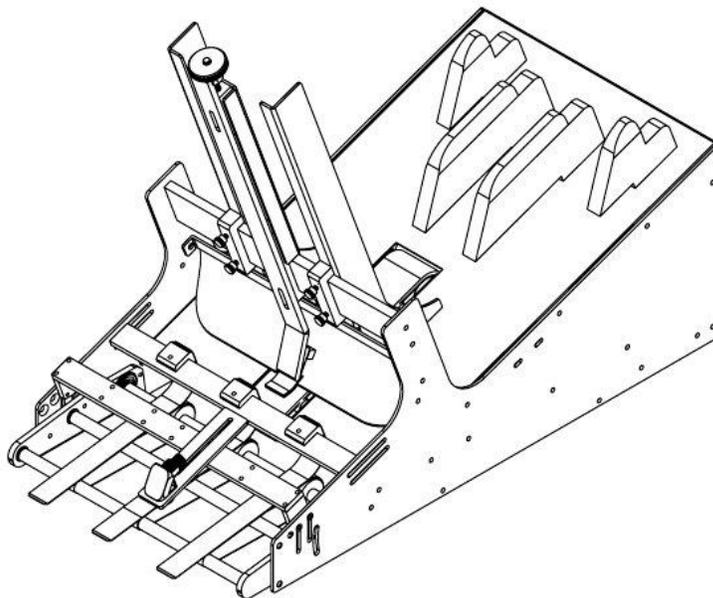


Maxim Operator's Manual

Models: RX-12bc, RX-12d

PATENT PENDING



Illustrations in this guide are for reference only and may depict optional features that are available at additional costs.

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Thank you for purchasing your Maxim RX Friction Feeder. Enclosed please find simple step-by-step instructions to help you quickly assembly your product. Before you begin, we recommend that you follow the steps below:

1. Please read the instructions thoroughly
2. Identify all parts, inspect that all items are received and there is no damage from shipping.
3. You will need the following tools: 1/8", 3/16" and 5/32" allen wrench.

CONTENTS:



Chassis Assembly



Hopper Assembly



(2) Product Wedges, and (2)
Short Product Wedges

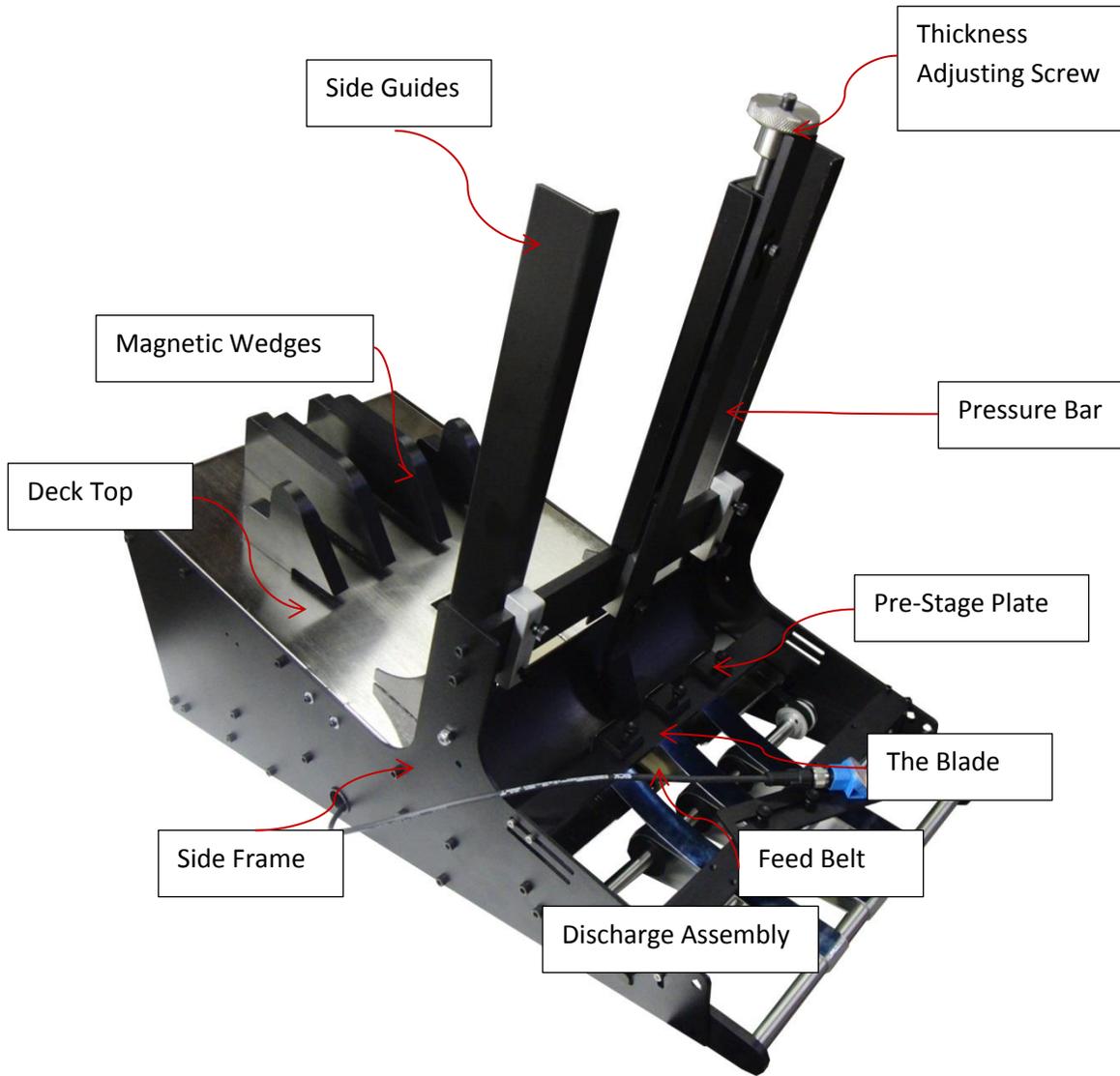


Power Cord



Trigger Assembly

OVERVIEW & SPECIFICATIONS



PRODUCT SIZES:

RX-12bc/d: 2.5"W x 3.5"L – 12"W x 12"L

PRODUCT THICKNESS:

.004" - .375"

SPEED:

400 ft./min, DC motor

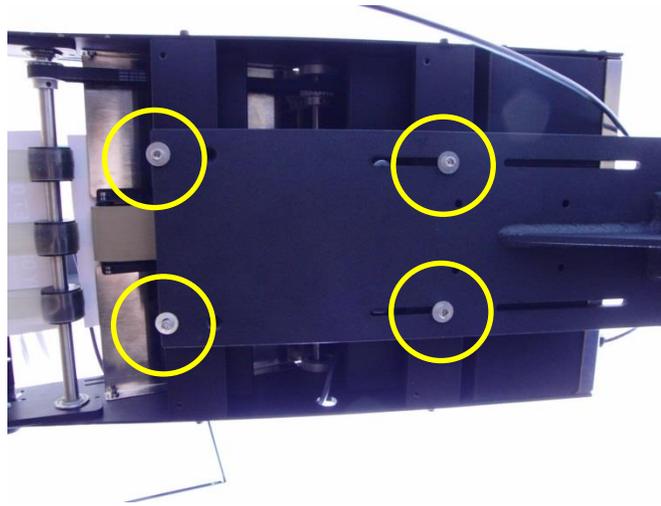
WEIGHT:

38 lbs (17.24 kg)

ASSEMBLY INSTRUCTIONS

IF YOU PURCHASED YOUR FEEDER WITH A MOUNTING STAND:

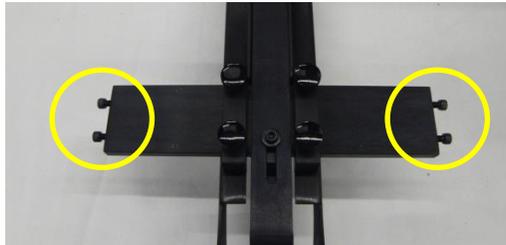
1. Assemble your stand referencing the Mounting Stand Assembly instructions.
2. Remove the RX feeder chassis from the box. The feeder will come with (2) mounting bars underneath the feeder if purchase with a stand.



