



DecoSpector 360™ Hardware Guide Vision Processor

MANUAL PART NUMBER: 86137 REV. 01

HARDWARE MODEL NUMBER(S): 85131 - 85132

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Chapter 1 Introduction

Welcome! Congratulations on your purchase of a Pressco DecoSpector 360™ system! The DecoSpector is an inspection system that performs extensive product quality checks on 100% of the decorated surface area of printed beverage cans.

The DecoSpector system locates the following on cans:

- Printing flaws (voids, spots, smears, cut blanket, etc.)
- Color conformity to specifications (drift, light, dark, contamination)
- Color to color registration (ghosting, shadows, shifts)
- Missing print coat (clear or white)

The DecoSpector system correlates defects to print blanket and mandrels, so that you can quickly locate problematic areas and make repairs or adjustments.

The system consists of a touch screen operator interface, a control enclosure, an inspection tunnel, and the associated cables connecting the components.

About this guide

This guide provides information about system features and technical specifications. It is intended for Administrator-level users.

This guide provides the necessary information to operate a DecoSpector 360 system that is properly installed and programmed. Some machine functions require specialized training. This training is available from Pressco and may be conducted at your plant or at Pressco in Cleveland Ohio, USA. For more information, contact Pressco's training department.

This manual:

- Is considered an integral part of the machine and should be kept handy for future reference as long as the system is being used in your plant
- Is your responsibility to keep in good condition, in a dry place, and ready for consultation by the authorized users of the system
- Contains the technology implemented at the time of selling and supplying the system and shall not be considered inadequate in case of technological enhancements in the machine or in the manual's illustrations

Related publications:

- DecoSpector 360 Operator Guide, intended for Operator-level users, and contains every day usage information.
- DecoSpector 360 Software Guide, intended for Administrators, and contains all the software functions of the system.

The following types of alerts may appear in this guide:



DANGER! - Danger messages alert you to specific conditions that can cause serious or fatal personal injury. Danger messages give you important information which must be observed to prevent injury.



WARNING: - Warning messages indicate information which must be observed to prevent injury, data loss, or equipment damage.



CAUTION: - Caution messages indicate important information which must be observed to prevent: loss of data, poor system performance, or equipment damage.

Note: Notes contain special information that warrants being set off from the body text as shown here.



IMPORTANT: - Indicates prerequisites or information that must be observed to complete or understand a concept or task.

TIP: Provides helpful hints for completing a task.

Safety Considerations

Observe the following safety warnings when operating the system or working near it:



WARNING: - Potential for projectiles to strike persons and cause injury. Keep clear of reject devices.



WARNING: - Sensitive electronics and High Voltages may be exposed. Keep Processor Cabinet/ Electrical Control Box door closed.

Static Discharge Protection



Caution: - Electronic components can be damaged by static electricity discharge.

Always observe the following precautions before removing, installing or handling any electronic components within the Inspection System:

- Wear an anti-static wristband which is grounded to the Inspection System.
- Stand on an anti-static, grounded floor mat, and lay circuit boards on the mat during any board replacement.
- Keep circuit boards in static shield bags when storing and transporting. Ensure the bag is sealed.

Chapter 2 Safety Information

This section contains operator safety information that must be read before operating or servicing the system.

 **WARNING** - This product contains no operator serviceable parts. Refer servicing to qualified personnel. To prevent electrical shock do not open cabinet doors whilst power is connected.

 **WARNING** - Do not, under any circumstances, tamper with sealed machine parts or devices. This could result in the removal of protections that might create potentially hazardous conditions.

 **CAUTION** - Possible hazardous optical radiation from LEDs. Do not stare at lamps.

Observe the following safety warnings when operating the system or working near it:

 **WARNING** - Potential for projectiles to strike persons and cause injury. Keep clear of reject devices.

 **WARNING** - Sensitive electronics and High Voltages may be exposed. Keep Processor Cabinet/ Electrical Control Box door closed.

Health Warning - Photosensitive Epilepsy

 **WARNING: PHOTSENSITIVE EPILEPSY/ SEIZURES**

A small percentage of individuals may experience epileptic symptoms or seizures when exposed to certain patterns or flashing lights. Exposure to the flashing lights in vision inspection systems may also trigger epileptic symptoms or seizures in these individuals. These flashing lights may trigger epileptic symptoms or seizures in persons who have no history of epileptic symptoms or seizures. If you, or anyone in your family has an epileptic condition or has had seizures of any kind, consult your physician before operating this machinery.

