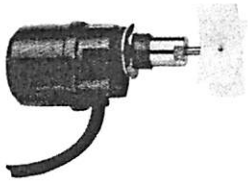
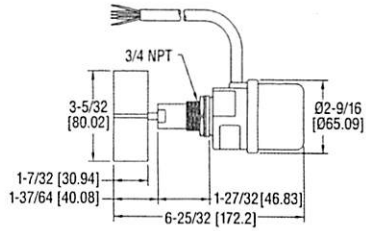
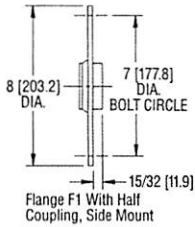
PROXIMITY

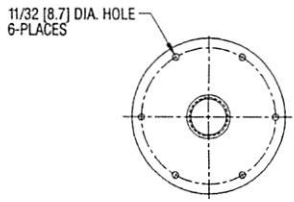
SERIES DBLM "MINI-BIN" DRY BULK LEVEL MONITOR

Specifications – Installation and Operating Instructions









The Series DBLM "Mini-Bin" provides reliable level sensing for dry bulk solids where mounting space is a premium. The compact size makes this unit an ideal replacement for standard size rotary paddle monitors. The control reports high, intermediate, or low level conditions, eliminating overflows, empty bins, choking, or clogging.

The "Mini-Bin" operates by using a 1 rpm synchronous motor to rotate a paddle. When paddle rotation is impeded by material surrounding it, the motor is de-energized and triggers a SPDT snap switch. The snap switch can be used to turn equipment on or off, or provide alarm functions.

The "Mini-Bin" is designed to be mounted on the side of a tank or bin and can detect materials from 25 to 65 lbs. per cubic foot. The housing is rated for NEMA 1 service.

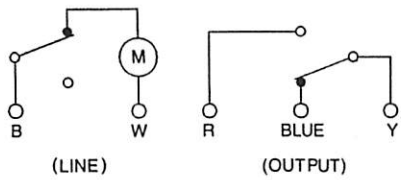
PHYSICAL DATA

Motor: 110 VAC or 220 VAC, 50/60 Hz.
Power Consumption: 1.5 watts
Switch: SPDT snap switch
Electrical Rating: 3 A @ 250 VAC
Mounting: ¾" NPT or optional 1¼" to ¾" reducer
Temperature Range: –4 to 140°F (–20 to 60°C)
Wiring Connections: 18 AWG, 12" leads wrapped in conduit.
Conduit Connection: ½" NPT
Housing: Polycarbonate, NEMA 1 service.
Wetted Parts: Polycarbonate paddle, SS shaft, Teflon washer.
Weight: 0.77 lbs. (350 g).

Series DBLM Model Numbers

Model Number	Power Supply
DBLM3040	110 VAC
DBLM3140	220 VAC

Accessories
No. F1, flexible carbon steel mounting flange.
No. A-335, 1¼" to ¾" reducer.



INSTALLATION

The unit should be mounted on the side of the tank or bin. The conduit opening should be placed in a downward position, to protect from moisture entering the unit through the conduit. When selecting a mounting location, be sure the material can freely flow to and away from the shaft and paddle. The shaft and paddle should also be out of the direct flow of material as it fills the bin or tank. If it is necessary to mount in the flow stream, a protective baffle should be installed on the inner wall of the bin.

When internal access is available on the tank or bin, the control can be directly mounted to the bin wall. Remove paddle and insert shaft through ¾" NPT connection on bin wall. Reattach paddle to shaft with cotter pin.

A flexible carbon steel mounting plate (Model No. F1) should be used when mounting on a curved or flat wall from the outside. Cut 5½" (13.97 cm) hole in the wall at the mounting location. Drill six bolt holes on a 7" (17.78 cm) dia. bolt circle to match the holes in the mounting plate. See drawing above. Use a 1¼" to ¾" reducer (Model No. A-335) to attach the control to the mounting plate. The mounting plate, with the control attached, is then bolted in place. If replacing an existing standard size unit, the optional 1¼" to ¾" reducer must be used. Remove the existing flange from the bin wall. Remove paddle from shaft. Install the control in the flange coupling with the 1¼" to ¾" reducer. Attach the paddle to the shaft using the cotter pin and remount the flange to the bin wall.

WIRING

The unit is supplied with 12" length leads wrapped in a single conduit. The leads are color-coded for easy installation. See Figure 1 for proper wiring configurations.

Power is supplied to the unit by attaching a power source to the black and white color-coded wires.

The output (SPDT snap switch) connection is made using the yellow (Y Common), red and blue color-coded wires.

For NC (normally closed) operation, connect the yellow (Y common) and blue wires to the output device. The circuit will be closed when the motor is running, and open when the motor is de-energized.

For NO (normally open) operation, connect the yellow (Y common) and red (R) wires to output device. The circuit will close when the motor is de-energized.

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