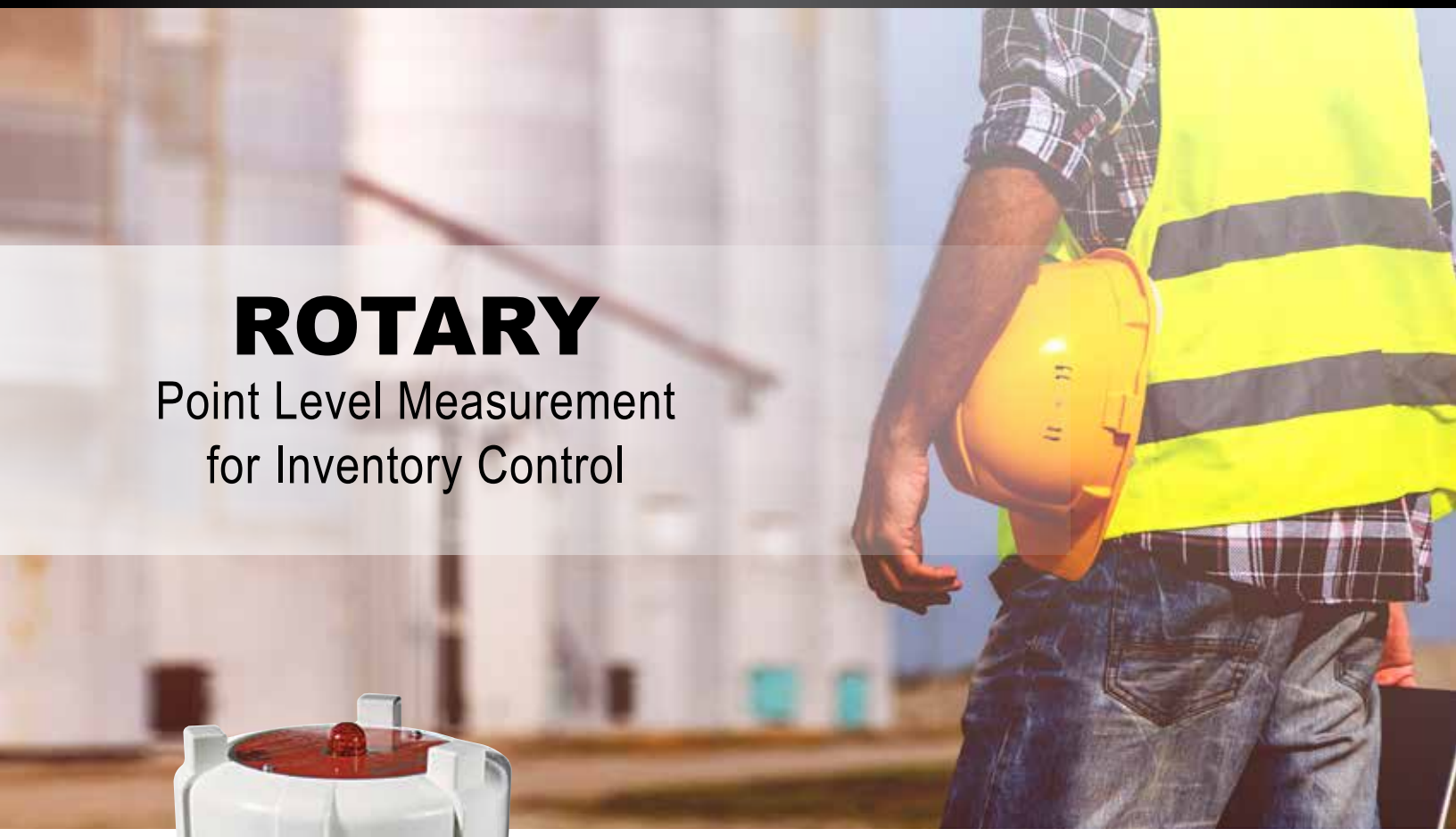
BINMASTER

Measure. Detect. Alert.