IMMEDIATELY DISCONTINUE use and consult your physician if you experience any of the following symptoms while operating this machinery:

- Dizziness
- Altered vision
- Eye or muscle twitches
- Loss of awareness
- Disorientation
- Seizures
- Any involuntary movement or convulsion

Epileptic symptom or seizure triggers vary from person to person. Some common triggers are:

- Flashing lights used for vision inspection systems or fire alarms
- Certain video games or TV broadcasts containing rapid flashes or alternating patterns of different colors
- Bright, contrasting patterns such as white bars against a black background
- Flashing white light followed by darkness
- Stimulating images that take up your complete field of vision, such as being very close to a TV screen or computer monitor
- Certain colors, such as red and blue

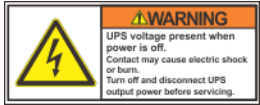
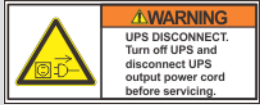
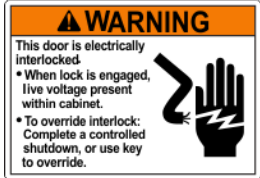
If you encounter something that might trigger epileptic symptoms or seizures without warning:

- Do not close your eyes (this could cause a flicker effect)
- Do not look directly at the flashing lights or trigger source
- Do cover one eye with the palm of your hand immediately
- Do turn away from the flashing lights or trigger source

Symbols Used With This System

The following symbols are used on or near the Pressco system. Be aware of potential risk hazards.

Symbol	Meaning
	CAUTION: Risk of danger. Refer to accompanying user documentation before use.
	WARNING: Risk of electric shock
	WARNING: Arc flash and shock hazard
	WARNING: Risk of electrical shock
	WARNING: Risk of burns from hot surface
	WARNING: Hand crush hazard
	On (supply)
	Off (supply)
	Alternating current
	Protective conductor terminal

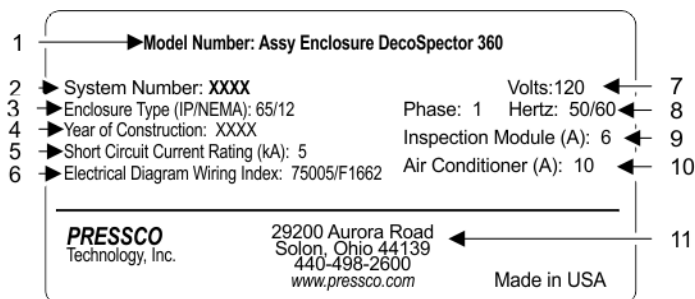
	Warning: Arc flash and shock hazard
	Warning: UPS voltage present when power is off
	Warning: UPS Disconnect
	Warning: Electrical interlock
	Danger: shock and arc flash explosion hazards

Arc Welding Warning

⚠ WARNING - Potential equipment damage can occur if the vision equipment is not fully powered down prior to any arc welding performed on the line where the vision equipment is installed, specifically but not limited to our encoders.

Product Label

The following illustration shows an example label that you will find on the system components.



- 1) Name of component
- 2) Serial number
- 3) Enclosure type
- 4) Year of construction
- 5) Short circuit current rating (kA)

- 6) Electrical wiring diagram number (Pressco number)
- 7) Voltage range in Volts AC
- 8) Frequency range in Hertz (Hz)
- 9) Inspection module current rating
- 10) Air conditioner current rating
- 11) Place of construction

Warning Devices

The Pressco system has warning devices that indicate system failure or report excessive defects or warnings for your production line. These include an optional light tree, alarms and indicators on screen, and audible warnings (depending on system).

Light Tree

The optional light tree is mounted on a pole in a customer-specified location.



The light tree color segments represent each alarm or system condition. A color segment may appear for more than one alarm condition.

Residual Risk

The Pressco system has been designed to minimize any danger of personal injury. However, the system uses rejection devices to remove defective product from the production stream. Also, the electronics cabinets contain risk of shock if they are opened.

Observe the following safety warnings when operating the system or working near it:



WARNING - Potential for projectiles to strike persons and cause injury. Keep clear of reject devices.



WARNING - Sensitive electronics and High Voltages may be exposed. Keep Processor Cabinet/ Electrical Control Box door closed.

Intended Use

Type of Process - The Pressco system is intended to monitor container and other special manufacturing processes and identify non-conforming product.

Intended Use - The Pressco system is designed and constructed for use in an indoor industrial environment, always sheltered from the weather.

Space Required - The Pressco system and accompanying sensors must be installed in a place that will enable safe and easy installation, size changeover, user operation, and maintenance procedures.

Prohibited Use

 **WARNING** - If this instrument is not used as specified, the protection provided by the equipment could be impaired. This instrument must only be used in a normal condition (in which all means of protection are intact).

 **Important** - The Pressco system should NOT be used for any purpose other than specifically indicated in the section titled *"Intended Use" on the previous page*.

The following uses are not intended:

-  Use in an explosive environment
-  Use in a flammable environment
-  Use in a damp, moist, or wet environment, except where specifically indicated

Personal Protective Equipment

 **Important** - Always follow the safety requirements of your plant in addition to the recommendations below.

We recommend, at minimum, use of the following Personal Protective Equipment (PPE):

	Protective clothing
	Protective gloves
	Protective ear plugs or headphones
	Protective eye wear
	Protective foot wear

Personnel Safety

The following rules are recommended to ensure the safety of personnel in charge of machine operation and maintenance.

During machine operation:



Only one operator is needed to operate the machine. All others must keep at a safe distance.

	Operators must be familiar with all machinery connected to the Pressco equipment and know how to use emergency stop devices. Note: the emergency stop devices may not be connected directly to the Pressco equipment, but it is important to know how to use them.
	Before putting the Pressco system online, the operator must ensure that all safety devices used with all connected machinery are in place and operational. Do not operate with guards removed.
	The operator must maintain maximum focus on his work and be alert throughout his shift. If this is not the case, immediately inform the shift supervisor.

