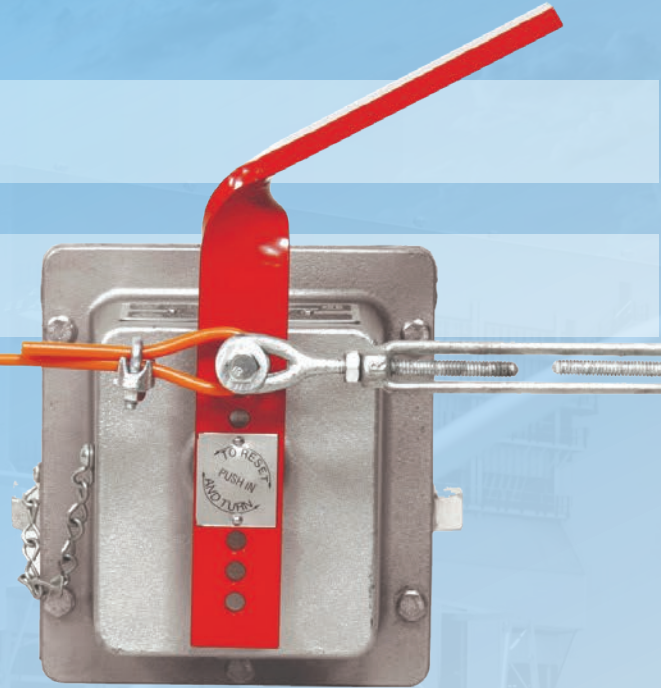


AIRMATIC®

WE'LL HANDLE IT.



**Conveyor Components
Company** Division of Material
Control, Inc.

WE ARE CONVEYOR SAFETY

AIRMATIC

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airmatic.com

**CONVEYOR COMPONENTS COMPANY, ESTABLISHED
IN 1965, IS WORLD RENOWNED FOR QUALITY
ENGINEERED PRODUCTS AND UNRIVALED DURABILITY.
BULK MATERIAL HANDLING CUSTOMERS AND
PROCESSING INDUSTRIES HAVE COME TO DEPEND ON
CONVEYOR COMPONENTS COMPANY AS A PREMIER
MANUFACTURER OF CONVEYOR CONTROLS, MOTION
CONTROLS, LEVEL CONTROLS, BIN AERATORS, AND
CONVEYOR BELT CLEANERS.**



*Conveyor Components Company
Croswell, MI*



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Conveyor Components Company

DIVISION OF MATERIAL CONTROL, INC.

As a manufacturer of quality engineered products for the bulk handling industry throughout the world, Conveyor Components Company prides itself as a leading supplier in both foreign and domestic markets by maintaining and expanding market share and pursuing new product opportunities. The scope of the Conveyor Components Company Quality Management System covers conveyor safety controls, motion controls, level controls, bin aerators, skirtboard clamps, and conveyor belt cleaners, as certified by NQA Global for ISO 9001:2015.

TO MAINTAIN THIS LEADING ROLE WE:

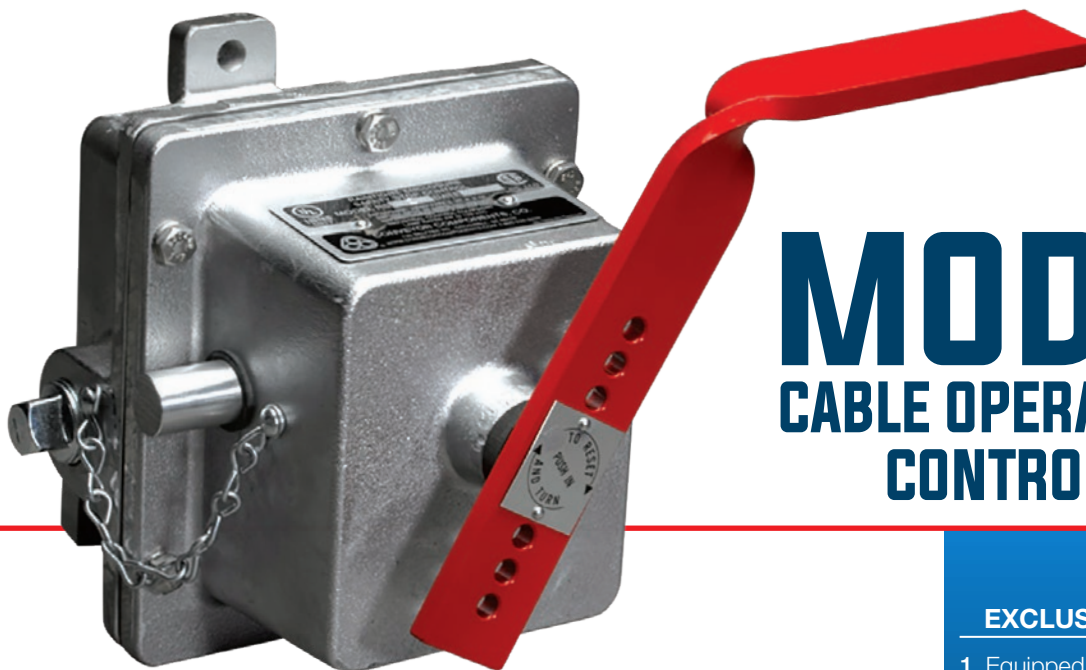
- Provide a quality product to the market that meet customers expressed requirements.
- Maintain good communication with customers
- Maintain the shortest possible lead time while pricing products competitively.
- Continually improve designs, service, and products.
- Comply with applicable standards, legislation, and regulations.
- Focus on occupational, health & safety standards.
- Invest in our future for continued growth.
- Provision of needed resources and infrastructure.

Conveyor Components Company strives to maintain to highest standards of integrity. By strictly following and enforcing a high code of ethics we make our company a better place to work and our community a better place to live.

Conveyor Components Company ensures that we meet the needs of our internal and external customers by training our employees to understand and support the requirements of our Management System. By focusing on continual improvement of our Management System, we will ensure meeting the future needs of Conveyor Components Company customers.

Warranty Policy

Equipment is guaranteed against defects in material and workmanship for eighteen (18) months after shipment or twelve (12) months after operational start-up, whichever is sooner.



MODEL RS

CABLE OPERATED SAFETY STOP CONTROL FOR CONVEYORS

A MUST FOR EMPLOYEE PROTECTION.

The Model RS is actuated by a cable pulled by endangered personnel. The output contacts of the Model RS can control up to two separate circuits, one for machinery shutdown and one for alarm.

Safety minded operators of conveyors, production lines, elevator equipment, assembly lines, material handling systems, cranes, etc. consider it a must for employee protection. Most states have safety statutes that require these controls on conveyors and related equipment. American National Standard Institute recommends their use (ANSI Standard No. ASME B20.1).

DETERMINATION OF NUMBER OF UNITS REQUIRED

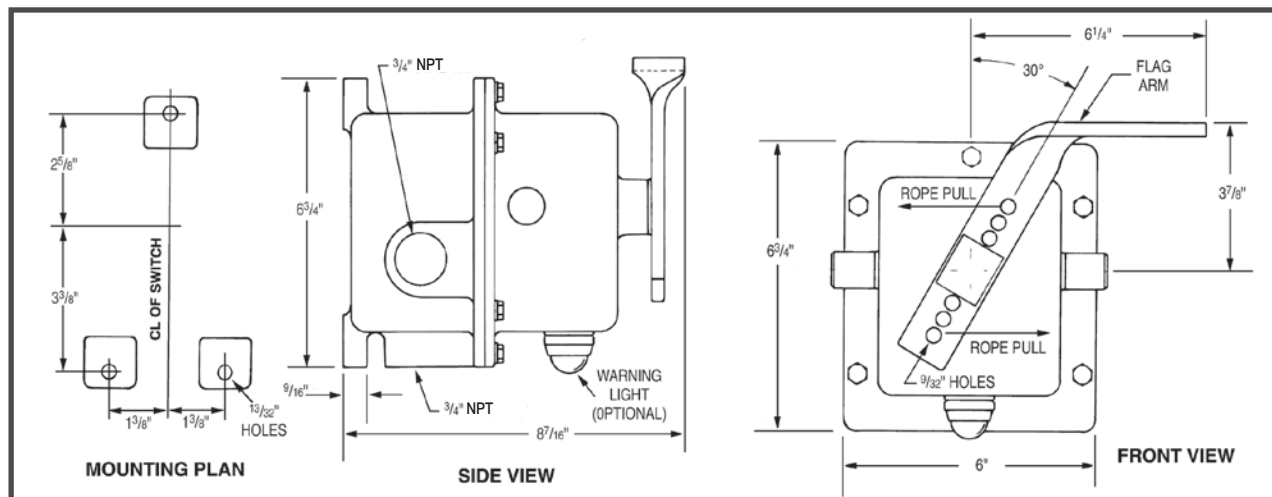
The Model RS control is designed so that a maximum of 100 feet (30m) of cable can be used on each side of the unit. A single control can therefore cover a maximum of 200 feet of conveyor belt or other machinery. If necessary, cable can be extended in only one direction from either side of the unit. The electrical characteristics of the application will determine the type of microswitches to be specified in the unit: either one, or two. The environmental considerations will determine whether or not the unit is to be explosion proof or require available epoxy coating. The possibility of a light to aid in identification of actuated units should be considered.

Our galvanized aircraft cable with either vinyl or nylon coating should be used with the control to assure proper actuation with no stretching. The cable should be supported by eyebolts every 8-10 feet (3m). These supports ensure that the weight of the cable alone will not actuate the control. For ease of installation, we offer a kit (RS-K) that includes all components and correct quantities for the proper installation of one unit.

EXCLUSIVE FEATURES

1. Equipped with a positive safety lock, once actuated, it cannot be accidentally reset causing dangerous equipment to restart. In order to reset the control, the actuation arm must be manually pushed in and turned. Reset is quick, and makes this a true "safety" control.
2. Installed with cables extending in both directions from the actuating handle. There is one electrical connection inside. This eliminates the double electrical connections required in two ended units employing a separate microswitch for cable in each direction.
3. The actuation force is easily adjusted in the field by a change in the position of the cable in holes provided in the actuation arm. One of our units will handle as much cable length as a double ended competitive unit and there is no longer a need to specify actuating force or right or left handed units.
4. The standard construction of the unit is a corrosion resistant aluminum housing complete with stainless steel hardware and red powder coated actuation handle. The actuation shaft is constructed of stainless steel. Epoxy coating is also available if required.
5. The Model RS controls are UL Listed and CSA Certified. The general purpose models are listed for non-hazardous atmospheres. Explosion proof models are listed for use in hazardous atmospheres as defined by the National Electric Code handbook and the National Electrical Manufacturers Association standards for NEMA type 7 and 9 hazardous locations. Specifically, they are listed for Class I, Div 1, Groups C and D; and Class II, Div. 1, Groups E, F and G.
6. The unit is available with a warning light that may be wired to indicate actuation. This permits easy identification of actuated units in areas where visual identification is difficult.

MODEL RS DIMENSIONAL INFORMATION



AVAILABLE MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS.
RS-2	2 Single Pole Double Throw (SP/DT) Microswitches *	13
RS-5	2 Double Pole Double Throw (DP/DT) Microswitches *	13
RS-2L	2 Single Pole Double Throw (SP/DT) Microswitches and Red Incandescent signal lamp *	14
RS-5L	2 Double Pole Double Throw (DP/DT) Microswitches and Red Incandescent signal lamp *	14
RS-2X	2 Single Pole Double Throw (SP/DT) Microswitches **	13
RS-5X	2 Double Pole Double Throw (DP/DT) Microswitches **	13
RS-2XL	2 Single Pole Double Throw (SP/DT) Microswitches and Red Incandescent signal lamp **	14
RS-5XL	2 DP/DT Microswitches and Red Incandescent signal lamp **	14
RS-2D	2 Single Pole Double Throw (SP/DT) Microswitches ***	13
RS-5D	2 Double Pole Double Throw (DP/DT) Microswitches ***	13

*General Purpose, NEMA TYPE 1, 3, 3R, 4, 4X

**Explosion Proof, NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; 9: Class II (Div. 1 & 2), Groups E, F & G

***Dual Rated, NEMA TYPE 3, 4, 4X; Type 9: Class II (Div. 1 & 2), Groups E, F & G

TECHNICAL SPECIFICATIONS

Standard Construction - Rubber gaskets seal unit for outside applications. Listed by UL for NEMA 4/4X dust-tight and rain tight construction, applies to general purpose units.

Housing - Cast aluminum. Epoxy coating available.

Conduit Opening - 3/4" NPT standard. 1" NPT optional (non UL). All RS units have three conduit openings.

Actuating Arm - Red powder-coated steel handle with stainless steel shaft.

Internal Cam and Wear Plate - Hardened steel.

External Hardware - Stainless steel.

Switches - SP/DT microswitches. Rated 20A @ 120 VAC, 240VAC, and 480 VAC; 1/2 amp at 125 VDC and 1/4 amp at 250 VDC. Switches may be wired for single throw operation, either normally open or normally closed as required. DP/DT (15A) microswitches also available.

All models are rated ambient -13° to 104°F (-25° to 40°C);

ACCESSORIES

BRACKET for mounting the Model RS stop switch to the conveyor stringer at an idler.
Item # RS-30

CONDUIT PLUG
3/4" metal, socket head conduit plug.
Item # RS-29 or # RS-29X

CABLE SUPPORT EYE BOLT
1/2" x 6" plated 2-1/2" long N.C. thread. 1" eye, two nuts and one lock washer.
Item # RS-27

CABLE END FITTING
Secures protective cable to switch hand and supports.
Item # RS-28

SAFETY CABLE
3/32" x 7x7 preformed, galvanized aircraft cable. Protective coating in either orange coated vinyl or nylon. 3/16" O.D.
Item # RS-25 (vinyl) RS-26 (nylon)

DOUBLE-ENDED CABLE SUPPORT EYE BOLT
Drilling is not required to install this cable support. Installs under idler bolt.
Item # RS-23

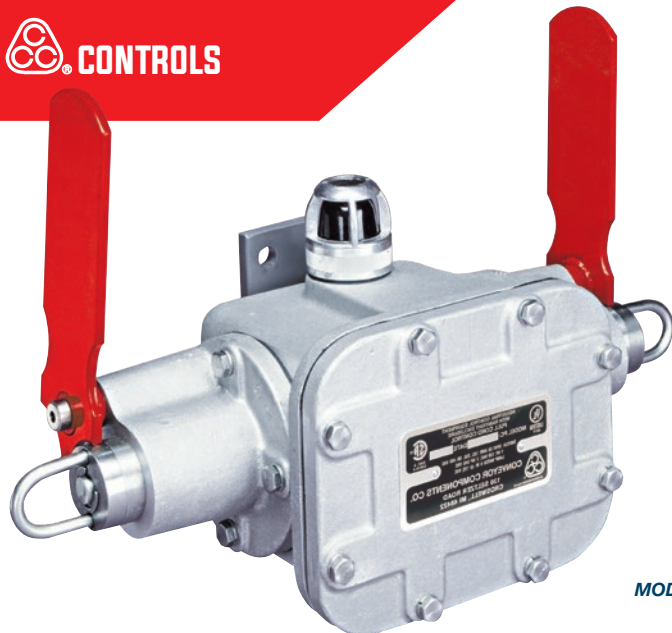
PIGTAIL-STYLE CABLE SUPPORT EYE BOLT
1/2" x 6" Plated, with (2) hex nuts and (1) lock washer.
Item # RS-27P

CABLE POSITIONS

SWITCH ACTUATING ARM

POSITION	TOTAL ACTUATION FORCE REQUIRED (LBS)
1	40
2	28
3	20

As shown in the chart above, the actuation force can be varied by attaching the cable at any one of the three positions.



MODEL PCD-4SL

MODEL PC

CABLE OPERATED SAFETY STOP SWITCH

*Rugged Construction withstands
the hardest usage, in the
harshest environments.*

RUGGED CONSTRUCTION WITHSTANDS THE HARDEST USAGE

The PC Stop Control can be used for emergency shutdown of conveyor systems, elevator equipment, bulk handling systems, cranes, production and assembly lines, or any other equipment which may require immediate, positive shutdown.

A cable is connected from a fixed point to the cable end connection clevis. Pulling on the cable will actuate the switch, trip the flag arm down into the walkway and lock the switch in the actuated position. The unit is reset by returning the flag arm to the normal up position.

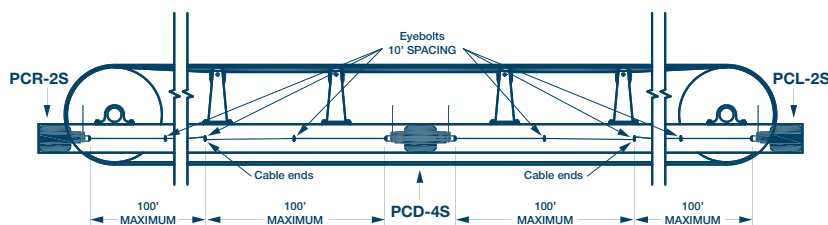
DETERMINATION OF NUMBER OF UNITS REQUIRED

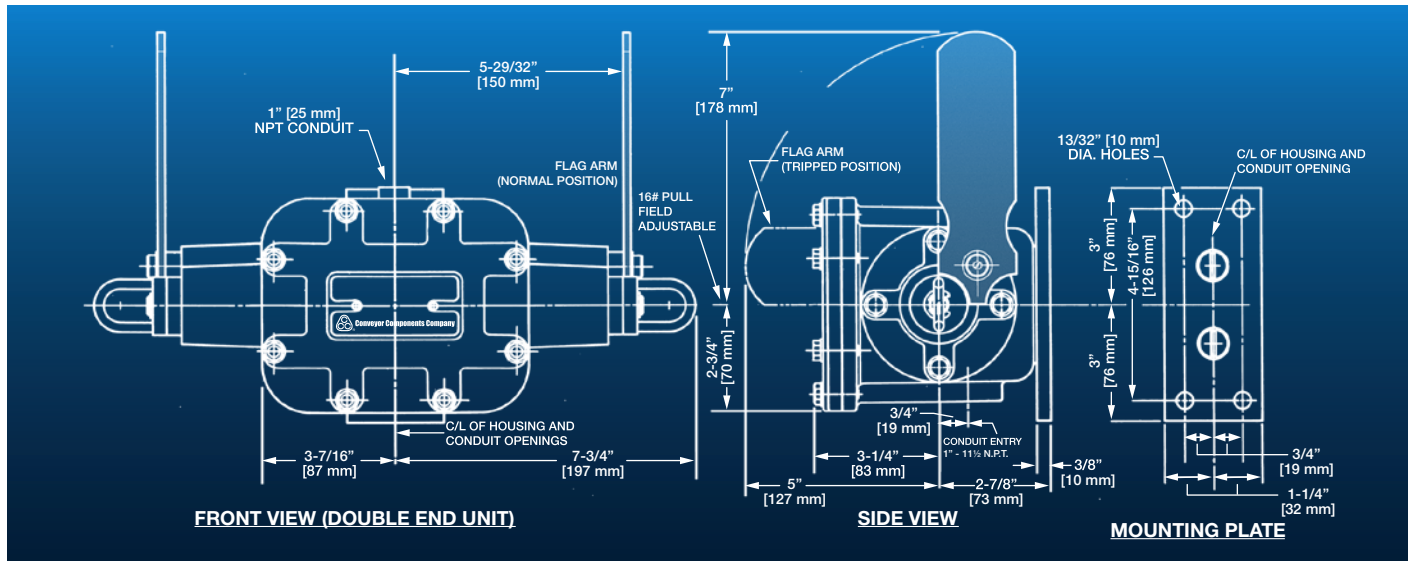
The Model PC control is designed so that a maximum of 100 feet (30m) of cable can be used. The electrical characteristics of the application will determine the type of microswitches to be specified in the unit. The environmental considerations will determine whether or not the unit is to be explosion proof or require available epoxy coating. The possibility of a light to aid in identification of actuated units should be considered.

Our galvanized aircraft cable with either vinyl or nylon coating should be used with the control to assure proper actuation with no stretching. The cable should be supported by eyebolts every 8-10 feet (3m). These supports ensure that the weight of the cable alone will not actuate the control. For ease of installation, we offer a kit (PCD-K and PCLR-K) that includes all components and correct quantities for the proper installation of one unit.

EXCLUSIVE FEATURES

1. The housing is cast aluminum, with optional epoxy coating available (for additional corrosion resistance).
2. Single ended units are actuated via a cable pull from one direction, while double-ended units can be actuated from either or both directions. The model PC units come standard with a 16 lb. pull force, however units can be manufactured with a 25 lb pull force. Add "-25" to the end of the model number.
3. The unit is mounted on the conveyor by drilling (4) 13/32" diameter holes.
4. General purpose (weatherproof) units and explosion proof units have (2) 1" NPT conduit openings.
5. The units with "S" type microswitches (SP/DT) have dry, unpowered microswitch(es) rated for 20A @ 120 VAC, 240 VAC, and 480 VAC.
6. The units with "T" type microswitches (Two-Circuit Double-Break) have dry, unpowered microswitch(es) rated for 15A @ 120 VAC, 240 VAC, 480 VAC and 600 VAC.
7. Highly visible red polyester powder coated flag arm for quick identification of actuation.
8. Optional red warning light available for dark or remote locations.
9. The ambient temperature range is -14°-104°F (-25°- 40°C).





