

# EMERSON D103032X012 Fisher L2 Liquid Level Controller Instruction Manual

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**EMERSON D103032X012 Fisher L2 Liquid Level Controller**



### Available Configurations

The Fisher L2 series of controllers include the L2 and L2 Snap models

- Controller: Snap-acting or throttling
- Sensor: Displacer-type liquid level sensor for mounting to side of tank. Displacer travel is transmitted to controller by pivotal movement of displacer rod Input Signal
- Type: Liquid level or liquid to liquid interface
- Level Change Required for Full Change in Output
- Signal in 1.0 Specific Gravity Liquid, with 1.4 Bar (20 Psig)
- Supply Pressure
- Direct Action and Standard 48 x 305 mm (1-7/8 X 12 Inch)
- Vertical Displacer with Standard Lever Arm Length

Control Mode	Minimum Proportional Band Level Change, mm Inches 1	Maximum Proportional Band Level Change, mm Inches 1
Throttling	102 (4)	305 (12)
On/Off	127 (5)	305 (12)
Snapacting	13 (0.5)	20 (0.8)

### Minimum Specific Gravity

- Minimum specific gravity, or specific gravity differential for interface applications
- Throttling Controllers: 0.4
- On/Off Controllers: 0.45 Snap
- Acting Controllers: 0.1

## Output Signal

Pneumatic on off or proportional pressure signal

## Ranges

- Throttling: 0.2 to 1.0 bar 3 to 15 psig or 0.4 to 2.0 bar 6 to 30 psig
- On/Off: 0 (off) or full supply pressure on
- Action: Field-reversible between direct increasing level increases output signal and reverse increasing level decreases output signal

## Supply Pressure Requirements

- Throttling and On/Off Controller
- Throttling: 1.4 bar for 0.2 to 1.0 bar output signal 20 psig for 3 to 15 psig output signal
- 2.4 bar for 0.4 to 2.0 bar output signal 35 psig for 6 to 30 psig output signal
- On/Off: Any desired pressure between 1.4 and 3.4 bar 20 and 50 psig.
- Snap-Acting Controller: Any desired pressure between 1.4 and 5.2 bar 20 and 50 psig direct
- 1.4 bar and 2.4 bar 20 and 35 psig reverse
- Do not use supply pressure below 1.4 bar 20 psig

## Supply Medium

Air or natural gas(3)

## Steady State Air Consumption

- Throttling Controller:  $\leq 0.03$  normal m<sup>3</sup>/hr (1.0 scfh) at 1.4 bar (20 psig) supply pressure
- Snap Acting Controller:  $\leq 0.03$  normal m<sup>3</sup>/hr (1.0 scfh) at 1.4 bar (20 psig) supply pressure
- $\leq 0.04$  normal m<sup>3</sup>/hr (1.5 scfh) at 2.4 bar (35 psig) supply pressure in tripped condition
- Air consumption increases during trip

## Sensor to Vessel Connection

2 NPT threaded or NPS 2 CL150 through 1500 slip on flange connection(5)

## Controller Connections

- Supply: 1/4 NPT internal located on the bottom of the case
- Output: 1/4 NPT internal located on the top of the case

- Case Vent: 1/4 NPT internal with vent screen assembly located on the back of the case

## **Standard Displacer Size**

48 x 305 mm, 541 cm<sup>3</sup> (1-7/8 x 12 inches, 33 in<sup>3</sup>)

## **Maximum Displacer Insertion Length**

Standard lever arm length plus one 6-inch extension, horizontal or vertical

## **Displacer Material and Maximum Sensor Working Pressure**

### **PVC Displacer**

Consistent with CL1500 pressure temperature ratings per ASME B16.34 up to maximum pressure of 258 bar (3750 psig) For PED (97/23/EC) maximum pressure limited to 200 bar (2900 psig) S31603 SST

### **Displacer**

CL600 pressure temperature ratings per ASME B16.34 up to maximum pressure of 99.3 bar (1440 psig)

### **Note**

For slip on flange connection, maximum sensor working pressure must be consistent with the flange ratings.

## **Displacer Material and Sensor Temperature Limits**

### **PVC Displacer**

- -18 to 71C 0 to 160F
- S31603 SST Displacer: -40 to 204C -40 to 400F

## **Operative Ambient Temperature Limits**

Controller: -29 to 71C (-20 to 160F)

## **Standard Supply and Output Pressure Gauge Indications**

Triple scale gauges in 0 to 60 psig/0 to 0.4 MPa/0 to 4.0 bar

## **Hazardous Area Classification**

- Complies with the requirements of ATEX Group II
- Category 2 Gas and Dust

Maximum surface temperature (Tx) depends on operating conditions

- Gas: T6
- Dust: T71

Meets Customs Union technical regulation TP TC 012/2011 for Groups II/III Category 2 equipment.

## Declaration of SEP

Fisher Controls International LLC declares this product to be in compliance with Article 4 paragraph 3 of the PED Directive 2014/68/EU. It was designed and manufactured in accordance with Sound Engineering Practice (SEP) and cannot bear the CE marking related to PED compliance. However, the product may bear the CE marking to indicate compliance with other applicable European Community Directives.