When carrying out maintenance or repair work:

	Disconnect master switch. For switch locations, refer to the Power Up and Power Down section.
	Before starting the machine, ensure that no person is close to the machine.
	If maintenance or repair requires the disconnection or removal of safety or protection systems, this operation must be supervised by authorized personnel who must ensure the prevention of personal injury or damage to the machine. All machine movements must be performed with limited speed and limited movements.
	Maintenance or repair work on electrical components must be carried out exclusively by authorized, trained personnel. When running tests with power connected, you must strictly comply with the rules provided.
	Personnel working on higher parts of a machine must wear a harness and hook it on to the structure and must always move with extreme caution.
	Never perform lubrication or maintenance procedures on mechanical parts with the machine running.

For your safety, do not:

-  Open safety guards during machine operation
-  Perform maintenance and repair while the system is running
-  Lean on the machine
-  Sit on the machine components
-  Use the machine for purposes other than those listed in this manual
-  Modify parts of the machine



Allow unqualified personnel to operate or perform maintenance procedures on the machine

Lifting Heavy Objects



CAUTION - Some components are heavy. Take proper precautions to prevent personal injury or damage to equipment. If you are not capable of lifting the object alone, ask a capable person to help lift the object, or use a mechanical lifting device

The components do not have handles to lift the equipment. Be sure to:

- Lift equipment from the bottom - do not use wires, brackets, nor other protrusions
- Keep fingers away from sensor lenses to keep the equipment clean
- Proceed slowly



WARNING- The Pressco cabinets must NOT be lifted by one person. Use a mechanical lifting device, and ask another person to assist you.



Do not twist your body when moving the load. Instead take small steps with your feet turning until you are in the correct position.

To safely lift equipment:

1. Stand close to the load and center yourself over it with your feet shoulder width apart.
2. Tighten your abdominal muscles.
3. Keeping your back straight, bend your knees and squat down to the floor.
4. Get a good grasp on the load with both hands.
5. Keeping the load close to your body, use your leg muscles to stand up lifting the load off the floor. Your back should remain straight throughout lifting, using only the muscles in the legs to lift the load.
6. To place the load in the appropriate spot, bend at the knees using only your leg muscles to lower the load.

Authorized Users

Trained machine operators, mechanic and electrical maintenance staff, and plant managers are considered authorized users of the Pressco system. These users should carefully read the information contained in this manual. The plant manager must ensure that the safety recommendations included in this manual are observed.



WARNING - Allowing workers who are unfamiliar with the production process to operate the Pressco system could result in hazard risk.

If you are unclear about any part of this manual, contact Pressco Technical Support.



Important - No worker should ever operate the system outside of his/ her own area of competence and responsibility.

Proper Operation: - Only one worker is to operate the system at any given time. The correct position for the operator is in front of the user interface monitor or control enclosure (if applicable).

Repairs: - Any repair on the system shall be carried out exclusively by Pressco Technology Inc. service personnel or by other service expressly authorized by Pressco Technology Inc.

Spare Parts Usage

The following restrictions apply to replacing parts:



WARNING - *Using spare parts that are not designed to Pressco's specifications can compromise the safety and effectiveness of the Pressco system.*

- The use of parts that are not within Pressco's design specifications is prohibited. This prohibition applies in particular when the parts involved contain or are connected with safety devices.
- Before resuming production, make sure all safety devices are in working order.

Pressco Technology Inc. shall not be liable in any way if any of the above-described directions are not complied with.

To obtain a spare parts list, contact the Spare Parts department at Pressco: SpareParts@pressco.com. Or call +1-440-498-2000 (Monday - Friday 8AM - 5PM Eastern time).

In addition, Pressco's technicians are available to help customers, in their own plant, to solve any problem that might arise during use and maintenance of the system.

Chapter 3 Specifications - DecoSpector 360

This instrument has been designed and tested in accordance with Publication EN61010-1 (2010) Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use and has been supplied in a safe condition. The instruction documentation contains information and warnings which must be followed by the user to ensure safe operation and to maintain the instrument in a safe condition.

