Wiring of float switch distribution box



Overview

How to Install a Float Switch: Step-by-Step Guide & Common MistakesA poorly installed float switch can cause pump failure, dry running, or overflow – leadi.

Key Takeaways

A float switch is wired to a distribution box using its common (COM), normally open (NO), and normally closed (NC) terminals, often through a contactor and overload relay to control pumps automatically or manually based on liquid levels.

Float Switch Basics

A float switch detects liquid levels and opens or closes an electrical circuit depending on the liquid height. It typically has three terminals: common (COM), normally open (NO), and normally closed (NC).

The N

O terminal closes the circuit when the liquid reaches a set level, while the NC terminal opens the circuit at that level.

The CO

M terminal serves as the reference connection for both NO and NC circuits. Wiring to a Distribution BoxPower Supply and Protection: Connect the main power to a four-pole MCB or circuit breaker in the distribution box. This protects the system from short circuits and overloads.

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

Contactor and Overload Relay: The float switch typically controls a contactor coil (A1 and A2 terminals). The three-phase power passes through the contactor and a thermal overload relay before reaching the pump motor. This ensures the motor only runs when the contactor is energized and is protected from overheating.

Float Switch Connection: Connect the COM terminal of the float switch to the control circuit. For automatic pump control, connect the NC terminal to the contactor coil if you want the pump to stop when the tank is full, or the NO terminal if you want the pump to start when the tank is empty. If using a double-function float switch, insulate the unused wire to prevent short circuits.

Manual/

Auto Selector: Include a selector switch in the distribution box to choose between manual and automatic operation. In manual mode, the pump runs regardless of the float switch, while in auto mode, the float switch controls the pump based on liquid level. Indicator Lamps: Optional lamps can indicate pump status: red for running, green for off, and yellow for overload or fault conditions.

Installation Tips

Ensure the float switch hangs freely in the liquid without touching walls or pipes. Use a cable holder or weight to maintain proper depth. Allow enough slack in the cable for free tilting of the float.

Avoid sharp bends or tension to prevent premature wear. Test the system by filling the tank to the start and stop levels to confirm the float switch activates and resets correctly. Follow all local electrical codes and safety standards when wiring the distribution box.

By following these steps, the float switch distribution box will reliably control pumps or alarms, providing both automatic and manual operation while ensuring safety and protection of the electrical system.

Article Content

How to Install a Float Switch: Step-by-Step Guide & Common Mistakes

A poorly installed float switch can cause pump failure, dry running, or overflow – leading to costly downtime and potential environmental risks. In this guide, we explain step-by-step how to

How To Wire a Float Switch

In this article, we are going to see the Float Switch Connection Diagram and wiring. This circuit can be used to fill a water tank automatically.

How to Wire a Float Switch: Simple & Safe Guide

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

Discover the essentials of float switch wiring to ensure proper installation and function. Mastering the wiring process can enhance safety and efficiency in fluid-level control systems.

Wiring your float switch for optimal performance

Learn how to wire a float switch with a diagram. This guide will help you understand the installation process and ensure proper functionality.

How to Install and Wire a Float Switch

Master the mechanical mounting, safe wiring, and final testing procedures needed to successfully install any liquid control float switch.

How to wire a float switch step by steps (simple method for beginners)

in this video you are going learn exactly how to connect a float switch to water pump control box step by step, this video is best for beginners and electrical DIYERs,

How do I wire a float switch to my pump or control panel?

The float acts as an automatic switch: when the float rises, it completes the circuit and supplies power to the pump. For this, just make sure the float''s cord is securely routed and that it''s a

Float Switch Connection Illustration

Visualize the complete wiring setup for a float switch connection in this clear illustration! Perfect for automating pumps in water tanks, sumps, or drainage systems with reliable level...

How To Wire A Float Switch?

Wiring a float switch is a relatively simple process that involves connecting the switch to a power source and a device, usually a pump or alarm, to automatically control liquid levels. This

How To Float Switch Wire Conntion » Wiring Diagram

When it comes to wiring any type of electrical device, understanding the principles of float switch wire connection is paramount. Float switches are used in a variety of industrial and home

How to install Float switch | Float switch practical wiring animation ...

Welcome to our comprehensive tutorial on wiring a float switch! Whether you''re a beginner or an experienced electrician, this video will guide you through the process of connecting a float switch ...

DIY Float Switch Pump Wiring (Easy Step-By-Step Guide)

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

In this comprehensive DIY video, we will guide you through the process of float switch pump wiring with an easy step-by-step approach. Whether you''re looking to install a float switch for a water ...

How do I wire a float switch to my pump or control panel?

Electrical Safety: Use waterproof connectors or cord grips when bringing float wires into a junction box or control panel (to keep the connection dry and secure). Do not run float switch

Submersible Pump Control Box Wiring Diagram

With the right wiring diagram, you can ensure that your pump runs reliably and safely. Knowing the appropriate wiring diagram is key when installing a submersible pump control box. The

Step-by-Step Guide to Wiring a Dual Float Switch with Diagram

Learn how to wire a dual float switch for controlling the water level in a tank or sump pump system using a wiring diagram. This diagram will guide you on how to connect the float switches to the control

Wiring diagram for 4-wire float switch

Learn how to wire a 4 wire float switch to control a pump or other electrical equipment. This diagram provides a step-by-step guide for installation.

How To Wire A Float Switch

A float switch prevents flooding. An air conditioner includes a normally closed float switch, which turns off the system if the condensate drain clogs and water overfills the drip pan. A bilge or

How to Install a Float Switch: Step-by-Step Guide & Common Mistakes

Learn how to correctly install a float switch for reliable liquid level control. Avoid pump failure & overflow with our step-by-step guide, common mistakes, and maintenance tips for the Flygt

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

Contact Us

Continue your research online:

Website: https://kenhardtprimary.co.za
Technical inquiry: https://kenhardtprimary.co.za/project-desk.html
African project coordination: Century City, Cape Town, Western Cape, South Africa

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved