

Data I/O

PSV Series Tape Rewinder

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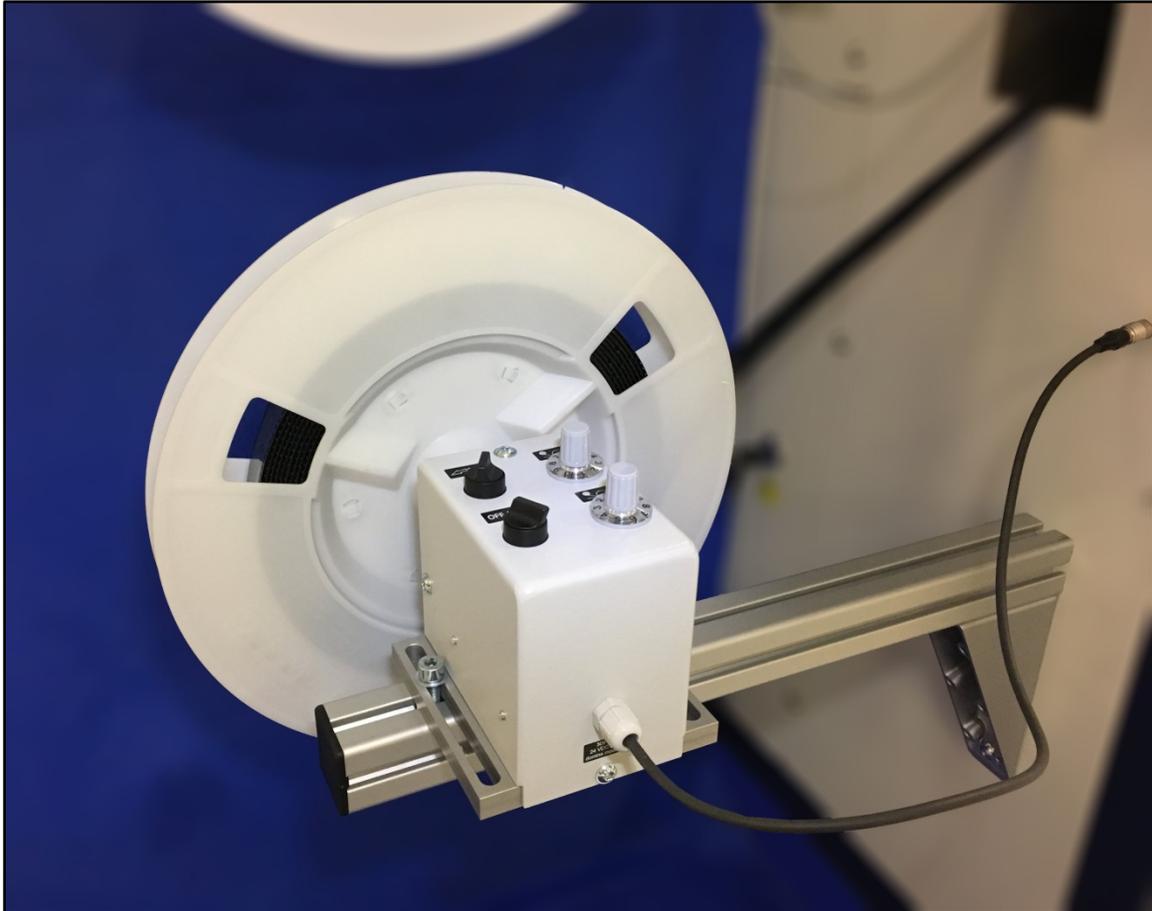
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Chapter 1: Introduction

The PSV Series Tape Rewinder from Data I/O provides a rotating spindle for winding-up used tape reels. Without the Tape Rewinder, used tape (emptied of devices) typically end up on the floor and/or are cut into small segments and ultimately trashed. The Tape Rewinder wraps the used tape around a spindle to eliminate waste pileup next to the system, and enables you to recycle the tape for other jobs.



Mounting the Tape Rewinder involves installing the bracket base and arm onto the side of the PSV machine, and then securing the Tape Rewind module to the bracket arm. With the electrical cable routed and connected, the Tape Rewinder is ready for operation.

This document provides instructions for mounting the Tape Rewinder, connecting its electrical cable, and testing it for proper rotation and tension.

Safety Warnings

To avoid personal injury and equipment damage, it is required that you comply with all safety rules and regulations. The PSV Series Tape Rewinder has moving parts and carries electricity.

Do not use the Tape Rewinder for any purpose other than its intended use. Do not operate the system if the PSV safety doors and panels are not in their normal operating positions, any of the outer cabinet panels are removed or missing, or the electronics panel is open.

The system can be dangerous if safety precautions are ignored. Do not operate the system unless you have been thoroughly trained. Do not disable or attempt to defeat any of the safety features of the system. Failure to adhere to safety warnings, operate the equipment properly under normal use, and apply safety practices constitutes a violation of your warranty agreement.



WARNING: Electric Shock Hazard!