ROTARY

Point Level Measurement for Inventory Control

Detect high and low levels while protecting valuable inventory with tried-and-true rotary level indicators from BinMaster. Made in Lincoln, Nebraska, USA, following ISO-9001:2015 quality processes, BinMaster offers the widest variety of custom extensions, paddles, and mounting options available. Select from the fail-safe MAXIMA+, reliable BMRX, or compact mini rotary – shipped fast and built to last.

Models for Every Mission

MAXIMA+

Fail-safe operation, self-diagnostics, and immediate and corrective response to failures distinguish the MAXIMA+ as the best rotary for process control. Its red LED light visually alerts to fault, covered, or rotating status conditions.

BMRX

From its explosion-proof housing, to de-energized motor operation, a bi-directional slip clutch, and a four-bearing drive shaft – the BMRX is a rugged workhorse built for efficiency and longevity.

MINI

Compact design for top or side mounting on small bins or hoppers and in tight spaces. Four-vane or bayonet style paddle options, adjustable sensitivity, and simple ¾" installation for affordable level alerts and detection.

	MAXIMA+	BMRX	MINI
De-Energized Motor	x	x	
Fail-Safe	x	x	
Status Light	x		
Time Delays	x		
Auto Sensing	x	x	x
Built-In Slip Clutch	x	x	x
Screw-Off Cap	x	x	
Tight Spaces			x

Seven Steps to a Better Rotary

1

De-energized Motor

Automatically goes into a resting state when paddle is covered to extend motor life

2

Fail-Safe

Confident process control for immediate status notification and visual status notification for mechanical failure or loss of power

3

Status Light

Solid for covered paddle, blinking for an uncovered turning paddle, and unlit for failed condition

4

Time Delays

Set 5 to 25 second delays in the alarm relay for covered or uncovered conditions to reduce false positives

5

Auto Sensing

No sensitivity setting or calibration required regardless of material density

6

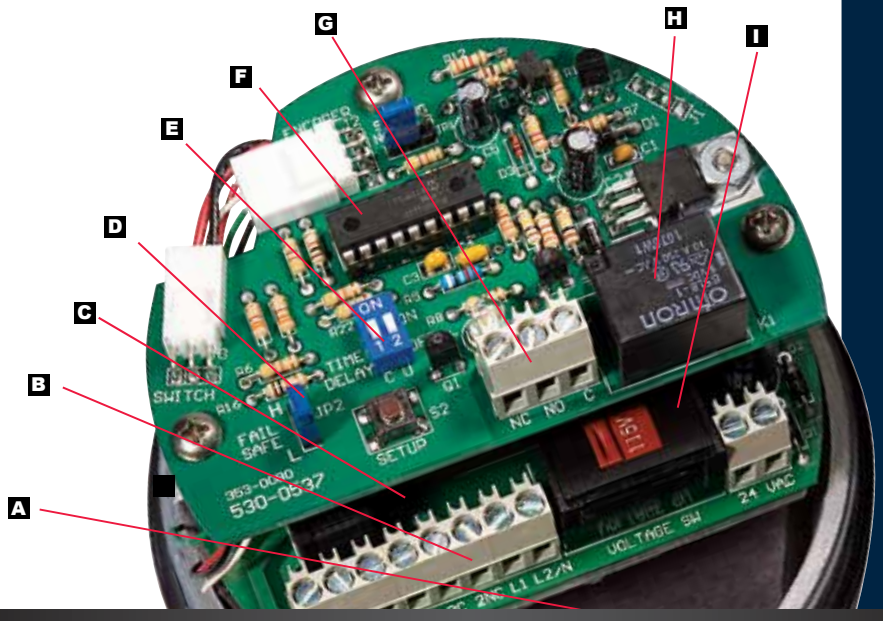
Built-in Slip Clutch

Protects the gear assembly from damage due to over rotation

7

Screw-off Cap

USA-made housing with simple access to internal components. No screws to lose!