AVAILABLE MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS.
PCL-2S	Left Ended unit with 2 Single Pole Double Throw (SP/DT) Microswitches*	12
PCR-2S	Right Ended unit with 2 Single Pole Double Throw (SP/DT) Microswitches*	12
PCD-4S	Dual Ended unit with 2 Single Pole Double Throw (SP/DT) Microswitches per end*	16
PCR-2T	Right Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches*	12
PCL-2T	Left Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches*	12
PCD-4T	Dual Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches per end*	16
PCL-2SX	Left Ended unit with 2 Single Pole Double Throw (SP/DT) Microswitches**	12
PCR-2SX	Right Ended unit with 2 Single Pole Double Throw (SP/DT) Microswitches**	12
PCD-4SX	Dual Ended unit with 2 Single Pole Double Throw (SP/DT) Microswitches per end**	16
PCR-2TX	Right Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches**	12
PCL-2TX	Left Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches**	12
PCD-4TX	Dual Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches per end**	16
PCD-4SD	Dual Ended unit with 2 Single Pole Double Throw (SP/DT) Microswitches per end***	16
PCR-2TD	Right Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches***	12
PCL-2TD	Left Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches***	12
PCD-4TD	Dual Ended unit with 2 Two Circuit Double Break (TC/DB) Microswitches per end***	16

*GENERAL PURPOSE NEMA TYPE 3, 3S, 4, 4X

** EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C, D; Type 9: Class II (Div. 1 & 2), Groups E, F, G

***DUAL RATED NEMA TYPE 4, Type 9: Class II (Div. 1 & 2), Groups E, F & G Compliant

ACCESSORIES

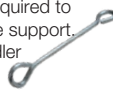
CABLE SUPPORT EYE BOLT

1" eye x 6" zinc plated.
1/2"-13 x 2 1/2" thread.
Includes two nuts and one lock washer.
PC-27



DOUBLE-ENDED CABLE SUPPORT EYE BOLT

Drilling is not required to install this cable support.
Installs under idler bolt.
Item # RS-23



PIGTAIL-STYLE CABLE SUPPORT EYE BOLT

1/2" x 6" Plated, with (2) hex nuts and (1) lock washer.
Item # RS-27P



SAFETY CABLE

3/32" x 7x7 preformed, galvanized aircraft cable. Available with either orange vinyl or orange nylon protective coating.
3/16" O.D.
Vinyl Coated PC-25
Nylon Coated PC-26



CABLE END FITTING

Forged steel saddle and steel U-bolt. Galvanized.
PC-28



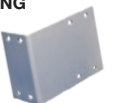
CONDUIT PLUG

1" metal, socket head conduit plug.
PC-29



PC MOUNTING BRACKET

PC-30



PCD-K

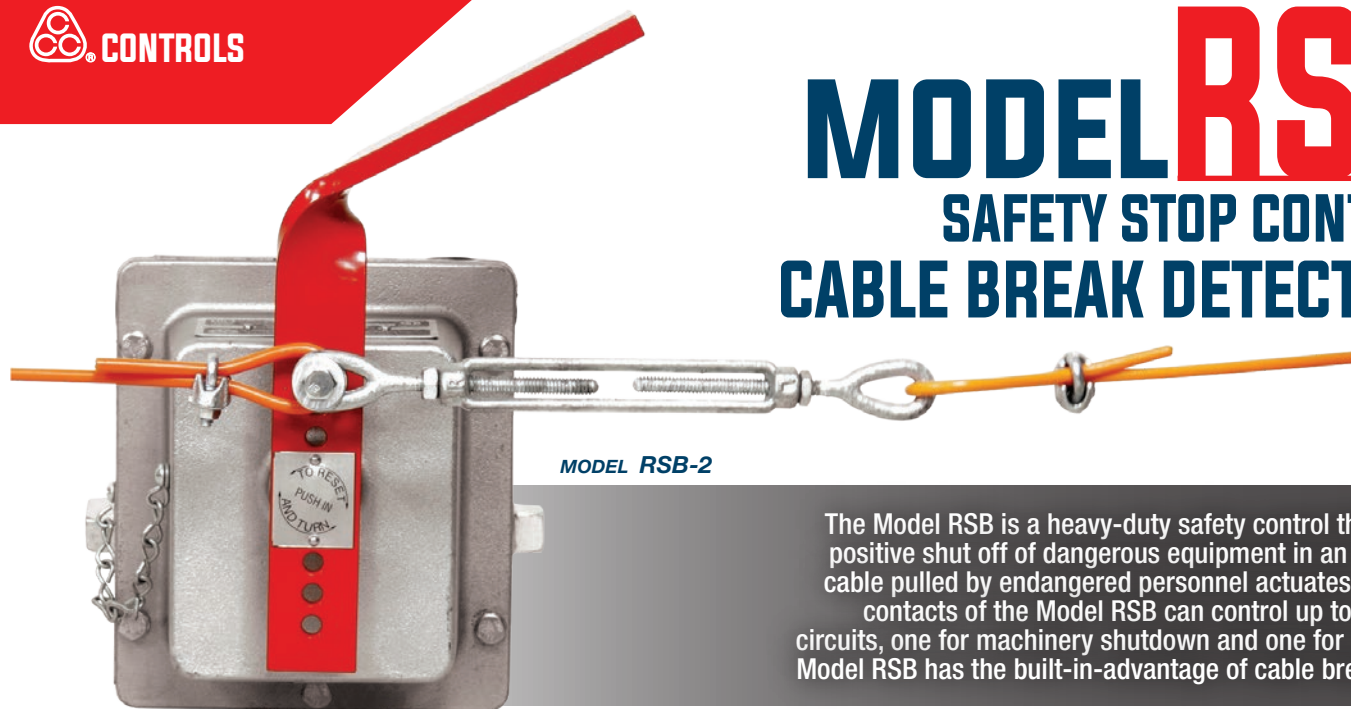
Double-ended (PCD units) accessory mounting kit includes: 2 pieces (105 feet each) pull cable (PC-25), 20 eyebolts (PC-27), 8 cable clamps (PC-28), 1 mounting bracket (PC-30).



PCLR-K

Single-ended (PCL & PCR units) accessory mounting kit includes: 1 piece (105 feet) pull cable (PC-25), 10 eyebolts (PC-27), 4 cable clamps (PC-28), 1 mounting bracket (PC-30).





MODEL RSB-2

MODEL RSB

SAFETY STOP CONTROL CABLE BREAK DETECTION

The Model RSB is a heavy-duty safety control that provides a positive shut off of dangerous equipment in an emergency. A cable pulled by endangered personnel actuates it. The output contacts of the Model RSB can control up to two separate circuits, one for machinery shutdown and one for an alarm. The Model RSB has the built-in advantage of cable break detection.

BUILT IN BROKEN CABLE DETECTION

Designed to act as an emergency stop pull cord control on conveyors and other moving machinery that incorporates built-in broken cable detection. The Model RSB has extension springs, attached to opposite ends of the pull cable, which maintain the cable under constant tension. The RSB is mounted so that it is centered between the end springs. In this way, temperature changes, which cause cable length changes, are canceled out. The operating handle is held in the center vertical position with the internal switch in a normally closed condition.

If the cable is pulled or the cable breaks, the handle rotates to release the switch lever. In this way, the alarm signal is generated for either condition. The operating handle must be manually reset back to the center position after the cause has been corrected.

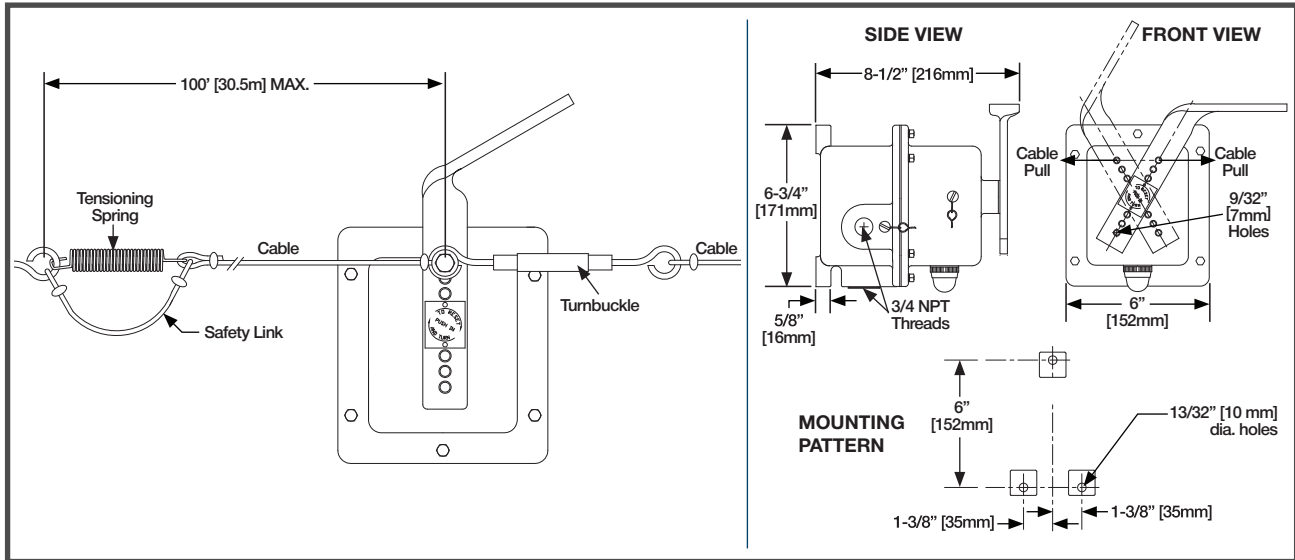
DETERMINATION OF NUMBER OF UNITS REQUIRED

The Model RSB control is designed so that a maximum of 100 feet (30m) of cable can be used on each side of the unit. A single control can therefore cover a maximum of 200 feet of conveyor belt or other machinery. The electrical characteristics of the application will determine the type of microswitches to be specified in the unit. The environmental considerations will determine whether or not the unit is to be explosion proof or require available epoxy coating. The possibility of a light to aid in identification of actuated units should be considered. Our galvanized aircraft cable with either vinyl or nylon coating should be used with the control to assure proper actuation with no stretching. The cable should be supported by eyebolts every 8-10 feet (3m). These supports ensure that the weight of the cable alone will not actuate the control. For ease of installation, we offer a kit (RS-K) that includes all components and correct quantities for the proper installation of one unit.

EXCLUSIVE FEATURES

1. The housing is cast aluminum, with optional epoxy coatings available.
2. The unit can be actuated via a cable pull from either direction, in other words, the unit is "double-ended". Pull cable is required on EACH side of RSB unit (+/- 5 feet).
3. The unit is mounted on the conveyor by drilling (3) 13/32" diameter holes.
4. All units have (3) 3/4" NPT conduit openings.
5. The standard units have dry, unpowered SP/DT microswitch(es) rated for 20A @ 120 VAC, 240 VAC, and 480 VAC; 1/2 amp at 125 VDC and 1/4 amp at 250 VDC.
6. Special spring tensioning kits included with each RSB unit provide stability due to temperature fluctuations, and ease of cable adjustment.
7. All models are rated ambient -13° to 104°F (-25° to 40°C).
8. The general purpose units are rated NEMA type 4/4X weatherproof and corrosion-resistant. Explosion proof units are rated NEMA type 7/9 for dust ignition proof and vapor explosion proof. Specifically, they are listed for Class I, Div. 1, Groups C and D; and Class II, Div 1, Groups E, F and G. The dual-rated "D" units are rated NEMA type 4X weatherproof and NEMA type 9 dust ignition proof. Specifically, they are listed for Class II, Groups E, F and G.
9. The general purpose controls meet or exceed IP65.
10. UL Listed and CSA Certified.

MODEL RSB DIMENSIONAL INFORMATION



AVAILABLE MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS.
RSB-2	2 Single Pole Double Throw (SP/DT) Microswitches *	13
RSB-5	2 Double Pole Double Throw (DP/DT) Microswitches *	13
RSB-2L	2 Single Pole Double Throw (SP/DT) Microswitches and Red Incandescent signal lamp *	14
RSB-5L	2 Double Pole Double Throw (DP/DT) Microswitches and Red Incandescent signal lamp *	14
RSB-2X	2 Single Pole Double Throw (SP/DT) Microswitches **	13
RSB-5X	2 Double Pole Double Throw (DP/DT) Microswitches **	13
RSB-2XL	2 Single Pole Double Throw (SP/DT) Microswitches and Red Incandescent signal lamp **	14
RSB-5XL	2 DP/DT Microswitches and Red Incandescent signal lamp **	14
RSB-2D	2 Single Pole Double Throw (SP/DT) Microswitches ***	13
RSB-5D	2 Double Pole Double Throw (DP/DT) Microswitches ***	13

*GENERAL PURPOSE NEMA TYPE 1, 3, 3R, 4, 4X

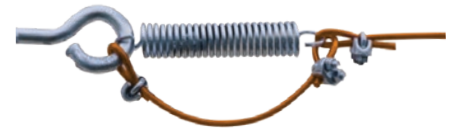
**EXPLOSION PROOF NEMA TYPE e 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II

(Div. 1 & 2), Groups E, F & G"

***DUAL RATED NEMA TYPE 3, 4, 4X; Type 9: Class II (Div. 1 & 2), Groups E, F & G



RS-30 BRACKET for mounting the Model RSB stop switch to the conveyor stringer at an idler.



Spring Tensioning Kit with cable safety link. (included with every RSB unit)



RS PULL CORD ACCESSORY MOUNTING KIT

Includes everything you need to properly install the CCC MODEL RS Pull Cord Safety Stop Switch.

- (2) 105' Pull Cable (RS-25)
- (20) Eyebolts (RS-27)
- (8) Cable Clamps (RS-28)
- (1) Mounting Bracket (RS-30)

Item # RS-K

CABLE SUPPORT EYE BOLT

1/2" x 6" plated 2-1/2" long N.C. thread. 1" eye, two nuts and one lock washer.

Item # RS-27



PIGTAIL-STYLE CABLE SUPPORT EYE BOLT

1/2" x 6" Plated, with (2) hex nuts and (1) lock washer.

Item # RS-27P



DOUBLE-ENDED CABLE SUPPORT EYE BOLT

Drilling is not required to install this cable support. Installs under idler bolt.

Item # RS-23



SAFETY CABLE

3/32" x 7x7 preformed, galvanized aircraft cable. Protective coating in either orange coated vinyl or nylon. 3/16" O.D.

Item # RS-25 (vinyl)
RS-26 (nylon)



CONDUIT PLUG

3/4" metal, socket head conduit plug.

Item # RS-29
or # RS-29X



CABLE END FITTING

Secures protective cable to switch hand and supports.

Item # RS-28



MODEL TA

BELT ALIGNMENT CONTROL



BELT ALIGNMENT MADE SIMPLE

The model TA Conveyor Belt Alignment Control protects conveyor belts from damage due to belt misalignment or runoff. These controls are used in pairs with the control placed on each side of the conveyor belt. Each unit can be equipped with two microswitches to produce signals indicating belt misalignment at two deviation points. The first signal point could indicate a small belt deviation by sounding an alarm. The second signal point could guard against extreme belt runoff by shutting down the conveyor.

Each control consists of an aluminum housing with a red powder-coated roller. The roller is adjustable up to 90° in both directions and is positioned approximately 1" from the conveyor belt. The control actuation points are adjustable from 0° to 45° by a simple change of the actuating cam(s). The model TA can be furnished with general purpose or explosion proof construction. Epoxy coated cast aluminum housing available upon request.

AVAILABLE MODELS

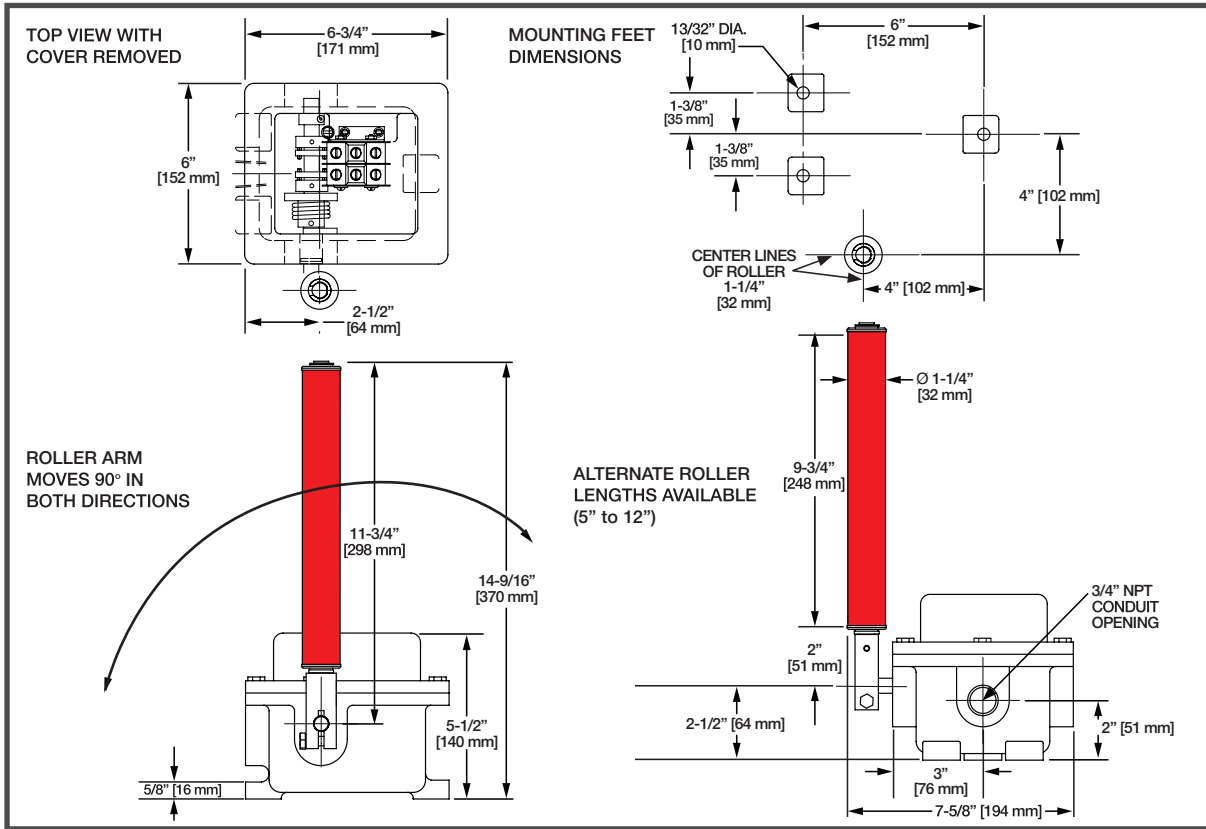
MODEL	DESCRIPTION	SHPG. WT. LBS.
TA-2	2 Single Pole Double Throw (SP/DT) Microswitches*	11
TA-5	2 Double Pole Double Throw (DP/DT) Microswitches*	11
TA-2X	2 Single Pole Double Throw (SP/DT) Microswitches**	11
TA-5X	2 Double Pole Double Throw (DP/DT) Microswitches**	11
TA-2D	2 Single Pole Double Throw (SP/DT) Microswitches***	11
TA-5D	2 Double Pole Double Throw (DP/DT) Microswitches***	11

*GENERAL PURPOSE NEMA TYPE 3S, 4, 4X, & 5

***EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div. 1 & 2), Groups E, F & G"

***DUAL RATED NEMA TYPE Type 3S, 4, 4X, 5; Type 9: Class II (Div. 1 & 2), Groups E, F & G

MODEL TA DIMENSIONAL INFORMATION



NUMBER OF UNITS RECOMMENDED

No less than four alignment controls should be installed on each conveyor, one on each side of the belt near the head and tail pulleys. For longer conveyors, we recommend an additional pair every 250 to 500 feet.

TA MOUNTING BRACKET Fits all TA Models. TA-30



Special Roller with Ball Bearing Ends

available: Roller ball bearings denoted by yellow end-cap.

Note: Standard roller has white polymer plain bearings.

Add "-RBB" to end of model number.



EXCLUSIVE FEATURES

1. **MANUAL RESET:** A positive lock-out model with manual reset is available. Available only on General Purpose units.
2. **SP/DT microswitches:** Individually adjustable. Rated 20 amp at 125, 250, or 480 VAC, 1/2 Amp 125 VDC; 1/4 Amp 250 VDC.
3. **DP/DT microswitches:** Individually adjustable. Rated 15 amp at 125, 250 VAC.
4. **Switches may be wired for single throw operation, either normally open or normally closed as required.**
5. **STANDARD CONSTRUCTION:** Rubber gaskets seal units against dust and rain for NEMA 4, 4X outdoor applications. Applies to weatherproof units only. NEMA 7/9 units also available (without gasket).
6. **HOUSING:** Aluminum. Epoxy coating available.
7. **CONDUIT OPENING:** One 3/4" NPT conduit opening.
8. **ACTUATING ARM:** Red powder-coated steel roller with stainless steel shaft.
9. **EXTERNAL HARDWARE:** Stainless steel.
10. All models are rated ambient -13° to 104°F [-25° to 40°C].
11. **Enclosure Ratings:** TA-2, TA-4, TA-5: C-UL-US Types 3S, 4, 4X & 5.
12. TA-2X, TA-4X, TA-5X: C-UL-US for Class I, Groups C & D; Class II, Groups E, F & G; Class III Hazardous Locations.
13. TA-a2D, TA-4D, TA-5D: C-UL-US Types 3S, 4, 4X & 5; Class II, Groups E, F & G; Class III Hazardous Locations.
14. **CERTIFICATION:** cULus Listed.
15. **Special 5" (shorter) height roller available,** add "-R5" to end of model number. Other alternate roller lengths available (5" minimum to 12" maximum, standard style roller only, not ball bearing style).
16. **Special 304 stainless steel roller (with red polyester powder coating) available,** add "SS" to end of model number and \$ to the price. Currently not available in ball bearing version.
17. **Special roller with ball bearing ends available,** add "-RBB" to end of model number and \$82.00 to the price. The "-RBB" roller is 9-3/4" inches in length, same length as the standard roller. Shorter "-RBB" lengths possible, such as 5" (-RBB-R5), 6" (-RBB-R6), 7" (-RBB-R7), 8" (-RBB-R8) or 9" (-RBB-R9).

MODEL **BA**

HEAVY DUTY BELT

ALIGNMENT CONTROL PREVENTS CONVEYOR BELT RUN-OFF



MODEL BA-2X
(EXPLOSION PROOF)

- *Inexpensive protection for conveyor belts.*
- *Easy to install. Can be bolted directly to discharge chute or mounted to conveyor frame.*
- *Stainless ball bearings, spring, and pivot.*
- *UL and CSA Listed switches: weather tight or explosion proof.*
- *Rugged and durable — not a light duty “whisker” switch.*

PROTECTS VALUABLE CONVEYOR BELTS FROM SEVERE DAMAGE

Model BA heavy duty conveyor belt alignment control protects valuable conveyor belts from severe damage due to belt misalignment or run-off. The Model BA makes sure that the belts are tracking properly. Prevents costly down time and unnecessary maintenance expense. Designed especially for bulk handling conveyor applications, it maintains a safeguard over equipment and keeps conveyor belts running.

Sometimes called a “side slip switch” or a “belt misalignment switch,” the Model BA operates on a very simple principal. Two controls are positioned close to the belt, one on each side, so that undesirable side to side motion of the belt will contact a switch roller. The roller “gives” just enough to actuate the switch. The signal generated by the actuated switch can be used to take appropriate action to re-align the conveyor belt, thus eliminating conveyor damage and serious down time.

CONSTRUCTION AND OPERATION

The Model BA belt alignment control has two basic welded steel components. The base housing and the roller housing. The roller housing contains the sensing roller and is attached to the base housing with a stainless steel pivot. The stainless steel pivot assures that movement will not be inhibited by corrosion. The roller and roller housing together are designed to pivot slightly when the roller is touched by the conveyor belt. The roller housing assembly actuates an enclosed switch mounted at the bottom of the base housing, it moves approximately 1/4” to actuate the switch. A stainless steel spring is mounted with a bolt at the bottom of the roller assembly to hold it away from the control except during actuation.

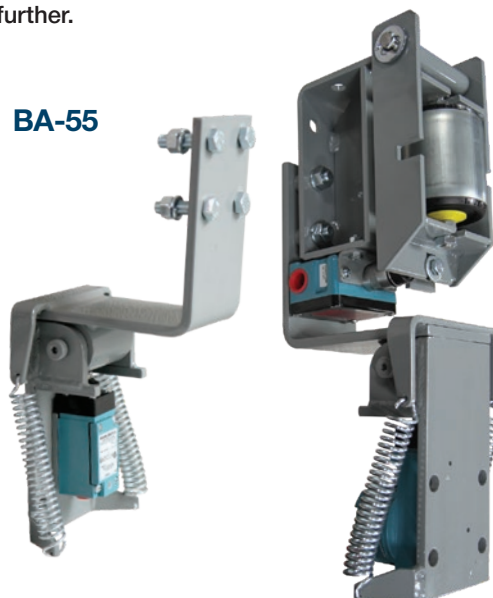
Microswitches are housed in either the standard weather-tight, or optional explosion proof enclosures.

The roller has stainless steel ball bearings and nylon labyrinth seals to prevent corrosion and entry of water or dirt.

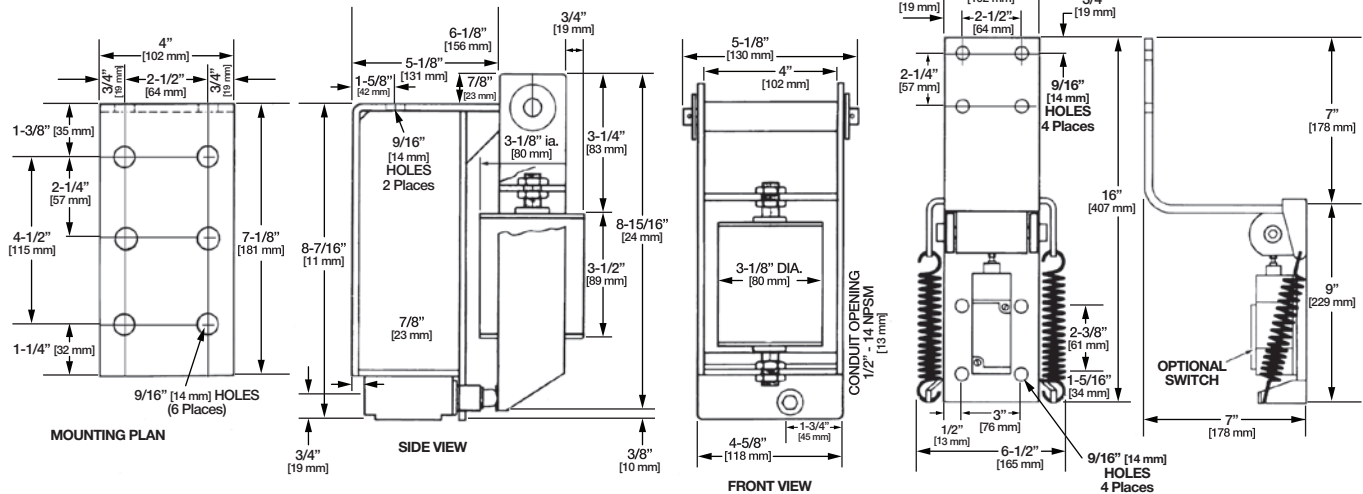
OPTIONAL BREAKAWAY MOUNT

This optional feature allows the Model BA to give a signal, and then to get out of the way if the belt does run-off, preventing serious damage to switches and belts. The breakaway mount is spring loaded and automatically returns the Model BA to its original position when the conveyor belt is realigned. It is designed so that the Model BA roller assumes a horizontal position when the breakaway mounting is actuated.

Breakaway mount is available with an optional microswitch to indicate the breakaway condition has occurred. Thus, two signals can be generated: First, a signal from the Model BA unit that the belt has deviated. Second, a signal from the breakaway switch that the belt has deviated further.



MODEL BA DIMENSIONAL INFORMATION



MODELS

MODEL	DESCRIPTION	ELECTRICAL RATING (BELOW)	SHPG. WT. LBS.
BA-1	1 Single Pole Double Throw (SP/DT) Microswitch*	1	18
BA-1X	1 Double Pole Double Throw (DP/DT) Microswitch*	3	18
BA-2	1 Single Pole Double Throw (SP/DT) Microswitch**	2	21
BA-2X	1 Double Pole Double Throw (DP/DT) Microswitch**	2	21

*GENERAL PURPOSE NEMA TYPE 1,3,4 & 13
 **EXPLOSION PROOF NEMA TYPE 7: Class I, Groups C, D; Type 9: Class II, Groups E, F, G

MODEL BA - ACCESSORIES

MODEL	DESCRIPTION	SHPG. WT. LBS.
BA-5*	Optional "Break Away" Mounting	10
BA-55*	Optional "Break Away" Mounting with additional SP/DT Microswitch	15
BA-55X*	Optional "Break Away" Mounting with additional Explosion Proof SP/DT Microswitch	15

*BA Belt Alignment Control purchased separately

NUMBER OF UNITS RECOMMENDED

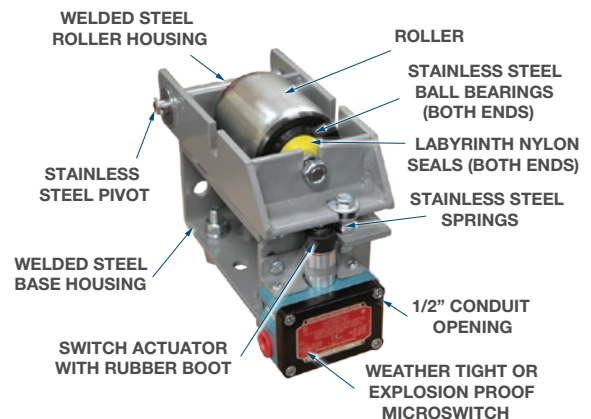
No less than four alignment controls should be installed on each conveyor, one on each side of the belt near the head and tail pulleys. For longer conveyors, we recommend an additional pair every 250 to 500 feet.



Shown are two BA units protecting a valuable conveyor belt from damage due to belt misalignment or run-off at an aggregate facility.

SWITCH ELECTRICAL RATINGS

- 20 Amp @ 125, 250, or 480 VAC;
 10 Amp @ 125 VAC "L"; 1 HP @ 125 VAC;
 2HP @ 250 VAC; 1/2 Amp @ 125 VDC;
 1/4 Amp @ 250 VDC.
- 10 Amp @ 125 or 250 VAC; 0.3 Amp @ 125 VDC;
 0.15 Amp @ 250 VDC
- 10 Amp @ 125, 250 or 480 VAC;
 1/2 Amp @ 125 VDC; 1/4 Amp @ 250 VDC.



NEW & IMPROVED!

MODEL VA

BELT ALIGNMENT CONTROL FOR VERTICAL BELTS



MODEL VA

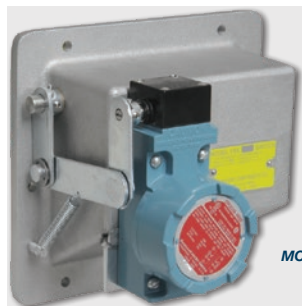
This Belt Alignment Control is designed to protect elevator legs from the severe damage that results from misalignment of vertical conveyor belts. When used in pairs, these controls can be wired to give signals such as turning on a warning device and/or can be connected directly into the starter motor circuit to stop the belt.

**THE MOST ECONOMICAL METHOD OF
MEETING OSHA REQUIREMENTS**

ENSURES THAT YOUR BELT IS TRACKING PROPERLY

Protect your valuable conveyor belt from severe damage caused by belt misalignment, prevent costly downtime and increase production with Conveyor Components Company's Model VA belt alignment control. Designed for use on bucket elevators, the Model VA ensures that your belt is tracking properly.

Normally installed in pairs on each side of the conveyor belt near the head pulley and/or the tail pulley, these heavy-duty controls consist of a conveyor roller with sealed bearings, four bar linkage and a double pole/double throw microswitch. The roller detects any belt run-off and will trigger the first pole of the microswitch to sound a warning alarm, illuminate an indicator light, or stop the conveyor completely when the vertical belt strays beyond 15° from horizontal. The second pole is triggered when the belt strays 25° from horizontal and can be wired to stop the conveyor motor. To eliminate false signals the controls should be mounted about one inch away from the belt.

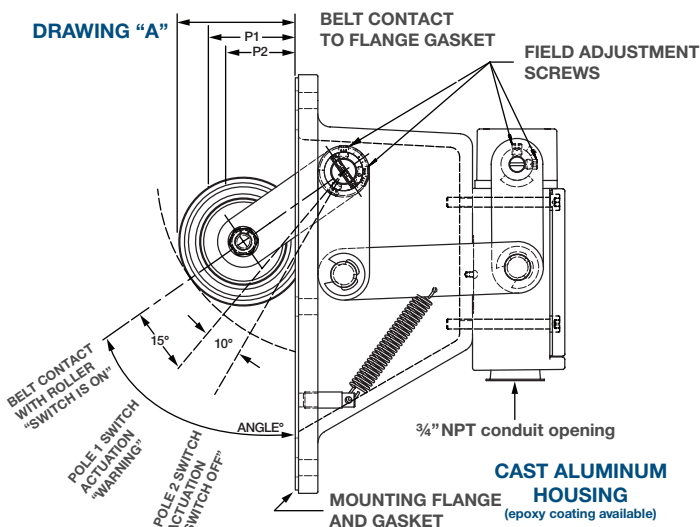


MODEL VA-X

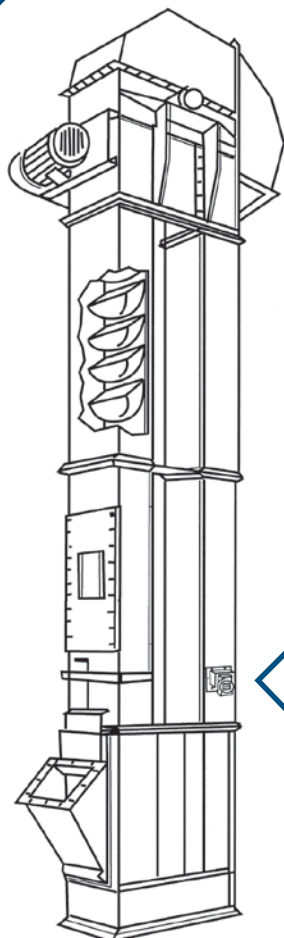
HOW IT OPERATES

The control has double pole/double throw circuitry. The four bar linkage connects the roller's pivot shaft to the switch actuator. The roller is held into position by roll pins and set screws.

When the roller is displaced 15°, the first pole of the switch is triggered. This pole can be wired to sound a warning alarm, light an indicator light, or stop the conveyor. The second pole is triggered after the roller is displaced an additional 10°. This pole could also be wired to stop the conveyor motor. Drawing "A" shows a range of roller orientations and the allowable travel for each stage.



MODEL VA TECHNICAL INFORMATION



CONFIGURATION OF UNITS

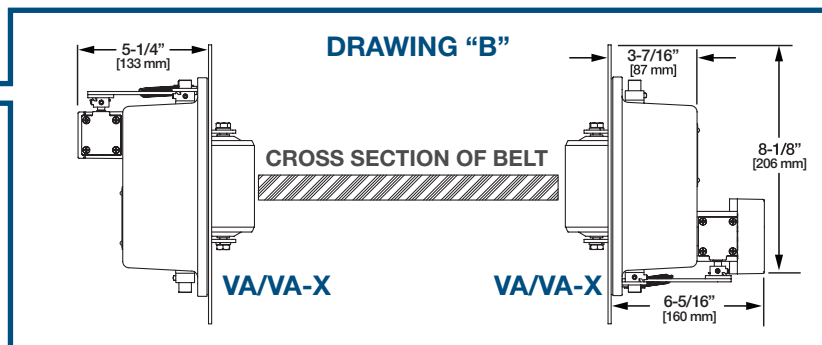
The Belt Alignment Controls should be mounted in a location that allows them to be directly across from each other. This will give the most accurate alignment reading. See Drawing "B" for an illustration.

PREPARING THE CHUTE:

1. The Vertical Bucket Elevator Control is mounted directly onto the chute.
2. Locate the centerline of the conveyor belt on the return side of the conveyor system. Project this point onto the chute walls.
3. Use the supplied template to mark off all hole locations.

MOUNTING THE UNIT:

1. Measure distance between chute and conveyor belt edge.
2. Adjust conveyor roller to rest about 1/4" - 1/2" from conveyor belt edge.
3. With the housing gasket in place, line up the control's holes with the holes on the chute.
4. Place the 1/4" - 20 bolts through the holes and tighten with wrench.
5. Wire according to schematic.



MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS.
VA	1 sequential double break Microswitch *	10
VA-X	1 sequential double break Microswitch **	10

*GENERAL PURPOSE NEMA TYPE 3,4,4X, 6P & 13

**EXPLOSION PROOF NEMA TYPE 1, 3, 4, 6, 13; Type 7: Class I (Div. 1 & 2), Groups B, C & D; Type 9: Class II (Div. 1 & 2), Groups E, F & G

SPECIFICATIONS

EXPLOSION PROOF MICROSWITCH

- Meets NEMA Standards: 1, 3, 4, 6, 7, 9 and 13
- Class I, Div. 1, Groups B, C and D
- Class II, Div. 1, Groups E, F and G
- UL Listed and CSA Certified

GENERAL PURPOSE MICROSWITCH

- Meets NEMA standards: 1, 3, 4, 4X, 6P and 13
- UL Listed and CSA Certified

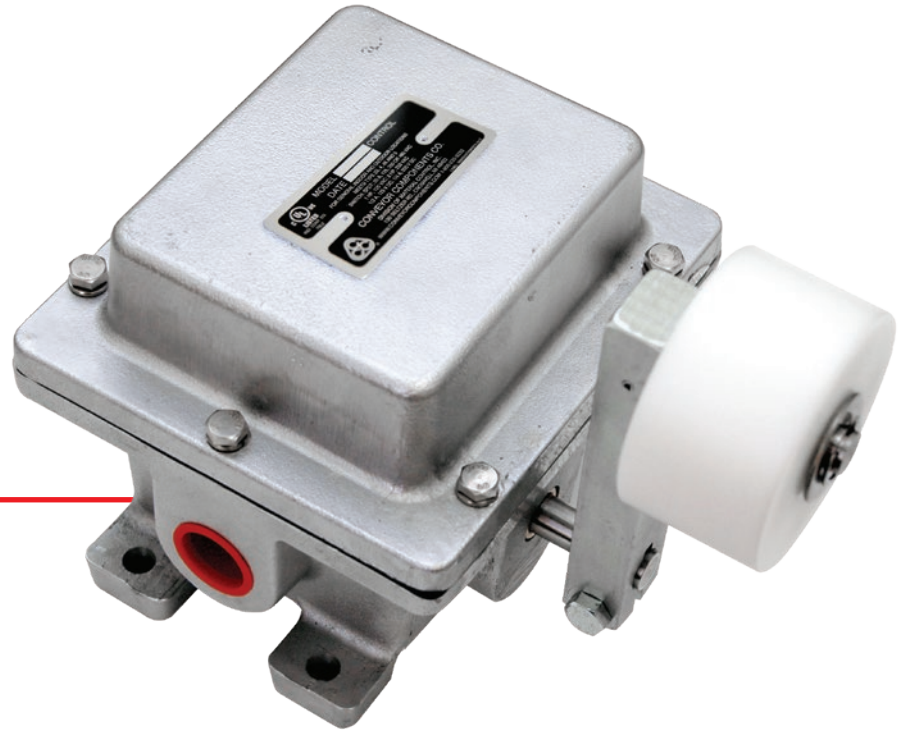
ELECTRICAL OUTPUT

- Double Pole/Double Throw
- 10 Amp - 120, 240, 480 VAC
- 0.8 Amp - 120 VDC
- 0.4 Amp - 240 VDC
- Conduit Connection: 3/4" NPT



MODEL TPS

TRIPPER POSITION CONTROL



HEAVY DUTY Limit Switch

The Model TA-TPS is a tripper position switch, which is a heavy duty limit switch commonly used to aid in positioning of the "tripper" on a conveyor with multiple discharge points or discharge chutes. The output contacts of the Model TA-TPS can control up to two separate circuits, one for machinery shutdown and one for an alarm. The Model TA-TPS is relatively inexpensive protection that provides benefit by savings time, money, and labor associated with bulk material transfer.

AVAILABLE MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS.
TA-2-TPS	2 Single Pole Double Throw (SP/DT) Microswitches*	9
TA-5-TPS	2 Double Pole Double Throw (DP/DT) Microswitches*	9
TA-2X-TPS	2 Single Pole Double Throw (SP/DT) Microswitches**	9
TA-5X-TPS	2 Double Pole Double Throw (DP/DT) Microswitches**	9
TA-2D-TPS	2 Single Pole Double Throw (SP/DT) Microswitches***	9
TA-5D-TPS	2 Double Pole Double Throw (DP/DT) Microswitches***	9

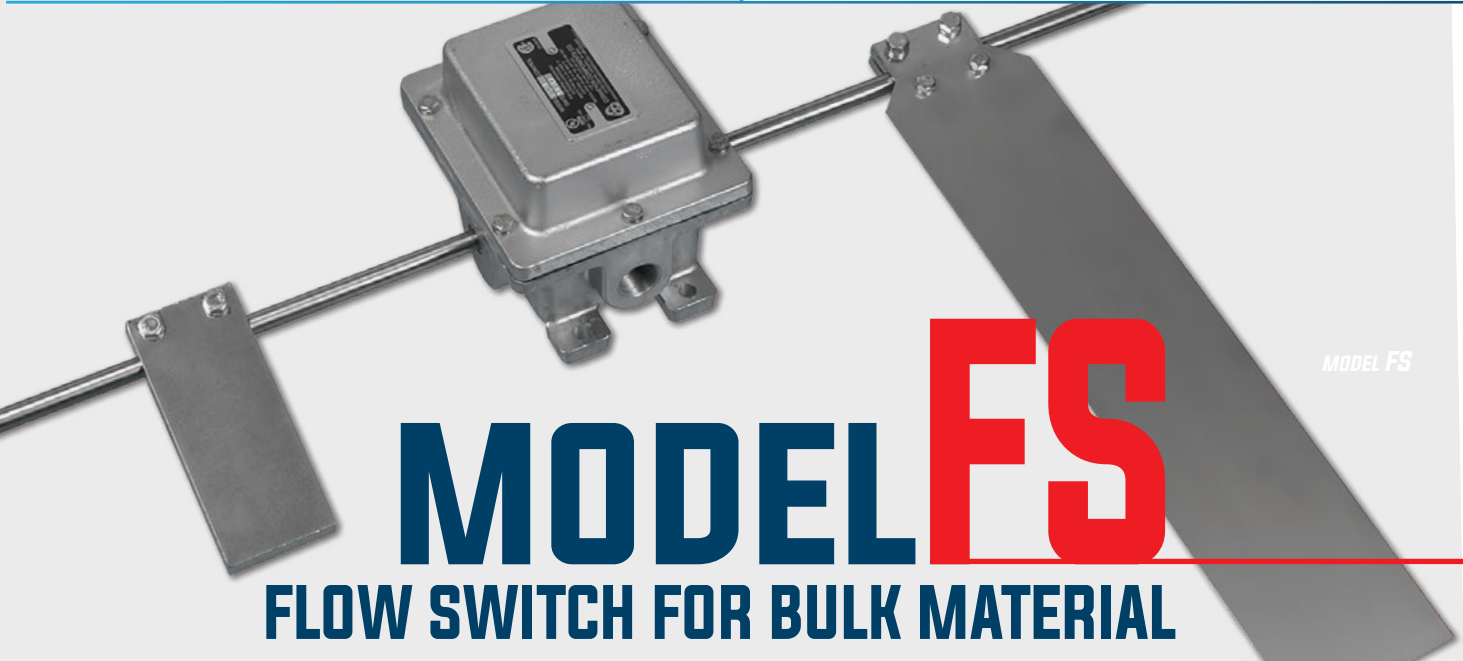
*GENERAL PURPOSE NEMA TYPE 3S, 4, 4X, & 5

***EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div. 1 & 2), Groups E, F & G"

***DUAL RATED NEMA TYPE 3S, 4, 4X, 5; Type 9: Class II (Div. 1 & 2), Groups E, F & G

EXCLUSIVE FEATURES

1. The housing is cast aluminum, with optional epoxy coating available. The roller is a heavy duty white acetal material of 3" diameter.
2. The unit is mounted on the conveyor by drilling (3) 13/32" diameter holes.
3. General purpose (weatherproof) units and explosion proof units have (1) 3/4" NPT conduit opening.
4. SP/DT microswitches: Individually adjustable. Rated 20 amp at 125, 250, or 480 VAC, 1/2 Amp 125 VDC; 1/4 Amp 250 VDC.
5. DP/DT microswitches: Individually adjustable. Rated 15 amp at 125, 250 VAC.
6. The roller arm can move up to 90 degrees in either direction. Roller is spring loaded to automatically reset itself.
7. All models are rated ambient -13° to 104°F (-25° to 40°C).
8. The general purpose units are designed NEMA Type 4/4X weatherproof and corrosion-resistant and NEMA Type 5 dust-tight. Explosion proof units are designed NEMA Type 7/9 for dust ignition proof and vapor explosion proof. The dual-rated "D" units are designed NEMA Type 4X weatherproof and NEMA Type 9 dust ignition proof.
9. The general purpose controls are IP65 compliant.
10. Certification: cULus Listed.



MODEL FS

FLOW SWITCH FOR BULK MATERIAL

FS Flow Switch

The Model FS Flow Switch is designed to produce a signal if the flow of material at any critical point is interrupted. This signal can then be used to correct the difficulty and/or warn the operator.

Several switches can be used, each one placed at critical points along the conveying system. A continuous flow of material past the switch holds the paddle-shaft-counterweight assembly out of the actuated position. If flow stops, the paddle is allowed to pivot and actuate the switch.

Fully adjustable, the paddle and counterweight assemblies can be positioned at various points along the shaft and rotated to any angular position. The shaft itself will adjust laterally. Inside, the actuating cams can be rotated so that switch actuation will occur at predetermined points.

MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS
FS-2	General Purpose*, 2 SP/DT microswitches	18
FS-2X	Explosion proof** with 2 SP/DT Microswitches	18
FS-2D	2 Single Pole Double Throw (SP/DT) Microswitches***	18
FS-5	General Purpose*, 2 DP/DT Microswitches	18
FS-5X	Explosion Proof** with 2 DP/DT Microswitches	18
FS-5D	2 Double Pole Double Throw (DP/DT) Microswitches***	18

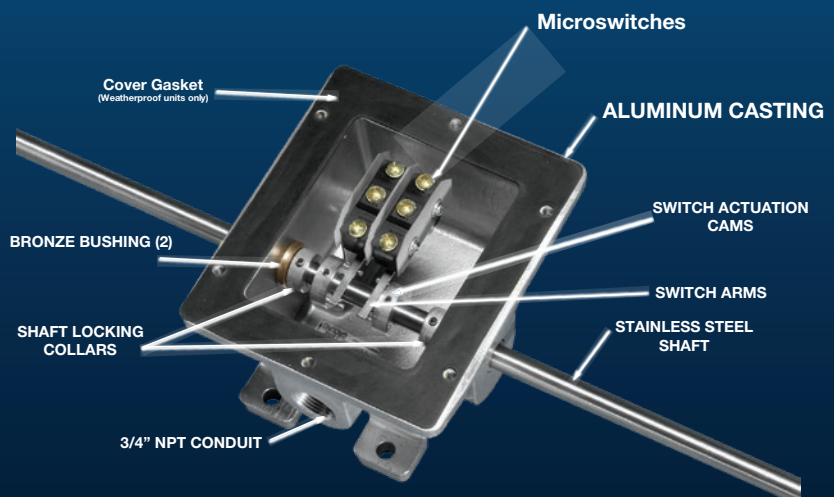
*GENERAL PURPOSE NEMA Type 4 & 4X

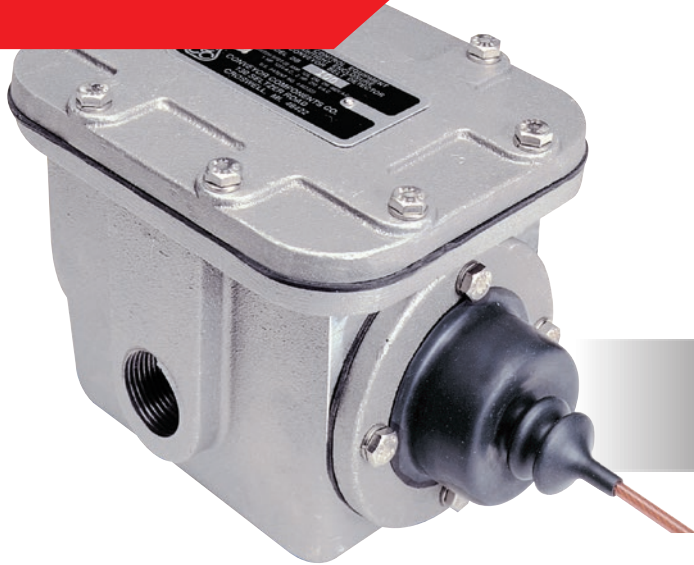
**EXPLOSION PROOF NEMA 7/9: Class I, Div 1 & 2, Groups C & D; Class II, Div. 1 & 2, Groups E, F & G

***DUAL RATED NEMA TYPE Type 3S, 4, 4X, 5; Type 9: Class II (Div. 1 & 2), Groups E, F & G

This versatile switch can be mounted on all types of conveyors and feeders: in discharge openings of bins, bunkers, or hoppers; in angled and vertical chutes; or in discharge chutes of any configuration. It is available with aluminum housing, and in standard or explosion proof models. The paddle and shaft are both stainless steel.

