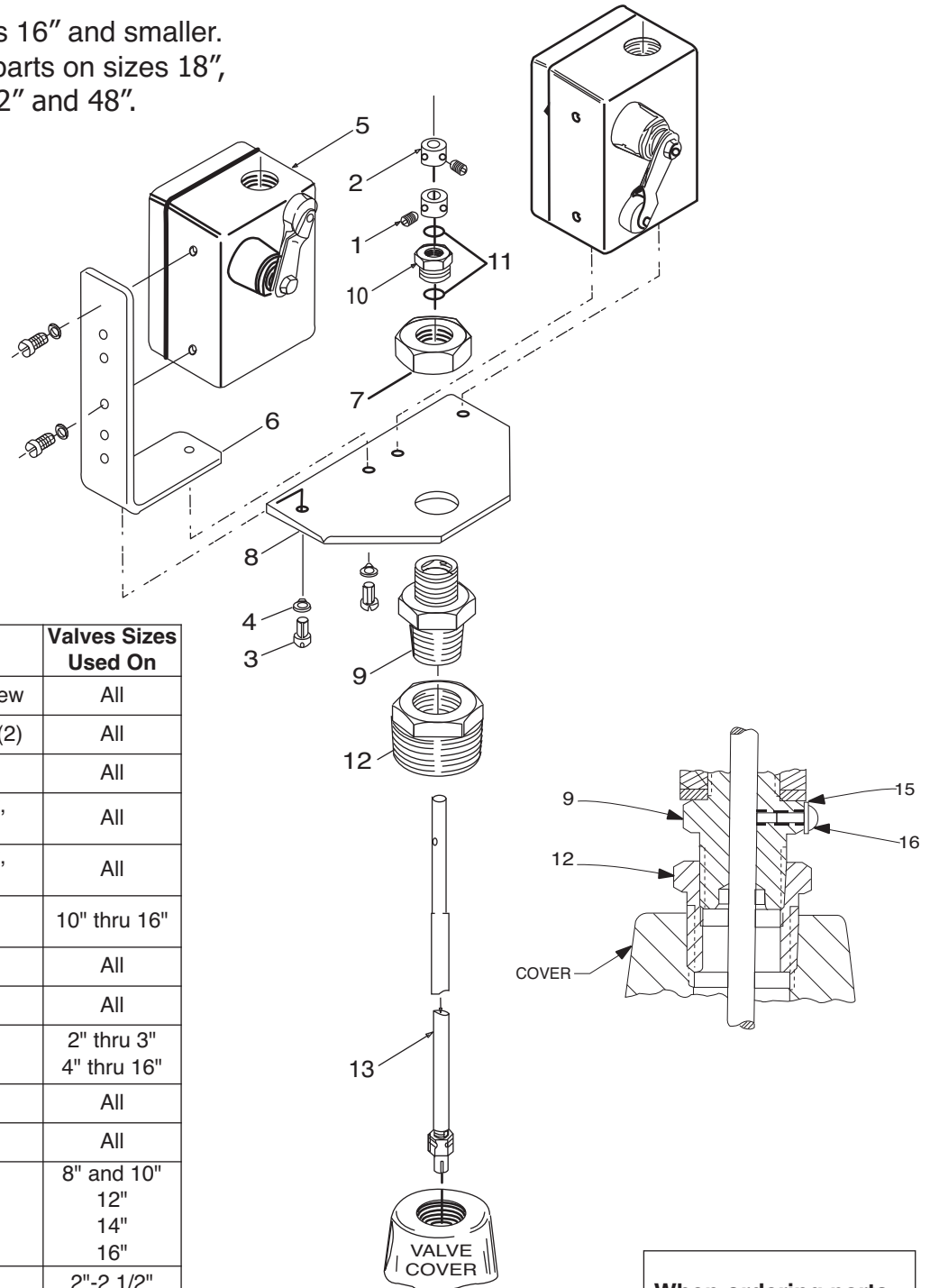
BasicValve 100-01	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	30	36*	42*	48*
Dimension "A"	10.19	10.19	7.16	7.16	7.34	7.00	6.69	6.91	9.88	9.59	9.16	10.78	10.78	18.23	19.10	35.07	36.07	36.07	36.07
Dimension "B"							1.69	1.69	2.44	2.94	2.94	2.94	2.94	4.32	5.19	8.40	8.40	8.40	8.40
C (NPT)	1/4	1/4	1/2	1/2	1/2	3/4	3/4	1	1	1 1/4	1 1/2	2	2	3/4	3/4	2	2	2	2
BasicValve 100-20					3	4	6	8	10	12	14	16	18	20	24	30	36*	42*	48*
Dimension "A"					7.16	7.34	7.00	6.69	6.91	9.88	9.59	9.59	10.78	10.78	10.78	11.30	35.07	36.07	36.07
Dimension "B"								1.69	1.69	2.44	2.94	2.94	2.94	2.94	2.94	5.19	8.40	8.40	8.40
C (NPT)					1/2	1/2	3/4	3/4	1	1	1 1/4	1 1/4	2	2	2	1	2	2	2



# X105L

## Limit Switch Assembly

Parts list shown is for sizes 16" and smaller.  
Please consult factory for parts on sizes 18",  
20", 24", 30", 36", 42" and 48".