- **A** Easy access to motor
- **B** Wire terminals simplify wiring
- **C** DPDT 10 Amp relay
- **D** Switch selectable high/low fail-safe switch
- **E** Time delay for covered & uncovered conditions
- **F** Microcontroller-based electronics ensure reliable operation
- **G** LED light for local visual indication (MAXIMA+ only)
- **H** Supervisory and pulse status relay
- **I** Motor voltages include 115 VAC, 230 VAC, 24 VAC, 24 VDC, & 12 VDC

Models for Every Mission

Custom Options for MAXIMA+ or BMRX

HORIZONTAL EXTENSIONS

Side mount through thick concrete walls using a 6”, 8”, 10” or 12” extended drive shaft and protective shaft guard with a sealed bearing end to prevent packing

VERTICAL EXTENSIONS

Get high level alerts and specify headroom with a top mounted rotary with a custom extension up to 144”

FLEXIBLE EXTENSIONS

A flexible 8 mm steel cable from 4” to 14’ long detects the level of heavy falling material when attached to a top mounted rotary

SEALED EXTENSIONS

Protective bearings form a seal between the shaft and shaft guard to prevent false alarms caused by material packing

STAINLESS STEEL PROCESS CONNECTION

1-1/4” or 1-1/2” stainless steel process connections stand up in corrosive or food processing applications

TRI-CLOVER

Stainless steel mounts, connections, and clean-in-place features for food, feed, and pharmaceutical use

“We just love the Binmaster rotaries. They are reliable and offer all the options our customers need.”

– Ronnie Shappley, Airdusco Inc.

ADJUSTABLE COUPLING

Vary the depth of a top mounted rotary from 6” to 72” without entering the vessel using a sliding extension

HEAT TUBES

Distance the electronics from the heat source when external temperatures exceed 140° F (60°C) with 6”, 8”, or 12” aluminum or stainless-steel extensions that can be side or top mounted

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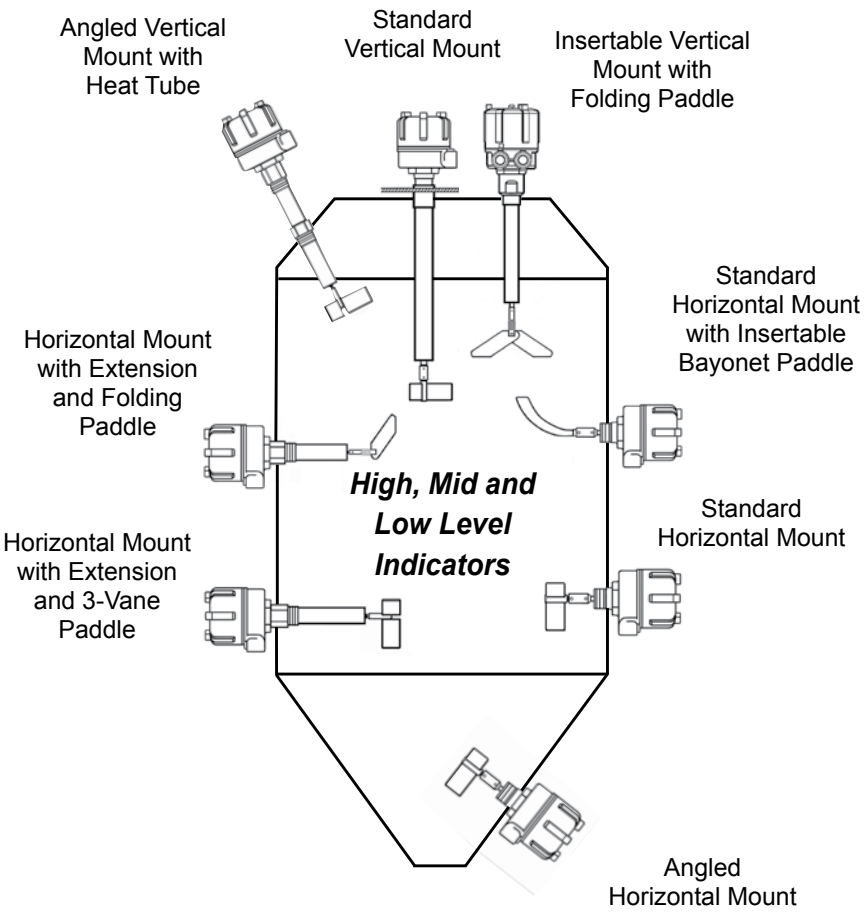
Rotary Mounting Options



Mounting Plate Selector

Side or horizontal mounting uses a solid shaft coupler and a half coupling mounting plate available in carbon steel or stainless steel.