Injury or death may result from contact to parts inside the equipment. Do not remove covers. There are no user-serviceable parts. Tampering with the Tape Rewinder and/or any of its components may result in damage, personal injury, electrical shock, or fire.

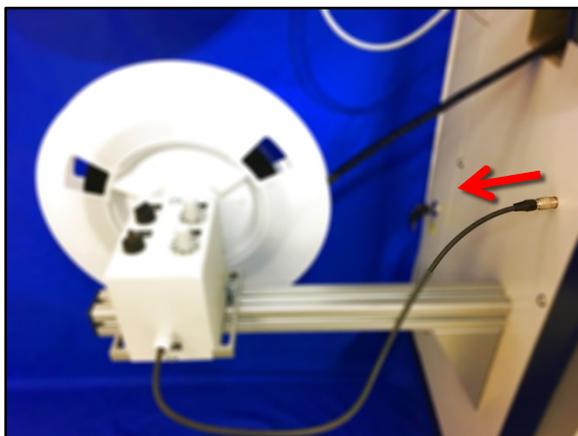
Never connect power to any component that appears compromised, damaged, or tampered with (ex. covers removed, wires hanging loose, etc.). Prior to connecting power of any kind, confirm the voltage requirements of your unit.

Data I/O is not responsible for any defects or failures in the equipment caused by user negligence, including but not limited to accident, improper maintenance, inattention, or unauthorized repair.

Emergency Stop

To stop the Tape Rewinder in an emergency:

- **Unplug the Tape Rewind connector** to immediately stop and prevent any Tape Rewind motion.

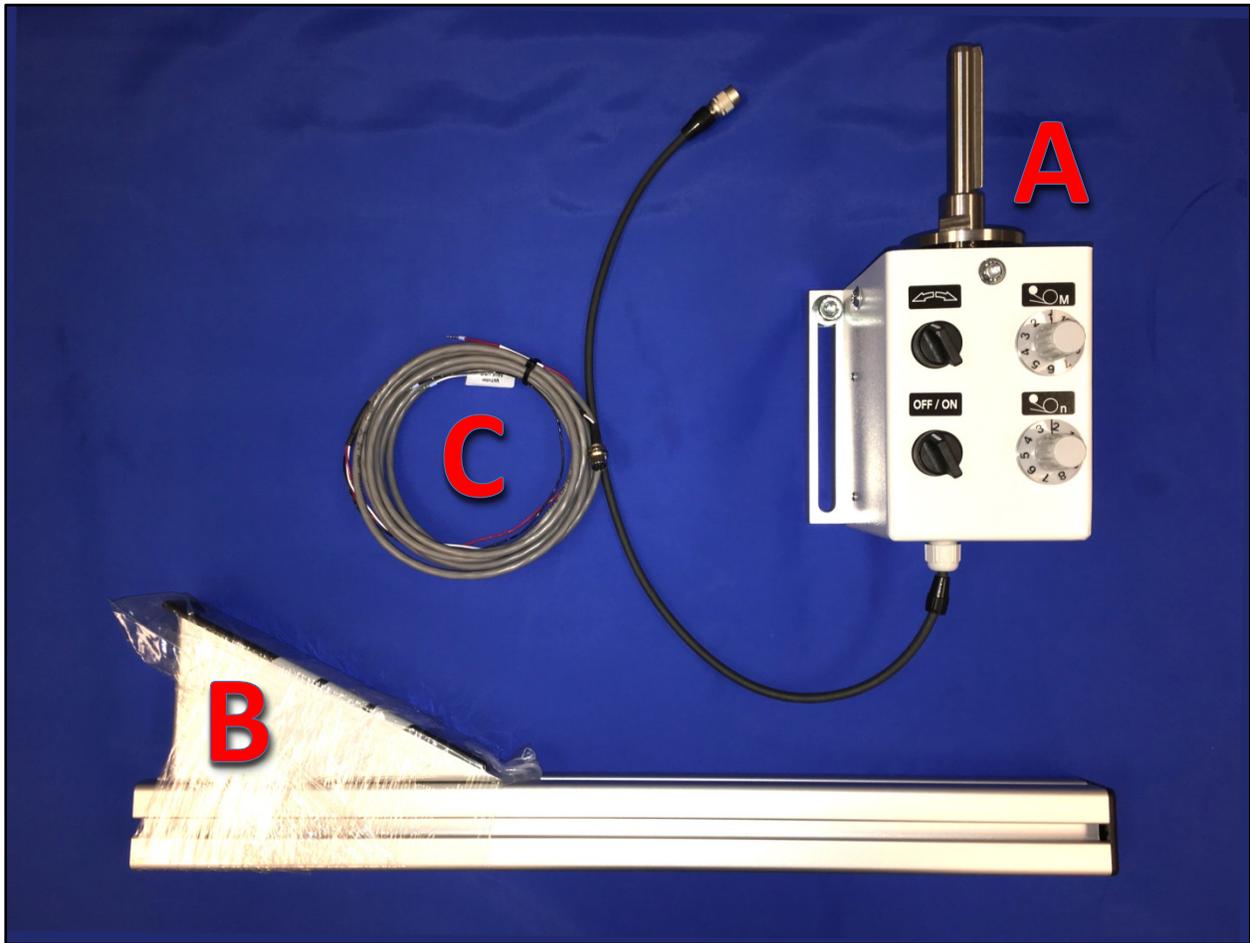


WARNING: Crush Hazard!

