

# ***BINMASTER*** Diaphragm Switch



BM-45



BM-25



BM-65

## Level Indicator Switch

*Switch activates when material hits pad*

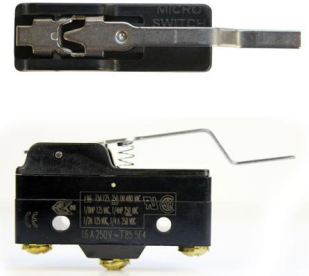
BinMaster diaphragm switches or bin indicators, provide a reliable solution for monitoring bulk material levels in bins, tanks and silos. The switches work by activating a sensitive micro-switch when material reaches the switch level inside the bin or vessel. This allows the diaphragm switch to send an alert that can start or stop a process or indicate a high-, medium- or low-level.

- > Alerts for overfills
- > Start/stop a process
- > For bins and some plugged chute applications
- > Cost effective
- > Rugged, versatile, construction and simple design
- > Die-cast aluminum housing available
- > Neoprene or silicone material
- > Internal or external mount
- > Multiple voltages
- > Certification and explosion-proof available

# The Science of Pressure Switches

## What is a Diaphragm Switch?

When material reaches the level of the diaphragm switch as the bin is filled, it presses against a sensitive micro-switch activating an alarm status. The switch is often wired to start or stop a process or alert to high, medium, or low levels in bins.



## Alerts and Switching

The switches integrate with lights, horns, alarms or BinMaster's point level alarm panels to communicate alert status. With a robust design and easy installation, BinMaster's diaphragm switches are a trusted choice for bulk solids level measurement, providing efficient operations

## Diaphragm Materials

**Neoprene** — synthetic rubber that is abrasion- and chemical-resistant, waterproof, stretchable, and buoyant.

**Silicone Rubber** — has the best long-term resistance to environmental extremes. Its chemical, electrical, and mechanical properties remain virtually unchanged at temperatures from -160° to 500° F.

**Neoprene with Nylon Mesh** — outstanding resistance to most chemicals, heat, and oils, has low moisture absorption, and good dielectric qualities. It has flame, weather, and extremely high-abrasion resistance.

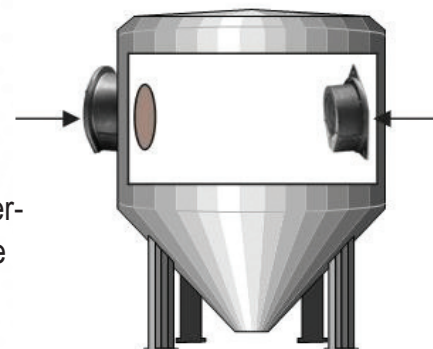


## Plugged Chute Detection

The BM65-FHPC and BM-65-RHPC are designed to alert when a chute becomes clogged with material. These plugged chute detectors feature a heavy spring and rugged diaphragm material. They have UL Class II, Groups E, F, & G explosion-proof certification and can be used in hazardous environments where there is a risk of combustible dust.

## Internal & External Mount

The diaphragm switch is offered in models for either internal or external mounting. External mounting requires cutting a hole in the bin wall. Installing or replacing an externally mounted diaphragm switch is performed easily from outside the bin. Internal mounting does not require a hole to be cut, but installation must be done inside of the bin, preferably when it is empty.



# Models for every mission

## BM-65 Explosion-Proof Switch



BM-65 handles free-flowing solids over 20 lb/cu ft in temperatures from -40°F to 300°F. It is well-suited for monitoring agriculture products, metals, coal, rubber and more in classified areas. The BM-65 brings world-class explosion-proof level monitoring capability at an affordable price point.

The BM-65 delivers high/low-level monitoring and chute plug detection through its pressure-sensing diaphragm design. By selecting from standard, heavy neoprene, or silicone diaphragm models with internal/external mounts, the ideal configuration can be specified for the application's dry material and temperature range. This is a UL Class II, Groups E, F & G certified switch.