Deco Can Printing Position Requirement

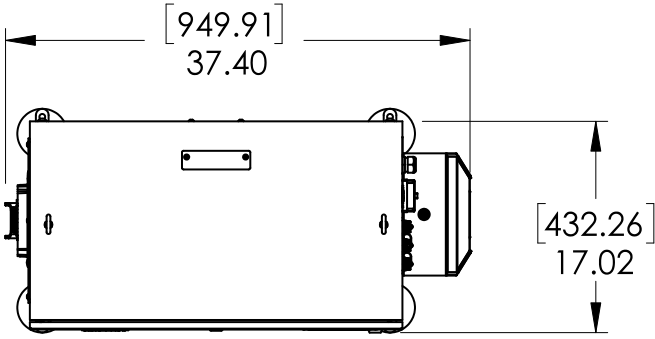
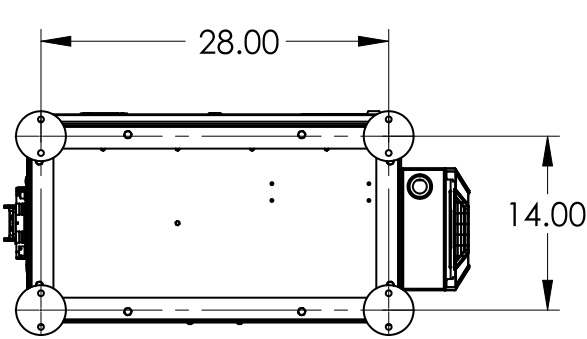
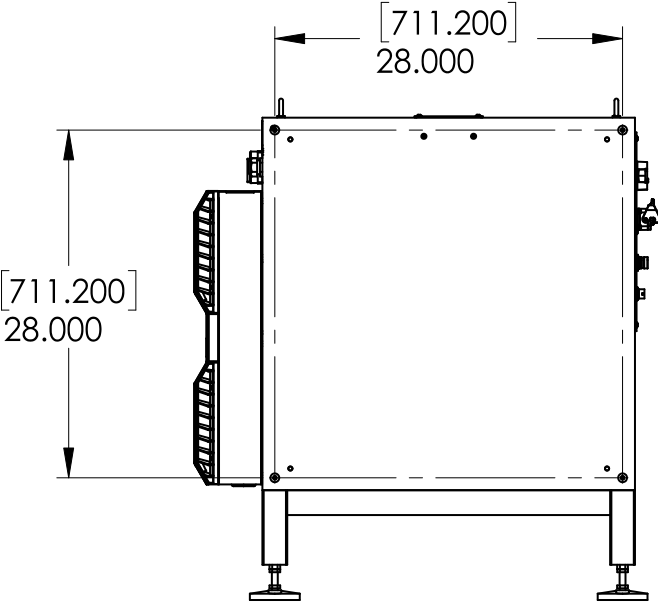
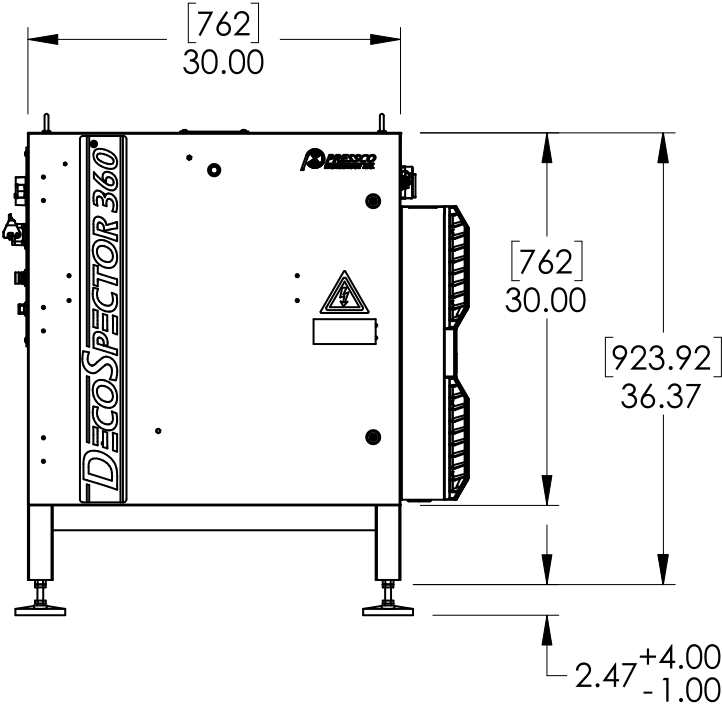
Specification

We require that two millimeters (2mm) of bare aluminum be present at the top of each can. This is required for proper part location. Less than 2mm may result in part location issues, which impacts inspection.



Dimensions - DecoSpector Control Enclosure

The measurements are in inches. The numbers in brackets are in millimeters.