Tape Rewind rotation does **NOT** stop when you open the safety doors and panels on the PSV, or push its Emergency Stop button.

Personal injury or death may result from contact to parts inside the workspace. Never reach inside the Tape Rewind or PSV workspace while a job is running.

Package Contents



- A.** Tape Rewind module
- B.** Mounting bracket(s)
- C.** Electrical cable/connector

Requirements

This page lists the tools and items required to install the PSV Series Tape Rewinder.

Tools

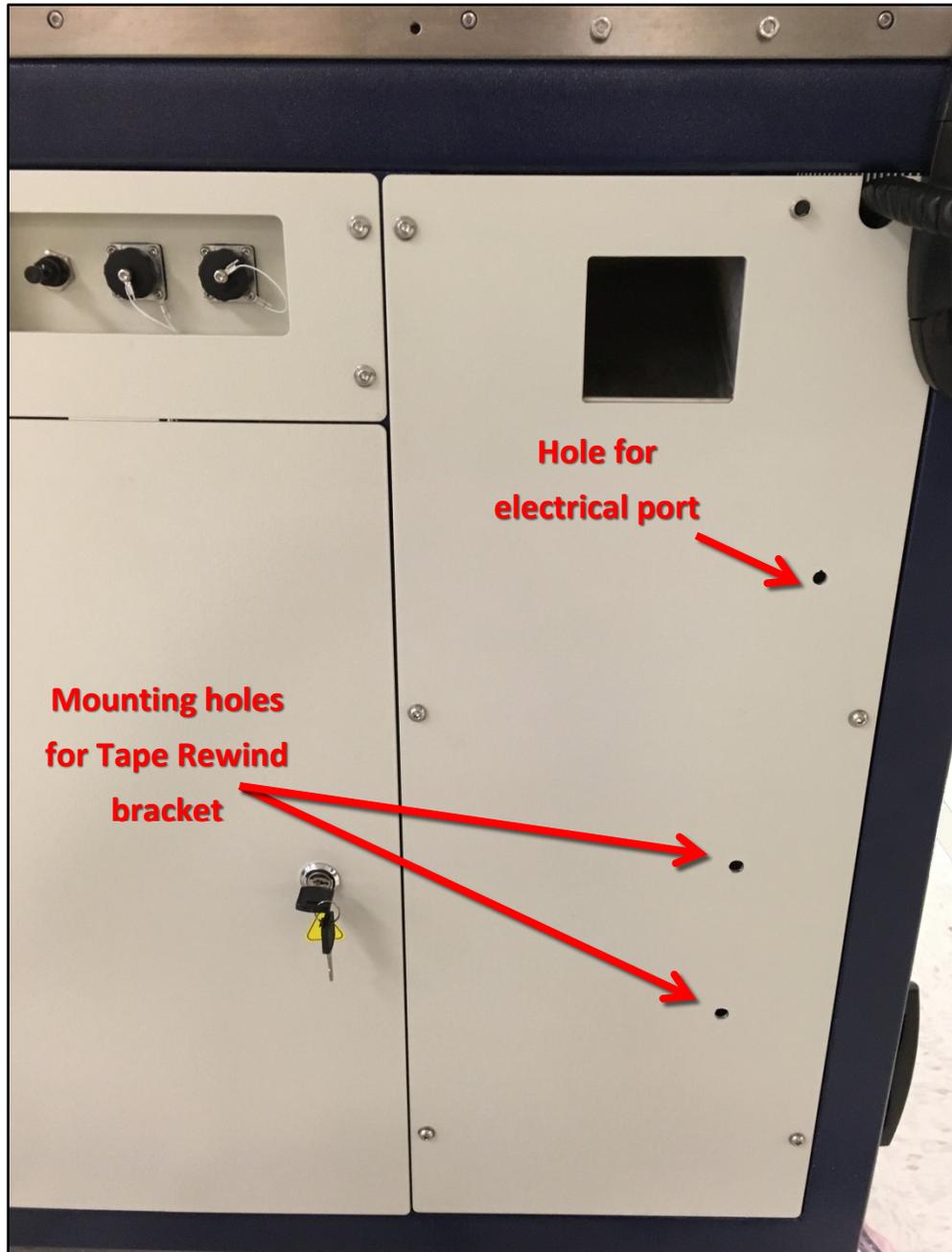
- Metric hex key set
- Screwdriver set
- Adjustable utility wrench and/or pliers
- Cutter (for snipping wire/zip ties and air tubing)

Chapter 2: Mounting the Hardware

Complete the following steps to mount the hardware for the Tape Rewinder. This process largely involves mounting the Tape Rewinder and connecting its electrical cable.