## BM-45 Diaphragm Switch

BM-45 diaphragm switch provides level detection in bins containing non-hazardous, free-flowing dry materials. BM-45 die-cast aluminum housing and choice of neoprene or silicone diaphragms ensure a long service life.

Available in multiple mounting and voltage configurations, the BM-45 adapts to specific application needs. The internal mount keeps everything contained within the bin, while the external mount allows easy access. Suitable for handling free-flowing dry solids over 20 lb/cu ft, such as grain, plastics, chemicals and minerals, the BM-45 offers exceptional value for basic-level monitoring.



## BM-25 Diaphragm Switch

BM-25 diaphragm switch prevents overfilling, material waste, and costly clean-ups in dry material handling operations. This is an economical solution for receiving high/low-level alerts to avoid issues with bins, silos, and plugged chutes. Well-suited for monitoring free-flowing dry materials over 20 lb/cu ft like grains, seeds, feed, and fertilizers in standard temperature conditions.



**Best practice:** Contact BinMaster to match your material to the correct diaphragm switch!



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# Point-level control for **free-flowing** dry bulk material

Aggregates  
Alumina  
Dry Ash  
Ground Bark  
Ground Barley  
Bentonite  
Carbon Black  
Cement Clinker  
Portland Cement  
Coal  
Foundry Sand

Shelled Corn  
Diatomaceous Earth  
Flour  
Fly Ash  
Gravel  
Kaolin Clay  
Hydrated Lime  
Limestone  
Oats  
Peanuts in Shell  
Peanuts Shelled

Polyethylene Powder  
Polyethylene Resin  
Polyethylene Beads  
Potash  
PVC Powder  
PVC Resin  
Rice  
Rye  
Salt  
Dry Sand  
Silica Sand

Sawdust  
Sesame Seed  
Cracked Soybeans  
Meal Soybean  
Whole Soybean  
Whole Sugar Beets  
Sunflower Seed  
Wheat  
Wood Chips  
Wood Dust  
Wood Pellets

Model	Mounting	Diaphragm Material	Temperature	Bulk Density	Location
BM-25-F	External	Silicone, Grey, .031"	-40° to 185°F	> 20 lb./cu. ft	Non-Hazardous
BM-25-R	Internal	Silicone, Grey, .031"	-40° to 185°F	> 20 lb./cu. ft	Non-Hazardous
BM2BM45-R	Internal	Neoprene, Black, .016" Thick	-30° to 220°F	10 to 40 lb./cu. ft.	Non-Hazardous
BM45-RH	Internal	Neoprene, Black, .031" Thick	-30° to 220°F	15 to 60 lb./cu. ft.	Non-Hazardous
BM45-RHT	Internal	Silicone, Grey, .031" Thick	-40° to 350°F	15 to 40 lb./cu. ft.	Non-Hazardous
BM45-F	External	Neoprene, Black, .016" Thick	-30° to 220°F	10 to 40 lb./cu. ft.	Non-Hazardous
BM45-FH	External	Neoprene, Black, .031" Thick	-30° to 220°F	15 to 60 lb./cu. ft.	Non-Hazardous
BM45-FHT	External	Silicone, Grey, .031" Thick	-40° to 350°F	15 to 40 lb./cu. ft.	Non-Hazardous
BM65-R	Internal	Neoprene, Black, .016" Thick	-30° to 220°F	15 to 60 lb./cu. ft.	Hazardous
BM65-RH	Internal	Neoprene with Nylon Mesh, Black, .020" Thick	-30° to 275°F	15 to 90 lb./cu. ft.	Hazardous
BM65-RHT	Internal	Silicone, Grey, .031" Thick	-40° to 350°F	15 to 60 lb./cu. ft.	Hazardous
BM65-F	External	Neoprene, Black, .016" Thick	-30° to 220°F	15 to 60 lb./cu. ft.	Hazardous
BM65-FH	External	Neoprene with Nylon Mesh, Black, .020" Thick	-30° to 275°F	15 to 90 lb./cu. ft.	Hazardous
BM65-FHT	External	Silicone, Grey, .031" Thick	-40° to 350°F	15 to 60 lb./cu. ft.	Hazardous