## NOTE

Specialized instrument terms are defined in ISA Standard 51.1 – Process Instrument Terminology.

1. Any deviation from the standard construction described in the input signal specification above requires special displacer sizing considerations. Contact your Emerson sales office for information.
2. Depends on float rod/displacer orientation and length. Contact your Emerson sales office before proceeding for further information.
3. This product can be used with natural gas as the supply medium.
4. Normal m<sup>3</sup>/hr—Normal cubic meters per hour 0C and 1.01325 bar, absolute) Scfh Standard cubic feet per hour 60F and 14.7 psia.
5. Converting from a threaded NPT connection to a flange connection is to be done by the end user.
6. Supplement (D103277X012), available at [www.Fisher.com](http://www.Fisher.com) or from your Emerson sales office.
7. Standard lever arm length.
8. The pressure and temperature limits in this document and any applicable code limitations should not be exceeded.

## Description

The rugged L2 liquid level controllers use a displacer type sensor (see figure 1) to detect liquid level or the interface of two liquids of different specific gravities. These controllers use a single four-mode relay to provide the applicable control and action. The device delivers a pneumatic output signal to a control/dump valve. Unless otherwise noted, all NACE references are to NACE MR0175-2002.

## Educational Services

- Emerson Automation Solutions
- Educational Services Registration
- Phone: +1-800-338-8158
- E-mail: [education@emerson.com](mailto:education@emerson.com)
- [emerson.com/mytraining](http://emerson.com/mytraining)

## Installation

### WARNING

Always wear protective clothing, gloves, and eyewear when performing any installation operations to avoid personal injury. To avoid personal injury or property damage caused by the sudden release of process fluid, be certain the service conditions do not exceed the sensor pressure limits. Use pressure-limiting or pressure-relieving devices to prevent service conditions from exceeding these limits. Personal injury or property damage

may result from fire or explosion if natural gas is used as the supply medium and appropriate preventive measures are not taken. Preventive measures may include, but are not limited to, one or more of the following

- Remote venting of the unit, re evaluating the hazardous area classification, ensuring adequate ventilation, and the removal of any ignition sources.
- For information on remote venting of this controller.
- Check with your process or safety engineer for any additional measures that must be taken to protect against process media.
- If installing this into an existing application.

#### **NOTICE**

Do not use sealing tape on pneumatic connections. This instrument contains small passages that may become obstructed by detached sealing tape. Thread sealant paste should be used to seal and lubricate pneumatic threaded connections. If the L2 level controller is installed on a vessel that is to be shipped to a different location (e.g. skid mounted units), remove the displacer and displacer rod extensions before shipment. Failure to do so could result in damage to the displacer rod due to vibration and impact loading during shipment. After the vessel is installed at its final location, reassemble the displacer and displacer rod extension.

1. Be sure there are no obstructions inside the tank that will interfere with displacer installation or operation.
2. Provide the appropriate connection in the tank wall to match the sensor connection.
3. Locate the tank wall connection such that the displacer will be at the desired control level.

#### **Attaching a Vertical Displacer**

1. Thread jam nut (key 68) all the way onto the threaded portion of the universal joint assembly (key 69).
2. Thread the displacer (key 81) all the way onto the threaded portion of the universal joint assembly.
3. Tighten the jam nut (key 63) against the displacer (key 81).

#### **Attaching a Horizontal Displacer**

1. Thread the displacer key 81 all the way onto the displacer rod key 64 or extension key 82.
2. Tighten the jam nut key 63 against the displacer key 81.

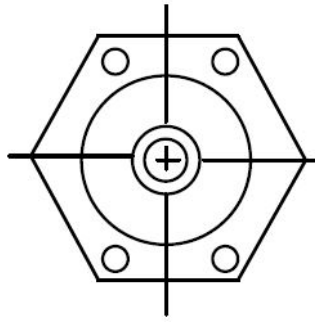
#### **Attaching the Sensor to the Vessel**

Insert the displacer end of the controller-sensor assembly into the tank connection, and screw the sensor threads into the tank connection. Tighten sufficiently to seal the threads. If necessary, loosen or tighten slightly to obtain the orientation. Make sure that the controller case is level.

#### **NOTICE**

Do not pick up the controller/sensor by lifting the displacer rod key 64. This action could place excessive stress on the displacer rod and cause the unit to malfunction.

#### **Sensor Orientation**



## Pressure Connections

### WARNING

Personal injury or property damage may occur from an uncontrolled process if the supply medium is not clean, dry, oil free air, or non-corrosive gas. While use and regular maintenance of a filter that removes particles larger than 40 micrometers in diameter will suffice in most applications, check with an Emerson field office and industry instrument air quality standards for use with corrosive air or if you are unsure about the proper amount or method of air filtration or filter maintenance.

### NOTICE

Do not use sealing tape on pneumatic connections. This instrument contains small passages that may become obstructed by detached sealing tape. Thread sealant paste should be used to seal and lubricate pneumatic threaded connections.

1. Provide a source of clean, dry air that meets the requirements of ISA Standard 7.0.01 as the operating medium.
2. Connect the supply pressure to the 1/4 NPT internal connection on the bottom of the controller case.
3. Connect the output signal line to the equipment being operated and to the 1/4 NPT output connection on the top of the controller case.

