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Guardmaster 440E-L13137

Instruction Manual: GUARDMASTER Lifeline 4 Cable Pull Switch

Model: 440E-L13137 | Brand: Guardmaster

1. PRODUCT OVERVIEW

The Guardmaster Lifeline 4 Cable Pull Switch, model 440E-L13137, is a robust safety device designed for emergency stop and general machine control applications. It provides a reliable means of stopping machinery from any point along an installed cable length, up to 75 meters. This switch features a durable yellow housing, M20 conduit entries, and 2 Normally Open (NO) and 2 Normally Closed (NC) contacts for versatile wiring configurations. Its design incorporates a cable tension indicator for proper setup and a manual reset mechanism.



Figure 1: Guardmaster Lifeline 4 Cable Pull Switch. This image shows the yellow industrial safety switch with a red emergency stop button, a blue reset lever, and a cable tension indicator. The top features a metal eyelet for cable attachment, and the side displays product labeling.

2. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of the Lifeline 4 switch. Always ensure power is disconnected before beginning installation.

2.1 Mounting

- Mount the switch securely to a rigid surface using appropriate fasteners. Ensure the mounting location allows for clear access to the cable and reset mechanism.
- Consider the maximum cable length of 75 meters when positioning the switch to ensure effective coverage of the hazard area.

2.2 Wiring

The switch is equipped with screw terminals for electrical connections. It features 2 Normally Open (NO) and 2 Normally Closed (NC) contacts.

- Connect control circuit wiring to the designated screw terminals. Refer to the wiring diagram provided with the product for specific terminal assignments.
- Utilize the M20 conduit entries for secure and protected cable routing.
- Ensure all connections are tight and properly insulated to prevent short circuits or electrical hazards.

2.3 Cable Tensioning

The Lifeline 4 switch incorporates a visual indicator for correct cable tension. This is critical for reliable operation.

- Attach the pull cable to the eyelet at the top of the switch.
- Tension the cable until the indicator aligns with the "TENSIONED" mark. Avoid over-tensioning, which can damage the switch or cable.
- If the indicator shows "SLACK", the cable is too loose and may not activate the switch reliably. Adjust tension until the "TENSIONED" state is achieved.

3. OPERATING INSTRUCTIONS

The Lifeline 4 switch operates by detecting a pull or slackening of the attached cable.

3.1 Normal Operation

- When the cable is correctly tensioned and the switch is in its "RUN" state, the connected machinery can operate.

3.2 Activating the Switch (Emergency Stop)

- To activate the emergency stop function, pull the cable firmly at any point along its length. This action will cause the switch contacts to change state, initiating a stop command to the connected machinery.
- Alternatively, the switch can be activated by the cable becoming slack, for example, due to a break in the cable.

3.3 Resetting the Switch

- After activation, the switch must be manually reset before machinery can be restarted.
- Locate the red emergency stop button and the blue reset lever on the switch housing.
- To reset, ensure the cable is properly tensioned, then push the red button and/or operate the blue lever as indicated on the device until the switch returns to its "RUN" position.
- Verify that the cable tension indicator shows "TENSIONED" before attempting to restart machinery.

4. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your Lifeline 4 Cable Pull Switch.

- **Visual Inspection:** Periodically inspect the switch housing, cable, and mounting for any signs of damage, wear, or corrosion.
- **Cable Tension Check:** Regularly verify that the cable tension indicator remains in the "TENSIONED" position. Adjust as necessary.
- **Functionality Test:** Perform routine functional tests by activating the switch (pulling the cable) and verifying

that the connected machinery stops as intended. Then, practice resetting the switch.

- **Cleaning:** Keep the switch free from excessive dust, dirt, and debris. Use a soft, damp cloth for cleaning. Avoid abrasive cleaners or solvents.
- **Connections:** Ensure all electrical connections remain secure and free from corrosion.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with the Lifeline 4 Cable Pull Switch.

| Problem | Possible Cause | Solution |
|---------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Switch does not activate when cable is pulled. | Cable not tensioned correctly; internal mechanism jammed; wiring issue. | Check cable tension indicator and adjust. Inspect for obstructions. Verify wiring connections. |
| Switch activates unexpectedly (false trip). | Cable over-tensioned; vibration; physical impact; faulty wiring. | Reduce cable tension slightly. Secure mounting to reduce vibration. Inspect for external impacts. Check wiring for shorts. |
| Switch cannot be reset. | Cable still activated (slack or pulled); internal damage; reset mechanism obstructed. | Ensure cable is properly tensioned and in "RUN" position. Inspect reset button/lever for damage or obstruction. |
| Indicator shows "SLACK" despite cable being taut. | Insufficient cable tension; indicator mechanism fault. | Increase cable tension. If issue persists, contact Guardmaster support. |

If troubleshooting steps do not resolve the issue, contact qualified personnel or Guardmaster technical support.

6. SPECIFICATIONS

| | |
|---------------------------------|-------------------------------------------------------------|
| Model Number | 440E-L13137 |
| Brand | Guardmaster |
| Operation Mode | Manual |
| Contact Type | 2 Normally Open (NO) + 2 Normally Closed (NC) |
| Connector Type | Screw Terminals |
| Terminal | Screw |
| Circuit Type | 4-way |
| Actuator Type | Push Button (for reset) |
| Contact Material | Copper |
| International Protection Rating | IP66 (Dust tight and protected against powerful water jets) |
| Number of Positions | 4 |
| Max Cable Length | Up to 75 meters |

| | |
|--------------------------------------|--------------------------------------------------|
| Electrical Ratings (from OCR) | AC15: 500V 10A; DC13: 240V 1.4A, 120V 3A, 60V 6A |
| Package Dimensions | 8 x 4 x 4 inches |
| Weight | 2 Pounds |
| Manufacturer | Guardmaster |

7. WARRANTY AND SUPPORT

For specific warranty information regarding your Guardmaster Lifeline 4 Cable Pull Switch (Model 440E-L13137), please refer to the documentation included with your purchase or visit the official Guardmaster (Allen-Bradley) website. Warranty terms typically cover manufacturing defects for a specified period from the date of purchase. For technical support, troubleshooting assistance beyond this manual, or inquiries about replacement parts, please contact Guardmaster customer service or an authorized distributor. Contact information can usually be found on the manufacturer's official website or product packaging.

Important: Only qualified personnel should perform repairs or modifications to the safety switch.

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Guardmaster is a brand of Rockwell Automation.