The Model FS is versatile enough to be used in a variety of applications; it can provide proof that material is actually flowing from a chute onto a conveyor belt, or it can be used to actuate a misting system to reduce dust only when material is present.





MODEL DB

DAMAGED BELT DETECTOR

**AN EARLY WARNING SYSTEM
FOR DAMAGED BELTS**

EXTRA MEASURE OF PROTECTION

Economical and easy to install, they warn supervisory personnel of impending belt failures due to rips, punctures, splice failures, or sharp objects protruding through the belt fabric.

Damaged Belt Detectors mount in pairs positioned on either side of the belt. The units are connected by two spans of vinyl coated aircraft cable. One end of the cable mounts permanently to a support bracket and the other connects to a spring-loaded ball located in the unit. The cables loop underneath the belt from each side crossing at the midpoint. A belt problem is detected when an object or a piece of damaged belt hangs below the belt's surface and sweeps away one or both cables.

As the cable is detached, it pulls a spring-loaded ball out of a socket, causing two microswitches to sound an alarm or to shut down the conveyor. One end of each cable is permanently affixed to the bracket preventing the loss of the cable.

The Damaged Belt Detector operates using a spring-loaded ball and socket connected to two plunger type microswitches. As an object hanging below the belt sweeps away the cable, it pulls the ball connector from its socket (only 4 lbs. of force required). When this happens, a spring-loaded shaft is released causing the plungers of the two microswitches to ride down cam surfaces machined on the shaft. This deactuates the switches causing them to sound an alarm, turn on a warning light, or shut down the system. To reactivate the detectors, all that's required is to snap the ball connector and cable back into its socket.

EASY TO MAINTAIN

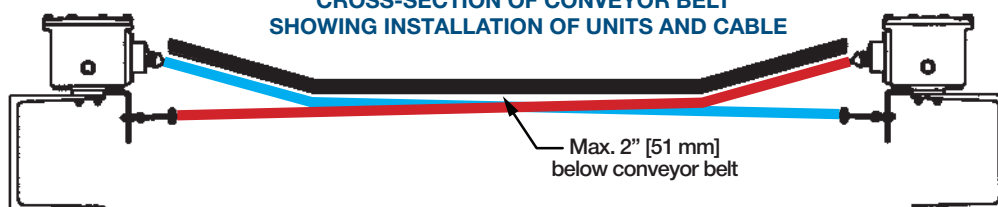
Damaged Belt Detectors are virtually maintenance free — thanks to their simple, yet tough construction. The units can be wired normally open or normally closed. Everything you need to install your system is included, and accessory or replacement items are always available.

COST EFFECTIVE

When you consider the cost of the average replacement belt, or the cost of repairing the mechanical damage from a torn belt, a damaged belt detection system is very inexpensive by comparison. Other than internally wired belts (tears are electronically indicated).



**CROSS-SECTION OF CONVEYOR BELT
SHOWING INSTALLATION OF UNITS AND CABLE**

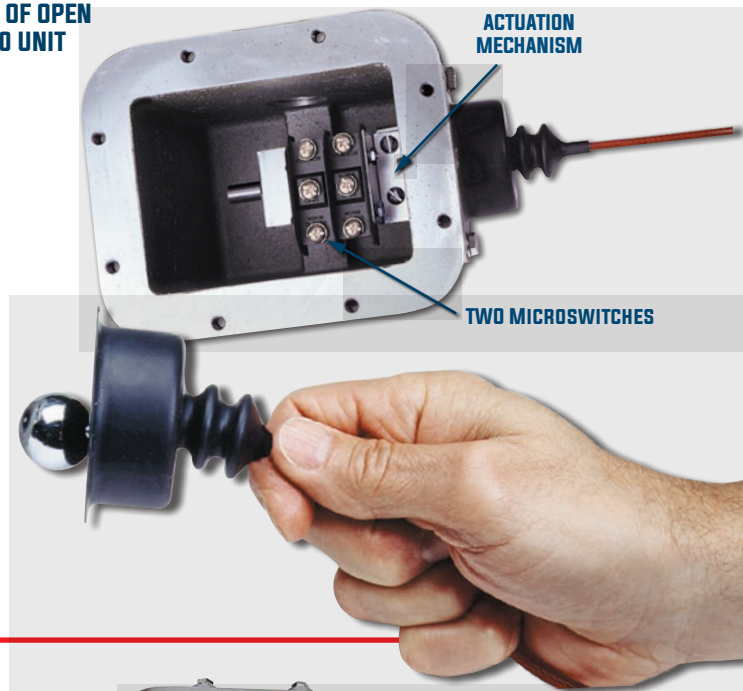


TOP VIEW OF OPEN DB-100 UNIT



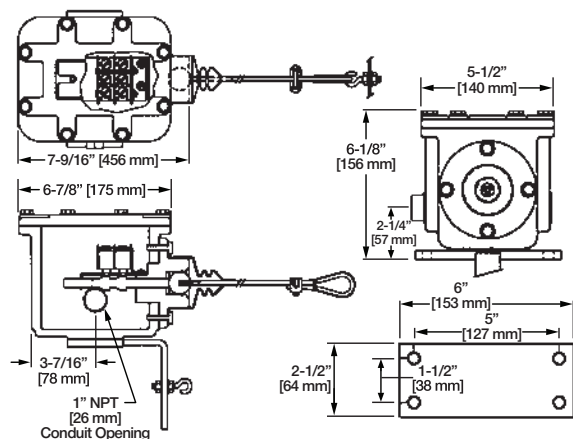
ACTUATION MECHANISM

TWO MICROSWITCHES



MODEL DB SHOWN WITH PROTECTIVE RUBBER BOOT WHICH SLIPS OFF WITH BALL AND CABLE WHEN UNIT IS ACTUATED. MOUNTING BRACKET (not shown) INCLUDED.

MODEL BA DIMENSIONAL INFORMATION



DB-100 unit shown with cable mounting bracket (included).



MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS
DB-100	2 Single Pole Double Throw (SP/DT) Microswitch, 4 lbs of pull force*	11
DB-500	2 Double Pole Double Throw (DP/DT) Microswitch, 4 lbs of pull force*	11
DBX-100	2 Single Pole Double Throw (SP/DT) Microswitch, 4 lbs of pull force**	11
DBX-500	2 Double Pole Double Throw (DP/DT) Microswitch, 4 lbs of pull force**	11
DBD-100	2 Single Pole Double Throw (SP/DT) Microswitch, 4 lbs of pull force***	11
DBD-500	2 Double Pole Double Throw (DP/DT) Microswitch, 4 lbs of pull force***	11

*GENERAL PURPOSE NEMA TYPE 4 & 4X

**EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div. 1 & 2), Groups E, F & G

***DUAL RATED NEMA TYPE 4, 4X; Type 9: Class II (Div. 1 & 2), Groups E, F & G

ACCESSORIES

MODEL	DESCRIPTION	SHPG. WT. LBS
DB-28	Cable End Fitting	1 oz.
DB-29	Conduit Plug, 1" NPT	6 oz.
20340008	DB Ball & 10 foot cable assembly with protective rubber boot	0.75

Housing: Aluminum (Standard). Epoxy coating available.

Conduit Opening: Two 1" NPT. Standard units and explosion proof models have two conduit openings.

External Hardware: Stainless Steel

Switches: SP/DT microswitch. Rated 20 amp at 125, 250 or 480V AC, 1/2 Amp 125 VDC; 1/4 Amp 250 VDC. Controls may be wired for single throw operation, either normally open or normally closed as required. DP/DT microswitches also available.

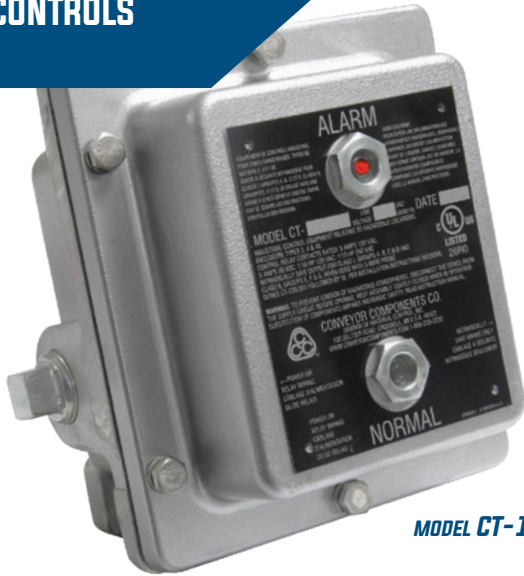
Standard unit "-100" is 4 lb. pull force. For optional 8 lb. or 16 lb. pull force retaining ring, add \$ USD to price, and change "-100" to either "-108" or "-116".



**Conveyor Components
Company** Division of Material
Control, Inc.

AIRMATIC[®]
WE'LL HANDLE IT.

**LEVEL
CONTROLS**



MODEL CT-105

MODEL CT

TILT LEVEL CONTROLS

RUGGED LEVEL CONTROLS

Designed for dry bulk material level indication and control applications. These cULus listed control units are enclosed in a rugged cast aluminum housing with LED indicator lights to alert the operator of either the presence or absence of material. Equipped with a surface mount PC board the unit now allows for a maximum of 5,000 feet of cable between the control unit and probe permitting the placement of the control unit in an easily accessible area.

Most models are equipped with intrinsically safe electronics, permitting the probe to be used in environments requiring explosion proof equipment. The control units are available in three different models for use in different environments. The Model CT-105 control unit is NEMA Type 4, 4X for use in general purpose outdoor applications and is dust proof and weather tight. The Model CT-106 control unit is NEMA Type 4, 4X and NEMA Type 9 dust ignition proof construction for use in hazardous locations. The Model CT-107 control unit is NEMA Type 7 explosion proof and NEMA Type 9 dust ignition proof construction for use in hazardous locations.



DETECT LEVELS OF DRY BULK MATERIALS IN A VARIETY OF LOCATIONS

FEATURES:

- Durable cast Aluminum NEMA Type housing with optional epoxy coating for corrosive environments.
- Explosion proof control units for use in hazardous locations: Model CT-106 and Model CT-107.
- Bright, energy efficient LED indicator lights.
- Up to 5,000 feet of cable length allows for control unit installation in easily accessible areas.
- Surface mount PC board resistant to shock and vibration.

ADVANTAGES:

- Optional stainless steel probes to safeguard against corrosion.
- Hanger fittings and mounting brackets available to permit easy suspension of probes from fixed supports.
- Our tilt probes are intrinsically safe and cULus listed when used in conjunction with the new CT Control Units: Models CT-105, CT-106 and CT-107.
- Heavy duty steel probes for abrasion resistance.
- Fail-Safe logic design defaults to safe condition when there is a loss of power.
- Adjustable time delay to prevent false signals.
- Low 12V DC probe for safety.
- Easy installation and low maintenance.
- Compact probes for use where space is limited.
- Probes are purchased separately. When not connected to our control unit they are not cULus listed.

Consisting of a Control Unit and a Tilt Probe, the Model CT senses the presence or absence of material. When suspended from a fixed support, the Probe indicates presence of material when it is tilted 15° for the mercury version or 25° for the non-mercury version. The circuit within the Probe is normally closed when vertical.



CONSTRUCTION DETAILS

The Model CT Control Unit is enclosed in a rugged cast aluminum housing with LED indicator lights labeled "Normal" and "Alarm" to indicate detection status. Within the housing a surface mount PC board has a logic selector switch and adjustable time delay to prevent false signals. There are three terminal contacts for connection to the Probe; three for the input power; and two sets of output contacts, each with one normally open, one normally closed, and one common. Signal lights, relay, and transformer are all accessible with the housing open.

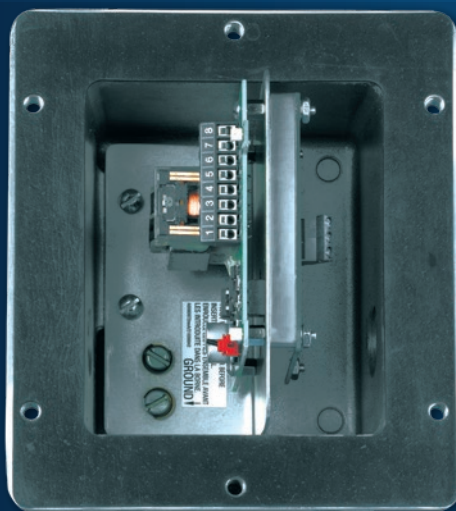
The Model CT Control Unit has a user configurable output relay (using normally closed contacts, normally open contacts or both) which is actuated by either the presence or absence of material. The relay provides a change in contacts as the Probe moves from vertical to tilt and vice versa.

The time delay is adjustable from 0.1 to 35 seconds. This adjustment will delay output relay action. The relay switches to the de-energized

position upon reaching the end of the delay period, as well as upon failure of power to the Control Unit.

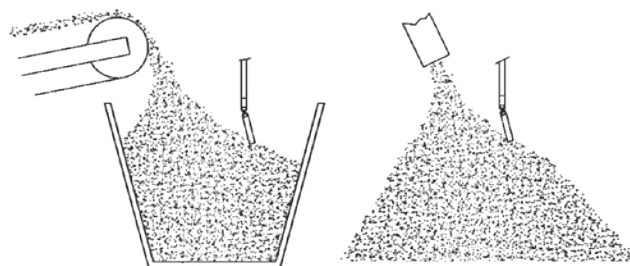
When used in conjunction with the new Control Units: Models CT-105, CT-106 and CT-107, the Probes are cULus Listed and intrinsically safe. Two Probe sizes are available.

The CT-200G is a compact 6 inch Probe for use on small bins and hoppers where space is limited. The CT-201G is our standard 9 inch, heavy duty Probe for applications where an abrasion resistant Probe is necessary. Both Probes are available in stainless steel for corrosive environments and optional fittings are available to permit easy suspension from fixed supports. Paddle options are available for use on moving materials as a flow indicator. Probes are air tight, dust tight, waterproof and come standard with 25 feet of three conductor 16-3 SO cable. Factory installed cable can be ordered up to 5,000 feet.



TYPICAL APPLICATIONS

- High level control on hoppers and silos
- Level detection under conveyor stackers
- Indicate back-up at conveyor transfer points
- High level detection in crusher outlets
- Detect high level in trippers
- Indicate plugged conditions in chutes
- Detect flow of material on conveyors
- High level indicator for loading rail cars or trucks



MODEL CT-200G

MODEL CT - CONTROL UNIT

MODEL	DESCRIPTION	SHPG. WT. LBS
CT-105	1 Double Pole Double Throw (DP/DT) relay for 120 VAC*	8
CT-105B	1 Double Pole Double Throw (DP/DT) relay for 240 VAC*	8
CT-105C	1 Double Pole Double Throw (DP/DT) relay for 24 VAC/VDC*	8
CT-106	1 Double Pole Double Throw (DP/DT) relay for 120 VAC***	8
CT-106B	1 Double Pole Double Throw (DP/DT) relay for 240 VAC***	8
CT-107	1 Double Pole Double Throw (DP/DT) relay for 120 VAC**	8
CT-107B	1 Double Pole Double Throw (DP/DT) relay for 240 VAC**	8

*GENERAL PURPOSE NEMA TYPE 3, 4, 4X

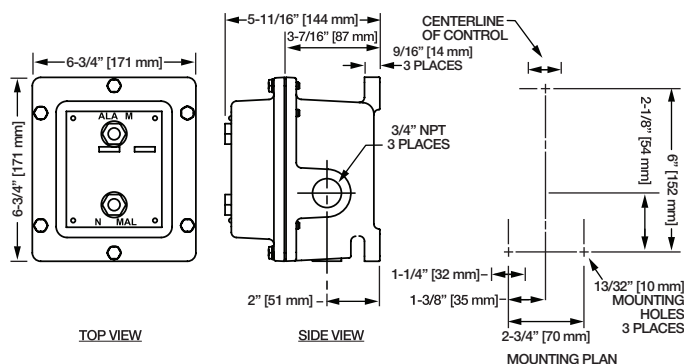
**EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div.1 & 2), Groups E, F & G

***DUAL RATED NEMA TYPE 3, 4, 4X; Type 9: Class II (Div. 1 & 2), Groups E, F & G



MODEL CT-107

CONTROL DIMENSIONS



CONTROL UNIT SPECIFICATIONS:

CT-105/CT-105B: NEMA Type 4, 4X

CT-106/CT-106B: NEMA Type 4, 4X

NEMA Type 9 Class II, Groups E, F and G

CT-107/CT-107B: NEMA Type 7 Class I, Groups C and D

NEMA Type 9 Class II, Groups E, F and G

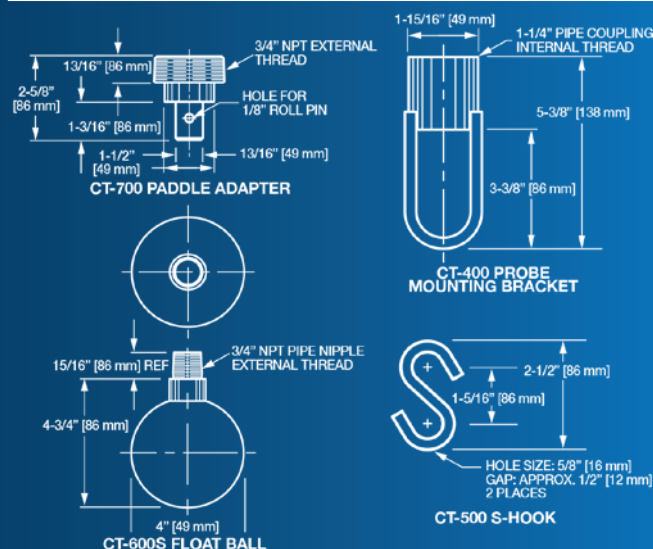
- Input Supply Voltage: Standard 120 VAC @ 50/60 Hz; or available 240 VAC @ 50/60 Hz (add suffix B to Model number)
- Power Consumption: 10 Watts
- Probe Voltage Output: 12 VDC
- Output Relay: DP/DT; 5 Amps, 120 VAC Resistive; 5 Amps, 240 VAC Resistive.
- Time Delay VR1: 0.1 to 35 Seconds. This adjustment will delay output relay action.
- Indicator Light: Normal (green): Illuminated when relay is energized.
- Indicator Light: Alarm (red): Illuminated when relay is de-energized.
- Power failure is indicated if neither light is illuminated.
- Logic Selector S1: This switch determines when the output relay actuates and de-actuates.
 - Position 1: Relay energizes when the Probe is in the vertical position. Relay de-energizes when Probe is in the tilted position.
 - Null: Middle position with no contact
 - Position 2: Relay energizes when Probe is in the tilted position. Relay de-energizes when Probe is in vertical position.

Probe Models CT-200G and CT-201G are cULus Listed and intrinsically safe when connected with CT-300G Cable to Conveyor Components Company's Control Units: Models CT-105, CT-106 and CT-107, and when used as intended and installed according to the manufacturer's instructions. Any other use or installation is not cULus Listed or intrinsically safe.

MODEL CT - ACCESSORIES

MODEL	DESCRIPTION	SHPG. WT. LBS
CT-300G	16-3 SO Probe Cable	0.09 lb./ft
CT-400	Probe Mounting Bracket	0.75
CT-500	S-Hook	0.5
CT-600S	Stainless Steel 4" Diameter Float Ball	0.5
CT-700	Paddle Attachment Adapter	0.15
CR-61	4 Vane Stainless Steel Paddle	0.4
CR-64	Rubber Flexible Paddle	0.4
CR-65	Stainless Steel Flexible Paddle	0.5

ACCESSORIES



AVAILABLE PROBE MODELS

MODEL CT - PROBES COMPACT 6"

MODEL	DESCRIPTION	SHPG. WT. LBS
CT-200G	Compact 6" probe with 25 feet of cable	5
CT-200GC	Compact 6" tilt probe with 25' feet of 16-3 SO cable included. 3/4" NPT coupling welded to probe.	5.5
CT-200GN	Compact 6" tilt probe with 25' feet of 16-3 SO cable included. Non-mercury (mercury free).	5.5
CT-200GNC	Compact 6" tilt probe with 25' feet of 16-3 SO cable included. Non-mercury (mercury free), 3/4" NPT coupling welded to probe.	5.5
CT-200GP	Compact 6" tilt probe with 25' feet of 16-3 SO cable included. With welded-on paddle.	5.5
CT-201GNC-3/4	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. Non-mercury (mercury free), 3/4" NPT coupling welded to probe.	5.5
CT-201GP	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. With welded-on paddle.	5.5

MODEL CT - PROBES STANDARD 9"

MODEL	DESCRIPTION	SHPG. WT. LBS
CT-201G	Standard 9" tilt probe with 25' feet of 16-3 SO cable included.	8.5
CT-201GC	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. 1-1/4" NPT coupling welded to probe.	8.5
CT-201GC-3/4	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. 3/4" NPT coupling welded to probe.	8.5
CT-201GN	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. Non-mercury (mercury free)	8.5
CT-201GNC	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. Non-mercury (mercury free), 1-1/4" NPT coupling welded to probe.	8.5
CT-201GNC-3/4	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. Non-mercury (mercury free), 3/4" NPT coupling welded to probe.	8.5
CT-201GP	Standard 9" tilt probe with 25' feet of 16-3 SO cable included. With welded-on paddle.	8.5

*For Non-Mercury Probe add option "N" to Model number.

*For 3/4" NPT or 1 1/4" NPT threaded coupling add option "C" to Model number.

*For Stainless Steel Probe add option "S" to Model number.

*For welded Paddle add option "P" to Model number.

*For High Temperature use, add option "H" to Model number.

Tilt Probes are cULus Listed and Intrinsically Safe for Class I, Groups A, B, C and D; Class II, Groups E, F and G Hazardous Locations when connected to Conveyor Components Company's Control Units: Models CT-105, CT-106 or CT-107 with CT-300G Cable and when used as intended and installed according to manufacturer's instructions.

