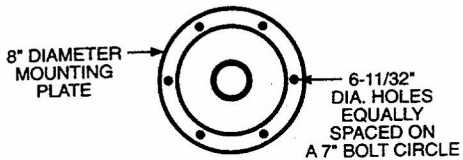


Super-Safe Roto-Bin-Dicator®

Installation and Operation Instructions



Mounting Location: There must be free flow of material both to and from the paddle and shaft. Keep the paddle and shaft out of the direct flow of material. Protective baffles or offset mounting may be required.

A. On a 7" bolt circle, drill and tap or drill 6 equally spaced holes in bin wall for 1/4" bolts or cap screws. Bolt heads should be tack welded to bin inner wall.

B. Cut 5" diameter hole to pass paddle.

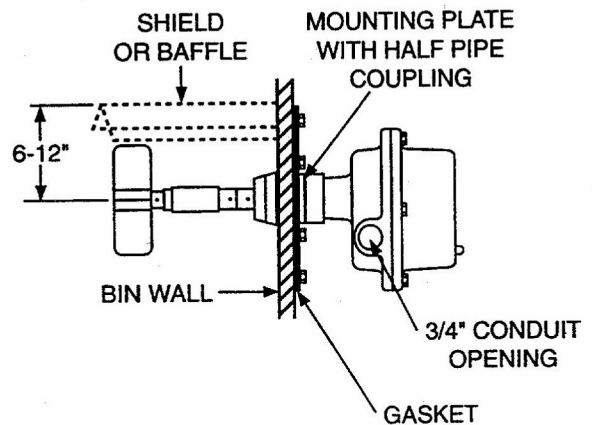
C. If required, fabricate and weld or bolt protective baffle to inner wall.

Mounting on Side of Bin:

A. Conduit opening must be down or to the left.

B. Assemble gasket between mounting plate and bin wall.

C. Use a pair of rubber and steel washers beneath the attaching hardware.



Mounting on Top of Bin:

A. Cut shaft extension pipe to required length and drill a 1/8" hole through the pipe 7/16" from each end.

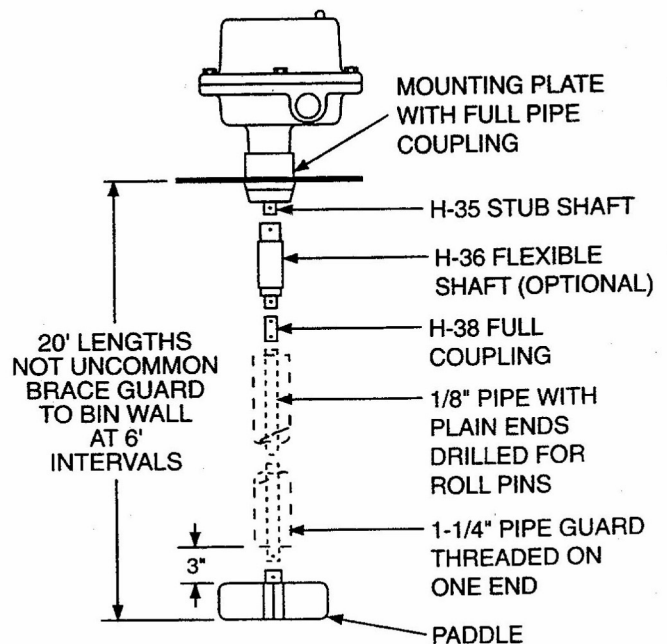
B. Assemble shaft extension to H-38 coupling and pin securely.

C. Cut pipe guard 5" shorter than overall extended shaft and paddle length. Thread one end 1-1/4" NPT.

D. Assemble guard over extension and screw securely into mounting plate.

E. Assemble paddle to shaft extension and pin securely.

Note: Shaft extension must be free to turn inside of shaft guard. Drive all roll pins (1/8" X 3/4") in flush to lock securely. Also, if separate couplings are used in place of conventional mounting plates with integral couplings, use full couplings for top mounting making sure that half the coupling protrudes inside the bin. For side of bin mounting use only half couplings.



* Shaft length 12" and longer require pipe ground.