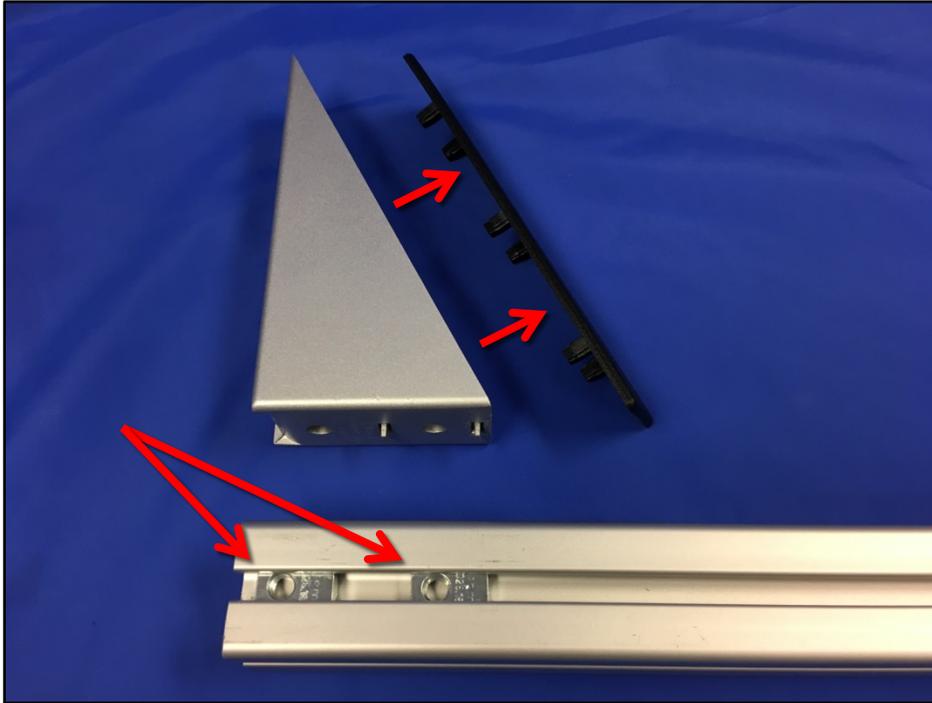
Mount the Tape Rewinder

1. On the left-side panel of the PSV, locate the mounting holes for the Tape Rewind bracket.



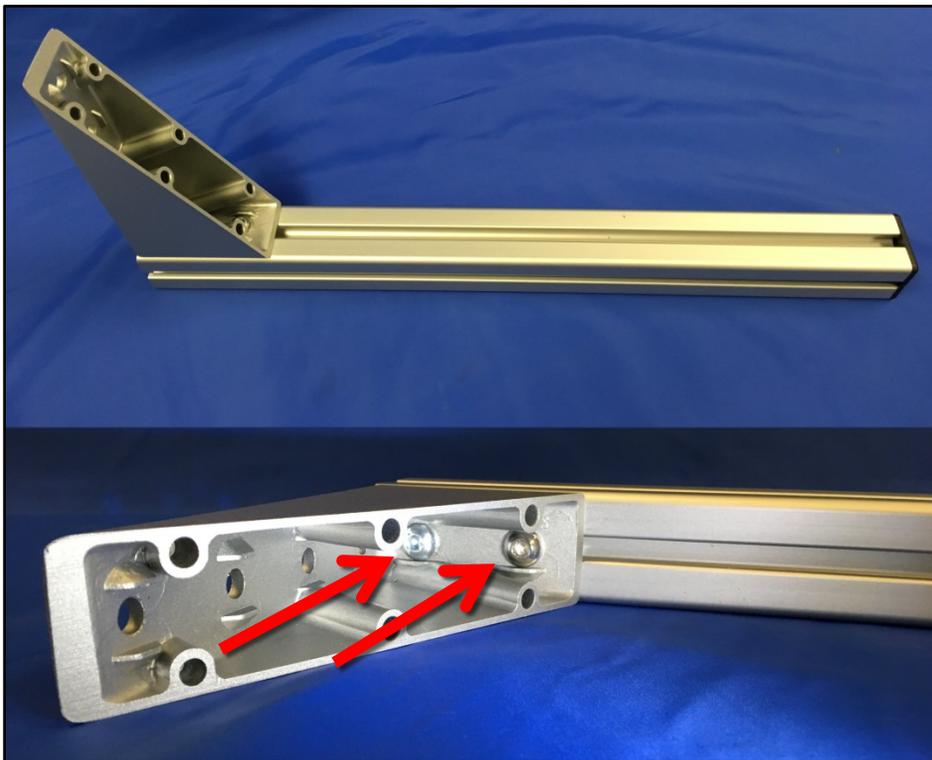
Locate mounting holes for Tape Rewind.

2. On the Tape Rewind bracket base, pull off the black plastic cover to expose the screw holes on the inside. Then insert two slider screws into the bracket arm (the end opposite of the black end cap).



Prepare Tape Rewind mounting bracket.