## Vent

### WARNING

If a flammable or hazardous gas is to be used as the supply pressure medium, personal injury or property damage could result from fire or explosion of accumulated gas or from contact with hazardous gas. The controller/actuator assembly does not form a gas-tight seal, and when the assembly is enclosed, a remote vent line, adequate ventilation, and necessary safety measures should be used. However, a remote vent pipe alone cannot be relied upon to remove all hazardous gas. Vent line piping should comply with local and regional codes and should be as short as possible with adequate inside diameter and few bends to reduce case pressure buildup. The vent opening or the end of the remote vent pipe, if one is required, must be protected against the entrance of all foreign matter that could plug the vent. Use 13 mm 1/2 inch diameter pipe for the remote vent pipe. Check the vent periodically to be certain it is free of any obstructions.

## Changing Controller Action or Mode

### WARNING

To avoid personal injury caused by a sudden release of pressure, shut off the supply pressure and bleed pressure from the supply lines before performing any procedure.

### Throttling and On/Off Controller

The action of a throttling and on/off controller may be changed between either direct or reverse, and the control



mode may be changed between either on/off or throttling.

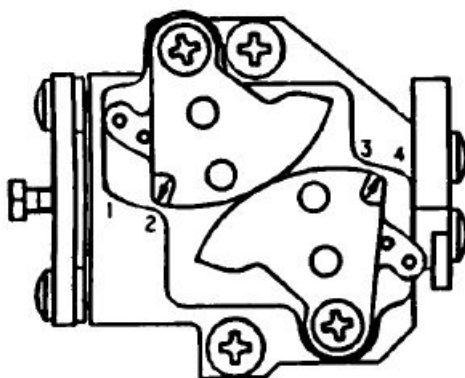
Loosen the four switch retention screws on the relay. Move the switches to the control action and control mode required by the application. Tighten the four switch retention screws.

### **Snap Acting Controller**

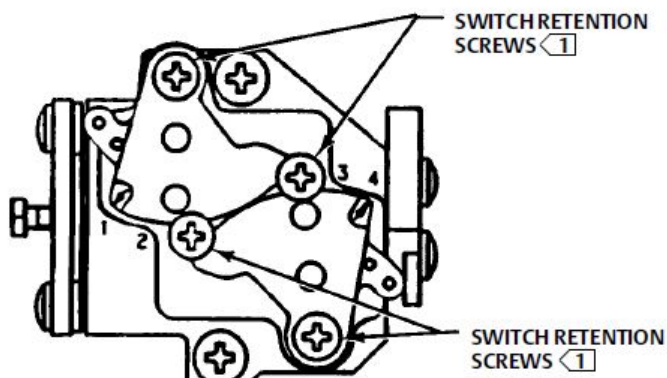
The action of a snap-acting controller may be changed between either direct or reverse. The control mode is always snap acting. Loosen the four switch retention screws on the relay. Move the switches to the control action required by the application. Tighten the four switch retention screws.

### **Fisher L2 Throttling and On/Off Controller Switch Positions for Changing Action and Control Mode**

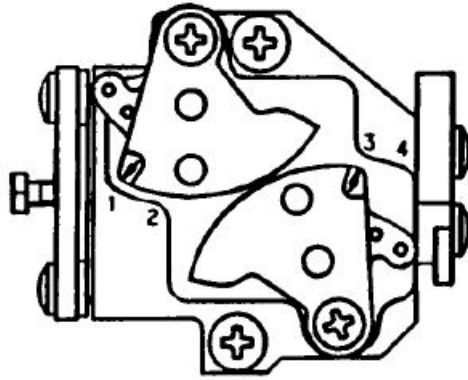
#### **DIRECT ACTION THROTTLING CONTROL MODE**



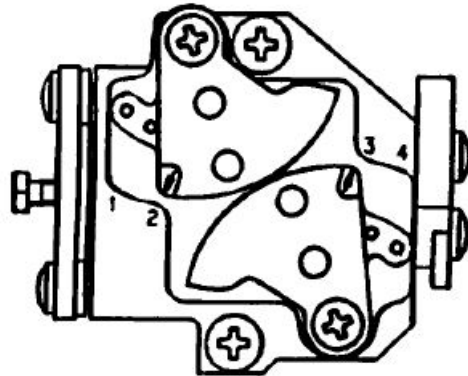
#### **DIRECT ACTION ON/OFF CONTROL MODE**