3. Rest the feeder on the stand head and secure it to the mounting bars using a 3/16" allen wrench with the 4-screws provided.

FEEDER ASSEMBLY INSTRUCTIONS:

1. Locate the Hopper and remove the 4 screws on the Hopper Assembly



2. Loosen or remove the Thickness Adjusting Screw



3. Insert the Hopper Assembly between the chassis side frames. Be sure the pressure bar on the hopper is positioned over the Blade



4. Mount the Hopper Assembly to the Chassis side frame with the 4 screws using a 5/32" allen wrench. Position the Hopper Assembly in the screw slots with 1/8" clearance above the chassis deck-top.



5. Place the magnetic Product Wedges on the chassis decktop. These will be used to support and lift your product.



The wedges contain powerful magnets. Do not place your fingers between the magnets and any metal object.

You are now ready to load product.

FRICITION FEEDING OVERVIEW

IMPORTANT: *If you are unfamiliar with friction feeding technology, it will be extremely beneficial to review the following section.*

Friction = surface resistance, of one object against another, to relative motion.

Feeder = a device that feeds product

Watch video demo: vimeo.com/superiorphs/feederbasics

Friction feeding technology is used to separate and feed objects through the motion of friction. A stack of product is placed into the hopper and separated by pulling the bottom piece through the feeder against the static friction weight of the product on top of it.

There are three basic guidelines for using friction feeding technology:

6. **Can the product be fed?** Take two pieces of your product and place them together. If they can slide apart, they can be fed. Good product candidates for friction feeding include card stock, cards, envelopes, paper, chip board, corrugate material, and other flat surface materials.
7. **Does the product easily mark or chip easily?** Some products mark easier than others so this will need to be tested.
8. **Does the product interlock when separating?** Some irregular shaped and die cut products may interlock when feeding and rip the product.

If any of these steps cannot be achieved, you will need to use something other than a friction feeder to separate your product.

The primary goal in friction feeding is to create a gap between each piece of product. For the Maxim RX-12bc and RX-12d, product separation will occur on the discharge of the feeder.

*****PRODUCT SEPARATION DOES NOT OCCUR UNDER THE BLADE****

This will be further detailed in the Product Setup section.

PRODUCT SETUP

WATCH VIDEO DEMONSTRATION: vimeo.com/superiorphs/rxproductsetup

Loading Product

1. Raise the Pressure Bar off the feed belt by turning the Thickness Adjusting Screw counter-clockwise.
2. Center one piece of product under The Blade and **loosely** tighten down the Pressure Bar by turning the Thickness Adjusting Screw clockwise. Be sure the product is centered over the feed belt to prevent skewing.
3. Fan out 1" of product and load into the hopper. Be sure the stack of product is perfectly fanned out and follows the curve of the Pre-Stage Plate.
4. Position the Magnetic Wedges to produce a little lift on the back end of the product. The RX-12bc/d come with **2-Small Product Wedges** that are the **longer wedges**. These are notched on the bottom so they can be placed over the feed belt to support shorter products. In general, for filmsy products longer than 6" to 8", place the **Roller Support Wedges** (shown right, sold separately) under the product stack to help support the weight and aid in product separation.
5. Be sure the product is supported evenly to reduce product skewing as it's fed.



NOTE: the amount of lift is product dependent. Use more lift for flimsy products, less for rigid products.

NOTE 2: more lift equals more separation, less lift equals less separation.

6. Adjust the Side Guides to 1/16" to 1/8" of clearance on either side of the product so it isn't pinched.
7. Fan out 2-3" of product and place it in the hopper. Again, be sure the stack is perfectly fanned out and hugging the curve of the Pre-Stage Plate.
8. Stack height above the Pre-Stage Plate does not need to be fanned out. Be sure your product is jogged square before loading.



Product Setup

The following instructions are general starting points and can be adjusted for your application.

1. Plug-in your power cord and turn the feeder on. Be sure the Sheet Sensor light at the nose of the feeder is NOT illuminated. If the light is lit on the sensor with no product present, it is detecting an object, such as the shaft, spring steel, or other object, and will need to be positioned so the light turns off.
2. Press and hold the Jog button while slowly tightening the Thickness Adjusting Screws to create a gap between each piece of product as it passes through the discharge. Once you achieve a ¼" to ½" gap between each piece, you can stop tightening the Thickness Adjusting Screw.
CAUTION: Do not overtighten. If you are creating too much pressure on the feed belt and not getting a gap between each piece, see Troubleshooting: Creating Product Separation.
3. As product passes the Sheet Sensor, it will illuminate when it's blocked and turn off when no object is present. On the RX-12bc, this is what is communicating the count to the feeder. If no gap is present or there is an overlap in product, this will create miscounts.
4. RX-12bc: set the Batch Count on the rear panel to '01'.
5. As a starting point, set the speed dial to 5 and press the Cycle button. The feeder will stage the leading piece of product to wherever the sensor is positioned. Cycle again. If one piece of product fed out and the feeder stopped, you have successfully setup your feeder. If not, proceed to Troubleshooting: Creating Product Separation.
6. RX-12bc: for batch counting applications, incrementally increase the batch count size while making fine-tuning setup adjustments until you reach your desired batch count, i.e. 05, 10, 15, 20). Be sure to count each stack to make sure the count is correct.

NOTE: Over counts result from not detecting a gap between each piece. Under counts result from the sheet sensor detecting (a) a reflective product, (b) curled product, or (c) a dark color on a sheet activating a second count.

7. If you are using the Trigger Sensor Assembly to externally cycle the feeder, be sure the feeder is turned off before plugging it in. Mount the assembly and position the sensor to detect a passing object such as a lug on a conveyor or a hand motion. The sensor has a 2-inch detection range.

FEATURES & FUNCTIONALTY

RX-12bc Rear Operator Panel



CYCLE: Pressing the Cycle button will manually trigger the feeder to the preset count or to run continuously until stopped. You can externally trigger the feeder by using the Trigger Assembly or sending a signal through the I/O. If the feeder receives a second signal before the cycle is complete, it will put the feeder in fault mode and stop the feeder. Cycle is not operable when a Fault is present. NOTE: if a Stop or Fault happens in Batch Counting mode, the feeder will reset the cycle count to zero.

JOG: The feeder will advanced when the Jog button is pressed. The feeder will run continuously when the Job button is activated. This option is typically used when setting up product in the feeder or clearing any product under the Blade or in the discharge. While holding down the Jog button, you can adjust the Thickness Adjusting Screw and feed until the product runs consistently. The Jog function ignores any fault conditions.