3. Assemble the base to the arm using two screws (aligned with slider screws in arm).



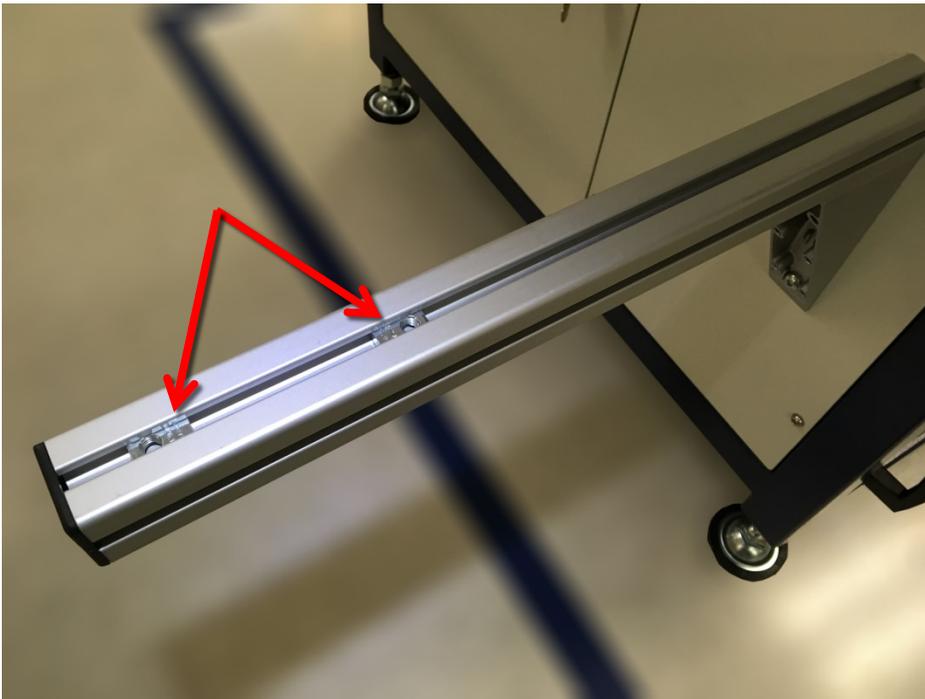
Attach bracket base to bracket arm.

4. Attach the 'base + arm' assembly to the PSV using two screws and two nuts (at the mounting holes located earlier in Step 1).



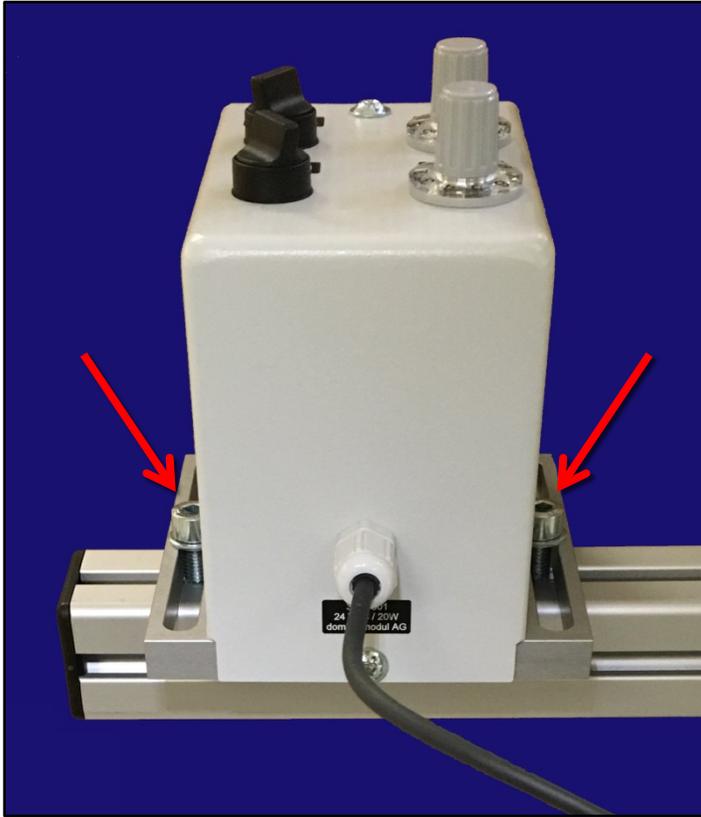
Attach 'base + arm' assembly to PSV.

5. Insert two slider screws into the arm of the mounting bracket.



Insert two slider screws in bracket arm.

- Secure Tape Rewind module to the bracket arm using two screws (aligned with slider screws in arm).



Attach Tape Rewind module to bracket arm.