#### **REVERSE ACTION THROTTLING CONTROL MODE**



**REVERSE ACTION ON/OFF CONTROL MODE**

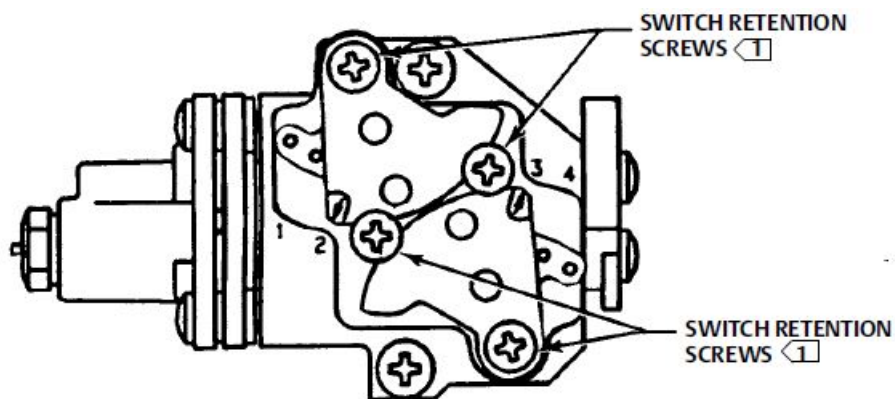


**NOTE**

ALL FOUR SWITCH RETENTION SCREWS SHOWN ONLY ON THIS VIEW. OTHER VIEWS SHOW ONLY TWO SWITCH RETENTION SCREWS IN ORDER TO ILLUSTRATE THE SWITCH CONFIGURATION.

**Fisher L2 Snap-Acting Controller Switch Positions for Changing Action**

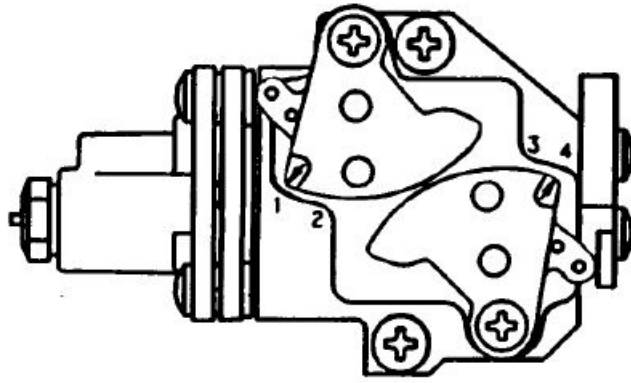
**DIRECT ACTION**



**NOTE**

ALL FOUR SWITCH RETENTION SCREWS SHOWN ONLY ON THIS VIEW. OTHER VIEWS SHOW ONLY TWO SWITCH RETENTION SCREWS IN ORDER TO ILLUSTRATE THE SWITCH CONFIGURATION.

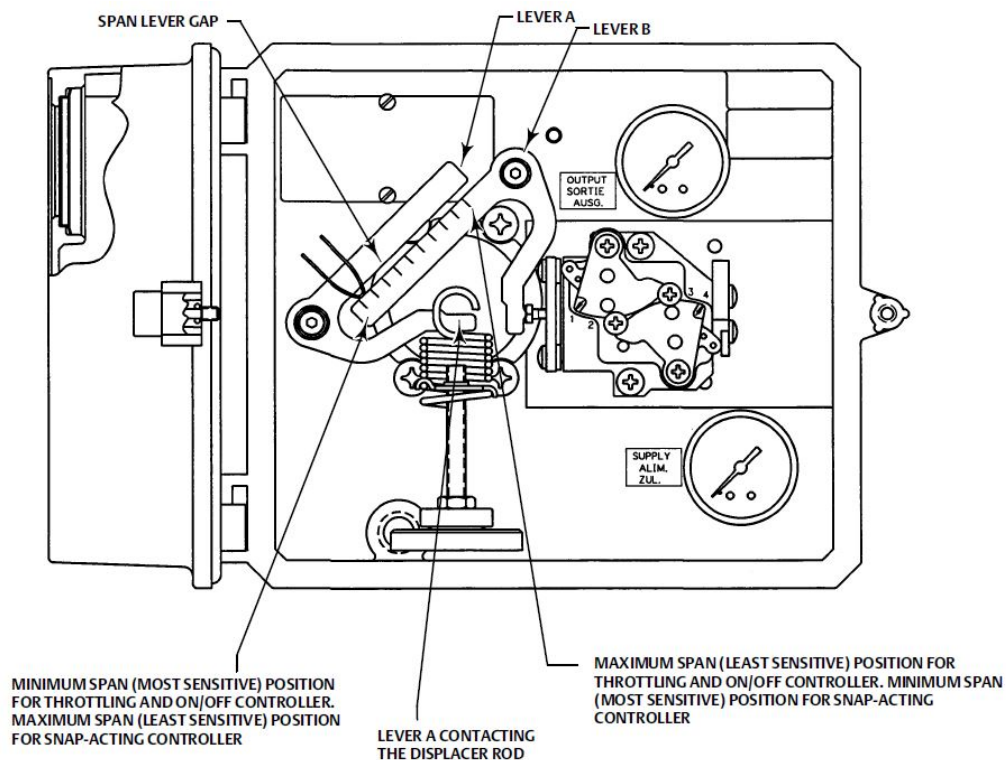
**REVERSE ACTION**



## Span Adjustment

Except where indicated, key numbers referenced in the following procedures. The span levers and other proportional band information.