- STOP · FAULT:** If a miss-feed, jam, time-out, or miss-detect occurs, it will put the feeder into fault mode and the stop light will blink red. Clear the jam and press the Stop button to reset the feeder into Ready Mode.
- BATCH COUNT:** The Maxim RX-12bc can count '01' to '99' pieces per cycle. Set the count to the desired batch count size. To run in Continuous Mode, set the count to '00' and cycle the feeder. The feeder will run continuously until stopped or it faults out.
- SLOW DOWN:** In high-speed batch counting applications, the Slow Down can be enabled to slow the last 1 or 2 pieces in the count. This will stop the last piece from shooting too far past the sheet sensor or adding an additional piece to the count.
- SPEED:** Use the speed pot to adjust your operating speed. Maxim RX feeders have a maximum belt speed of 400 ft./min. and are not recommended to run at slower than 200 ft./min. Your slowest operating speed should be set no lower than between 2 and 5 on the dial. **NOTE: there is a time-out feature built into the feeder.** During the feeder cycle, if no gap or product is detected for a factory set amount of time, this will put the feeder in fault mode. This is especially true when running longer products at too slow of speed. For more information, see Troubleshooting: Fault Conditions.
- TRIGGER:** The Trigger port is a 4-pin connector for the Trigger Assembly. The Trigger Assembly is use to send an external signal to the feeder to cycle.
 Pin 1 - +24VDC Pin 2 – Signal Return Pin 3 – 0VDC
- I/O:** The I/O is a 9-pin connector for an external interface cable (sold separately). See Electrical Schematic for pin-out wiring diagram. The I/O connector is used to receive operating signals from an external host system such as a wrapper, conveyor, or other host system.
 Pin 1- Constant Fault (O) Pin 2 - +24VDC (O) Pin 3 – Ext Stop (I)
 Pin 4 – Ext Jog (I) Pin 5 – Busy (O) Pin 6 – Timed Fault (O)
 Pin 7 – Dropper (I) Pin 8 – Ext Trigger (I) Pin 9 – Dropper (O)
- POWER / FUSE:** Power inlet for power cord and On/Off power switch. The RX-12bc andRX-12d come standard with 115vac – 60Hz CorCom power filter (optional 220vac is available) with 2 – 3-amp slow-blow fuses. Be sure the voltage window reads the correct voltage for your supplied power (115/220). The round fuse holder contains a 1-amp fast-acting fuse to protect the DC circuitry.

RX-12d Rear Operator Panel



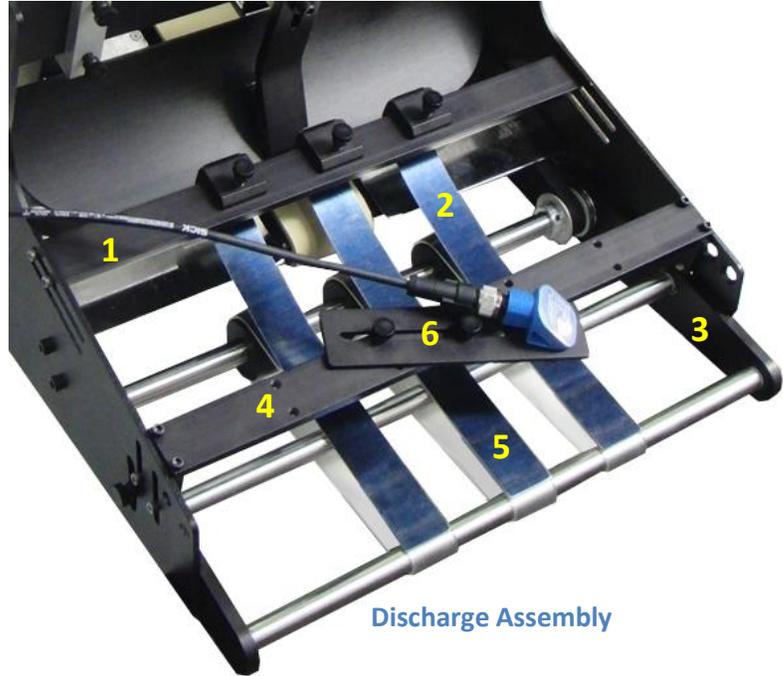
CYCLE: Pressing the Cycle button will manually trigger the feeder to the preset count or to run continuously until stopped. You can externally trigger the feeder by using the Trigger Assembly or sending a signal through the I/O. If the feeder receives a second signal before the cycle is complete, it will put the feeder in fault mode and stop the feeder. Cycle is not operable when a Fault is present.

JOG: The feeder will advanced when the Jog button is pressed. The feeder will run continuously when the Job button is activated. This option is typically used when setting up product in the feeder or clearing any product under the Blade or in the discharge. While holding down the Jog button, you can adjust the Thickness Adjusting Screw and feed until the product runs consistently. The Jog function ignores any fault conditions.

STOP • FAULT: If a miss-feed, jam, timeout, or miss-detect occurs, it will put the feeder into fault mode and the stop light will blink red. Clear the jam and press the Stop button to reset the feeder into Ready Mode. Learn more under Fault Conditions.

Discharge Assembly

The discharge on the Maxim RX-12bc and RX-12d come with many features and advantages for your product setup. The discharge belts run *faster* than the main feed belt, pulling the product faster when it enters the discharge and creating a gap between each piece.



Discharge Assembly

1. **Discharge Cross Bar** – this bar is adjustable forward and back to control the pinch point of the product between the spring steel straps and urethane belts when it enters the discharge. In general, for longer products you will want to position the bar closer to the main feeder belt. Positioning is product dependent so use trial-and-error for the correct placement. This bar can also be positioned in the top or bottom slots. The bottom slots are used for thin sheets and/or longer product to create more grab on the product to aid in separation.
2. **Spring Steel Straps** – these three straps create pressure on the product and guide it down the discharge. You can bend these to create the desired amount of pressure on the product or position them along the discharge cross bar for different sized products. You can position the rollers along the shaft for different sized products by loosening the two set-screws on each roller, but be sure the spring steel straps are always positioned over the urethane belts.
3. **Adjustable Discharge Assembly** – the adjustable discharge houses the drive and idler shafts. It is adjustable up and down to angle your product into whatever you're feeding on.
4. **Elevated Discharge Cross Bar** – the sensor cross bar houses the sheet sensor bracket and double detect (optional). This can be adjusted up-and-down, forward-and-back. The sheet sensor has a 2-inch range and should be positioned to detect the product within 2-inches.
5. **Short/Long Spring Steel** (not pictured) – The RX-12bc comes with an additional long spring steel attached to the sensor cross bar. It is slightly bent down at the tip to aid in high-speed batch counting and acts as a kick-down on the back end of the product as it leaves the feeder. This can be bent to your desired angle. The RX-12d comes with a shorter spring steel attached to the sensor cross bar for one-shot applications to aid in product separation.
6. **Sheet Sensor Bracket** – the sheet sensor bracket holds the sheet sensor and can be position to detect the edge of the leading piece of product. Be sure the sheet sensor is not positioned over a shaft, spring steel or other object.