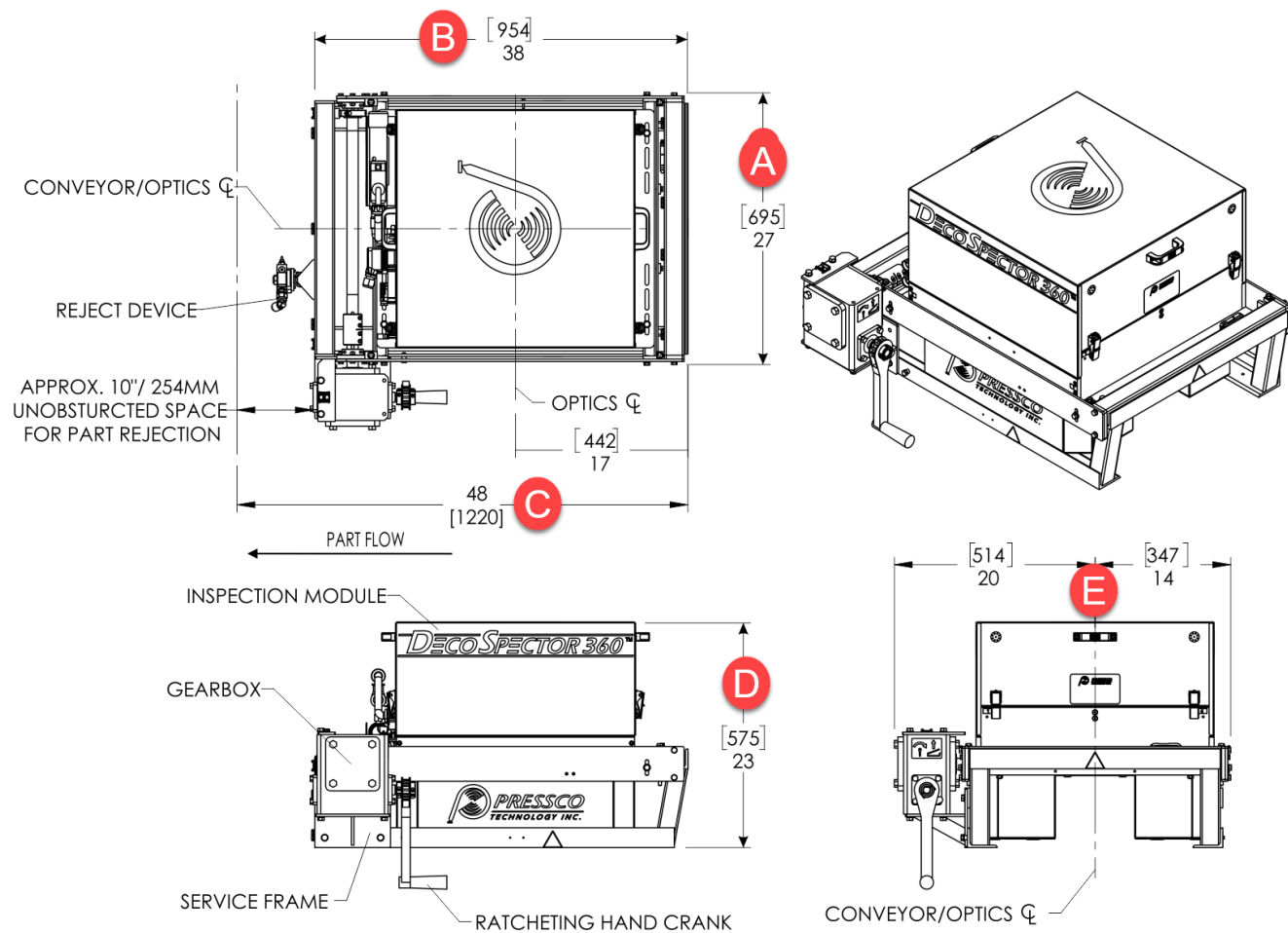
Deco Inspection Module Measurements

⚠ CAUTION - This object is heavy. Review the section on lifting heavy objects before moving this object. "Lifting Heavy Objects" on page 14

Dimensions of inspection modules and service frames

Note: The dimensions listed below include the Service Frames on which the modules are mounted
Note: measurements do not include connectors

The illustration below shows the measurements of the standard (pin stripper) inspection module DS6 (model 76610). Other module measurements are listed in tables below.



- NOTES:
- 1. MODULES SHOWN IN INSPECTION POSITION.
 - 2. FRAME SHOWN IN ONE OF SEVERAL POSSIBLE CONFIGURATIONS.
 - 3. GEARBOX AND REJECTOR CAN BE LOCATED ON EITHER SIDE OF CONVEYOR.
 - 4. FRAME TO CONVEYOR MOUNT LEGS NOT SHOWN.

Standard (pin stripper) inspection module DS6 (model 76610)

A	Width	27 inches [695 mm]
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B	Length	38 inches [954 mm]
C	Length with reject device and optics (10 inches necessary for rejection)	48 inches [1220 mm]
D	Height	23 inches [575 mm]
E	Width from conveyor centerline	20 inches [514 mm] and 14 inches [347 mm]

XL (pin stripper) inspection module DS7 (model 76620) and DS9 (model 80134)

Width	33 inches [847 mm]
Length	44 inches [1108 mm]
Length with reject device and optics	53 inches [1360 mm]
Height	25 inches [641 mm]
Width from conveyor centerline	23 inches [590 mm] and 17 inches [424 mm]

Standard (pin stripper) inspection module DS8 (model 80125)

Width	27 inches [695 mm]
Length	38 inches [954 mm]
Length with reject device and optics	48 inches [1220 mm]
Height	24 inches [613 mm]
Width from conveyor centerline	20 inches [514 mm] and 14 inches [347 mm]

XXL inspection module (model 83226)

Width	37 inches [939.80 mm]
Length	41 inches [1041.40 mm]
Length with reject device and optics	42.06 inches [1068.40 mm]
Height	25.79 inches [655.07 mm] (34.85 inches [885.19 mm] with stand)

Environmental Conditions

The DecoSpector 360™ system is designed to be safe in the following environmental conditions:

Note: Please consult Pressco Technology Inc. if your environmental conditions are outside of those listed.

Condition	Specifications
Indoor/ outdoor use	Indoor use only
Altitude	Up to 2000 meters

Condition	Specifications
Operating Temperature	5 °C to 50 °C
Storage Temperature	0 °C to 70 °C
Humidity	Maximum relative humidity 80 % for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at 50 °C
Mains supply	Voltage fluctuations up to ± 10 % of the nominal voltage Transient overvoltage typically present on MAINS supply
Overvoltage protection rating	NOTE: the normal level of transient overvoltages is impulse withstand (overvoltage) category II of IEC 60364-4-443.
Rated pollution degree	This instrument is designed for use in Installation Category II and Pollution Degree 2 as per EN61010-1 and EN60664 respectively.