OPERATION & WIRING INSTRUCTIONS

Theory of Operation: The 2 PM synchronous motor either turns the paddle in the absence of bulk material, or actuates DP/DT 5 amp relay contacts when the paddle is stopped by the bulk material. An optical transmitter/receiver, in combination with a pulse wheel, monitors the rotation of the shaft to ensure the clutch assembly is fully operational.

CAUTION: When replacing the cover take care not to bend the LEDs.

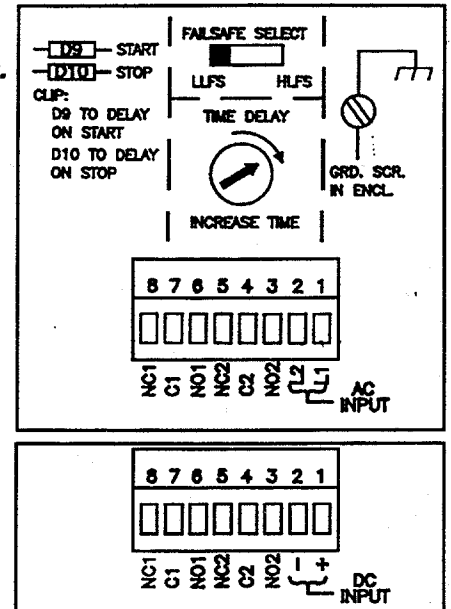
Time Delay for Relay Output: The time delay can be customized in 4 different ways. This involves clipping either one or both delay diodes, and adjusting the time delay potentiometer. The time delay pot is adjustable for 0-30 seconds.

For delay after material falls below the paddle and the paddle starts turning, clip D9 and adjust the time delay pot clockwise.

For delay after the material covers the paddle and the paddle stops turning, clip D10 and adjust the time delay pot clockwise.

For zero time delay (no delay), do NOT clip D9 or D10. Adjust the time delay pot completely counterclockwise.

For delay when the paddle starts and stops, clip both D9 and D10. Adjust the time delay pot as necessary.



External Lights: The green external LED signals that the unit has input power, and the red external LED signals that the unit is in alarm.

Fail-Safe Selection: This feature allows the operator to select the desired alarm state should input power ever fail. Refer to the diagram at the bottom of this page for relay alarm/non-alarm states.

To select High Level Fail-Safe, move the fail-safe selector switch to HLFS.

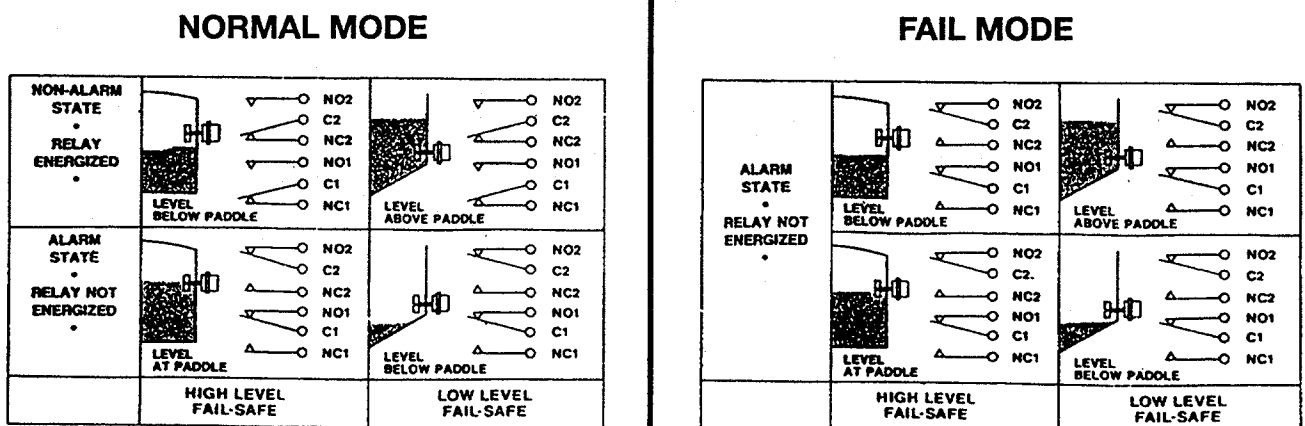
To select Low Level Fail-Safe, move the fail-safe selector switch to LLFS.