DOUBLE DETECT SETUP INSTRUCTIONS

1. Open the plastic lid on the Double Detect Amplifier, and HOLD the Teach Button until the Red display shows "**Pt**".
2. Place 2 pieces of product between the fiber optic sensors in the discharge area.

NOTE: Place the 2 pieces together at their thickest point (i.e. envelop flaps). Because this is a burn-through sensor, choose the darkest ink area if possible.

3. With the 2 pieces of product in place, PRESS the Teach Button once. The sensor will set a value in the green portion of the display. This is the threshold value the sensor will use to determine a pass/fail reading. This value can be changed manually by pressing the ▶ or ◀ buttons if the threshold value achieved through teaching isn't sufficient.



RUN DISPLAY

The Double Detect Amplifier should be set to a Dark - On status from the factory. This is the required setting to work with the MAXIM line. If needing to set, follow these Instructions below.

1. Open the plastic lid on the Double Detect Amplifier, and HOLD the Mode Button until the Red display shows "**L-d**".
2. PRESS the Mode Button once until the green display flashes.
3. Use the ▶ or ◀ buttons to change the green display to read "**d on**". PRESS the Mode Button to set.
4. Use the ▶ or ◀ buttons to cycle through the menus until the red display reads "**end**". PRESS the Mode Button once to take it out of the menu screens and back to the run screen.



MENU DISPLAY

PRODUCT SETUP TROUBLESHOOTING

Fault Conditions

Flashes at ¼ second intervals – Double Detect (optional).

Flashes at 1 second intervals – Timeout detected. While cycling, if the sheet sensor stays blocked for more than 1.3 seconds or stay unblocked for more than 4 seconds, the timeout error will initiate.

Flashed at 2 second intervals – Miss Detect. Miss detect function monitors

Solid – more than one error has occurred.

ISSUE	POSSIBLE CAUSE	PROPOSED SOLUTION
Time Out Error	<ol style="list-style-type: none"> 1. Sheet sensor in discharge is blocked or unblocked for about 2 seconds when feeder is triggered to feed. 2. Sheet sensor in discharge is not changing state 3. Sensor was moved and is reflecting off a surface, is on all the time, and doesn't see gap 4. Product is overlapped so there is no gap 5. No Product is coming through feeder. 6. Wedge and Separator Blade settings are incorrect 7. Feed Belt is not turning 8. Motor is not turning. 9. Feed Belt Turns, but Discharge belts do not turn 	<ol style="list-style-type: none"> 1, 2, 3. Move sensor 4. Adjust wedge and gate separator blade, and adjust discharge hold down straps as required to create separation and gap 5. Product is out or almost out. Refill hopper 6. Adjust wedge and gate separator blade to create separation and gap 7.a. Speed knob turned down too low. Turn up speed knob so belt turns 7.b. Check timing belt and pulleys between motor and drive shaft. Replace belt or tighten pulley set screws if needed 8.a. If older unit, check if brushes are worn. Replace brushes 8.b. Verify 90 Volts to the motor when it should be running. If not, check operation of relay, then Click PLC. Replace component as needed 9. Check timing belt and pulleys between main drive shaft and discharge drive shaft. Replace or tighten as needed.
Miss Detect	Product is not dispensed in time between two trigger (lug) signals	Slow down lugged conveyor or speed up feeder

Creating Product Separation

Product separation is controlled by couple factors: (1) the amount of pressure on the product between the main feed belt and pressure bar, (2) the amount of lift from the wedges, (3) the amount of weight in the hopper, (4) the product itself. All four work together to create a balance in the feeder and aid in product separation. There is no magic formula for all products; just trial-and-error.

1. **Pressure vs. Lift:** Do not overtighten the Pressure Bar. This will create too much resistance on the motor and can prematurely wear on consumable parts. Instead, create more lift on the back end of the product stack by moving the wedges forward.
2. **Weight:** Rigid products, such as chipboard material, tend to be lightweight and may require more weight in the hopper to increase contact with the feed belt to pull the product through. Just the opposite is true for heavy products. The weight of a heavy stack, such as paper sheets, can create too much resistance on the bottom piece to pull it through. Instead, increase the wedge lift to reduce the weight of the stack off the feed belt or position the Low Profile Wedge Rollers (sold separately) on the deck-top to disperse the stack weight.
3. **Product Types:** The Maxim RX Series is designed to be a cost-effective solution for a variety of applications and product types. It is not recommended for any type of glossy product substrates. There are thousands of different products on the market and it's impossible to give a comprehensive list of what can and can't feed. Product testing is always highly recommended before the sale of a Maxim RX feeder if the product poses any type of feeding issues.

Correcting for Product Skew

On Maxim RX models, two factors contribute to skewing:

1. **Uneven product weight distributed over the feed belt:**
 - a. Be sure the weight of your product stack is evenly distributed over the feed belt. Position the magnetic wedges under and around your product stack to help distribute the weight.
 - b. In general, whichever corner of your product is leading first usually means that side of the product has more contact with the feed belt and is pulling faster. Using micro-adjustments with your wedges, lift that side of the product off the belt or lower the other side.
2. **Product not centered in the hopper:**
 - a. For symmetrical products, be sure the product stack is centered over the feed belt and adjust the side guides to help center your product.
 - b. For asymmetrical products, be sure the stack is positioned over the feed belt to distribute the product weight evenly. This is especially true with poly bags and other uneven products.

Operating Stack Height

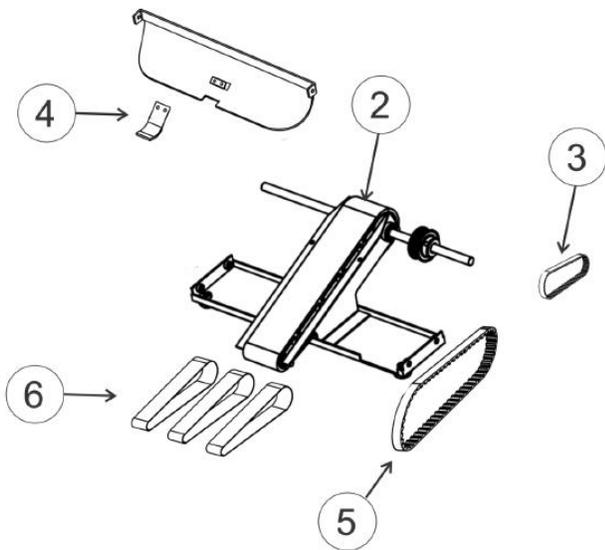
Operating stack height refers to the amount of product in the hopper. This will vary depending on the weight and rigidity of your product. While the feeder has a maximum stack capacity of 16", your product may not allow for that. Heavy-thin products, such as paper sheets, will have a lower operating stack height around 2"-5", while

lighter-rigid products, such as envelopes, may run at full 16" capacity. The greater the weight, the greater the friction and force needed to separate the product.