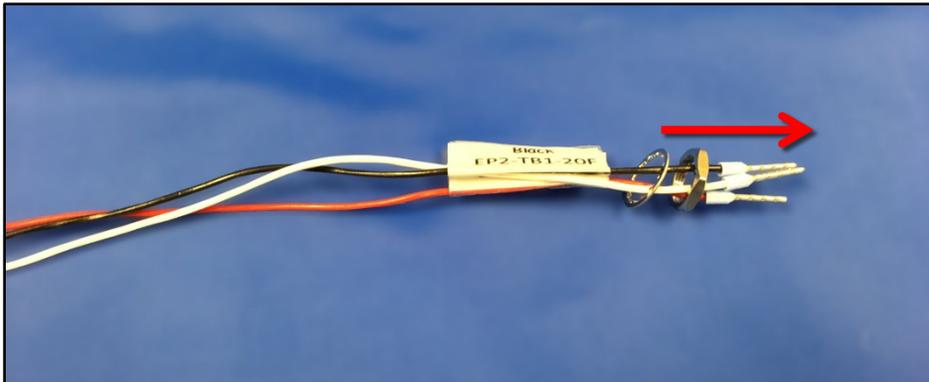
Connect Power

1. With the Tape Rewinder mounted, now connect power by first preparing the supplied electrical cable: detach/unscrew the nut and washer from the back side of the female adapter.



Detach nut and washer from female adapter.

2. Completely remove the nut and washer from the cable by sliding them all the way off the other end of the cable. (Keep the nut and washer nearby, as they will be re-attached shortly.)



Remove nut and washer from cable.

3. Now insert the 'loose end' of the cable (with three male plugs) into the top hole of the PSV.



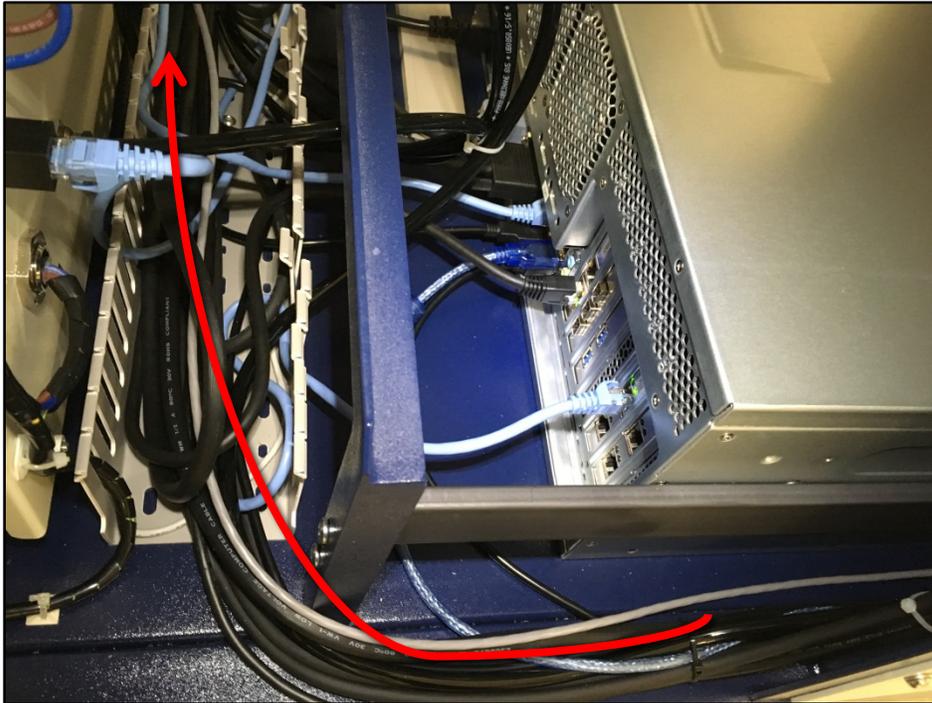
Insert cable through hole.

4. From the inside of the PSV, slowly pull the cable all the way until the female adapter fits through the top hole. Then slide the washer and nut onto the cable all the way so it screws into the back of the female adapter. Tighten the female adapter to the PSV side panel/wall.



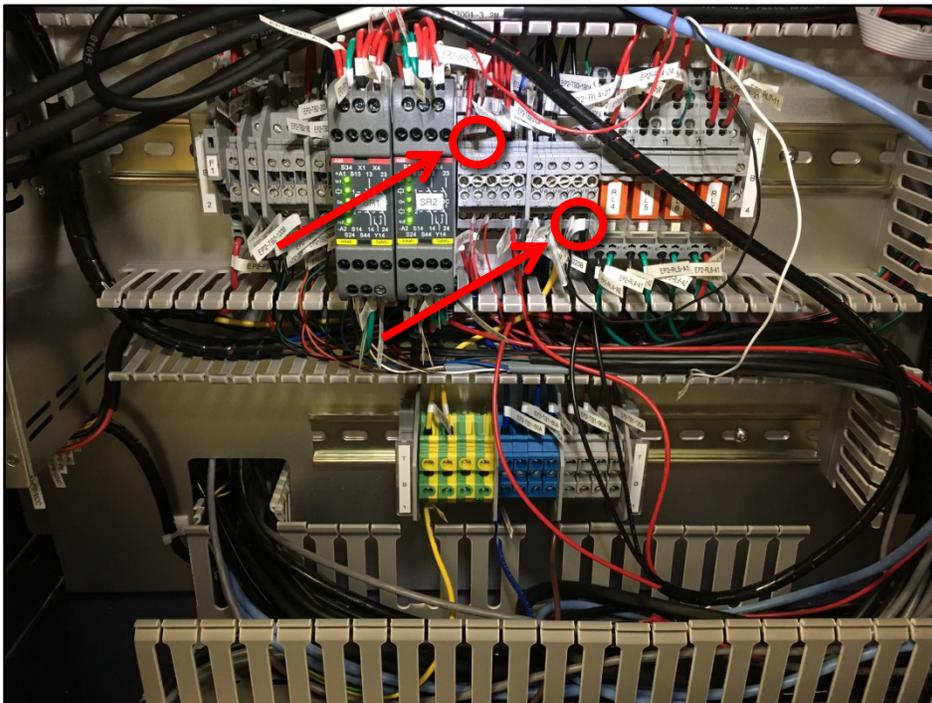
Fasten Tape Rewind electrical port to side panel/wall.