## Proportional Band Adjustments



## Preliminary Checks

1. Check the supply pressure gauge key 10 to be certain that the supply pressure is at the desired value.
2. Adjust the supply pressure as required.
3. Adjust the displacer rod to the horizontal position with the spring adjustment key 4.
4. Bounce the end of the displacer rod key 64 up and down to check that the sensor is operating freely.
5. Place the span adjuster key 9 at the desired position.
6. Check for correct control action and control mode.
7. Adjust the relay adjustment screw key 49, throttling controller) or the valve assembly key 51, snap acting controller so that the gap between the span levers is equal when lever A is contacting the displacer rod.

## **Direct Acting Throttling Controllers**

1. Make certain the Preliminary Checks procedure at the start of this section has been completed.
2. Lower the liquid level so that it is below the bottom of the displacer or at the lowest desired operating point on the displacer.
3. For interface applications, completely cover the displacer with the fluid with the lower specific gravity.
4. The heavier fluid should be below the bottom of the displacer or at the lowest desired operating point on the displacer.
5. Adjust the spring adjustment (key 4) until the output pressure is 1 to 2 psig for a 3 to 15 psig output range, or 2 to 4 psig for a 6 to 30 psig output range.

## **Reverse Acting Throttling Controllers**

1. Make certain the Preliminary Checks procedure at the start of this section has been completed.
2. Lower the liquid level so that it is below the bottom of the displacer or at the lowest desired operating point on the displacer.
3. For interface applications, completely cover the displacer with the fluid with the lower specific gravity.
4. The heavier fluid should be below the bottom of the displacer or at the lowest desired operating point on the displacer.
5. Adjust the spring adjustment (key 4) until the output is 16 to 17 psig for a 3 to 15 psig output range, or 31 to 34 psig for a 6 to 30 psig output range.

## **Direct Acting On/Off and Snap-Acting Controllers**

1. Make certain the Preliminary.
2. Checks procedure at the start of this section has been completed.
3. Lower the liquid level so that it is below the bottom of the displacer or at the lowest desired operating point on the displacer.
4. For interface applications, completely cover the displacer with the fluid with the lower specific gravity.
5. The heavier fluid should be below the bottom of the displacer or at the lowest desired operating point on the displacer.
6. Adjust the spring adjustment key 4 until the output pressure is at full supply pressure.
7. Readjust the spring adjustment key 4 until the output pressure goes to zero psig.

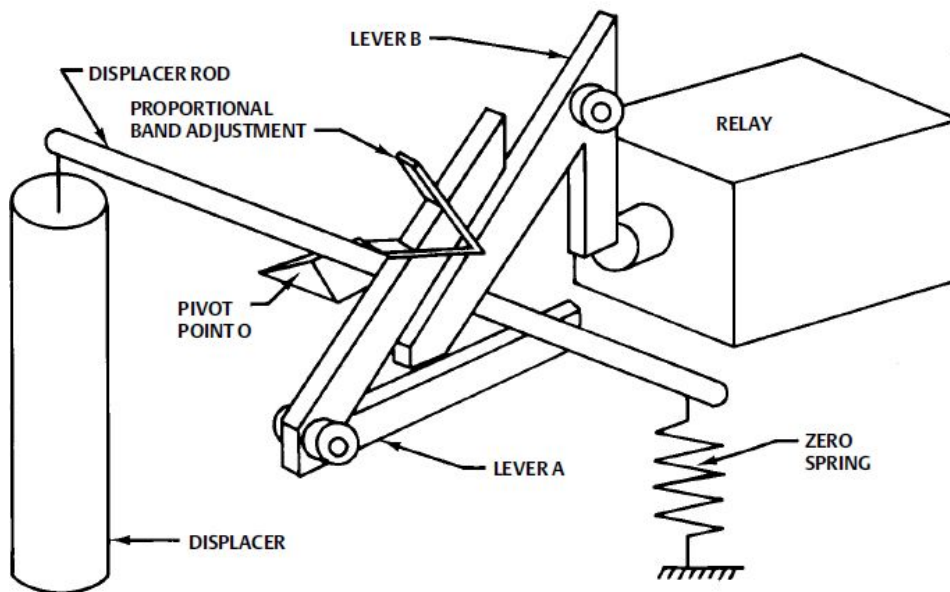
## **Reverse Acting On/Off and Snap-Acting Controllers**

1. Make certain the Preliminary Checks procedure at the start of this section has been completed.
2. Lower the liquid level so that it is below the bottom of the displacer or at the lowest desired operating point on the displacer.
3. For interface applications, completely cover the displacer with the fluid with the lower specific gravity.
4. The heavier fluid should be below the bottom of the displacer or at the lowest desired operating point on the displacer.
5. Adjust the spring adjustment (key 4) until the output pressure goes to zero psig.
6. Readjust the spring adjustment (key 4) until the output pressure goes to full supply pressure.

## Principle of Operation

The operation of L2 controllers in combination with the sensor is based on Archimedes Principle, which states that a body immersed in a liquid will be buoyed up by a force equal to the weight of the liquid displaced. The buoyant force and resultant movement of the displacer in the liquid is transmitted to the controller which delivers a pneumatic signal to a control valve. In its normal position, the counterclockwise moment due to the weight of the displacer about pivot point O is balanced by the clockwise zero spring moment and the counterclockwise relay zero force moment applied through lever A to the displacer rod. The weight of the displacer decreases when the liquid level increases and the subsequent buoyant force increases causing a force imbalance between the zero spring, relay, and displacer forces. This force imbalance is transmitted to the relay by levers A and B. The relay compensates for the force imbalance by converting it to a pressure output to a control valve and bringing the forces back into equilibrium.