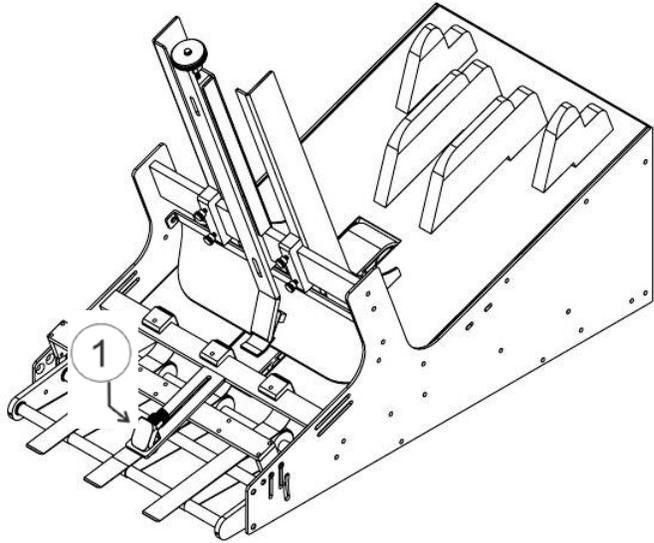
NOTE: Overtightening the Blade and creating too much pressure to try and separate your product can damage the feeder by creating too much resistance on the motor and prematurely wearing down your belts, Blade, and other consumables.

Instead, use the wedges to lift heavier products off the feed belt to aid in separation and reduce friction, and/or reduce your stack height. There is no exact formula to determine your operating stack height. For maximum results, use trial-and-error to find your optimal stack height for your specific product type and keep your operating stack height close to that range. You may notice feeding inconsistencies if the operating weight/height of your product stack is not consistent.

COMPONENTS & PARTS LIST



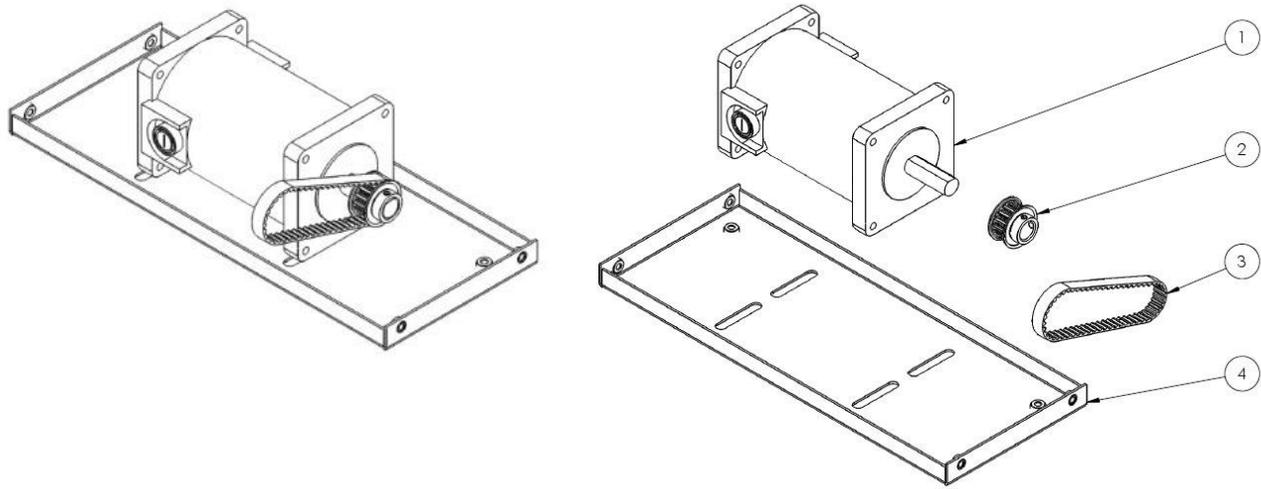
Consumable Parts



Parts Not Listed

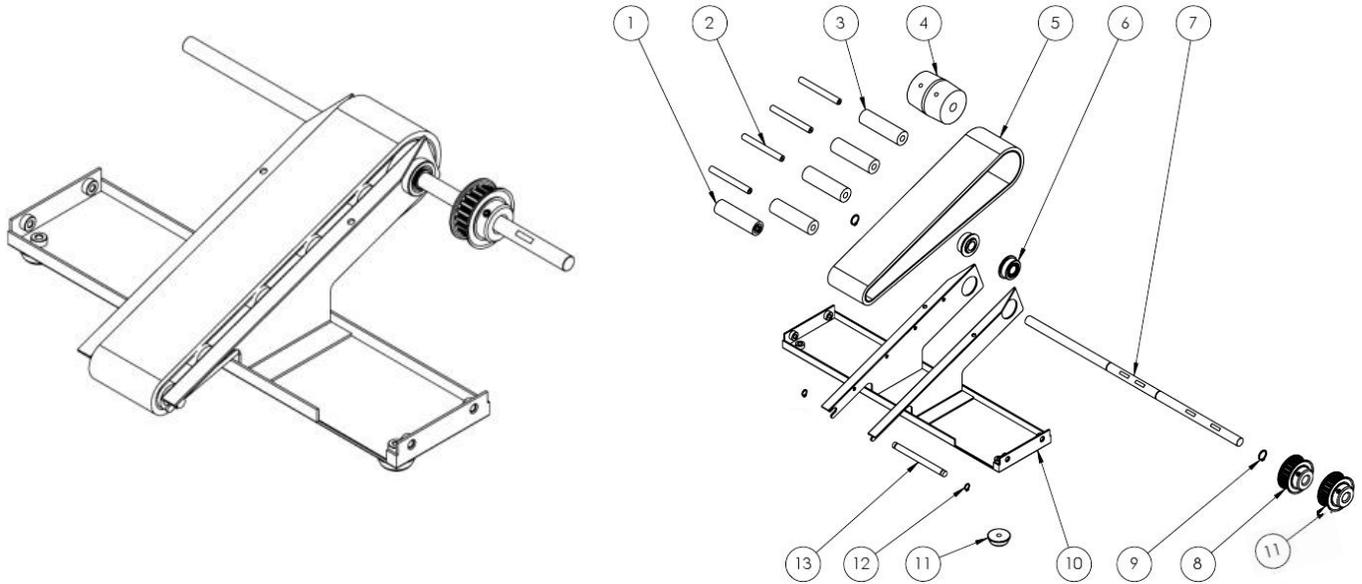
Item	Description	Part Number	Quantity
1	PNP Trigger Sensor w/ Quick Disconnect (ET3) (This is the same for the sheet sensor and trigger assembly)	S100388	1
2	RX-12 Gum Rubber Main Feed Belt, smooth RX-12 Gum Rubber Main Feed Belt, grooved (optional)	S300991 301991	1
3	100XL037 Timing Belt, Motor Drive	S300846	1
4	The Blade™ (Red) Soft durometer, 55a The Blade™ (Blue) Hard durometer, 75a	S400226A S400226B	1
5	232XL037 Timing Belt, Discharge	S301177	1
6	Carriage, Rear Urethane Idler Belt	S100158	3
N/A	M12 Sensor Cable Standard	S100389	1
N/A	Trigger Sensor Assembly	G100390	1