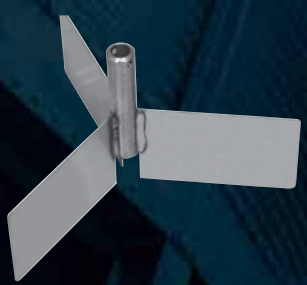
Top mounting plates in 0°, 10°, 20°, and 30° angles use a flexible shaft coupler to absorb impact when loading and a full coupling mounting plate.

MODEL	MOUNT	ANGLE	COUPLING	CONSTRUCTION	FINISH	GASKET
GRMP-1	Side	0°	Half - 1.25”	Carbon Steel	White Powder Coat	Black Neoprene
GRMP-3	Side	0°	Half - 1.25”	Stainless Steel	Bare	Black Neoprene
GMRP-14	Side	0°	Half - 1.25”	Carbon Steel	Bare	White Silicone
GRMP-2	Top	0°	Full - 1.25”	Carbon Steel	White Powder Coat	Black Neoprene
GRMP-4	Top	0°	Full - 1.25”	Stainless Steel	Bare	Black Neoprene
GRMP-15	Top	0°	Full - 1.25”	Stainless Steel	Bare	White Silicone
GRMP-9	Top	10°	Full - 1.25”	Carbon Steel	White Powder Coat	Black Neoprene
GRMP-16	Top	20°	Full - 1.25”	Carbon Steel	White Powder Coat	Black Neoprene
GRMP-13	Top	30°	Full - 1.25”	Carbon Steel	White Powder Coat	Black Neoprene

Paddles

BinMaster offers a wide selection of paddles for very light to heavy materials. Select paddles will collapse to fit through a 1-1/4” or 1-1/2” opening allowing installation without entering the vessel. For some applications, a direct connect paddle option will not require a coupler.

MODEL	TYPE	CONSTRUCTION	TURNING DIAMETER	INSERTION DEPTH	BLADE HEIGHT	CONNECTION	MATERIAL DENSITY
GRP-1	3-VANE	STAINLESS STEEL	7.0”	2.7”	2.0”	COUPLER	LIGHT
GRP-2	3-VANE	STAINLESS STEEL	5”	2.2”	1.5”	COUPLER	MEDIUM
GRP-3	SINGLE VANE INSERTABLE	STAINLESS STEEL	4-7/16”	2.0”	1.0”	COUPLER	HEAVY
GRP-11	3-VANE	NYLON	7.0”	2.6”	1-15/16”	COUPLER	LIGHT
GRP-12	3-VANE	NYLON	5.0”	2.1”	1-7/16”	COUPLER	MEDIUM
GRP-22	3-VANE	STAINLESS STEEL	5.0”	2.2”	1.0”	COUPLER	HEAVY
GRP-23	BAYONET	STAINLESS STEEL	6.4”	6.2”	1.2”	COUPLER	MEDIUM
GRP-24	BELT	BELTING	1.5”	13.2”	12.0”	COUPLER	HEAVY WITH LARGE PARTICLE SIZE
GRP-25	3-VANE	STAINLESS STEEL	5.4”	5.7”	5.0”	COUPLER	VERY LIGHT
GRP-26	3-VANE	STAINLESS STEEL	7.0”	3.5”	2.0”	DIRECT	LIGHT
GRP-27	BAYONET	STAINLESS STEEL	6.4”	8.0”	1.2”	DIRECT	MEDIUM
GRP-28	3-VANE	STAINLESS STEEL	7.0”	5.7”	5.0”	COUPLER	VERY LIGHT
GRP-29	3-VANE	STAINLESS STEEL	5-7/16”	5.7”	5.0”	DIRECT	VERY LIGHT
GRP-30	3-VANE	STAINLESS STEEL	5.0”	4.0”	1.5”	DIRECT	MEDIUM
GRP-31	SINGLE VANE	STAINLESS STEEL	7”	2.25”	1-5/8”	COUPLER	HEAVY
GRP-34	SINGLE VANE	STAINLESS STEEL COLLAPSIBLE TO 1.5” NPT	8”	4.7”	1-3/8”	DIRECT	MEDIUM TO HEAVY
GRP-35	DOUBLE VANE	STAINLESS STEEL COLLAPSIBLE TO 1.5” NPT	8”	4.8”	1-3/8”	DIRECT	MEDIUM TO HEAVY
GRP-36	SINGLE VANE	STAINLESS STEEL COLLAPSIBLE TO 1.5” NPT	8”	4.8”	1-3/8”	COUPLER	MEDIUM TO HEAVY
GRP-37	DOUBLE VANE	STAINLESS STEEL COLLAPSIBLE TO 1.5” NPT	8”	4.8”	1-3/8”	COUPLER	MEDIUM TO HEAVY