PROBE DIMENSIONS

PROBE SPECIFICATIONS:

CT-201G: Standard heavy-duty probe; 9" [23 cm] long

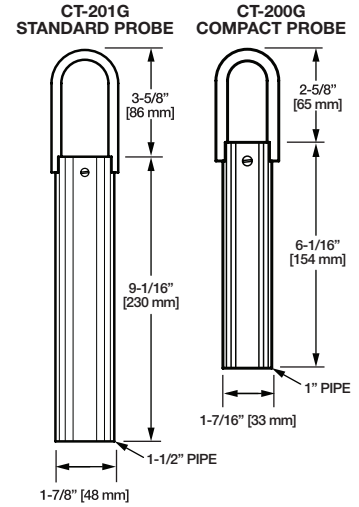
CT-200G: Compact probe; 6" [15 cm] long.

- Probe signal voltage: 12 VDC
- Probe ratings: 1.5 A @ 120 VAC, 1.5mA at 5 VDC
- Probe actuation angle: 15° from vertical

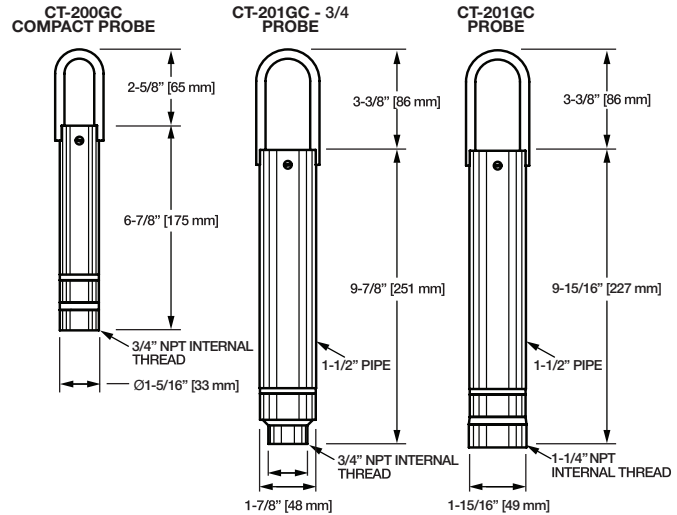
CT-201GN: Non-Mercury heavy-duty probe; 9" [23 cm] long

CT-200GN: Non-Mercury compact probe; 6" [15 cm] long

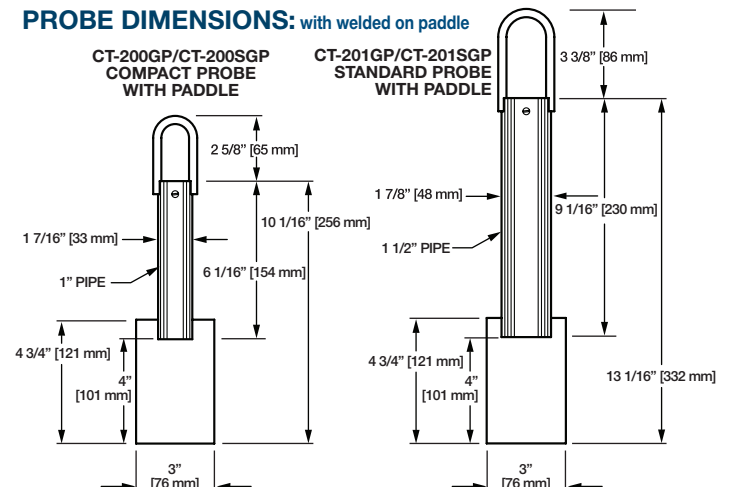
- Probe signal voltage: 12 VDC when used with CCC controller
- Probe ratings: 0.25 A max., 60 V max
- Probe actuation angle: 25° from vertical
- Each steel Probe contains one SP/ST, normally closed contact. Stainless steel, paddles, epoxy coating and threaded coupling options are available



COUPLING OPTIONS:



PROBE DIMENSIONS: with welded on paddle



MODEL **CR**

ROTO-LEVEL CONTROL™



TOTAL *RELIABILITY*, DURABLE CONSTRUCTION and ECONOMICAL PROTECTION

You get them all with the ROTO-LEVEL CONTROL™ from Conveyor Components Company. Evolved from over 35 years of experience with level controls, it's the finest electro-mechanical indicator available.

The Model CR is designed for use in the aggregate, mining, chemical, plastics and other bulk-handling industries. It functions as a perpetual sentinel, monitoring storage bins and eliminating such nagging problems as material overflow, empty bins, abnormally high or low levels, plugged chutes, jammed conveyors and damaged equipment.

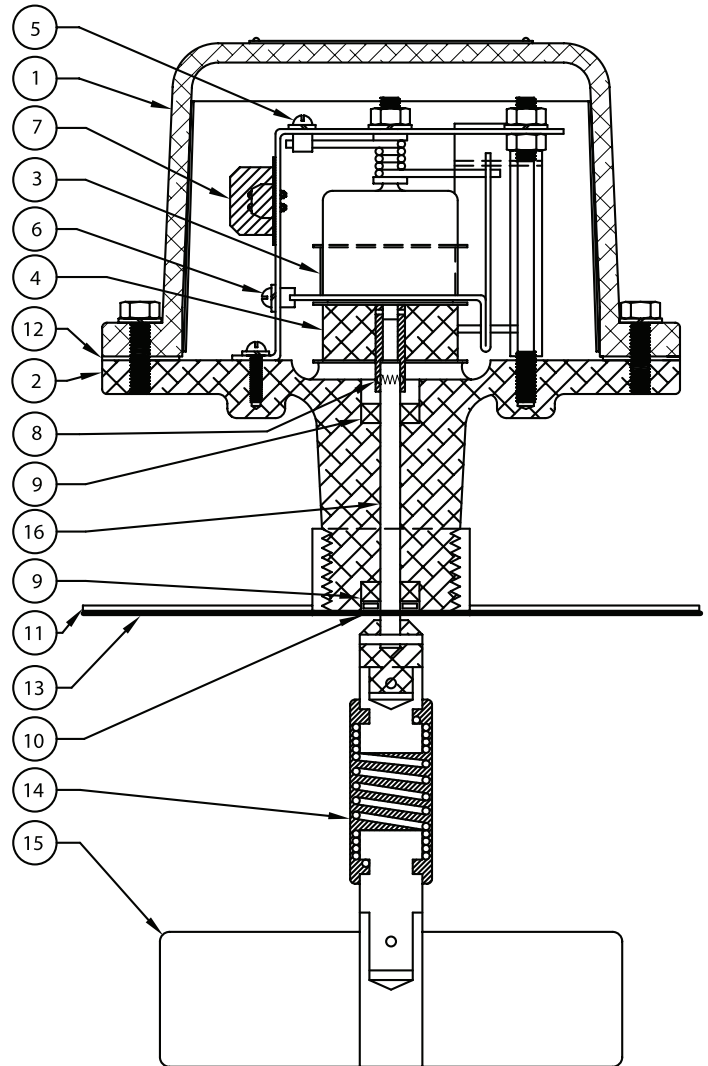
OPERATION

Operation of the Model CR is surprisingly simple. A paddle sensor is connected to a low torque, 5 watt synchronous motor. This sensor rotates continuously inside the bin at a slow 1 RPM. When the paddle meets the resistance of accumulated material it transfers its torque to actuate one or more microswitches.

Now actuated, these switches can be used to control the start-stop operations of conveyors, elevators, or feeders, and provide audible or visual warning signals. Actuation continues as long as the paddle motion is restricted. There's no harm to the monitoring unit or its motor while in this stalled condition. As soon as bin material moves away, the paddle turns freely once more and the switches are de-actuated. Model CR units mount at the top or side levels of the bin, or in both positions simultaneously to automatically control material level.

CONSTRUCTION FEATURES COMMON TO ALL CR MODELS

1. **Cover** – Cast aluminum used for both NEMA Type 4, 4X general purpose models and NEMA Type 7: Class I, Groups C and D; NEMA Type 9: Class II, Groups E, F and G explosion proof models. Optional epoxy coating is available.
2. **Base** – Cast aluminum standard with 1 ¼" NPT thread on neck for installation in ½ coupling or standard mounting plate. Conduit connection is ¾" NPT thread.
3. **Motor** – Power: 5 Watts, Frequency: 50/60 Hertz, Speed: 1 RPM, Voltage: 120V or 240V. Other Voltages available.
4. **Microswitches** – SP/DT, rated at 20 amps. Unit can be furnished with 1, 2 or 3 switches. All microswitches can be wired for single throw operation, either normally open or normally closed as required.
5. **Sensitivity Adjustment** – Spring tension is adjustable to product density.
6. **Time Delay Adjustment** – Variable to prevent false signals.
7. **Terminal Block** – For CR motor voltage.
8. **Clutch** – Slips to prevent damage to motor gears.
9. **Bearings** – Sealed, permanently lubricated precision ball bearings.
10. **Shaft Seal** – Dust and moisture-tight. Rated ½ micron dust at 30 P.S.I.
11. **Mounting Plate** – 8" diameter with 1 ¼" welded pipe coupling. Powder coated steel is standard. Stainless steel is optional. Flexible to conform to curved bins.
12. **Cover Gasket** – 1/16" thick neoprene.
13. **Mounting Gasket** – 1/16" thick fiber.
14. **Shaft** – Optional flexible or solid with all metal parts made of stainless steel.
15. **Paddle** – All metal parts made of stainless steel. Various types interchangeable in field.
16. **Drive Shaft** – Precision machined stainless steel. Impervious to moisture and corrosion build-up.



MODELS

MODEL	HOUSING CONSTRUCTION	SHPG. WT. LBS
CR-2A	2 Single Pole Double Throw (SP/DT) Microswitches for 120 VAC*	9
CR-3A	3 Single Pole Double Throw (SP/DT) Microswitches for 120 VAC*	9
CR-2B	2 Single Pole Double Throw (SP/DT) Microswitches for 240 VAC*	9
CR-3B	3 Single Pole Double Throw (SP/DT) Microswitches for 240 VAC*	9
CR-2C	2 Single Pole Double Throw (SP/DT) Microswitches for 24 VAC/VDC *	9
CRX-2A	2 Single Pole Double Throw (SP/DT) Microswitches for 120 VAC**	9
CRX-3A	3 Single Pole Double Throw (SP/DT) Microswitches for 120 VAC**	9
CRX-2B	2 Single Pole Double Throw (SP/DT) Microswitches for 240 VAC**	9
CRX-3B	3 Single Pole Double Throw (SP/DT) Microswitches for 240 VAC**	9
CRD-2A	2 Single Pole Double Throw (SP/DT) Microswitches for 120 VAC***	9
CRD-3A	3 Single Pole Double Throw (SP/DT) Microswitches for 120 VAC***	9

*GENERAL PURPOSE NEMA TYPE 4 & 4X

** EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div. 1 & 2), Groups E, F & G

***DUAL RATED NEMA TYPE 4, 4X & 9

MODEL CR - ACCESSORIES
MOUNTING PLATE

MODEL	DESCRIPTION	SHPG. WT. LBS
CR-81	Side Mount	1.50
CR-82	Side Mount, Stainless Steel	1.50
CR-83	Top Mount	1.75
CR-84	Top Mount, Stainless Steel	1.75
CR-85	1-1/4" Half Coupling	.25

SIMPLE, RUGGED CONSTRUCTION
WITH FEWER PARTS.

FIELD ADJUSTABLE SENSITIVITY
AND TIME DELAY.

STAINLESS STEEL
SHAFT AND PADDLE

SHAFT

MODEL	DESCRIPTION	SHPG. WT. LBS
CR-70	Solid Stainless Steel Shaft	.25
CR-71	Flexible Shaft	.25
CR-72	Stainless Steel Coupling	.06
CR-91	1/8" Stainless Steel Pipe Extension	.04 / inch
CR-100	1-1/4" Pipe Guard	.19 / inch
CR-101	1-1/4" Stainless Steel Pipe Guard	.19 / inch

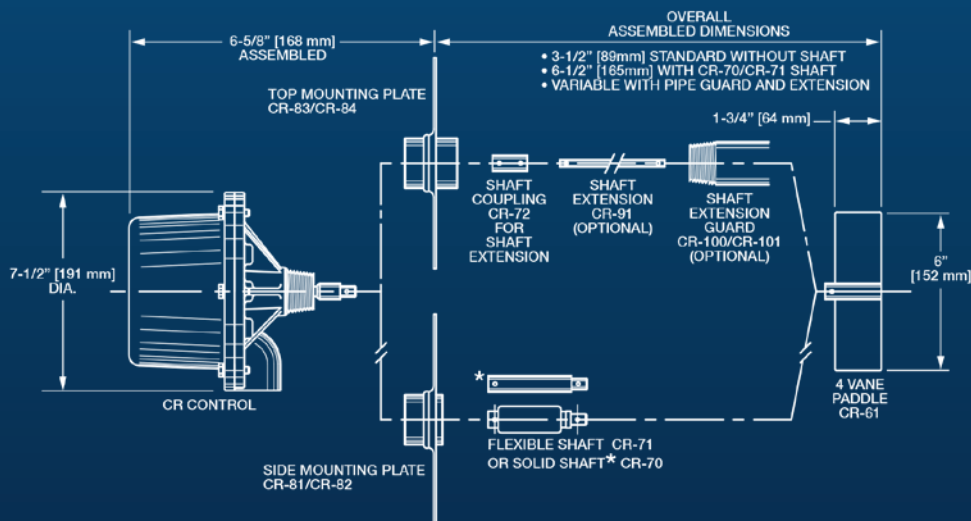
PADDLE

MODEL	DESCRIPTION	SHPG. WT. LBS
CR-61	4 Vane Stainless Steel Paddle	.40
CR-62	1 Vane Curved S.S. Paddle	.50
CR-63	1 Vane Stainless Steel Paddle	.25
CR-64	Rubber Flexible Paddle	.45
CR-65	Stainless Steel Flexible Paddle	.50

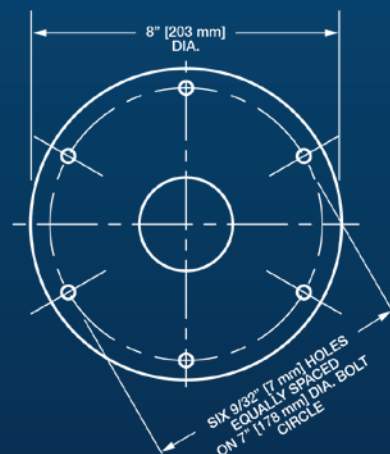
MOTOR

MODEL	DESCRIPTION	SHPG. WT. LBS
CR-6	120 VAC Replacement Motor	.40
CR-6A	240 VAC Replacement Motor	.50

TECHNICAL INFORMATION

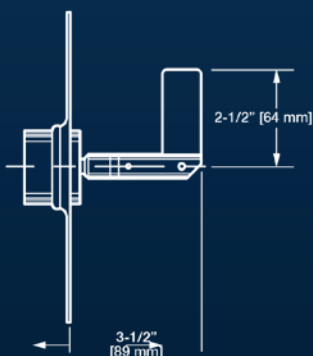


MOUNTING PLATE

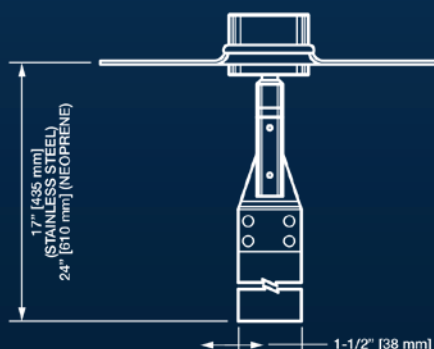


OPTIONAL PADDLES

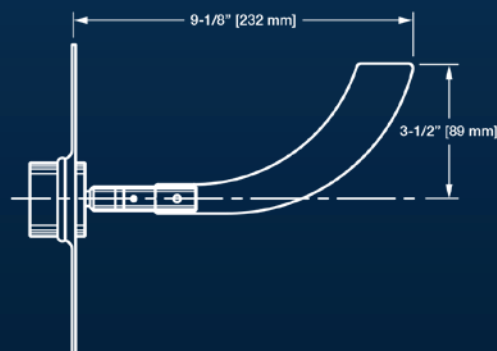
CR-63 SOLID SHAFT W/ SINGLE VANE PADDLE



CR-64 NEOPRENE PADDLE / CR-65 STAINLESS STEEL PADDLE



CR-62 CURVED VANE PADDLE

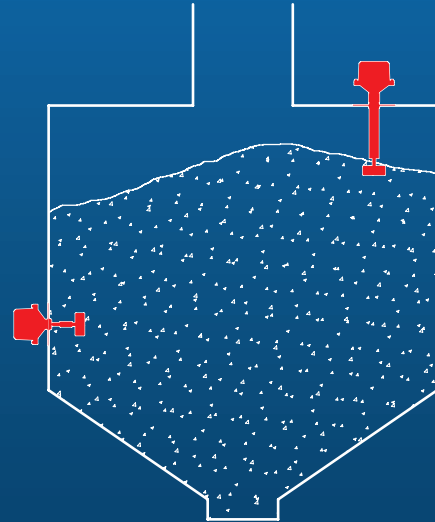


FOLLOW THESE 5 STEPS TO DETERMINE THE PROPER ROTO-LEVEL CONTROL™ FOR YOUR APPLICATION:

1. SELECT PROPER MODEL

Selection of the proper Model CR Roto-Level Control™ should begin with the electrical requirements. Use the chart below to select the model number that will give the motor voltage, number of microswitches, and type of housing construction required.

Enclosure	Number of 20 AMP SP/DT Microswitches	MODEL NUMBER		
		120 VAC Motor	240 VAC MOTOR	24 VAC (non-UL) MOTOR
NEMA Type 4, 4X UL and cUL Certified	One	CR-1A	CR-1B	CR-1C
	Two	CR-2A	CR-2B	CR-2C
	Three	CR-3A	CR-3B	CR-3C
Explosion Proof NEMA Type 7 & 9 UL and cUL Certified	One	CRX-1A	CRX-1B	CRX-1C
	Two	CRX-2A	CRX-2B	CRX-2C
	Three	CRX-3A	CRX-3B	CRX-3C



2. DETERMINE MOUNTING PLATE

It must be decided whether the unit is to be mounted on the top or the side of the bin and which mounting plate is to be used.

- The paddle and shaft must be at a point on the bin where the material will flow freely both to and away from them.
- The paddle and shaft must be away from the direct flow of incoming material.

HIGH LEVEL CONTROL: Top mounting is recommended. It simplifies installation, accessibility and wiring. Top mounting is suggested for:

- Light materials where large paddles must be used.
- Large lump materials where long flexible paddles must be used.
- Avoiding stagnation areas which can occur with moist materials.

PART NUMBER: CR-83 Standard mounting plate for most top mount applications.

PART NUMBER: CR-84 Stainless steel mounting plate for most top mount applications.

LOW LEVEL CONTROL: Side mounting is customary but top mounting may be easier in smaller or medium sized bins.

PART NUMBER: CR-81: Standard side mounting plate for most applications.

PART NUMBER: CR-82: Stainless Steel mounting plate. Use where corrosion is a problem.

PART NUMBER: CR-85: Half coupling welded directly to the bin wall. Used with the CR-62 or CR-63 paddles, it allows unit to be mounted directly in the coupling without a mounting plate. Paddles are inserted into the bin through the coupling.

It is sometimes necessary to install protective baffles over the paddles at the low level to protect paddles and shaft from surges in the product.

3. CHOOSE CORRECT PADDLE

- **PART NUMBER CR-61:** Stainless Steel 4 vane 6" O.D. paddle. For use on materials up to 75 lbs./cu. ft. Used at high and low level, top and side mounted.
- **PART NUMBER CR-62:** 1 vane curved paddle. For use with materials 30 lbs./cu. ft. Inserted through half coupling Part Number CR-85.
- **PART NUMBER CR-63:** 1 vane paddle. Extends 3 1/2" in to bin. For materials over 75 lbs./cu. ft. and temperature ranges up to 350°F. Side mounted.
- **PART NUMBER CR-64:** Flexible neoprene paddle. 1 1/2" wide, 24" long. For large lump materials up to 50 lbs./cu. ft. Located so product pins paddle to bin wall.
- **PART NUMBER CR-65:** Stainless steel; flexible; top mounted. For materials up to 50lbs. long. For materials up to 50lbs./cu ft. and/or sticky materials.

4. PICK SHAFT COMPONENTS

- **PART NUMBER CR-71:** Flexible shaft; top and side mounting. Adds 3" to overall shaft and paddle assembly. Withstands bin temperature to 160°F and shock loads from product surge.*
- **PART NUMBER CR-91:** 1/8" stainless steel pipe extension for top mounting.
- **PART NUMBER CR-100:** 1 1/4" protective guard for top mounting.
- **PART NUMBER CR-72:** Shaft extension coupling.
- **PART NUMBER CR-101:** Stainless steel guard.

*Flexible shaft is not necessary on many side mounted applications. Bin temperature limit is Raised to 350°F.

5. CHECK THE FOLLOWING

- Specify stainless steel option on mounting plates and shaft extensions where corrosion is a problem. The shaft and paddle assembly come standard in stainless steel.
- Units should be side mounted at both high and low levels where high temperatures are encountered. Temperature in housing is UL and cUL rated for up to 104°F.
- Bin pressure should not exceed 30 P.S.I. Check with factory when this is a problem.
- Mount unit on bin where there is a minimum vibration. Use rubber washers or a soft rubber mounting gasket when vibration is severe.

**LEVEL
CONTROLS**



MODEL **DLC**

DIAPHRAGM LEVEL CONTROL

PRESSURE ACTIVATED PLUGGED CHUTE DETECTOR

The Model DLC is a flush-mount, pressure-activated, diaphragm style level control and plugged chute detector. The Model DLC has 2 dry (unpowered) microswitches that activate when material within the bin or chute presses upon the diaphragm face. The unit should be mounted on the vertical side wall of the bin, hopper or chute. The unit may also be mounted on the sloped portion of the chute (as long as material flows freely and does not "bridge"). The Model DLC is also used as a high level limit in a screw conveyor, transfer point or auger box.

The Model DLC can be used as a high-level switch, a low-level switch, or a plugged chute detector. Additionally, the Model DLC may also operate as a material presence control on a conveyor belt, and a high level indicator in a crusher box.

The Model DLC is commonly used when intrusion into the bin is not acceptable, not possible or not allowed. The Model bin is not acceptable, not possible or not allowed. The Model DLC does not intrude on the material flow stream.

DLC MODELS AVAILABLE

MODEL	DESCRIPTION	SHIP WT.
DLC-2R	2 Single Pole Double Throw (SP/DT) Microswitches and neoprene rubber diaphragm*	8 lbs.
DLC-2S	2 Single Pole Double Throw (SP/DT) Microswitches and stainless steel diaphragm*	8 lbs.

*GENERAL PURPOSE NEMA TYPE 4X

DLC REPLACEMENT PARTS

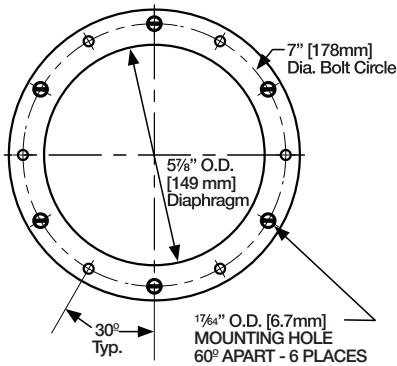
MODEL	DESCRIPTION	SHIP WT.
20250005	Replacement neoprene rubber diaphragm	1 lb.
20250004	Replacement 302 stainless steel diaphragm	2 lbs.