Motor Pan Assembly



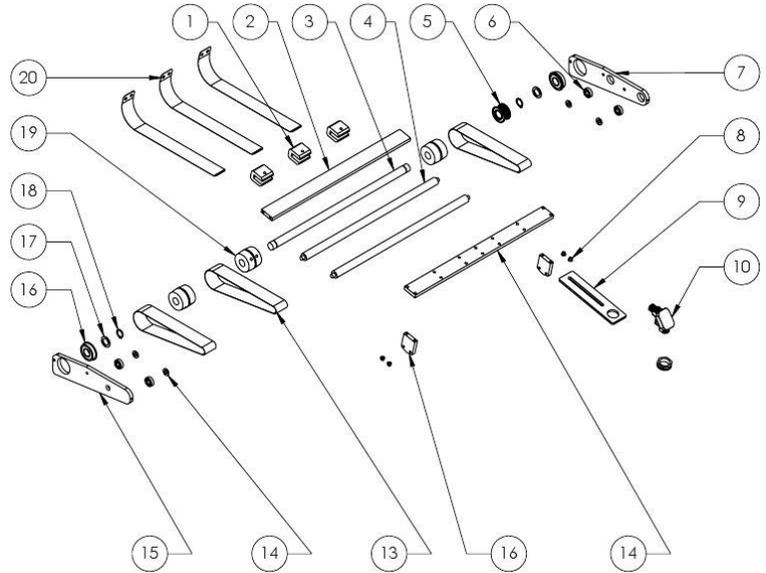
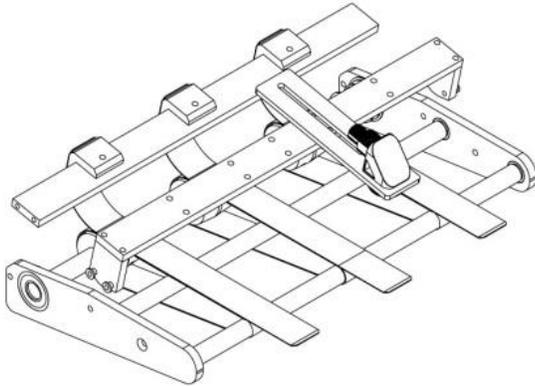
Item	Description	Part Number	Quantity
1	Lesson Motor RX-12	300842	1
2	15T XL Timing Pulley	300844	1
3	100XL037 Timing Belt, Motor Drive	S300846	1
4	Motor Pan, RX-12	300511	1

Carriage Assembly



Item	Description	Part Number	Quantity
1	2" Idler Roller Discharge Assembly w/ sealed bearing	301001S	1
2	Carriage, Shaft Idler w/ bearings	301005	4
3	Carriage, Roller Idler w/ open bearings	3010010	4
4	Carriage, Roller Drive Rear	301003	1
5	RX-12 Gum Rubber Main Feed Belt RX-12 Gum Rubber Main Feed Belt, grooved (optional)	S300991 301991	1
6	R6 Flanged Bearing	300525	2
7	Carriage, Rear Drive Shaft RX-12bc/d	301012	1
8	Carriage, 20T Timing Pulley	300845	1
9	Stainless Steel External Retaining Ring 3/8"	390003	2
10	Belt Cartridge, RX-12bc/d	301011	1
11	Carriage, 22T Timing Pulley	301405	2
12	.250 Snap Ring	300841	2
13	Carriage, Shaft Idler Discharge	301004	1

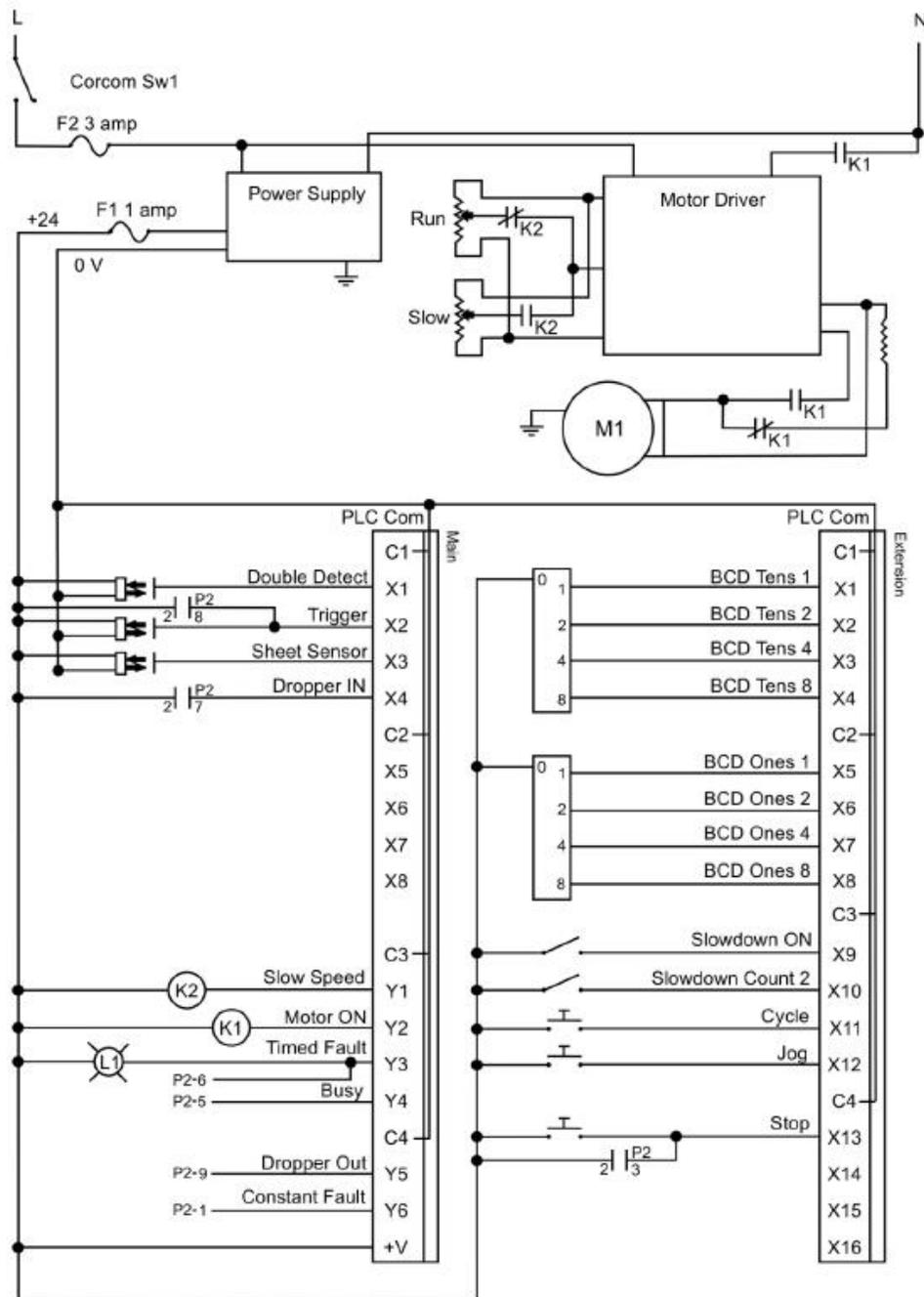
Discharge Assembly



Item	Description	Part Number	Quantity
1	Discharge, Horizontal Blade Adjustment Block	300975	3
2	Discharge, Cross Bar	300974	1
3	Discharge, Drive Shaft	300585	1
4	Discharge, Idler Shaft	300583	2
5	15T XL Timing Pulley	300844	1
6	Bearing R4	300978	4
7	Discharge, Left Frame Member	300971	1
8	#6 Nylon Flanged Spacer	301131	8
9	Discharge, Sheet Sensor Bracket	301093	1
10	PNP Trigger Sensor w/ Quick Disconnect (ET3)	S100388	1
13	Carriage, Rear Urethane Idler Belt	S100158	3
14	Discharge, Elevated Discharge Cross Bar RX-12bc/d	301082	1
15	Discharge, Right Frame Member	300970	1
16	Discharge, Elevated Cross Bar Uprights	301079	2
17	Plastic Washer .5 ID .75 OD	300979	2
18	External Snap Ring ½"	390047	2
19	Crowned Drive Roller .500 Bore	300973	3
20	Discharge, Center Spring Steel Strap	301090	3