3-vane paddle

Bayonet paddle

Single vane paddle

Nylon paddle

Principle of Operation

High Level Control During Filling

The paddle continually rotates until material reaches it. Sensing resistance, the motor rotates an actuator arm activating a switch wired to an alarm or process equipment to prevent overfilling.

Low Level Control When Emptying

When covered, the paddle is de-energized and not rotating. As material drops below the paddle, the actuator arm springs back, the motor re-energizes, and the paddle rotates, sending an alarm or starting up a process system.

Many Materials and Applications

Point level detection in powders and bulk solids with a bulk density of 2 pounds to over 100 pounds per cubic foot. Used in bins, silos, chutes, and conveyors storing or processing powders, pellets, and granular materials.

	MAXIMA+	BMRX	Mini
Power Requirements	24/115/230 VAC 50/60 Hz; 8VA 24/12 VDC, 60/35 mA, 4V4	24/115/230 VAC 50/60 Hz; 5.5VA 24/12 VDC, 1W	115/230 VAC, 50/60 Hz
Output Contacts	DPDT 10 Amp 250 VAC	DPDT 10 Amp 250 VAC	5A @ 250 VAC
Status Indicator Relay	Standard: SPDT 10 Amp 250 VAC, Optional: DC Solid State Relay 1A 60 VDC Optional: AC Solid State Relay 1A 250 VAC		
Operating Temperature	-40°F to +185°F (-40°C to +85°C) ATEX -4°F to +185°F (-20°C to +85°C)	-40°F to +185°F (-40°C to +85°C) ATEX -4°F to +185°F (-20°C to +85°C)	-40°F to +185°F (-40°C to +85°C)
Process Temperature	to +400°F (to +204°C)	to +400°F (to +204°C)	
Pressure	1/2 micron, 30 PSI	1/2 micron, 30 PSI	
Approvals & Certifications CSA / US	Class II Groups E, F & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9, & 12 IP66	Class I, Groups C & D and Class II, Groups E, F & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 7, 9, & 12 IP66	
ATEX	Please see www.binmaster.com for latest ATEX certifications	Please see www.binmaster.com for latest ATEX certifications	
Fail-Safe Mode	Switch selectable between high & low	Switch selectable between high & low	
Time Delay	Dual Independent Time Delay Selectable 5 seconds; Programmable to 25 seconds		
Enclosure	Die cast aluminum, FDA recognized powder coat finish	Die cast aluminum, FDA recognized powder coat finish	Polycarbonate, NEMA 1
Mounting	1-1/4" NPT	1-1/4" NPT	3/4" PF (pipe fitting)
Conduit Connections	3/4" NPT	3/4" NPT	
Shaft and Components	Stainless Steel	Stainless Steel	