TECHNICAL SPECIFICATIONS

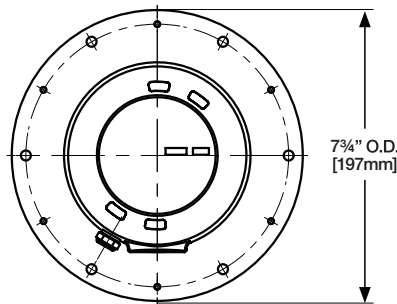
- The diaphragm material is neoprene rubber (50 durometer, 0.031" thick) or grade 302 stainless steel.
- Diaphragm requires a material density of 25 pcf or higher for proper activation. Contact factory for use on lower density materials.
- The temperature range is 32°F to 104°F (0°C to 40°C).
- The control has two dry, unpowered microswitches rated 15A @ 120 VAC, 240 VAC, and 480 VAC; 1/2 amp @ 125 VDC and 1/4 amp @ 250 VDC.
- Each microswitch has a COMMON, NORMALLY OPEN and NORMALLY CLOSED contact.
- General purpose (weatherproof) units have (1) 3/4" NPT conduit opening.
- The general-purpose controls are designed to meet NEMA Type 4X weatherproof and dust-tight environments.
- Bronze air vent allows equal pressurization of both sides of the diaphragm.
- Threaded screw-on cast aluminum cover with spanner wrench bosses and rubber o-ring gasket.
- The mounting flange dimension matches the Roto-Level Control mounting plate bolt and hole pattern so it can be interchangeable with the Model CR unit. Fiber mounting gasket included.
- Optional black epoxy coating available, add "E" to suffix of model number.
- Indication level may vary with material flow, material density and bin design.

MODEL DLC DIMENSIONAL INFORMATION

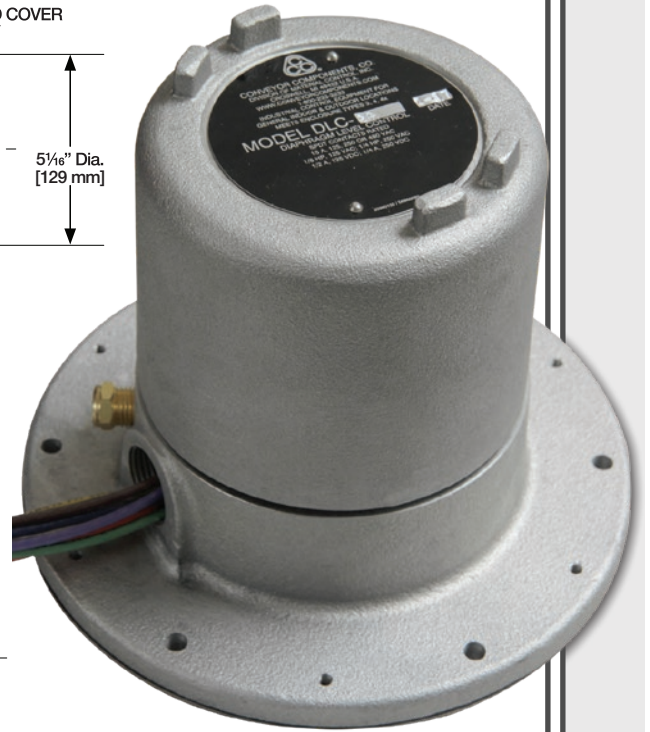
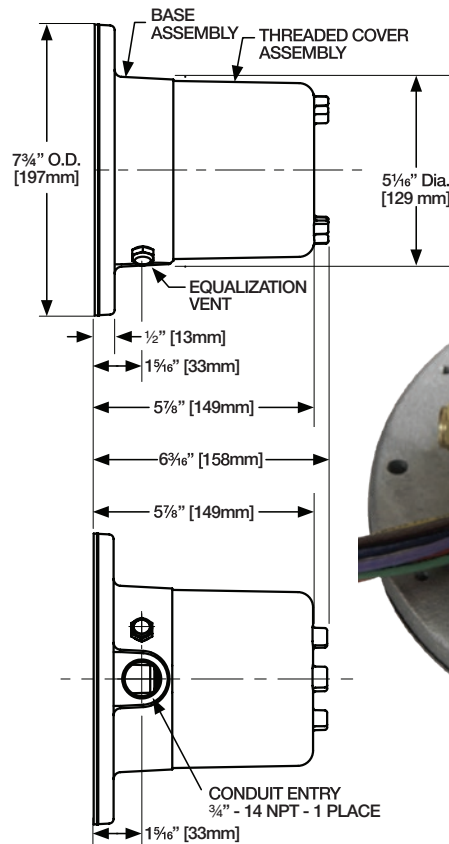
DIAPHRAGM END VIEW



TOP COVER END VIEW



SIDE VIEW



MODEL DLC mounted in a bin to monitor the level of soybeans



**Conveyor Components
Company** Division of Material
Control, Inc.

AIRMATIC[®]
WE'LL HANDLE IT.

 **AERATION**

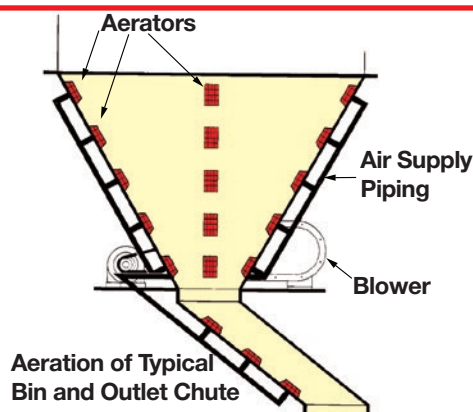


MODEL **AD** BIN AERATOR

END FLOW PROBLEMS FOREVER!

Model AD Aerators provide positive flow of dry, finely ground materials from any bin using the proven principle of aeration. Low pressure air is introduced into the product, restoring its natural ability to flow. In this way congestion, bridging and rat-holing are overcome without resorting to brute force. Almost all flow problems inherent to dry, fine materials are caused by compaction. When low pressure air is introduced to a finely ground material it will flow like water, uniformly and quickly.

Model AD Aerators are non-clogging and provide equal distribution and consumption of air. They feature simple and quick installation. Simply drill a 7/16" hole in bin wall insert, special tank nipple through hole and secure with lock nut.



MATERIALS RESPONDING TO AERATION

Aeration gives the best results on materials with a 60 mesh size or smaller and with a 3% or less moisture content. Specific materials that respond well to aeration are as follows: Lime, Portland Cement, Carbon Black, Diatomaceous Earth, Flour, Soda Ash, Gypsum, Fly Ash, Pigments, Soap Powders, Bentonite, Bran Clay, Cereals, Fullers Earth, Detergents and many others. For questionable materials please contact our sales department.

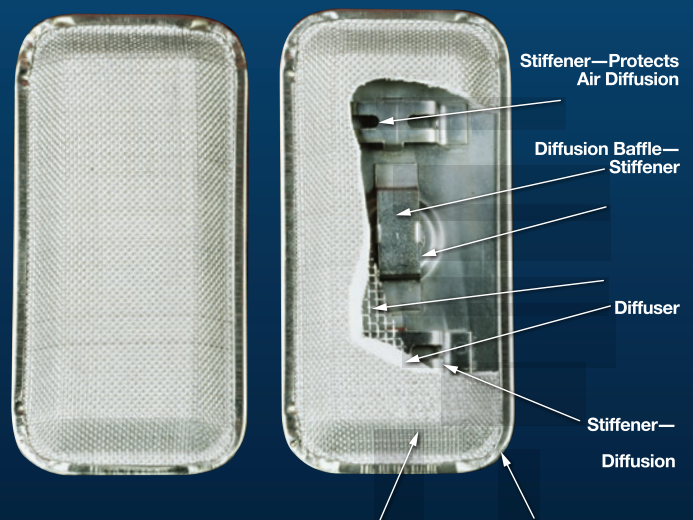
ADVANTAGES OF AERATION

- Positive, uniform and easily controlled flow
- Eliminates Bridging and Rat-holing
- Quiet operation
- Low power requirements
- First in / first out flow
- Adapts to any bin configuration
- Low-Cost, Easy to Install, Maintenance Free

EXCLUSIVE

Heavy-Duty construction features stiffeners to prevent crushing of air compartment. These stiffeners eliminate the possibility of the Aerator being crushed by weight of material or by personnel stepping on it when cleaning the bin. The stiffeners do not obstruct the diffusion of air.

CUTAWAY VIEW



MODELS

MODEL	DESCRIPTION	SHPG. WT. LBS
AD-C	Zinc plated steel body with galvanized steel mesh and cotton diffuser. Brass nipple and lock nut. Nickel plated steel spacer washers and rubber gasket.	0.7
AD-F	Zinc plated steel body with galvanized steel mesh and fiberglass diffuser. Brass nipple and lock nut. Nickel plated steel spacer washers and rubber gasket. Typically used when temperatures exceed 200°F.	0.7
AD-SSC	Type 316 Stainless Steel body and mesh. Cotton diffuser. Nickel plated spacer washers, nipple and locknut. Rubber Gasket.	0.7
AD-SSF	Type 316 Stainless Steel body and mesh. Fiberglass diffuser. Nickel plated spacer washers, nipple and locknut. Rubber Gasket. Typically used when temperatures exceed 200°F.	0.7
AD-K	Optional mounting kit includes two positive sealing gaskets, adapter and clamp. Use with any of the aerators when mounting from outside the bin.	0.7

AERATOR SELECTION GUIDE:

For best results, locate lower aerators as close to the discharge outlet as possible. If material is held in the bin for long periods and/or compacted in transport, we recommend aerators be installed on 12" centers.

Aerators on 12" Centers

Length of Sloping Bin Wall	Number of Aerators Per Row
1'8" - 2'7"	2
2'8" - 3'7"	3
3'8" - 4'7"	4
4'8" - 5'7"	5
5'8" - 6'7"	6
6'8" - 7'7"	7
7'8" - 8'7"	8
8'8" - 9'7"	9
9'8" - 10'7"	10

Aerators on 15" Centers

Length of Sloping Bin Wall	Number of Aerators Per Row
1'11" - 3'1"	2
3'2" - 4'4"	3
4'5" - 5'7"	4
5'8" - 6'10"	5
6'11" - 8'1"	6
8'2" - 9'4"	7
9'5" - 10'7"	8
10'8" - 11'10"	9
11'11" - 13'1"	10

Generally four rows of aerators on 12" or 15" centers are recommended. On conical bins these rows are spaced equally. On pyramidal bins, rows are spaced equally on sloping sides or in valleys if material tends to hang up in these valleys.

AIR SUPPLY

Air supply must be clean and dry. We recommend positive displacement, low pressure blowers. Plant air can be used but the pressure must be reduced to 3 to 5 P.S.I. and a filter or moisture trap used on the low pressure side. The volume of air needed is a limiting factor on the use of plant air.

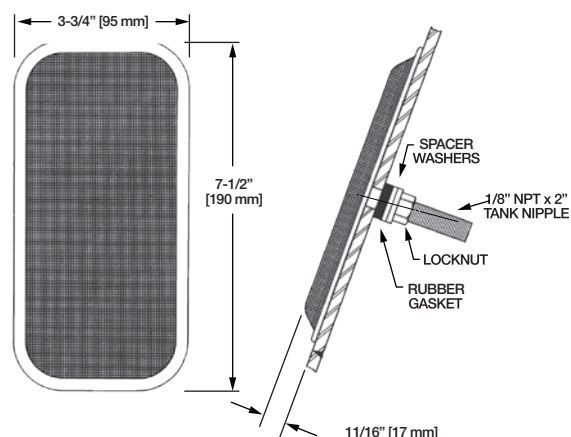
Manifold Piping Size Guide

Piping Size	Number of Aerators in a Row
3/4"	1-5
1"	6-9
1-1/4"	10-12

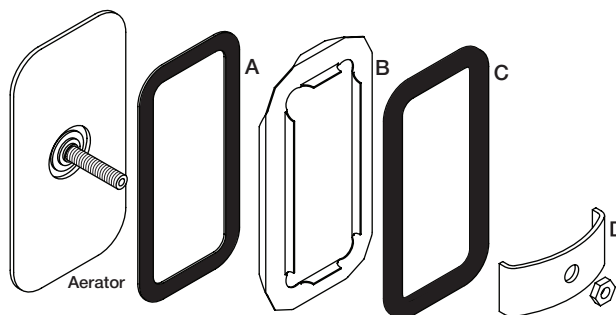
Air Consumption Guide Per Aerator

Air Pressure PSI	Cubic Feet Per Minute
1	4.2
2	5.7
*3	6.5
4	7.1
5	7.6
*Recommended for most applications	

MODEL AD AERATOR SPECIFICATIONS



MODEL AD-K MOUNTING KIT (SOLD SEPARATELY)



A. 1/16" gasket, adhesive both sides.

B. Adaptor

C. 3/16" gasket, adhesive one side.

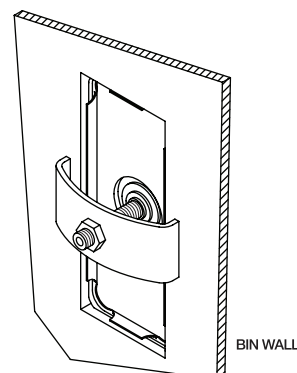
D. Spring Steel clamp.

The Model AD-K aerator mounting kit completely eliminates the need to enter the bin to install or service aerators. By cutting a 2-5/8" x 6-3/8" hole in the bin wall the mounting kit can be completely installed and serviced from outside the bin.

After the initial hole has been cut, the aerator is mounted on the adaptor assembly and inserted into the bin in less than two minutes. No holes to drill, no welding or tapping. The aerator is positively sealed and securely held in place in the bin. Removal is just as simple and quick.

Aerator kits are also adaptable for use on round bins. Installation is made with standard gaskets, and the 3/16" adhesive gasket ("C" above), on bins with a diameter of three feet or greater.

AERATOR KIT IN PLACE ON BIN





MAG-NEAT-O™

MAGNETICALLY COUPLED MOTION CONTROL

EASY QUICK INSTALLATION

Designed for easy installation, the Mag-Neat-O™ is a magnetically coupled motion sensor that when paired with Conveyor Components Company controller MSD, it can be programmed as an over speed, under speed or zero speed device. The Mag-Neat-O™ is a speed switch that uses a uniquely designed magnetic coupler to attach the unit to a roller shaft on your conveyor. This coupler is connected to a target that rotates in unison with the roller shaft of conveyor. A target is then read by a proximity sensor that communicates pulse into the optional MSD controller which has a relay to control up to two circuits.

ADVANTAGE

The Mag-Neat-O™ features a simple robust Magnetic Coupler for easy, rapid field installation. The coupler of the Mag-Neat-O™ is magnetically attached to the shaft of a conveyor roller or other rotating piece of equipment that you want to monitor for motion.

MAG-NEAT-O MODELS AVAILABLE

MODEL	DESCRIPTION	SHIP WT.
MCM-2S	Sensor magnetically coupled motion control with 12mm 2-wire (RMS-12S) inductive sensor and MCC-1 magnetic coupling connector.	2 lbs.
MCM-3S	Sensor magnetically coupled motion control with 12mm 3-wire (MSD-12S3) inductive sensor and MCC-1 magnetic coupling connector. Does not include optional MSD-800 controller.	2 lbs.

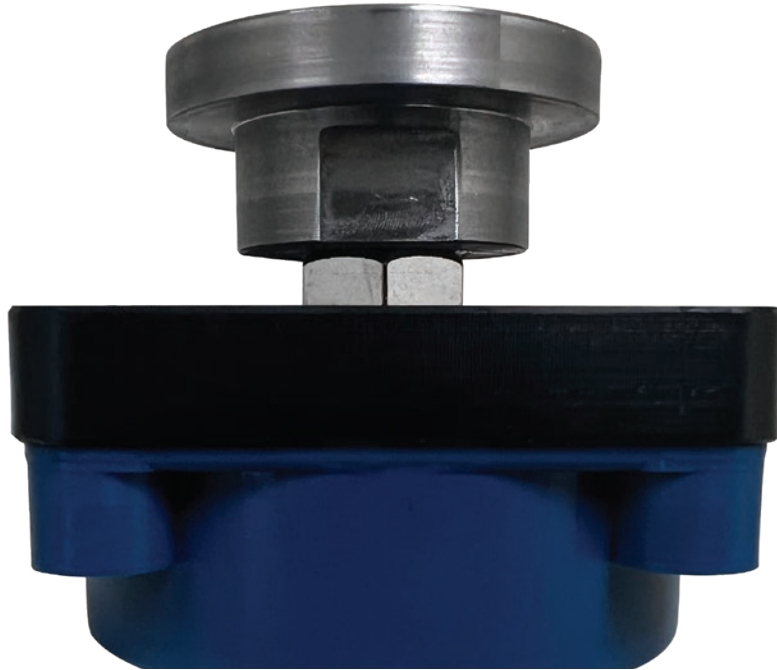
ACCESSORIES / SPARE PARTS

MODEL	DESCRIPTION	SHIP WT.
MCC-1	Magnetic Coupling Connector for Models MCM-2S & MCM-3S	1 lb.

TECHNICAL SPECIFICATIONS

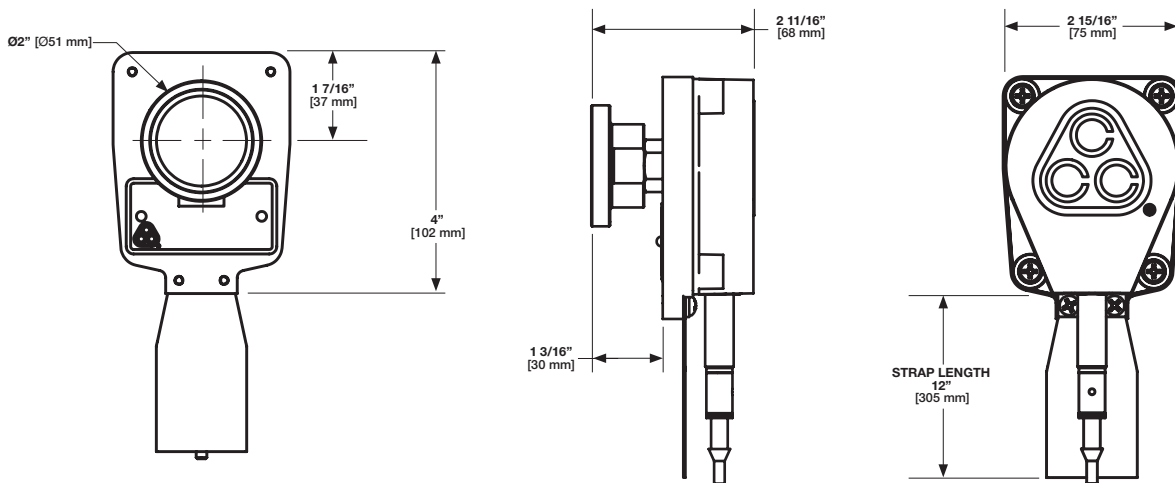
- The sensor can be used in outdoor environments and is connected to the controller(s) with Belden 8442 or 9760 or similar.
- The maximum separation distance between controller and sensor is 200 feet.
- No drilling or tapping of the tail pulley shaft is necessary. The unit connects magnetically to the pulley shaft.





The Mag-Neat-O™ is a magnetically coupled motion sensor that can be programmed as an over speed, under speed or zero speed device. The Model MCM features a simple robust Magnetic Coupler for easy rapid field installation. The coupler of the Mag-Neat-O™ is magnetically attached to the shaft of a conveyor roller or other rotating piece of equipment that you want to monitor for motion.

MAG-NEAT-O DIMENSIONAL INFORMATION





MODEL **BSD** BELT SPEED DETECTOR



TRACTION ACTION

The Model BSD is a traction action™ motion control that indicates when a conveyor belt has slowed or quit moving altogether. It can be used as an overspeed, underspeed, or zero speed control. For maximized control the Model BSD should be wired into our optional RMS controllers or MSD controllers which can be set to shutdown machinery or activate an alarm. These controllers allow the BSD to indicate either Over-Speed, Under-Speed or Zero-Speed.

The Model BSD can shut down rotating equipment before damage is encountered. It provides protection for interlocked conveyor belts, especially if one of the belts fails due to overloading or quits due to tearing. Also prevents material backup or plugged chute.

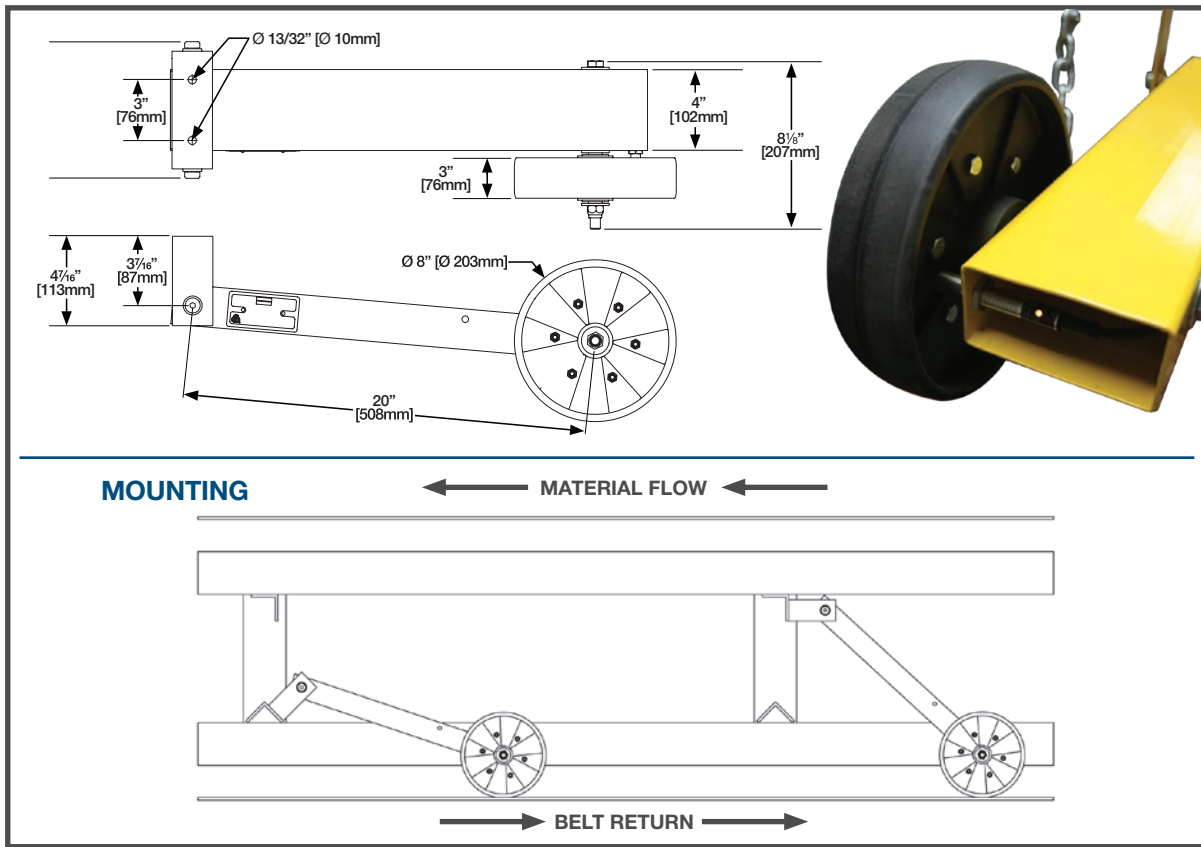
No drilling or tapping of tail pulley shaft required. Unit is shielded between top and bottom of conveyor belt, and can be placed anywhere on the conveyor belt.