RX-12BC ELECTRICAL SCHEMATIC

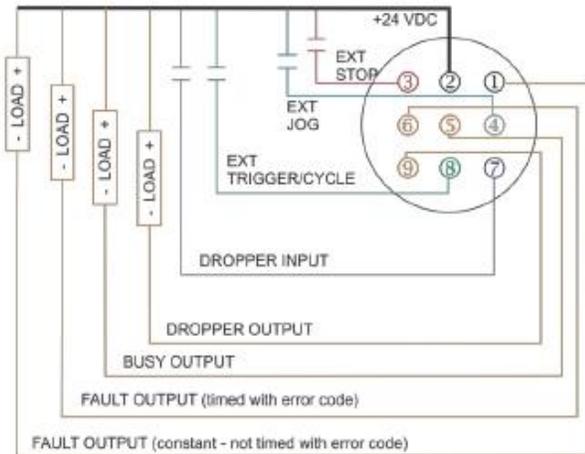
- | | | |
|---------------------------|-------------------------|-------------------------|
| Pin 1- Constant Fault (O) | Pin 2 - +24VDC (O) | Pin 3 – Ext Stop (I) |
| Pin 4 – Ext Jog (I) | Pin 5 – Busy (O) | Pin 6 – Timed Fault (O) |
| Pin 7 – Dropper (I) | Pin 8 – Ext Trigger (I) | Pin 9 – Dropper (O) |



RX-12BC I/O CONNECTIONS



READ THE FOLLOWING DESCRIPTIONS FOLLOWING THE DIAGRAM BELOW BEFORE WIRING TO THE I/O PLUG. DAMAGES TO THE FEEDER WILL RESULT IF THE I/O IS NOT PROPERLY CONFIGURED. WARRANTIES ARE VOID IF IT'S DETERMINED AN IMPROPER I/O WAS CREATED. NEVER SUPPLY VOLTAGE FROM AN EXTERNAL SOURCE TO ANY OF THESE PINS. The Maxim RX-12bc has 4-inputs, 4-outputs, and 1-power signal (24VDC).



INPUTS

The inputs allow for external control of the feeder.

By apply PIN 2 to PIN 3 (STOP) or PIN 8 (TRIGGER/CYCLE) you can externally start and stop the feeder. If your feeder is equipped with an optional SPHS Dropper, the I/O cable will come with PIN 2 shorted to PIN 7. The feeder software will know automatically a dropper is attached and operate accordingly.

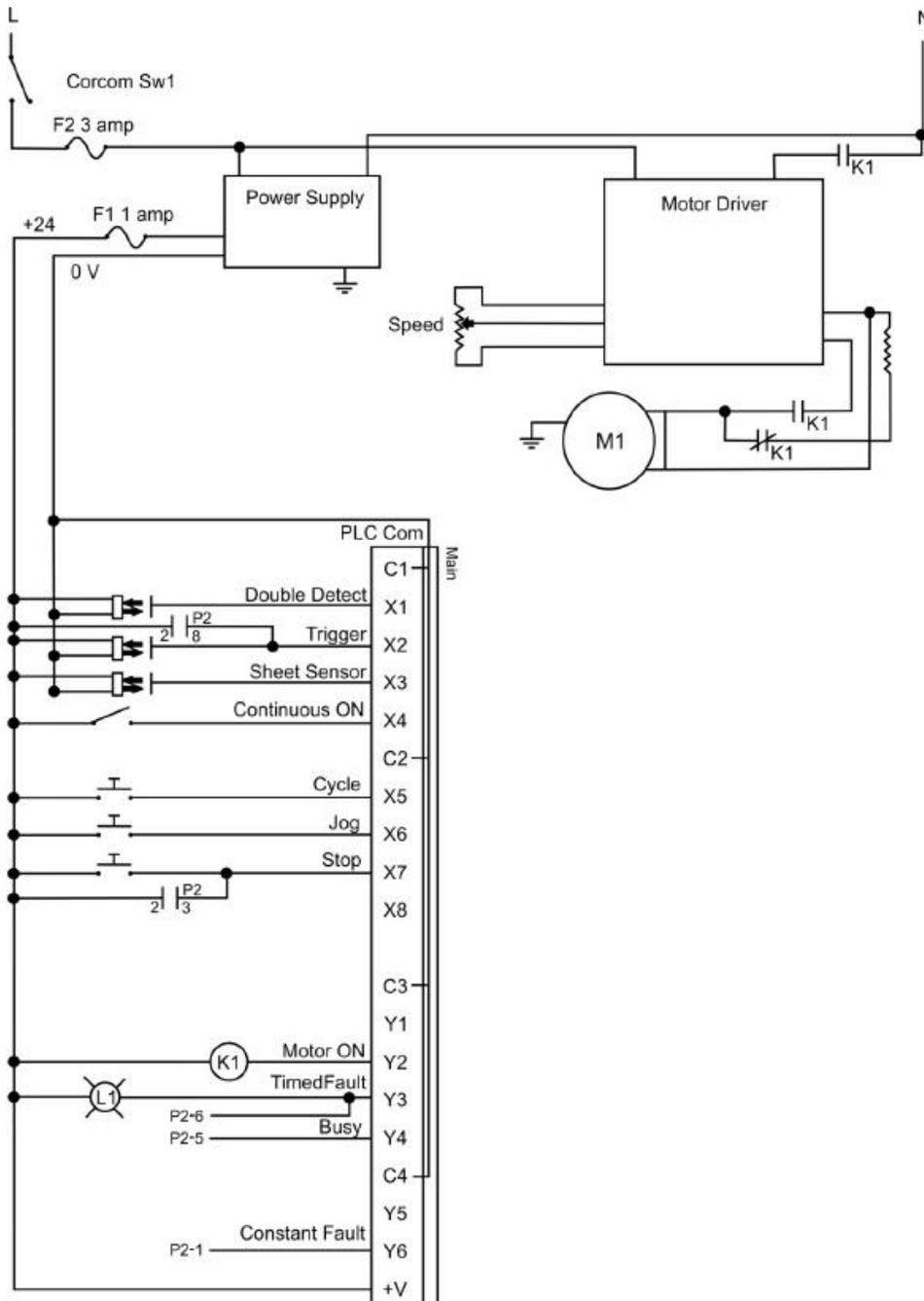
OUTPUTS

FIRST - NEVER SUPPLY PIN 2 DIRECTLY TO THE OUTPUTS (PINS 1, 5, 6, & 9) DAMAGE TO THE FEEDERS PLC CONTROLLER WILL OCCUR. THERE MUST BE AN ELECTRICAL LOAD BETWEEN THESE PINS AS SHOWN ABOVE.