- 5. On the inside of the PSV, route the cable to ePlate 2.



Route cable to ePlate 2.

- 6. Secure the BLACK wire to -24 VDC, then secure the RED wire to +24 VDC.



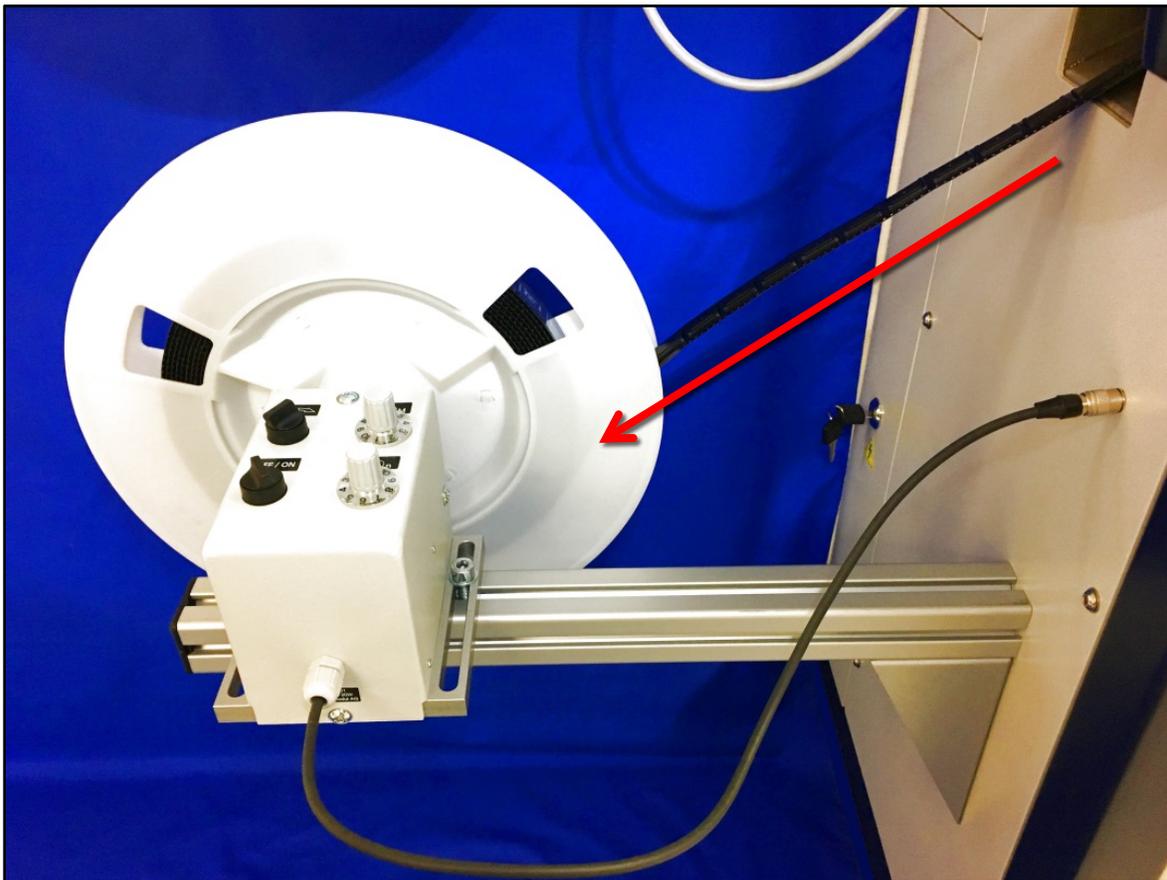
Connect Tape Rewind to Power.

7. Advance the tape-in module until the empty carrier tape extends out from its output chute, then connect the carrier tape to an empty tape reel (which eventually pulls the empty carrier tape).