WARNING - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Electrical Specifications

The following are electrical specifications* for the DecoSpector 360™ control enclosure:

Note: the specifications are current as of the date of this publication and the wiring diagrams included in this publication. If your system was manufactured in a different year, look at the **System Number tag located on your system to see the actual specifications.*

Configuration	Specification - 120 V system	Specification - 230 V system
Voltage Range	120 VAC	230 VAC
Frequency	50/ 60 Hz	50/ 60 Hz
Current	6A for Air Conditioner 8A for Inspection System	2.7A for Air Conditioner 4A for Inspection System

Sound Pressure Level

The (optional) horn on the light tree has a maximum 105dB level at 1 meter distance in front of the horn. Use proper hearing protection as specified by your plant safety instructions.

Weight - DecoSpector 360™ Cabinet

The weight of a crate is listed below. Note that this is the maximum weight. The weight may be less depending on your configuration. You may receive multiple crates depending on your configuration.

Weight (full Decospector system)	250 lbs. (114 kg)
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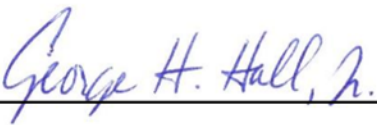
Chapter 4 Declaration of Conformity - DecoSpector 360

Declaration	The listed product is in conformity with following Union harmonization legislation: Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility and with Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits. The Technical Documentation demonstrates the fulfillment of the essential requirements as set out in Annex I of the above Directive.
Manufacturer	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA This declaration of conformity is issued under the sole responsibility of the manufacturer.
Product Name	DecoSpector DS360
Referenced harmonised standards to which conformity is declared:	EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use — EMC requirements — Part 1: General requirements EN 55011:2016+A11:2020: Radiated / Conducted Emissions EN 61000-4-2:2009: ESD Immunity EN 61000-4-3:2006 + A1:2008 + A2:2010: Radiated RF Immunity EN 61000-4-4:2004 + A1:2010: EFT Burst Immunity EN 61000-4-5:2006: Surge Immunity EN 61000-4-6:2009: Conducted RF Immunity EN 61000-4-11:2004: Voltage Dips & Interruptions EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements 2011/65/EU Restriction of Hazardous Substances in Electronic Equipment
Place	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA

Signed: George Hall, VP Engineering. Signed for and on behalf of Pressco Technology Inc.

Chapter 4

Signed for and on behalf of Pressco Technology Inc., 29200 Aurora Road, Cleveland, OH USA 44139:



George Hall
VP, Engineering

Date: 12 November 2024

Chapter 5 Installation

This section contains information about installation requirements and preparations that need to be complete before installing the system.

Pressco Technology Inc. recommends that the machine be installed and assembled by Pressco's specialized technicians. This is of vital importance for correct machine operation.



WARNING - Pressco Technology Inc. shall not be liable in case of failures or damage to property and/or personal injury resulting from or connected with assembly if this has been carried out by unauthorized personnel, or is not in compliance with the indications given in this manual.

To carry out production and cleaning/ servicing operations, it is important for the machine to have a minimum amount of space all around and away from walls.

Recommendations Prior to Installation

Before the machine is installed, the Pressco installer, together with the Customer (or representative) shall check the following criteria in the environment where the machine is to be installed:

- Work required by contract for the installation of the machine has been carried out
- The plant layout drawing that describes where the machine will be installed is the final drawing agreed to by Pressco Technology Inc.
- The space and height required for installation are actually available
- Only the components included in the installation layout are present in the area where the machine is to be mounted. Ensure no machines or components have been added at a later stage that might hinder mounting or make it more difficult. Should this be the case, immediately contact Pressco's Project Engineering personnel to arrange a suitable solution to the problem.

We recommend the following prior to machine installation:

- Transport the machine in its packaging to the area where it will be installed to minimize possibility of damage
- Carefully remove the packaging material and check components for damage
- Check tightness of mechanical components, as they can loosen during transport
- Prepare the compressed air mains line. Before making final connections, ensure that the pipes are clean and free from any debris.

Instructions for Safe Assembly Operations



IMPORTANT - The site supervisor will be responsible for ensuring that all the various mounting phases are carried out safely and in compliance with current regulations.

The site supervisor will also be required to make sure that all the members of personnel involved in the mounting operations comply with said regulations.

Shipping and Handling

Pressco Technology Inc. ships unassembled components in packing cases designed to protect the contents during handling and from exposure to weather.

Unless otherwise specified in the contract with the machine order, the Customer shall supply Pressco Technology Inc. with the means and equipment necessary for the unloading, lifting, and handling of machine parts. Pressco Technology Inc. deems it important to have one of their technicians supervise the process of unloading, handling, and lifting the machine. The technician can give useful advice as to the logical sequence in which the components should be unpacked and positioned for ease of assembly.