***Simple design and installation.
No drilling or tapping of tail pulley
shaft required, unit is shielded
between top and bottom of conveyor
belt, and the unit can be placed
anywhere on the conveyor belt.***

TECHNICAL SPECIFICATIONS

- The BSD-2S (2 wire sensor) works with the RMS-G series controller, while the BSD-3S (3 wire sensor) works with the MSD-800 series controller.
- The RMS-G controller is available in a NEMA Type 4 polycarbonate housing, while the MSD-800 controller is a panel-mount plastic housing with display.
- Both controllers are available in either a 120 VAC, 240 VAC, or 24V AC/DC power input. Specify input voltage upon ordering.
- The sensor can be used in outdoor environments and is connected to the controller(s) with Belden 8442 or 8760 or similar.
- Each inductive sensor is supplied with 6 feet of electrical cable. Field splice for longer lengths.
- The maximum separation distance between controller and sensor is 200 feet.
- Each controller has a dry, unpowered relay rated for 5A @ 120 VAC, 240 VAC.
- 6 targets are built into the wheel assembly. The wheel is replaceable if necessary.
- The operating temperature range is -4°F to 158°F (-20°C to 70°C).

MODEL BSD DIMENSIONAL INFORMATION



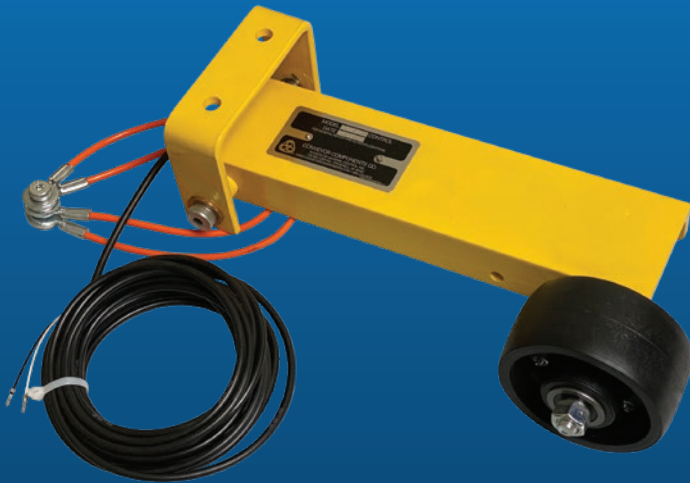
MODELS

MODEL	DESCRIPTION	SHIP WT.
BSD-2S	Wheel (traction action™) motion control, includes 12mm 2-wire (RMS-12S) inductive sensor and wheel target. Does not include optional RMS-G controller.	18 lbs.
BSD-3S	Wheel (traction action™) motion control, includes (MSD-12S3) 12mm 3-wire inductive sensor and wheel target. Does not include optional MSD-800 controller.	18 lbs.
BSD-0S	Wheel (traction action™) motion control, sensor not included. Does not include optional controller.	18 lbs.

ACCESSORIES / SPARE PARTS

MODEL	DESCRIPTION	SHIP WT.
RMS-12S	12mm (2 wire) inductive proximity sensor (for use with RMS-G series controller).	1 lb.
MSD-12S3	12mm (3 wire) inductive proximity sensor (for use with MSD-800 or MSD-800-24 controller).	1 lb.
21310007	Nylon wheel assembly with 6 targets.	2 lbs.
21310016	Safety chain & hardware kit, 2 pieces at 4 feet each.	5 lbs.
21310015	Safety cable, 1 piece at 2 feet each (2 required).	1 lb.
MSD-14	Two conductor electrical cable (Belden 8442 or 8760).	.02 lbs/ft





The Model BSDC is a compact (reduced-size) version of our heavy duty "traction action" motion control that indicates when a conveyor belt has slowed or quit moving altogether. The unit can be adjusted as an overspeed, underspeed, or zero speed control. The output of the Model BSDC can be wired into a PLC or DCS, or to the optional RMS controller (or MSD controller) which has a DP/DT relay to control up to two separate circuits, one for machinery shutdown and one for an alarm.

The Model BSDC can shut down rotating equipment before damage is encountered. It provides protection for interlocked conveyor belts, especially if one of the belts fails due to overloading or quits due to tearing.

NEW! **MODEL BSDC** **COMPACT BELT SPEED DETECTOR**

*Simple design and installation.
No drilling or tapping of tail pulley shaft required, unit is shielded between top and bottom of conveyor belt, and the unit can be placed anywhere on the conveyor belt.*

MODELS

MODEL	DESCRIPTION	SHIP WT.
BSDC-2S	Wheel (traction action™) motion control, includes 12mm 2-wire (RMS-12S) inductive sensor and wheel target. Does not include optional RMS-G controller.	10 lbs.
BSDC-3S	Wheel (traction action™) motion control, includes (MSD-12S3) 12mm 3-wire inductive sensor and wheel target. Does not include optional MSD-800 controller.	10 lbs.
BSDC-0S	Wheel (traction action™) motion control, sensor not included. Does not include optional controller.	10 lbs.

COMPATIBLE CONTROLLERS FOR BSD / BSDC

MSD-800 CONTROLLERS

MODEL	DESCRIPTION	SHIP WT.
MSD-800	Panel mount style, indicates two under-speed or two over-speed points, or one of each. 100-240 VAC power input. Digital RPM tachometer display.	1.5 lbs.
MSD-800-24	Panel mount style, indicates two under-speed points, two over-speed points or one of each. 24 VDC power input. Digital RPM tachometer display.	1.5 lbs.



MSD-800 control unit

RMS MOTION CONTROLLERS

MODEL	DESCRIPTION	SHIP WT.
RMS-1G	Non-contact motion control, includes: 120 VAC electronics *	1.5 lbs.
RMS-2G	Non-contact motion control, includes: 240 VAC electronics *	1.5 lbs.
RMS-3G	Non-contact motion control, includes: 24 VAC/VDC electronics *	1.5 lbs.

* GENERAL PURPOSE NEMA TYPE 4 & 4X



RMS control unit



MODEL RMS

NON-CONTACT MOTION MONITORING SYSTEM

ACCURATE AND RELIABLE SENSING OF UNDERSPEED, OVERSPEED AND ZERO SPEED CONDITIONS ON ROTATING SHAFTS AND MACHINERY

PROTECTS VALUABLE ROTATING EQUIPMENT

The Model RMS non-contact motion control will provide accurate and reliable speed sensing of rotating shafts and machinery. Choose a NEMA 4 polycarbonate enclosed controller, then choose a sensor, and a matching mounting bracket and target disk. Each sensor comes with 6 feet of cable, will need to field splice for longer lengths. It will produce an output signal at a predetermined speed which may be either underspeed or overspeed. Solid state electronics and analog technology make this one of the most advanced and versatile motion detectors available. The Model RMS protects all valuable rotating equipment including belt conveyors, bucket elevators, rotary feeders, or screw conveyors.

The Model RMS uses a remote mounted inductive sensor to monitor speed. Motion is sensed by means of induced measurable pulses produced by a ferrous metal target rotating past the sensor. Sensors and Targets are paired for optimal pulse ranges and are available for purchase separately. If a distinctive metal target is available, sensors can be used without RMS Target. The produced pulses are converted to a digital electronic signal. Solid state circuitry within the DIN rail mount box then analyzes the digital signal and activates or deactivates the output relay at the pre-set speed point.



The output of the model RMS-G is a DP/DT relay. There are two sets of output contacts, each set includes normally open, normally closed, and common. As a result, the unit can be used to control two separate circuits such as a motor starter and a signal light.

RMS-8M, RMS-12M, RMS-18M and RMS-30M
Mounting Brackets Sold Separately.

CONTROLLER SPECIFICATIONS

MECHANICAL SPECIFICATIONS:

ENCLOSURE: Polycarbonate
MEETS: NEMA 1
WEIGHT: .75 lbs.
SIZE: 3" x 2 1/4" x 4 1/4"

ELECTRICAL SPECIFICATIONS:

INPUT VOLTAGE: RMS-1G; 105-135 volts A.C., 50-60Hz.
RMS-2G; 210-250 volts A.C., 50/60Hz.
RMS-3G; 24V AC/DC

OUTPUT: DP/DT relay 5 Amp. Resistive at 120 volts A.C.
DP/DT relay 5 Amp. Resistive at 240 volts A.C.
DP/DT relay 5 Amp. Resistive at 30 volts D.C.
1/10 horse power at 120 volts A.C.
1/10 horse power at 240 volts A.C.

AMBIENT TEMP: -10°F to 104°F (-23°C to 40°C) Controller only

REPEATABILITY: +2% maximum at constant voltage and temperature

POWER CONSUMPTION: 3 watts maximum

SPEED RANGES: Input ranges at which relay will energize:
LOW: 2 to 120 PPM (use RMS-8S or RMS-12S)
MED: 20 to 1200 PPM (use RMS-12S or RMS-30S)
HIGH: 200 to 12,000 PPM (use RMS-18S or RMS-12S)

SIGNAL POINT: Speed at which relay will de-energize for Underspeed, or energize for Overspeed. Recommended to be 15-20% lower or higher than running speed. This will eliminate nuisance shutdowns.

START UP DELAY: Adjustable up to 45 seconds

SENSOR SPECIFICATIONS:

MODEL NUMBER	RMS-8S/8T	RMS-12S/12T	RMS-18S/18T	RMS-30S/30T
Sensor Type	2 wire DC	2 wire DC	2 wire DC	2 wire DC
Body Diameter	8mm (0.31")	12mm (0.47")	18mm (0.71")	30mm (1.18")
Body Length	50mm (1.97")	71mm (2.79")	80mm (3.15")	81mm (3.19")
Thread Size	M8	M12	M18	M30
Cable Length	2m (6.5")	2m (6.5")	2m (6.5")	2m (6.5")
Sensing Range	1.5mm (0.06")	2.0mm (0.08")	5.0mm (0.20")	10mm (0.30")
Maximum Pulse Rate	2 kHz	1.5 kHz	1.0 kHz	0.6 kHz
Maximum Voltage	30 VDC	30 VDC	30 VDC	30 VDC
PPM Range	2 - 120 PPM	20 - 1200 PPM	20-1200 PPM	200 - 12,000 PPM
Maximum Current	100 MA	100 MA	100 MA	100 MA



MODEL MSD

MOTION SENSING CONTROL WITH TWO SET POINTS AND DIGITAL TACHOMETER

CONSTANTLY DISPLAYS ACTUAL ROTARY SPEED

The Model MSD is comprised of two different components, a control unit and a speed sensor. The MSD-800 control unit is a programmable controller that has two set points permitting it to indicate two under-speed points, two over-speed points, or one of each. The control unit acts as a digital tachometer that constantly displays the actual rotary speed of the equipment being monitored. The control unit is installed remotely in a control panel where it is free from dust, dirt and vibration. This allows the operator to monitor equipment from one central location.

The speed sensor, which is installed directly to the shaft of the rotating equipment being monitored, is enclosed in a rugged cast aluminum housing designed to withstand harsh environments. The enclosure is weatherproof, dust-tight and meets NEMA Type 3S, 4, 4X classifications. For hazardous environments, explosion proof sensors are available that meet NEMA Type 7, Class I Groups C and D and NEMA Type 9, Class II, Group F and G classifications.



PROGRAMMABLE CONTROL UNIT WITH TWO SET POINTS AND DIGITAL TACHOMETER

- Indicates two under-speed points or two over-speed points, or one of each
- Field adjustable to desired speed set points
- Simple set up menu and adjustment
- Panel Mount for easy access in a location free from dust, dirt and vibration
- LCD Display shows shaft RPM
- 100-240 VAC Power input, 24 VDC available

The Model MSD-800 series motion sensing controls offer affordable and reliable protection of indoor and outdoor rotating equipment such as screw conveyors, belt conveyor pulleys, rotary feeders and bucket elevators from costly damage by continuously monitoring rotary speed. The Model MSD alerts the operator of a change in speed by sending a signal to the control unit which can be set to sound an alarm and/or shutdown the equipment completely. By monitoring speed you can greatly reduce system and equipment downtime by fixing malfunctions such as broken drive gears or belts, over-worked motors, belt overload and other problems before serious damage occurs.



MSD-800 control unit

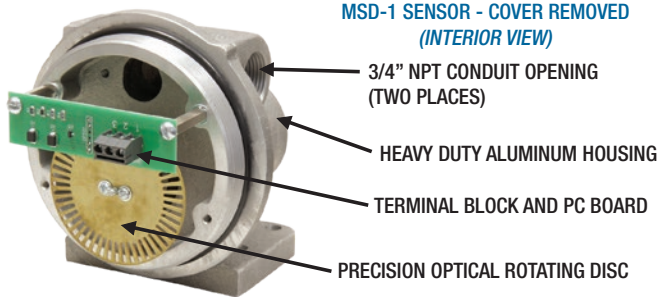
OPERATION

The Model MSD-1 sensor detects motion by means of a precision metal disc with slots on its periphery generating electronic pulses as the disc rotates past an infra-red light source. These pulses are transmitted to the MSD-800 control unit where the signal is

analyzed and the relays are activated or deactivated at preset signal speeds. The MSD-800 control unit is designed to permit two signal set points. Field adjustment of the signal set points is easily accomplished through the buttons on the face of the control unit.

TECHNICAL SPECIFICATIONS

TECHNICAL INFORMATION



MSD-1 (or MSD-1X) SENSOR

Power Input: 12 VDC from the control unit

Output: 12 VDC NPN square wave to control unit

Ambient Temperature: 14°F to 131°F (-10°C to 55°C)

Max. Operating Temperature: T6: 185°F (85°C) "X" units only

Maximum Speed Limit: 1000 RPM

Shaft Load: 125 lbs. radial, 100 lbs. end thrust

Rotation: Clockwise or Counter-clockwise

Drive Torque: 1 inch-pound

Shaft: 5/8" dia. x 1-1/4" long stainless steel

Enclosure: 319 cast aluminum;

NEMA Type 3S, 4, 4X compliant (MSD-1)

Optional: Type 7 Class I Groups C and D,

and Type 9 Class II Groups F and G compliant (MSD-1X)

Bearings: Permanently lubricated and sealed for life ball bearings

Operating Range: 0-1000 RPM

Signal Accuracy: +/- 1 RPM

MODEL MSD MOTION SPEED CONTROL - SENSOR

MODEL	DESCRIPTION	SHPG. WT. LBS.
MSD-1	Speed Sensor (PULSE Generator)*	7
MSD-1X	Speed Sensor (PULSE Generator)**	7
RMS-12S3	Speed Sensor	1

*GENERAL PURPOSE meets NEMA TYPE 3S, 4, 4X

**EXPLOSION PROOF meets NEMA TYPE 7: Class I (Div. 1 & 2) Groups C & D; and Type 9 Class II: (Div. 1 & 2) Groups F & G compliant

MODEL MSD - ACCESSORIES

MODEL	DESCRIPTION	SHPG. WT. LBS.
303	Stub Shaft, 5/8" diameter	0.5
304	Flexible Coupling, 5/8" x 5/8"	0.5
305	Coupling Guard	0.5
310	Sensor Mounting Bracket	1.0
311	Bearing Bracket - Small	2.5
312	Bearing Bracket - Medium	6.0
313	Bearing Bracket - Large	10.0
MSD-14	Two conductor shielded cable to connect control unit and sensor (Belden 8760)	0.02

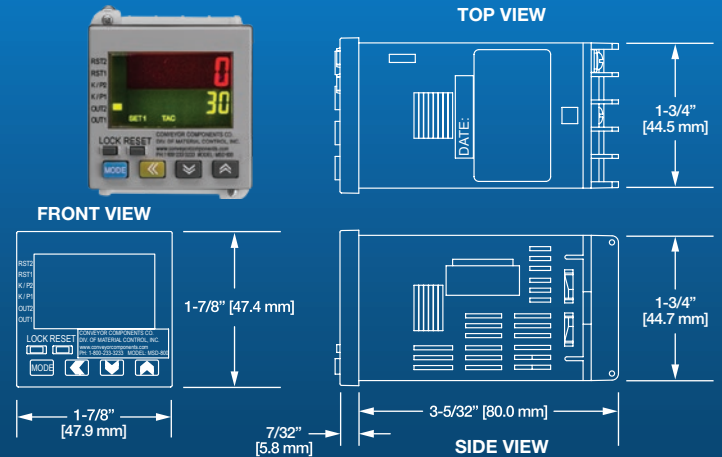
MSD BEARING BRACKETS AND SHIM PLATES

All Dimensions are in Inches

PART NO.	SHAFT DIAMETER	"A"	"B"	"C"	"D"
311	1-7/16"	1-1/4" to 2"	1-7/8" to 2-1/8"	3-1/8"	1-1/8"
312	1-15/16" to 2-7/16"	1-1/2" to 2-9/16"	2-1/4" to 3"	3-3/4"	1-5/8"
313	2-15/16" to 3-15/16"	3" to 3-3/4"	3-1/8" to 4-1/8"	4-1/2"	2-3/16"

Mounting Bracket: Part number 310 will fit Part Numbers 311, 312 or 313

CONTROL UNIT DIMENSIONS



MSD-800 Control Unit:

Power Input: 100-240 VAC, 50/60 Hz

Optional: 24 VDC (MSD-800-24)

Power Consumption: Less than 10 VA (AC input), less than 5 W (DC input)

Output Power to Sensor: 12 VDC

Signal Input From Sensor: 12 VDC square-wave, NPN or PNP (field programmable)

Output 1: SPST Relay: rated 5 amps resistive at a maximum of 250 VAC;

Transistor: NPN open collector. When 100mA/30 VDC, residual voltage = 1.5 VDC max.

Output 2: SPDT rated 5 amps resistive at 125/250 VAC;

Ambient Temperature: 32°F to 122°F (0°C to 50°C)

Storage Temperature: -4°F to 149°F (-20° to 65°C)

Reading Accuracy: .1 to 1 RPM

Alarm Set Accuracy: .001 to 1 RPM

Mounting: 1/16 DIN panel mount (45 mm x 45 mm cutout)

Certifications: UL, CE

MODEL MSD control unit

MODEL	DESCRIPTION	DIGITAL TACH	SHPG. WT. LBS.
MSD-800	CONTROL UNIT: Indicates two under-speed or two over-speed points, or one of each. 110-240 VAC power input.	YES	2.0
MSD-800-24	CONTROL UNIT: Indicates two under-speed or two over-speed points, or one of each. 24 VDC power input.	YES	2.0





MODEL CMS

COMPACT MOTION CONTROL ONE SIGNAL SET POINT

RUGGED, *HEAVY DUTY* DETECTION

The Model CMS Motion Sensing Control is a compact unit designed to include all mechanical and electronic components in one housing. It will produce an output signal at a predetermined speed which may be either underspeed or overspeed. Rugged, heavy duty construction combined with solid state electronics and photo-electric technology, make this one of the most advanced detectors available.

The Model CMS protects all valuable rotating equipment including belt conveyors, bucket elevators, rotary feeders, or screw conveyors. It operates in either a clockwise or counterclockwise direction and mounts in any position.

The control can be mounted in any position, but the mounting surface should be flat and smooth. The bearing brackets and shim plates shown in the chart can be used to mount the unit directly to the pillow block supporting a shaft. Normally, only 1/4" mounting bolts and lock washers are required. If vibration is extreme two of the mounting holes should be doweled and bolts used in the others.

The shaft of the device should be mounted in line with or parallel to the driving shaft. Model CMS can be driven by a flexible coupling, V-belt drive, chain drive, or gear drive.



TECHNICAL SPECIFICATIONS

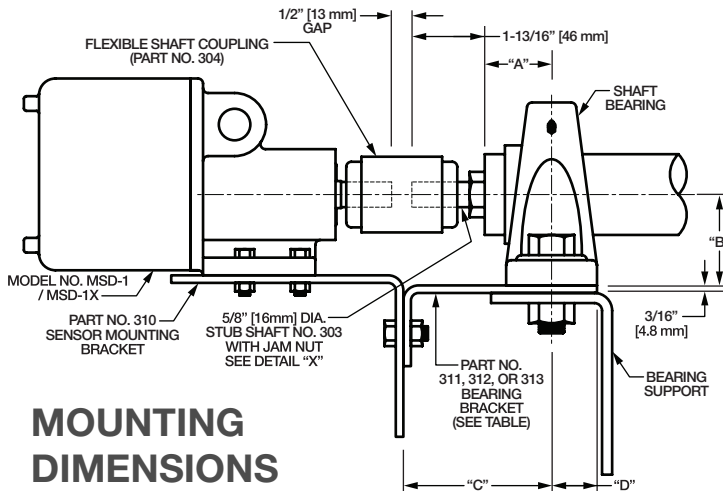
The Model CMS senses motion by means of a precision metal disc mounted on the input shaft. The disc generates measurable light pulses as a series of slots on its periphery rotate past an infra-red light source. A photo-electric sensor monitors the series of light pulses and converts them to a digital signal and activates or deactivates the output relay at the pre-set signal speed. The Model CMS has a adjustable built-in time delay eliminating the need for a separate start-up time delay.

The Model CMS will sense underspeed or overspeed conditions. Three signal speed ranges are available with each unit. The low signal speed range is from 0.1 to 10 RPM. The medium signal speed range is 1 to 100 RPM, and the high speed range is 10 to 1000 RPM.

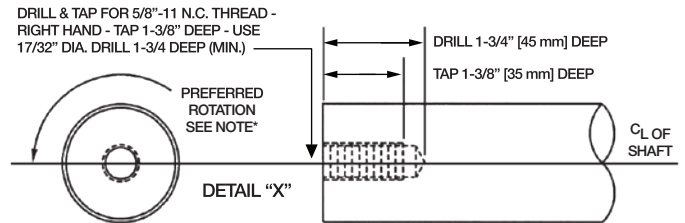
Field adjustment of the signal set point is easily accomplished by means of an adjustment screw. The signal speed ranges are selected by a three position toggle switch on the printed circuit board. For **UNDERSPEED** sensing, the signal point is set below the normal operating speed of the unit. The output relay will then de-energize if the speed drops below the signal set point. For **OVERSPEED** sensing the signal set point is set above the normal operating speed. The output relay will energize if the speed exceeds the signal set point. The output relay can be wired either normally open or normally closed.

Zero speed sensing can be accomplished by locking the signal set point adjustment screw at it's lowest setting of 0.1 RPM. The output relay will then de-energize when the shaft speed of the unit approaches zero.

MODEL CMS TECHNICAL INFORMATION



MOUNTING DIMENSIONS



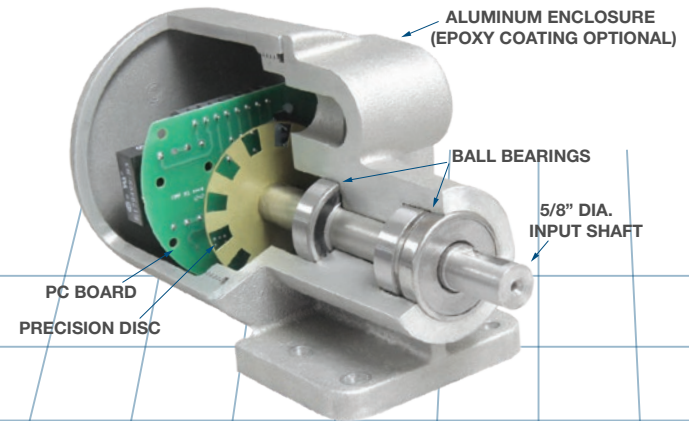
*NOTE: When threaded stub shaft (Part 303 or equal) is to be used. It is recommended that the location of the stub be in the end of the shaft that rotates counterclockwise. This allows the threads to continue being under a constant fastening torque while the shaft turns. If the rotation is clockwise or the shaft is for reversing type service, make sure the jam nut is locked tight against the shaft.