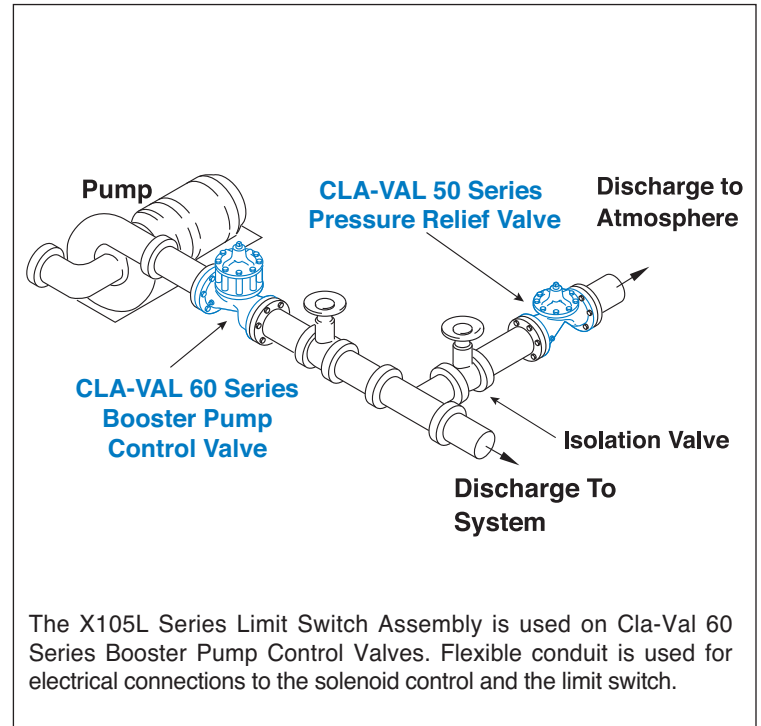
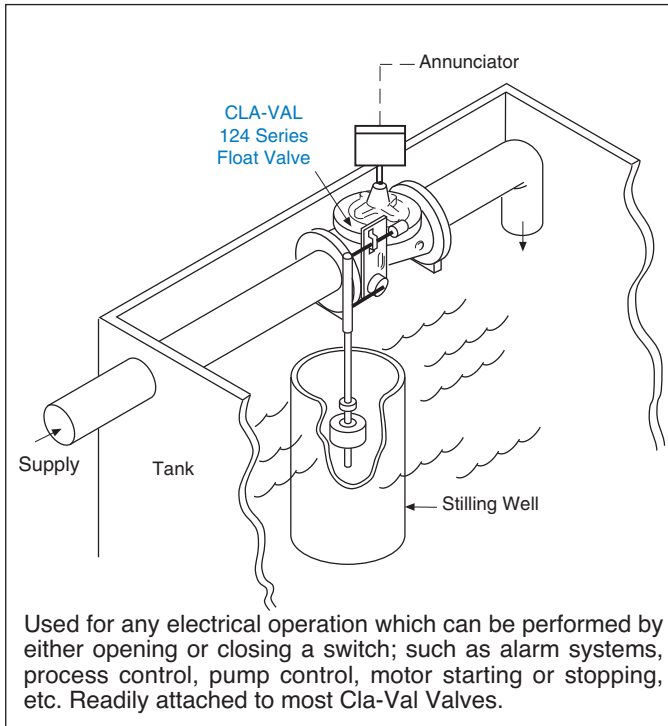


Item	Part Number	Description	Valves Sizes Used On
1-2	20441701E	Collar W/Set Screw	All
3	67578-21B	Screw, Machine (2)	All
4	67584-23F	Washer, Lock (2)	All
5	34637K	Switch Assembly, Weather Proof	All
	34633J	Switch Assembly, Explosion Proof	All
6	64310G	Bracket Switch Mounting	10" thru 16"
7	67815-06J	Nut, Jam	All
8	63674G	Plate, Mounting	All
9	2838201J 2838202G	Adapter Adapter	2" thru 3" 4" thru 16"
10	63398C	Bushing, Gland	All
11	00951E	O-Ring (2)	All
12	6764417K 6764418H 6764419F 6764491J	Bushing Bushing Bushing Bell Reducer	8" and 10" 12" 14" 16"
13	8970101F 8970102D 8970103B 8970104K 8970105G	Stem, Actuating Stem, Actuating Stem, Actuating Stem, Actuating Stem, Actuating	2"-2 1/2" 3"-4" 6"-8" 10"-12"-14" 16"
15	6551201H	Fiber Washer	All
16	6824421K	Screw 8-32 x 3/8	All

**When ordering parts,  
please specify:**

- Item Number
- Description
- Part Number

## Typical Applications



## Specifications

**Materials:** Aluminum switch housing  
Steel bracket and brass adapter  
Stainless steel stem

**Electrical:** 1/2" Conduit connection

**Switch Type:** SPDT UL, File No. E12252,  
CSA Certified, File No. LR57325  
Weather proof  
NEMA 1,3,4, and13

**Switch Rating:** UL/CSA rating: L96  
15 amp. 125, 250, or 480 volts AC  
1/2 amp. 125 volts DC  
1/4 amp. 250 volts DC

**Switch Options:** DPDT switches available on request  
UL/CSA Rating: L59, 10 amps

Explosion proof micro switches are  
NEMA 1,7, and 9  
UL Listed, File No. E14274 and CSA  
Certified, File No. LR57324: Class I,  
Group C and D and Class II, Group  
E, F and G.

## When Ordering, Please Specify

1. Valve Size and Basic Valve Model Number
2. Catalog Number from Table Below
3. All Valve Name Plate Data
4. Select Single or Double Pole Switch
5. Explosion Proof or Weather Proof Type Enclosure
6. Amperes and Voltage, AC or DC
7. Actuating Position (Valve Open or Closed)

CATALOG NO.	ACTUATION POSITION	SWITCH ENCLOSURE
X105LCW	Valve Closed	Weather Proof
X105LCX	Valve Closed	Explosion Proof
X105LOW	Valve Open	Weather Proof
X105LOX	Valve Open	Explosion Proof
X105L2W	Dual	Weather Proof
X105L2X	Dual	Explosion Proof



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