



— MODEL — **X117D**

# Valve Position Transmitter



- Accurately Monitors Valve Position
- Environmentally Sealed to IP-68
- Featured on Electronic Control Valves
- Easy Field Adjustments
- Compact and Rugged Construction

The Cla-Val Model X117D Valve Position Transmitter is an accurate monitor of valve position. Through an industry standard 4-20 mA output, the X117D delivers the accuracy required for computer-guided control valve systems (SCADA).

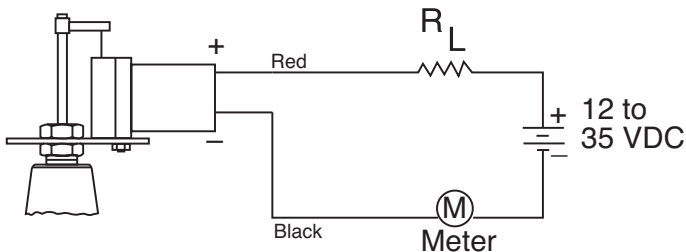
The electronic components are enclosed in a rugged, sealed aluminum and stainless steel housing. The assembly is mounted externally on the cover of a Cla-Val main valve. An extension of the valve stem projects outside of the cover at the center boss and is mechanically linked to the electronic components with an extensible wire rope.

As the valve stem rises and lowers, the X117D provides an output signal in direct proportion to the valves position. An internal spring maintains constant tension on the wire rope for virtually no hysteresis error throughout valve stroke.

## Wiring Diagram

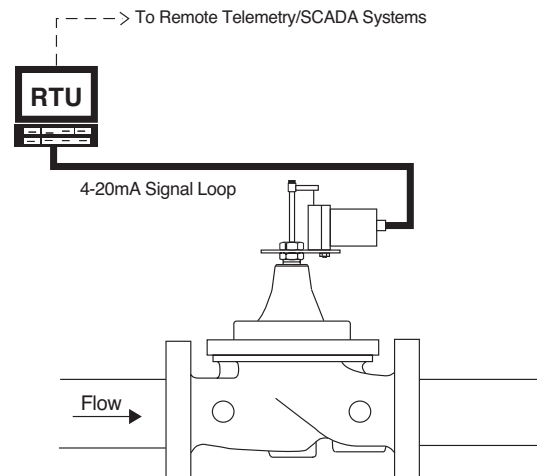
The signal from the position sensing mechanism wire rope is converted to a two-wire 4 to 20 mA current output. The voltage compliance range is 14 to 35 VDC. The required, but not supplied, maximum load resistance can be calculated using the following formula:

$$R_L \text{ Max.} = \frac{V_{\text{supply}} - 12.5}{.020}$$

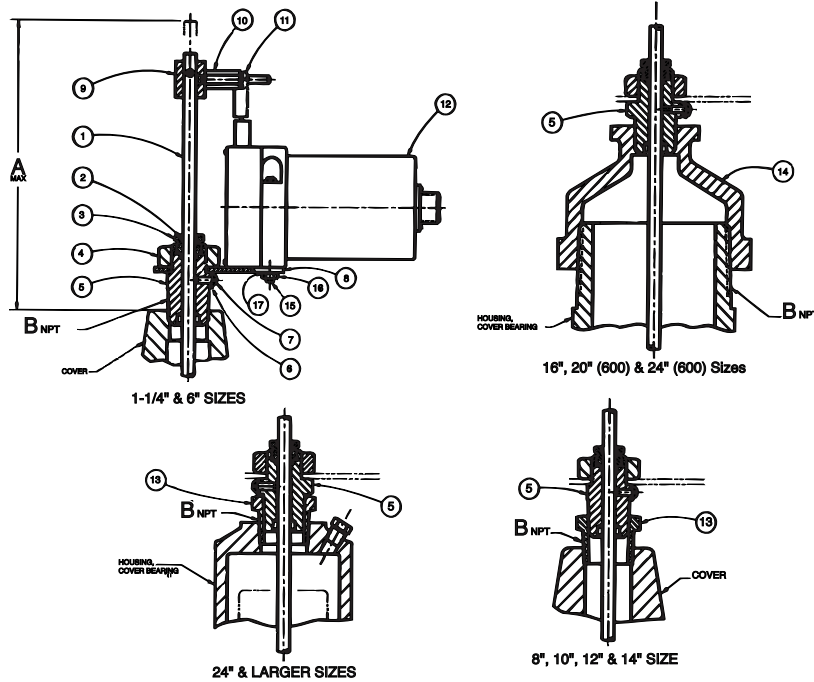


## Typical Installation

The X117D Valve Position Transmitter can be used to transmit valve position to the optional 131VC-3 Electronic Valve Controller.



## Dimensions



No.	Description
1	Stem Assembly
2	O-Ring
3	Bushing, Gland
4	Nut, Hex
5	Adapter
6	Washer, Fiber
7	Screw
8	Plate, Mounting
9	Nut, Coupler
10	Hex, Coupler
11	Nut, Hex
12	Transducer Assembly, Position
13	Bushing, Hex Pipe
14	Reducer, Bell Pipe
15	Screw, Fillster Head
16	Nut, Hex
17	Lockwasher

## Dimensions (In Inches)

Main Valve 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
Dimension "A"	10.68	10.68	7.75	7.50	7.65	10.00	10.00	10.62	10.75	11.44	12.75	12.75	13.35	13.88	14.75	17.94	19.17
Dimension "B" NPT	1/4	1/4	1/2	1/2	1/2	3/4	3/4	1	1	1-1/4	1-1/2	2	1	1	1	2	2
GAP	3/16	3/16	1/8	3/16	1/8	9/16	5/16	1/2	7/8	1/2	11/16	3/16	2-15/16	2-11/16	2-1/4	1-1/2	1-1/8

Main Valve 100-20	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48
Dimension "A"	7.50	7.65	10.00	10.00	10.62	10.75	11.44	12.75	12.75	12.75	13.88	14.75	17.94	19.17	19.17
Dimension "B" NPT	1/2	1/2	3/4	3/4	1	1	1-1/4	1-1/2	2	2	1	1	2	2	2
GAP	1/8	1/8	9/16	5/16	1/2	7/8	1/2	1/2	3/16	3/16	3/16	2-1/4	1-1/2	1-1/8	1-1/8

## Specifications

### Fits Valve Sizes

1-1/4" thru 48"

### Pressure Rating

400 psi Max.

### Temperature

-13° to 180° F

### Materials

Cast aluminum and stainless steel housing  
 Steel bracket  
 Brass adapter  
 Stainless steel stem  
 Buna-N® synthetic rubber seals  
 Other materials available as additional cost option

### Electrical

Housing, weather sealed NEMA 6 (IP-68)

### Output Current: 4-20 mA

### Adjustment Range

At 4mA                      0 to 30% of Range  
 At 20mA                    80% to 100% of Range

### Insulation

100 Meg Ohms min. at 100 VDC

### Repeatability ± 0.015% Full Scale

Protection for reversed polarity

### Wiring

Red wire for positive  
 Black wire for negative

## When Ordering, Please Specify

- For New Valves – At time of order specify:  
 "with X117D Installed".
- For Retrofitting existing valves, give all nameplate data of valve on which X117D will be installed.