The outputs are used to control the optional SPHS Dropper and also allow the user to monitor the BUSY and FAULT condition of the feeder. Each output can power up to 100ma. (A standard coil 24 VDC relay would be an example) This is helpful when you want to install the feeder into a system layout. The PLC outputs are pulled low when the condition is true. (i.e. when the feeder is busy performing its batch cycle, PIN 5 is pulled low. The diagram above shows that if you connect a load such as a relay between PIN 5 and PIN 2, an active 24 VDC will be present when the feeder is BUSY. You could hold a system from starting while the BUSY signal is on. Also is the case in monitoring the FAULT output. When the feeder faults these inputs are pulled low. The difference between the two FAULT outputs is that one is a constant out while the feeder is in a FAULT condition. The second one corresponds to the fault timer which denotes the type of FAULT based on the programmed flash sequence. This might be beneficial if there is a system controller that might want to know the type of fault present in the feeder.

RX-12D ELECTRICAL SCHEMATIC

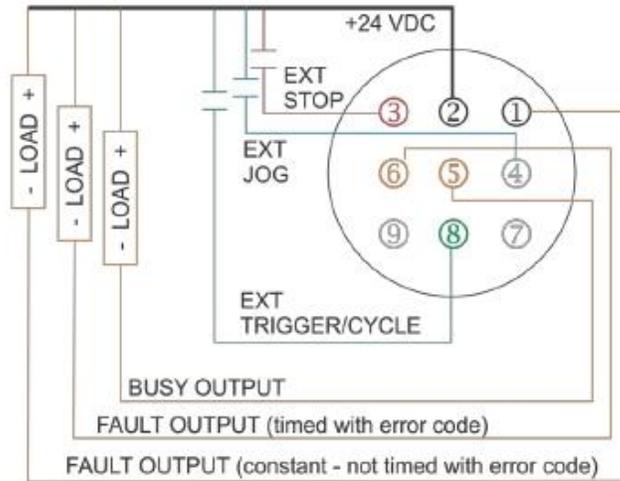
- | | | |
|---------------------------|-------------------------|-------------------------|
| Pin 1- Constant Fault (O) | Pin 2 - +24VDC (O) | Pin 3 – Ext Stop (I) |
| Pin 4 – Ext Jog (I) | Pin 5 – Busy (O) | Pin 6 – Timed Fault (O) |
| Pin 7 – Not Used | Pin 8 – Ext Trigger (I) | Pin 9 – Not Used |



RX-12D I/O CONNECTIONS



READ THE FOLLOWING DESCRIPTIONS FOLLOWING THE DIAGRAM BELOW BEFORE WIRING TO THE I/O PLUG. DAMAGES TO THE FEEDER WILL RESULT IF THE I/O IS NOT PROPERLY CONFIGURED. WARRANTIES ARE VOID IF IT'S DETERMINED AN IMPROPER I/O WAS CREATED. NEVER SUPPLY VOLTAGE FROM AN EXTERNAL SOURCE TO ANY OF THESE PINS. The Maxim RX-12d has 3-inputs, 3-outputs, and 1-power signal (24VDC); and 2-unused pins.



INPUTS

The inputs allow for external control of the feeder.

By apply PIN 2 to PIN 3 (STOP) ;PIN 8 (TRIGGER/CYCLE) or PIN 4 (JOG) you can externally start and stop, or jog the feeder.

OUTPUTS

FIRST - NEVER SUPPLY PIN 2 DIRECTLY TO THE OUTPUTS (PINS 1, 5, & 6) DAMAGE TO THE FEEDERS PLC CONTROLLER WILL OCCUR. THERE MUST BE AN ELECTRICAL LOAD BETWEEN THESE PINS AS SHOWN ABOVE.

The outputs are used to monitor the BUSY and FAULT condition of the feeder. Each output can power up to 100ma. (A standard coil 24 VDC relay would be an example) This is helpful when you want to install the feeder into a system layout. The PLC outputs are pulled low when the condition is true. (i.e. when the feeder is busy performing its cycle, PIN 5 is pulled low. The diagram above shows that if you connect a load such as a relay between PIN 5 and PIN 2, an active 24 VDC will be present when the feeder is BUSY. You could hold a system from starting while the BUSY signal is on. Also is the case in monitoring the FAULT output. When the feeder faults these inputs are pulled low. The difference between the two FAULT outputs is that one is a constant out while the feeder is in a FAULT condition. The second one corresponds to the fault timer which denotes the type of FAULT based on the programmed flash sequence. This might be beneficial if there is a system controller that might want to know the type of fault present in the feeder.

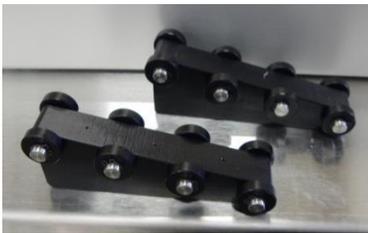
ACCESSORIES AND AFTERMARKET OPTIONS



Height Adjustable Mounting Stand. Designed with locking swivel casters and low-toe profile for mobility on the production floor. 30"-40" height adjustable. Includes Stand Mounting Brackets when purchased with feeder.
P/N 500020



Resettable Piece Counter. Keep an accurate count of pieces fed throughout the day, shift, job, or other variable, with push button reset. Counts up to 8-digits.
P/N G200503



Low-Profile Roller Support Wedges, set of 2. Used to lift the weight heavy products off the feed belt to reduce friction and aid in product separation, and to provide added support/lift for long, flimsy products. Generally, products greater than 8" L.
P/N G400200

WARRANTY

SUPERIOR-PHS LIMITED WARRANTY

Superior Paper Handling Solutions, Inc. (Superior-PHS) warrants this product to be free from defect in materials and workmanship, when used under recommended operating conditions, for a period of one year from the date of original shipment.

If you discover a defect during the warranty period, please notify the distributor from whom you purchased this product, who will arrange for the replacement parts to be sent to you. Defective parts must be returned to Superior-PHS for credit on replacement parts. Shipping and labor costs are not included in this warranty. If the defect is not field repairable and if you return it to Superior-PHS during the warranty period, Superior-PHS will, at its sole option, repair or replace this product at no charge to you other than shipping charges to and from the facility in Minneapolis, MN.

If you return this product to Superior-PHS for warranty repair or replacement, please attach to the returned product your name and your company's name, address, telephone number and fax number; a description of the problem; and a copy of the bill of sale or invoice that shows the appropriate serial number for the product. All returns must be accompanied by an authorized Superior-PHS Returned Goods Authorization (RGA) number. An authorized RGA number can be obtained from the Superior-PHS distributor from whom you purchased this product.

This warranty applied only to products manufactured by Superior-PHS. This warranty does not apply if the product has been damaged by accident, abuse, misuse, neglect, improper maintenance, misapplication, or as a result of being modified with the written permission of Superior-PHS; or if the product's serial number has been removed or defaced. This warranty further does not apply to the failure of any rubber-based or consumable components including, but not limited to, rollers, bearings, belts, fuses, or bulbs.

ALL IMPLIED WARRANTIES INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND THE IMPLIED WARRANTY OF MERCHANTABILITY ARE HEREBY DISCLAIMED.

Superior-PHS is not responsible for special, incidental, or consequential damages resulting from any breach of warranty or under any other legal theory, including lost profits, downtime, goodwill, or damage to or replacement of equipment or property.

This warranty and the remedies set forth above are exclusive and are in lieu of all others, oral or written, express or implied. There are no warranties that extend beyond the description on the face hereof. No Superior-PHS employee, distributor, or agent is authorized to make any modification, extension, or addition to this warranty.