WARNING - Only qualified personnel must be involved in the operation of unloading, handling, and lifting the machine. Pressco Technology Inc. shall not be liable for damage to components and/or personal injury resulting from the involvement of unauthorized personnel and/or failure to comply with the directions provided in this manual in relation to lifting and transport.



Important - The site supervisor will be responsible for ensuring that all the various mounting phases are carried out safely and in compliance with current regulations.

After the machine is delivered, check for any damage that might have occurred during shipping. In case of damage, contact Pressco Technology Inc.

In handling the machine, always keep it close to the ground.



We recommend using a forklift truck with adequate capacity and forks to suit the weight to be lifted (machine plus packaging).

Hoisting

The machine is packaged in a wooden box, inside which the parts are individually packaged to prevent shock and sudden movements during transport. It is anchored onto a pallet.



WARNING - To prevent personal injury in the event that the machine or packaging box should fall, ensure that during hoisting operations no person is standing within the range of action of the hoisting machines.

Hoisting, transporting and placement operations should be supervised by qualified technical staff trained in these specific areas.

Before performing any movement, you should always ensure that the hoisting means and equipment (ropes, hooks, etc.) are suitable for lifting the weight and also verify its stability.



If using a fork lift truck, ensure that the forks extend beyond the opposite side.

Before you start moving the machine, check the stability of the element to be transported.



Storing

The machine should be stored indoors, still packed. Maintain regular temperature and humidity.

Utilities to be Supplied by Customer

The following utilities are required to operate the Pressco Intellispec system. Before making connection, make sure the utility matches the technical specifications. More than one connection of the utilities may be required depending on the number of modules installed. Refer to specific wiring diagrams.

Utility	Requirements
Air supply for rejection device	Pipe size must be such that there will be no pressure decrease during machine operation. Air must be dry and free of oil.
Electrical supply	Provide one each electrical socket to comply with: • User interface electrical specifications (use the specifications that apply to your system) • Integrated tunnel electrical specifications (if applicable) • Cluster box electrical specifications (if applicable)
Internet connection (optional)	Provide a shielded ethernet cable to use Pressco's remote support through the Internet.

Protective Earthing

This product must be grounded (earthed). If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

**DANGER** - Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service technician if you are in doubt as to whether the product is properly grounded.

Cord Connected Equipment

The product will be equipped with a supply cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with local codes and ordinances.

Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

Cable Direct

This product must be connected to a grounded metal, permanent wiring system, or an equipment grounding conductor must be run with the circuit conductors and be connected to the equipment grounding terminal.

Electrical Connections DecoSpector System

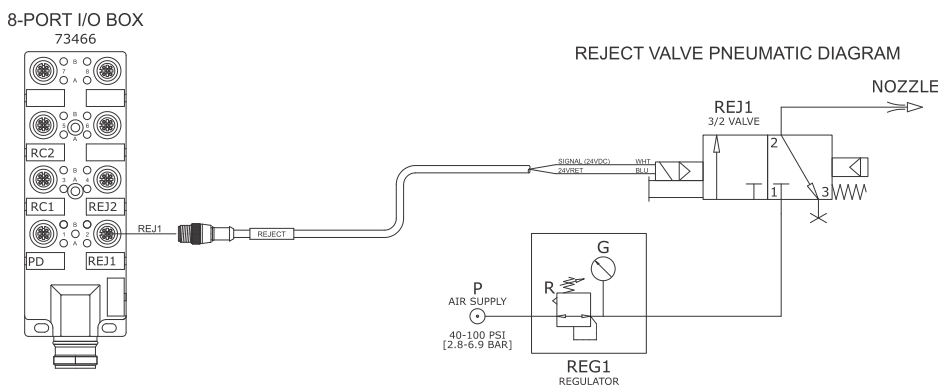
Make sure that the power outlet voltage matches the voltage required by the machine. Refer to the electrical specifications and wiring diagrams for your system.

⚠ WARNING - Power Switch is the power disconnect device. Do not position the equipment such that access to the disconnect switch is impaired. If not readily accessible (such as within a rack or mounting out of reach), an additional disconnect device should be installed that can isolate the Live and Neutral lines of the mains power supply, whilst leaving the protective earth intact.

- Wiring diagram for systems with 115VAC power: "F2284W Sheet 1 of 9" on page 41
- Wiring diagram for systems with 230VAC power: "F2284W Sheet 3 of 9" on page 43

Deco Reject Valve Pneumatic Diagram

This diagram shows the pneumatic valve connection to the 8-port I/O box.



Install the Inspection Module

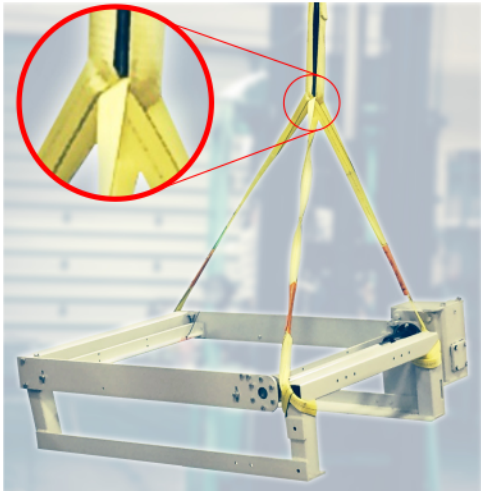
Installation should be carried out by Pressco personnel. Refer to the installation drawings.