Part No. 310 will fit parts No's. 311, 312 or 313

Bearing Bracket & Shim Plate	All Dimensions are in inches				
	Shaft Diameter	"A"	"B"	"C"	"D"
311	1 7/16	1 1/4 to 2	1 7/8 to 2 1/8	3 1/8	1 1/8
312	1 15/16 to 2 7/16	1 1/2 to 2 9/16	2 1/4 to 3	3 3/4	1 5/8
313	2 15/16 to 3 15/16	3 to 3 3/4	3 1/8 to 4 1/8	4 1/2	2 3/16

BEARING BRACKETS AND SHIM PLATES FOR CMS

MODEL CMS (Cut-Away View)



The output of the Model CMS is a DP/DT relay connected to the terminal block at the rear of the unit. There are two sets of output contacts. Each set includes normally open, normally closed and common. As a result, the unit can be used, to control two separate circuits such as a motor starter and a signal light. Input power is connected from the source to contacts L₁ and L₂. A ground connection is also furnished.

CMS-K CMS ACCESSORY MOUNTING KIT INCLUDES:



STUB SHAFT

FLEXIBLE COUPLING

COUPLING GUARD

MOUNTING BRACKET

MODEL CMS MOTION SPEED CONTROL

MODEL	DESCRIPTION	SHPG. WT. LBS.
CMS-1G	1 Double Pole Double Throw (DP/DT) Relay rated for 120 VAC*	7
CMS-1X	1 Double Pole Double Throw (DP/DT) Relay rated for 120 VAC*	7
CMS-2G	1 Double Pole Double Throw (DP/DT) Relay rated for 240 VAC*	7
CMS-2X	1 Double Pole Double Throw (DP/DT) Relay rated for 240 VAC**	7
CMS-3G	1 Double Pole Double Throw (DP/DT) Relay rated for 24 VAC/VDC**	7
CMS-3X	1 Double Pole Double Throw (DP/DT) Relay rated for 24 VAC/VDC**	7

* GENERAL PURPOSE NEMA TYPE 3S, 4, 4X

** EXPLOSION PROOF NEMA TYPE e 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div. 1 & 2), Groups F & G



ACCESSORIES FOR THE MODEL CMS (CMS-DSPO & MSD)



303 STUB SHAFT
5/8" dia., threaded one end, keyed other end. With jam nut and 3/16" key.



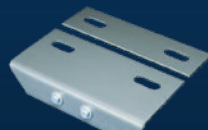
304 FLEXIBLE COUPLINGS
Available for connection of the CMS sensor to the driven shaft.



305 COUPLING GUARD
Protection cover for coupling connection.



310 MOUNTING BRACKET
For mounting CMS sensor to rotary machinery.



311, 312, 313 BEARING BRACKETS
Attaches 310 mounting bracket to pillow block bearing assembly.



**Conveyor Components
Company** Division of Material
Control, Inc.

AIRMATM
WE'LL HANDLE IT.

MECHANICAL SPECIFICATIONS

RADIAL LOAD ON INPUT SHAFT: 125 lb. max.

END THRUST ON INPUT SHAFT: 100 lb. max.

ROTATION: Either clockwise or counterclockwise

DRIVING TORQUE: 1 inch-pound maximum

SHAFT: 5/8" diameter with 3/16" x 1" square key

ENCLOSURE: Aluminum with screw on cover. Optional epoxy coating available.

MEETS: NEMA Type 3S, 4, 4X; or NEMA Type 7: Class 1, Groups C & D; NEMA Type 9: Class II, Groups F & G

BEARINGS: (2) Ball Bearings, permanently lubricated and sealed for life

SHAFT SEAL: Leather type oil seal

WEIGHT: 6 lb.

SIZE: 5" high x 5" wide x 8 1/2" long

ELECTRICAL SPECIFICATIONS

INPUT VOLTAGE: 105-135 A.C., 50/60 Hz.
210-250 volts A.C., 50/60 Hz. (Special Order)

OUTPUT: DPDT relay 3 amp. Resistive at 120 volts A.C.
DPDT relay 3 amp. Resistive at 240 volts A.C.
DPDT relay 3 amp. Resistive at 30 volts D.C.
1/10 Horse Power at 120 volts A.C.
1/10 Horse Power at 240 volts A.C.

AMBIENT TEMPERATURE: 14°F to 131°F (-10°C to 55°C)

MAX. OPERATING TEMPERATURE: T6: 185°F (85°C) "X" units only

REPEATABILITY: +2% max. at constant voltage and temperature

POWER CONSUMPTION: 3 Watts maximum

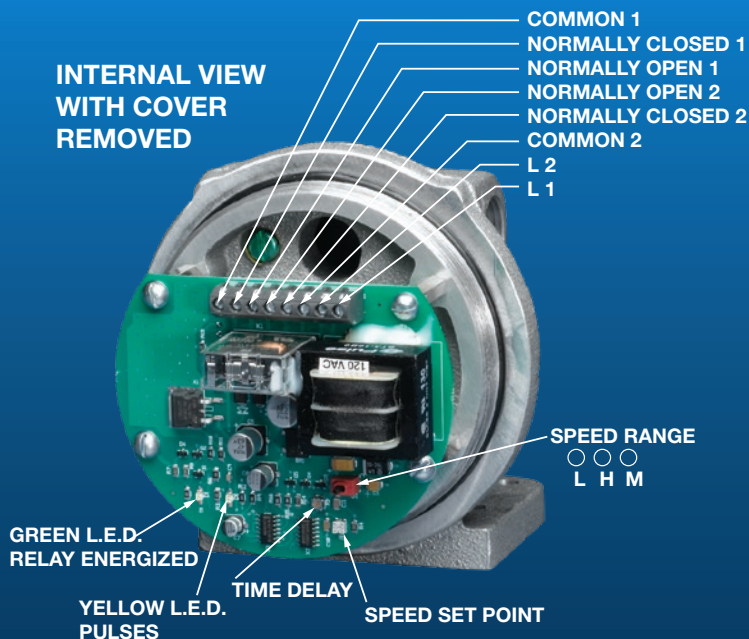
SPEED RANGES: 3 Signal Speed Ranges
LOW: 0.1 to 10 RPM
MEDIUM: 1 to 100 RPM
HIGH: 10 to 1000 RPM

SIGNAL POINT: Speed at which relay will de-energize for Underspeed, or energize for Overspeed.
Recommended to be 15-20% lower than running speed.

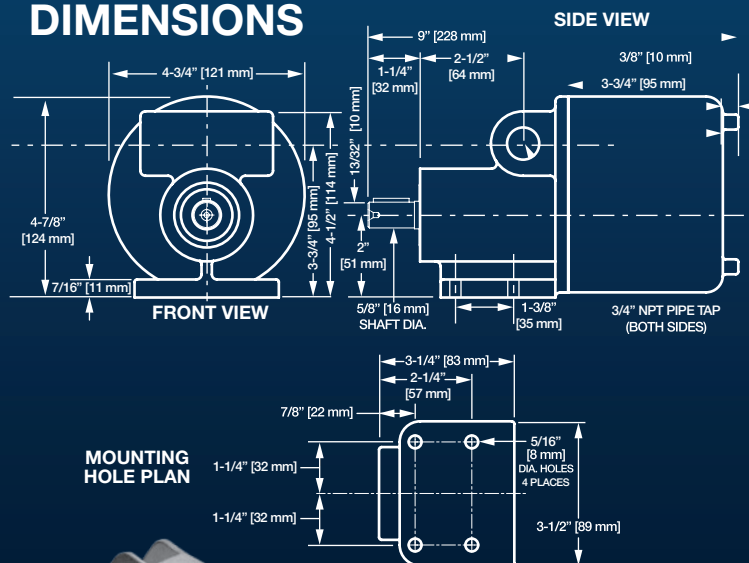
This will eliminate nuisance shutdowns.

START UP DELAY: Adjustable up to 45 seconds

**INTERNAL VIEW
WITH COVER
REMOVED**



DIMENSIONS



**BELT
CLEANERS**

MODEL SC
SKIRTBOARD CLAMP

**REDUCES MATERIAL SPILLAGE OFF
THE SIDES OF THE CONVEYOR BELT**



The Model SC-4 skirtboard clamp forms the basis for a dust containing system that doesn't allow material to leave the edges of the conveyor belt.

PART NO.	DESCRIPTION	SHIPPING WEIGHT (LBS.)
SC-4	Skirtboard Clamp	2



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MODEL CMS DSPO

COMPACT MOTION SWITCH DUAL SETPOINT & PULSE OUTPUT



The model CMS-DSPO motion sensing control is a compact unit designed to include all mechanical and electronic components into a single housing. It will produce a switching output signal at each of two predetermined speeds; which may be two over-speed, two under-speed or one each over-speed and under-speed. It also produces a pulse rate signal for external monitoring with a PLC or Tachometer.

Add "L-DSPO" to end of model number.

MECHANICAL SPECIFICATIONS

RADIAL LOAD ON INPUT SHAFT: 125 lb. max.

END THRUST ON INPUT SHAFT: 100 lb. max.

ROTATION: Either clockwise or counterclockwise

DRIVING TORQUE: 1 inch-pound maximum

SHAFT: 5/8" diameter with 3/16" x 1" square key

ENCLOSURE: Aluminum with screw on cover

MEETS: CMS-1G-DSPO: NEMA Types 3S, 4 & 4X

CMS-1X-DSPO: NEMA Type 7: Class I Groups C & D

NEMA Type 9: Class II Groups F & G
(120 VAC units cULus Certified)

Epoxy coating option: add "E" to end of model number.

BEARINGS: (2) Ball Bearings, permanently lubricated and sealed for life

SHAFT SEAL: Leather type oil seal

WEIGHT: 7 lb.

SIZE: 5" high x 5" wide x 8 1/2" long

ELECTRICAL SPECIFICATIONS

INPUT VOLTAGE: 105-135 volts AC, 50/60 Hz.
210-250 volts AC, 50/60 Hz. (Special Order)
24 volts AC/DC, 50/60 Hz. (Special Order)

OUTPUT (RELAYS):

DPDT relay to 3 Amp. Resistive at 120 volts AC
DPDT relay to 3 Amp. Resistive at 240 volts AC
DPDT relay to 3 Amp. Resistive at 30 volts DC
1/10 Horsepower at 120 volts AC
1/10 Horsepower at 240 volts AC

OUTPUT (PULSE):

12V DC NPN: 12 pulses per rev. with standard disk
50 pulses per rev. with optional low-speed disk

AMBIENT TEMPERATURE:

14°F to +131°F (-10°C to 55°C)

MAX. OPERATING TEMP. (CMS-X-DSPO):
Class T6: 185°F (85°C)

REPEATABILITY: +2% maximum at constant voltage and temperature.

POWER CONSUMPTION: 3 Watts

MODEL CMS DSPO MOTION SPEED CONTROL

MODEL	DESCRIPTION	SHPG. WT. LBS.
CMS-1G-DSPO	Dual Setpoint & Pulse Output with 2 Double Pole Double Throw (DP/DT) relays for 120 VAC*	7
CMS-1X-DSPO	Dual Setpoint & Pulse Output with 2 Double Pole Double Throw (DP/DT) relays for 120 VAC*	7
CMS-2G-DSPO	Dual Setpoint & Pulse Output with 2 Double Pole Double Throw (DP/DT) relays for 240 VAC*	7
CMS-2X-DSPO	Dual Setpoint & Pulse Output with 2 Double Pole Double Throw (DP/DT) relays for 240 VAC**	7
CMS-3G-DSPO	Dual Setpoint & Pulse Output with 2 Double Pole Double Throw (DP/DT) relays for 24 VAC/VDC**	7
CMS-3X-DSPO	Dual Setpoint & Pulse Output with 2 Double Pole Double Throw (DP/DT) relays for 24 VAC/VDC**	7

*GENERAL PURPOSE NEMA TYPE 3S, 4, 4X

**EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div. 1 & 2), Groups F & G

MODEL CMS / CMS DSPO ACCESSORIES

MODEL	DESCRIPTION	SHPG. WT. LBS.
303	Stub Shaft, 5/8"	.25
304	Flexible Coupling, 5/8" x 5/8"	.75
305	Coupling Guard	.5
310	Mounting Bracket	2
311	Bearing Bracket - 1 7/16 Shaft Diameter	3.5
312	Bearing Bracket - 1 15/16 to 2 7/16 Shaft Diameter	6
313	Bearing Bracket - 2 15/16 to 3 15/16 Shaft Diameter	9
CMS-K	CMS accessory mounting kit (includes 303, 304, 305, 310)	4

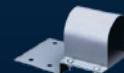
CMS-K CMS ACCESSORY MOUNTING KIT INCLUDES:



STUB
SHAFT



FLEXIBLE
COUPLING



COUPLING
GUARD



MOUNTING
BRACKET

MODEL BK

RUBBER BELT-KLEEN

Protects valuable conveyor belts. It has a straight, smooth edge and improves the cleaning effectiveness of wiper style belt cleaners. Available in rolls up to 50' foot long, or cut to length at no extra charge. Used as standard wiper material on all our rubber wiper style conveyor belt cleaners.

The Model BK (BELT-KLEEN) is an 80 durometer solid rubber made especially for belt cleaning applications. It has the proper stiffness for belt cleaning and is abrasion resistant. Available in four different sizes.



PART NO.	THICKNESS	WIDTH	SHIPPING WEIGHT PER FOOT
BK-54	1/2"	4"	1
BK-56	1/2"	6"	1.6
BK-16	1"	6"	3.2
BK-19	1"	9"	4.7



**Conveyor Components
Company** Division of Material
Control, Inc.

AIRMA[®]TIC
WE'LL HANDLE IT.

**READY[™]
PRODUCTS**

MADE IN THE USA
**READY[™]
GATE[™]**



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PRODUCTS GO DIRECTLY TO**



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MADE IN THE USA

READY GATE™

FOR USE WITH OSHA COMPLIANT 42" GUARDRAIL SYSTEMS.
READY GATE™ ADJUSTABLE SELF CLOSING SAFETY GATES MEET OSHA 1910 SUBPART D, AND ANSI/ASSP-A1264.1-2017.

ADJUSTABLE

Two models cover openings from 16" to 40". Either model can be mounted to allow for left or right opening.

Will mount to round or square guardrail systems or to any reinforced flat mounting surface, by easy bolt-on attachment.

Stainless steel spring resists rust while ensuring gate closes automatically. Tested to over 1,000,000 cycles without spring failure.

Adaptable to round or square guardrail.

2" incremental adjustment.

Friction reducing bushings eliminate metal to metal contact.

Strike Plate adds additional strength to the gate. Noise dampening foam rubber pad reduces loud noise when gate closes.

SELF-CLOSING

Comprehensively tested to over 1,000,000 cycles without spring failure.

CORROSION RESISTANT

Two-part powder-coat finish, zinc rich primer with UV resistant polyester top coat.

OSHA/ANSI

OSHA & ANSI Standards require any surface above 4 feet to be guarded by guardrail systems. Any openings in the guardrail system must be protected by an offset guardrail or self-closing safety gate.

READY GATE™ Advantages

- Versatile, can be mounted to round or square guardrail up to 2", or a firm reinforced wall surface.
- Stainless steel spring closes the gate after each pass thru.
- Gate width is available in two adjustable size ranges to fit openings of 16" to 26" or 24" to 40". Gate width is adjustable in 2" increments.
- Available in red or safety yellow powder coated finish for safety, with zinc rich powder coat primer for corrosion resistance.

MODELS AVAILABLE:

RED - RGC-26-ZC15

SAFETY YELLOW - RGC-26-ZC16

FITS CLEAR OPENINGS OF 16" to 26"
adjustable in 2" increments

RED - RGC-40-ZC15

SAFETY YELLOW - RGC-40-ZC16

FITS CLEAR OPENINGS OF 24" to 40"
adjustable in 2" increments

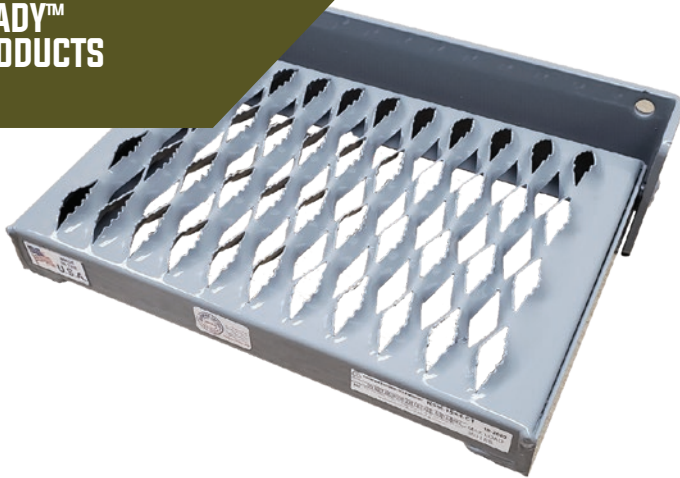
MEETS OR EXCEEDS THE FOLLOWING STANDARDS:

OSHA 1910.29 Fall protection systems and falling object protection-criteria and practices.

Guardrail systems are capable of withstanding, without failure, a force of at least 200 pounds downward or outward without deflecting to a height of less than 39 inches above the walking-working surface.

ANSI/ASSP A1264.1 - 2017

Gates must meet the guardrail requirements of 200 lbs. applied in any direction with a maximum allowable deflection of 3 inches under load.



MADE IN THE USA
READY
STEP
FOLDING STEP

The **READY STEP** mounts easily and allows a quick step up almost anywhere. Easily folds into a vertical position when not in use. Includes two 9/16" mounting holes.

MODELS AVAILABLE

MANUAL FOLD	RSM-15X4-C1
SPRING LOADED FOLD	RSS-15X4-C1



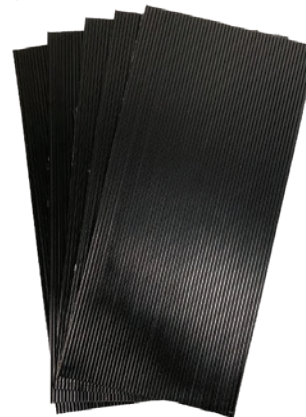
TECHNICAL SPECIFICATIONS

- 10" x 15" tread surface
- Spring- loaded for ease of folding
- 350 lb. load rating
- Gray Powder-coated finish

MADE IN THE USA
READY
TREAD
UNIVERSAL ADHESIVE TREADS

High Quality adhesive backed, durable treads for multiple surfaces.

RIBBED RUBBER	RT5-R-7X15
ABRASIVE	RT5-A-2.75X13.75



RIBBED RUBBER ADHESIVE
BACKED TREAD- 5 PACK
RT5-R-7X15



ABRASIVE ADHESIVE
BACKED TREAD- 5 PACK
RT5-A-2.75X13.75

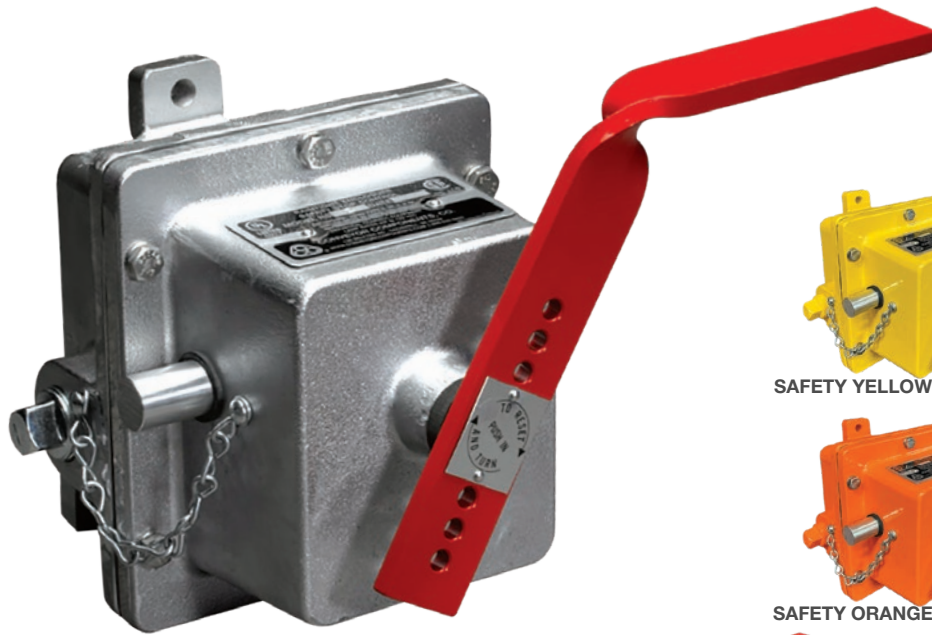
**A PORTION OF ALL SALES OF READY
PRODUCTS GO DIRECTLY TO**



osotamerica.org

DID YOU KNOW?

Conveyor Components Company offers a wide selection of color options on all our Safety Products? Whether equipment is required to be a specific color, or it's just a preference, Conveyor Components Company has the color to suit YOUR needs!



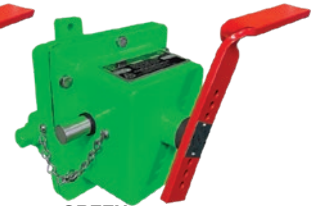
SAFETY YELLOW



BRIGHT GREEN



SAFETY ORANGE



GREEN



BLACK



RED



BLUE



GRAY



PINK



WHITE

[illegible]



Division of Material
Control, Inc.

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AIRMATIC founded in 1944, is a woman-owned Industrial Distributor, with installation and maintenance capabilities, offering equipment, machinery, and shop supplies to the Industrial, Construction, Utility, Government, and Commercial Markets. Our products and services are sold through three business units:

The **MATERIALS MANAGEMENT GROUP** provides products and services to industries that convey, store, transport, and process powders and bulk solids from aggregates, cement, and chemicals to foods, grains, metals, power generation, and waste water treatment applications;

The **SERVICE GROUP** provides fabrication, installation, and maintenance services to improve bulk materials handling efficiency; mechanical clean-out services for silos and hoppers to eliminate material flow problems; and shop repair/rebuilding and modifications services of products sold by the Company.

The **TOOL GROUP** provides power tools, personal protective equipment, materials-handling equipment, shop equipment and MRO supplies used for production, fabrication, assembly, metal removal, maintenance, and storage in manufacturing, construction, utility, and commercial applications. Our Customers tell us that by choosing **AIRMATIC** to solve their problems, they gain increased productivity, decreased costs, and a safer, cleaner work environment.



CONVEYOR COMPONENTS COMPANY, established in 1965, is a manufacturer of conveyor controls, motion controls, level controls, bin aerators, and conveyor belt cleaners. Conveyor Controls include safety stop switches, pull cords, belt alignment controls, damaged belt-rip detectors and material flow controls. Motion Controls include contact and non-contact zero speed controls and speed monitors. Level Controls include paddle wheel switches, tilt level probes, and bin aeration pads. Conveyor Belt Cleaners include rotary brush cleaners, single and multi-blade cleaners, plow style belt cleaners.

AIRMATIC

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