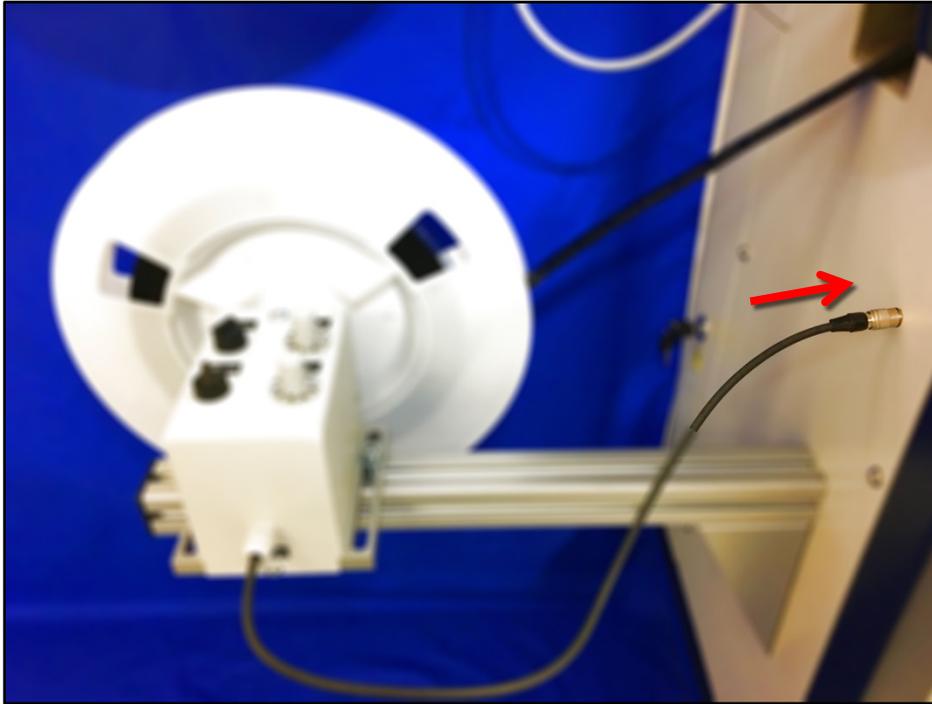
Connect carrier tape to empty tape reel.

8. Mount the tape reel onto the Tape Rewinder and ensure proper orientation (and alignment).



Mount reel to Tape Rewind module.

9. Now plug the connector from the Tape Rewind module to the newly installed female port.



Plug electrical connector into port.

Chapter 3: Testing the Tape Rewinder

With the Tape Rewinder installed, now Power-Up the system and verify functionality.

Confirm Rewind Motion

- On the Tape Rewind module, turn the Power knob to **On** and confirm the spindle starts rotating.



Confirm unit is rotating the spindle.

Confirm Tape Rewind Controls

- Verify that each of the control knobs function properly:
 - Change **Direction** of rotation (upper-left knob, as depicted above)
 - Adjust the **Tension** of rotation (upper-right knob)
 - Adjust **Speed** of rotation (lower-right knob)

The only connection on the Tape Rewind is for electrical power, so it has no communication interface and does not require any software configuration in CH700, WinAH400.ini, or otherwise.

The Tape Rewinder is now ready for operation: load your tape-in feeder, start your programming job, and watch the Tape Rewinder neatly wrap the empty carrier tape around a tape reel (which you can use for placing programmed devices later).

Chapter 4: Optimizing and Maintenance

After setting up your Tape Rewinder according to the steps in Chapters 2 and 3, it provides constant tension for pulling the empty carrier tape onto an empty tape reel.

If you need to reverse the taper for any reason (go back one pocket instead of advancing), remember to first change the **Direction** of rotation on the Tape Rewind (see previous page). Else, the Tape Rewind may cause problems if it is pulling the empty carrier tape in the opposite direction from which the tape-in feeder is also pulling (but typically, the tape-in feeder is pushing/advancing the tape forward).

Optimization

Knowing when and how to make adjustments will depend on the environmental conditions and technical requirements of your specific setting. In general:

- If there is excessive slack in the empty carrier tape, then increase the **Speed** of rotation
- If Tape Rewind is pulling too hard on the empty carrier tape, then decrease the **Tension** of rotation

Adjusted properly, the Tape Rewinder keeps the empty carrier tape taut without excessive pulling.

Maintenance Schedule

The Tape Rewinder is a relatively low-maintenance component. But use the following maintenance schedule to ensure proper Tape Rewind operation (your specific environmental conditions may vary).

- **At the start of each job**, double-check the Tape Rewind tension and speed.
- **On a weekly basis**, wipe down the exterior surfaces of the Tape Rewinder with isopropyl alcohol applied to a lint-free cloth.
- **On a monthly basis**, keep the spindle lubricated to ensure smooth operation.

Obtain Parts and Supplies

To order consumable Tape Rewind parts from Data I/O, please refer to the following part numbers.

Part Name	Description	Data I/O Part Number
Tape Rewind Module/System	Provides rotational tension for wrapping used tape reels	966-0133-001
Tape Rewind Button Screw	Secures the Tape Rewind module and its bracket arm to the PSV machine	220-9505-001
Tape Rewind Cable Assembly	Connects the Tape Rewind port (female port on PSV machine) to ePlate #2	709-0126-001