### Operational Schematic



For throttling control, the relay pressure output will be proportional to the buoyant force. For on/off control, the relay pressure output will be either zero or equal to the supply pressure over the range of liquid level change. The liquid level change required to fully operate the relay is adjusted by sliding the proportional band adjustment along lever A to vary the lever ratio between levers A and B. With reverse acting proportional control, the principle of operation remains the same as that for direct action however, the controller delivers an increasing pneumatic signal to the control valve when the liquid level falls.

## Maintenance

Parts are subject to normal wear and must be inspected periodically and replaced as necessary. The frequency of parts inspection and replacement depends upon the severity of service conditions. When inspection or repairs are required, disassemble only those parts necessary to accomplish the task.

### WARNING

Always wear protective clothing, gloves, and eyewear when performing any maintenance operations to avoid personal injury. To avoid personal injury or property damage caused by the release of pressure or process fluid, observe the following before starting maintenance

- Personal injury or property damage may result from fire or explosion if natural gas is used as the supply medium and appropriate preventive measures are not taken.
- Preventive measures may include, but are not limited to, one or more of the following

- Remote venting of the unit, re-evaluating the hazardous area classification, ensuring adequate ventilation, and the removal of any ignition sources. For information on remote venting of this controller.
- Provide some temporary means of control for the process before taking the controller out of service
- Provide a means of containing the process fluid before removing any measurement devices from the process.
- Vent any trapped process pressure. Check with your process or safety engineer for any additional measures that must be taken to protect against process media.

## **Removing the Controller From the Sensor**

1. Disconnect the supply and output pressure lines.
2. Slide the hook end of the zero spring key 5 over and off the controller end of the displacer rod key 64.
3. Remove the four controller mounting screws key 11 and pull the controller straight away from the sensor.

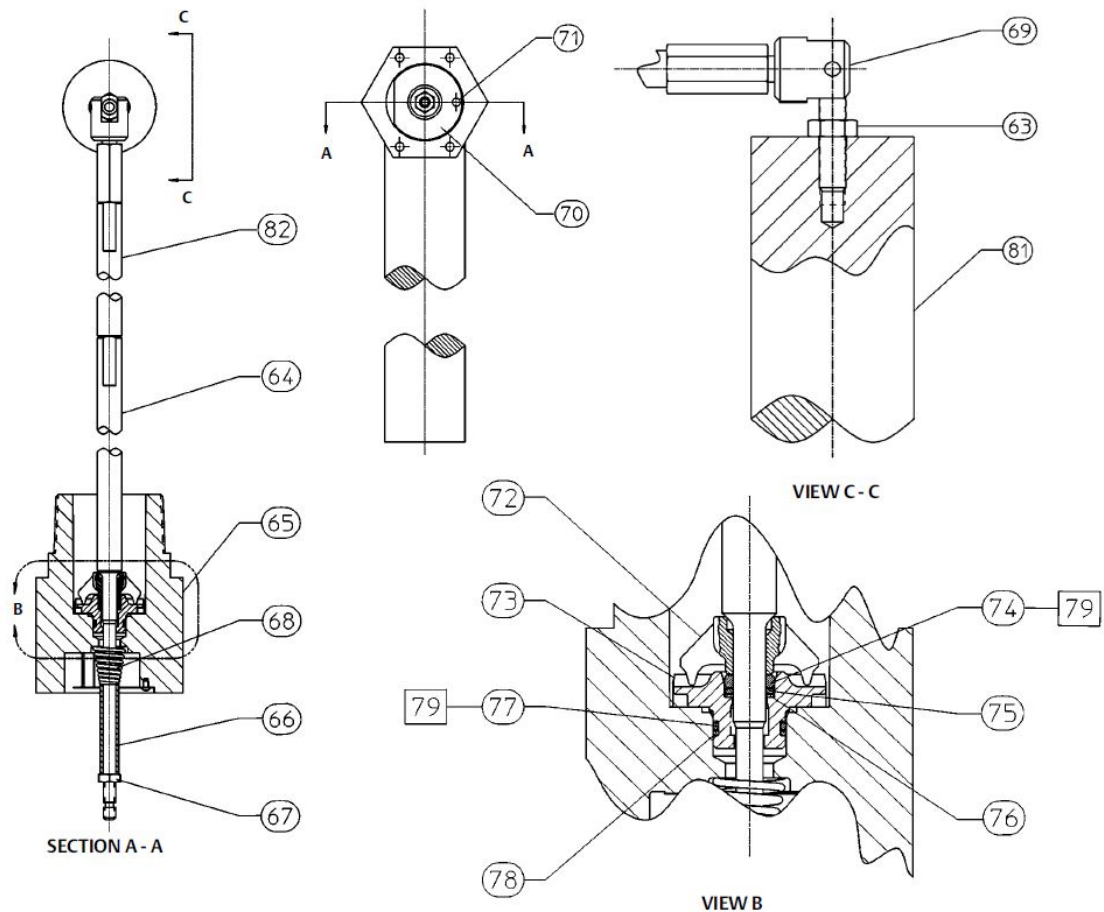
## **Replacing the Sensor O-Rings**

key number locations unless otherwise indicated.