Function Test Feature: With material below the paddle, place the FOB so that the holes are aligned over the two external LEDs on the cover.

If the fail-safe switch is positioned in HLFS, the red LED will illuminate and the relay will change output state.

If the fail-safe switch is positioned in LLFS, the red LED will turn off and the relay will change output state.

Relays: The relay contacts are dry, unpowered contacts. The desired voltage must be brought into the relay common in order to provide an output. The output contacts are rated 5 amps maximum (see Specifications for more information).



SPECIFICATIONS

A. Housing & Cover

Standard: Dust-tight and weatherproof (NEMA 4,5) polyester-coated aluminum castings.

Explosionproof: C-UL Listed (NEMA 7/9), polyester coated aluminum castings.

B. Drive Shaft Assembly

Precision machined shaft with two shielded ball bearings.

C. Teflon/Viton Shaft Seal

Rated 1/2 micro at 30 psi at 400 F (204 C), though the unit is only rated to 200 F (93 C) without external cooling.

D. Motor

5 watts, 2 RPM, Input + 10%, 50/60 Hz on AC versions, Continuous stalled condition will not affect this synchronous motor. Heat generated by the motor's continuous running eliminates moisture, preventing internal corrosion and unit failure. Conduit connection: Drilled and tapped for 3/4" NPT pipe conduit.

E. Mounting Plate

Flexible, 8" outside diameter with 1-1/4" NPT coupling; standard painted mild steel; optional 302 stainless steel.

F. Fail-Safe Circuitry

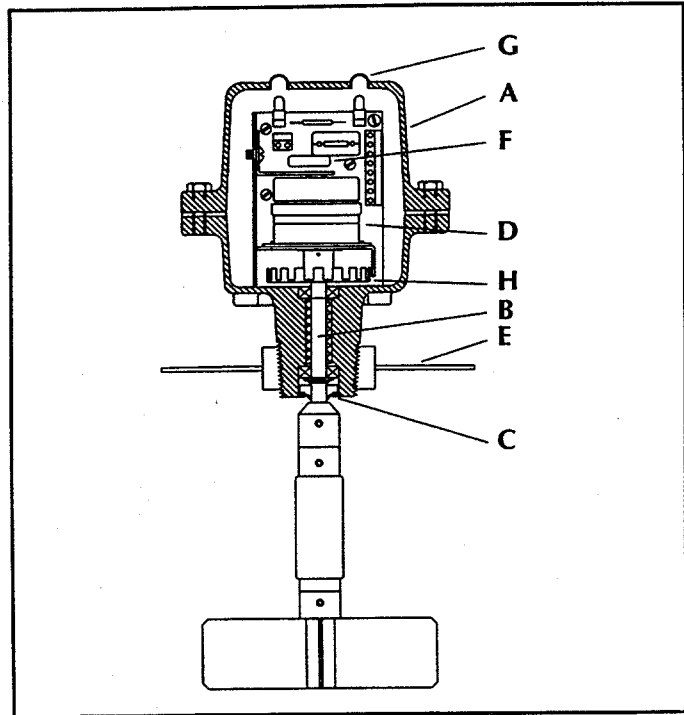
Switch position allows customer selection of fail-safe mode. Electrical connections readily accessible for ease of installation.

G. External Lights

Green (power) and red (alarm) lights

H. Pulse Wheel

A multi-toothed pulse wheel, combined with an opto-reflective circuit, provides continuous monitoring of shaft rotation.



Relay

Control relay contacts: DPDT, 2 Form C, 5 Amps at 125/250 VAC, 5 AMPS at 30 VDC, 1/8 HP at 125 VAC, 1/8 HP at 250 VAC

Power Consumption

7 watts; 1/8 amp internally fused

Wiring Diagram

Recommended Hookup wire 14 AWG or as required by local standards

All Roto-Bin-Dicator Super-Safe controls are Underwriter's Laboratories, Inc. listings. The weatherproof models are listed for non-hazardous atmospheres. The explosion-proof models are C-UL Listed for use in hazardous atmospheres, Class I, Groups C and D; and Class II, Groups E, F, and G.

ORDERING INFORMATION

HOUSING PARTS LIST	SIDE OF BIN MOUNTING	TOP OF BIN MOUNTING																																																												
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