### **Disassembly**

1. Remove the controller from the sensor by following the procedure outlined in the previous section.
2. Remove the sensor from the tank.
3. Unscrew the hex nut key 67 and remove the spacer key 66 and spring key 68.
4. After removing the spring replace the spacer key 66 and hex nut key 67 on the displacer rod.
5. From the displacer end, pull the displacer rod away from the sensor connection key 65 to pull the pivot base key 73 loose from the sensor connection.
6. Remove the hex nut key 67 to permit removing the displacer rod, pivot base, pivot body, and spacer from the sensor connection.
7. Slide the pivot base key 73, retaining ring key 76 anti extrusion ring key 75, and O ring key 74 off the displacer rod.
8. Remove the O ring key 77 and backup ring key 78 from the pivot base.

## **Sensor**



## Assembly

### WARNING

Improper assembly of the O-rings, anti-extrusion ring, and backup ring could result in O-ring extrusion and permit leakage of process fluids. To avoid personal injury or property damage from leaking process fluid, be sure the O-rings, anti extrusion ring and backup ring are assembled in the order shown in figure 7.

1. Place the pivot body (key 72) on the displacer rod (key 64) so that it is positioned.
2. Slide the O ring (key 74), anti extrusion ring (key 75) and retaining ring (key 76) onto the displacer rod assembly (key 64).
3. Be sure the O ring, anti-extrusion ring, and retaining ring are in the order.
4. Slide the pivot base onto the displacer rod so that the points of the pivot body (key 72) will engage the slots in the pivot base (key 73).
5. Install the O-ring (key 77) and backup ring (key 78) into the groove on the pivot base (key 73).
6. Be sure the backup ring is on the downstream pressure side of the O-ring.
7. Insert the displacer rod (key 64) into the vessel side of the sensor connection (key 65).
8. The pivot base must seat in the slots cast in the sensor connection.
9. These slots will be horizontal when the sensor connection (key 65) is oriented.
10. To reduce the possibility of nicking the O-ring (key 77) on the pivot base, keep the displacer rod centered in the sensor connection as much as possible while pushing the pivot base into the sensor connection.
11. Be sure the pivot base seats in the slots cast in the sensor connection.
12. Slide the spring (key 68) and spacer (key 66) onto the displacer rod and secure with the hex nut (key 67).
13. Fully tighten the hex nut (key 67).
14. View the sensor connection from the vessel side. Ensure that the pivot body arms remain aligned with the pivot



base arms (the two pivot body points are seated in the pivot base slots).

15. Install the sensor on the tank.

## Replacing the Controller Relay

1. Disconnect the supply and output pressure lines.
2. Remove the two relay mounting screws key 33, and pull the relay away from the controller base key 1.
3. Install the new relay using two relay mounting screws key 33.
4. Make certain that the relay mounting O-rings keys 43 and 44, not shown are completely in their mounting bosses before installing the relay. Make certain span lever is in line with and pushing in on the end of either the relay adjustment screw key 49, throttling controller or the pilot valve plug of the valve assembly (key 51, snap-acting controller).

## Replacing the Controller Supply Filter

1. Disconnect the supply and output pressure lines.
2. Loosen the filter cap screws (key 17), and rotate the filter cap (key 14) to the side to uncover the supply filter (key 15).
3. Remove the old filter (key 15), and remove any debris from the filter boss.
4. Install a new supply filter. Reinstall the filter cap (key 14), and tighten the filter cap screws (key 17).

## Related Documents

Converting a Threaded NPT Connection to a Flange Connection Supplement to Fisher L2, L2e and L2sj Liquid Level Controller D103277X012 Dimensions for NPS 2 CL150 through 1500 Slip On Flange Connections Supplement to Fisher L2, L2e, and L2s Liquid Level Controller Instruction Manuals (D103405X012) Fisher L2sj Low Emission Liquid Level Controller All documents are available from your Emerson sales office or [Fisher.com](https://www.fisher.com)

## Parts Ordering

When corresponding with your Emerson sales office about this equipment, always mention the serial number of the controller. The serial number can be found on the nameplate key 55.

## WARNING

Use only genuine Fisher replacement parts. Components that are not supplied by Emerson should not, under any circumstances, be used in any Fisher instrument. Use of components not supplied by Emerson may void your warranty, might adversely affect the performance of the valve, and could cause personal injury or property damage.

## Parts Kits

### Description

#### Controller

Repair kit includes O rings keys 13 and 16 and gaskets keys 18, 21, and 23

#### Relay

Repair kits includes relay assembly, relay mounting screws key 33, and O rings keys 43 and 44 Throttling and On/Off Controller Snap Acting Controller.



## Sensor

Repair kit includes keys 74, 75, 77, and 78 fluorocarbon O rings, anti-extrusion ring, and fluorocarbon backup ring.

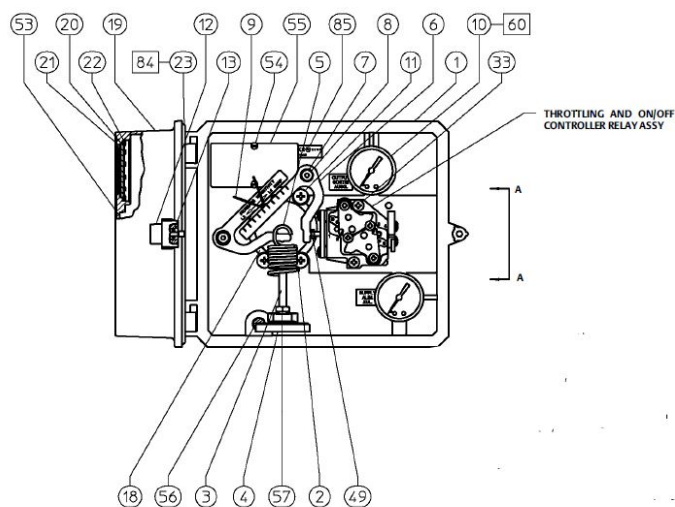
## Part Number

- RL2CNTRX012
- GB0138X0012
- GB0138X0022
- RL2SENSX012

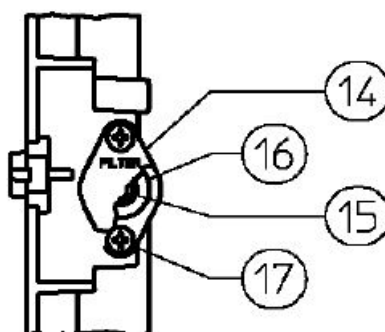
## Controller

1. Controller Base
2. Zero Spring Seat
3. Zero Adjustment Bolt
4. Spring Adjustment
5. Zero Spring

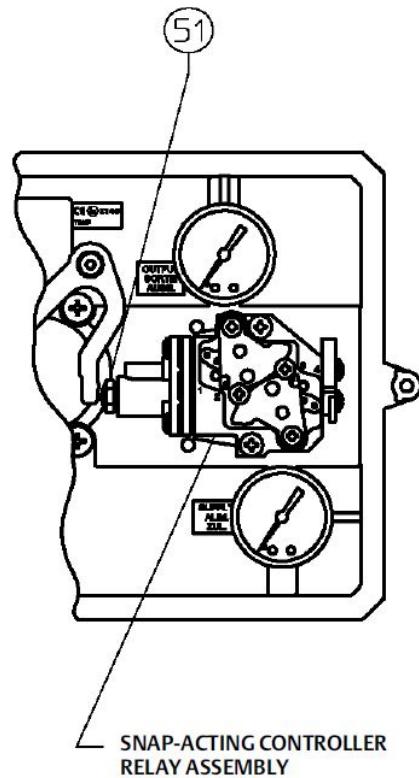
## Fisher L2 Liquid Level Controllers



## THROTTLING AND ON/OFF CONTROLLER



## SNAP ACTING CONTROLLER



- Span Lever Assembly
- Shoulder Screw (2 req'd)
- Flanged Bearing 4 req'd
- Span Adjustor
- Pressure Gauge 2 req'd
- Mounting Screw 4 req'd
- Cover Screw
- O Ring 1
- Filter Cap
- Filter
- O Ring1
- Machine Screw 2 req'd
- Sensor Gasket(1)
- Cover
- Cover Lens 2 req'd
- Gasket(1) 2 req'd
- Retaining Ring 2 req'd
- Cover Gasket 1
- Relay Mounting Screw(2) (2 req'd)
- Relay Mounting O Ring(2) not shown
- Relay Mounting O Ring2 not shown
- Relay Adjustment Screw
- Valve Assembly
- Valve Assembly O Ring

- Label, setup and calibration
- Self-Tapping Screw 2 req'd
- Nameplate
- Screen
- Hex Nut
- 60 Anti seize sealant not furnished with controller
- Lubricant not furnished with controller
- Thread locking adhesive, medium strength not furnished with controller
- Adhesive
- Nameplate, ATEX

#### **Sensor**

- Displacer 1-7/8×12-inches
- Hex Nut
- Displacer Rod
- Sensor Connection
- Spacer
- Hex Nut
- Conical Spring
- Universal Joint (vertical displacer only)
- Nameplate
- Drive Screw
- Pivot Body
- Pivot Base
- Anti Extrusion Ring 3
- Retaining Ring
- O Ring 3
- Backup Ring 3
- Lithium grease not furnished with sensor
- Instruction Tag
- Extension


#### **Recommended spare parts**

- Included in Controller Repair Kit
- Included in Relay Repair Kit
- Included in Sensor Repair Kit





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## Documents / Resources

	<p><a href="#">EMERSON D103032X012 Fisher L2 Liquid Level Controller</a> [pdf] Instruction Manual D103032X012, Fisher L2 Liquid Level Controller, D103032X012 Fisher L2 Liquid Level Controller, L2 Liquid Level Controller, Liquid Level Controller, Level Controller, Controller</p>
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## References

-  [Emerson Training](#)
-  [Fisher.com](#)
-  [Contact Us | Emerson US](#)
-  [Fisher.com](#)

Manuals+.