⚠ Caution - The user interface and inspection module must NOT be lifted by one person. Use a mechanical lifting device, and ask another person to assist you.

Lift the Service Frame

Using a forklift or other mechanical lifting device, lift the service frame using the three straps that are installed by Pressco prior to shipping. Use a hook, another strap (as shown below), or your plant's preferred method.

Place the service frame in the desired location and mount as specified in the installation drawings.



Lift the Module

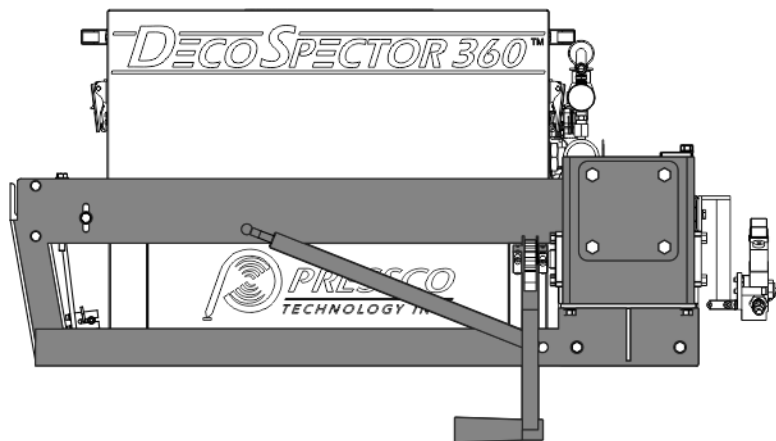
Using a forklift or other mechanical lifting device, lift the module using the two straps that are installed by Pressco prior to shipping. Use a hook, another strap, or your plant's preferred method.

Place the module on top of the service frame. Secure the module in place with screws, as specified in the installation drawings.



Secure the Module to the Service Frame

Secure the module to the service frame. Refer to the installation drawings for instructions.



Installation

Pressco Technology Inc. recommends that the machine be installed and assembled by Pressco's specialized technicians. This is of vital importance for correct machine operation.

⚠ WARNING - Pressco Technology Inc. shall not be liable in case of failures or damage to property and/or personal injury resulting from or connected with assembly if this has been carried out by unauthorized personnel, or is not in compliance with the indications given in this manual.

To carry out production and cleaning/ servicing operations, it is important for the machine to have a minimum amount of space all around and away from walls.

Ventilation

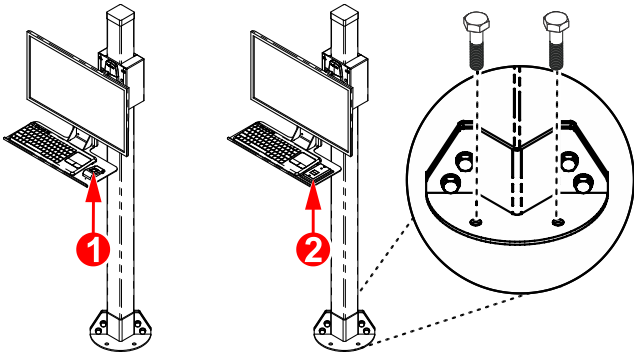
Place the Pressco Intellispec components in a position with adequate ventilation to allow proper air flow through the air filters.

Component	Spacing
User Interface	Leave 1 meter [39 inches] clear around machine
Cluster box (not used on all systems)	Leave 100 mm clear in front of the fan and vent

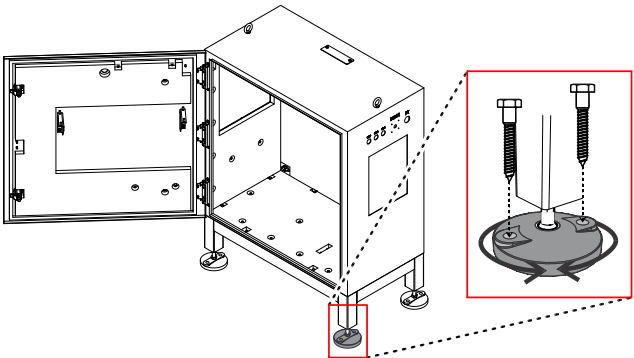
Stability of User Interface and Control Cabinet

Install lag bolts through the holes in the base to secure the user interface and control cabinet to the floor.

(bolts shown are for illustration purposes only, and are not included with the system)



Your system has user interface hardware to operate the system. For logging into the system, your system may have the optional 1) biometric fingerprint reader or 2) RFID card reader. Either way, secure the pole to the ground.



Adjust the feet to level the control cabinet and ensure stability. Proper leveling can help ensure proper operation. Also refer to the directives in the "Personnel Safety" on page 12 section.

Commissioning

Before placing the machine into operation, make sure the following checks are completed:

Completed	Yes	No
Positioning and leveling of the unit		
Connection of compressed air line to connection points		
Connection of power supply to vision processor cabinet		
Connection of power supply to cluster box (if applicable)		
Connection of power supply to integrated inspection module(s) if applicable		
Proper wiring from user interface cabinet to sensor module(s) and cluster box (if applicable) using the wiring diagrams		

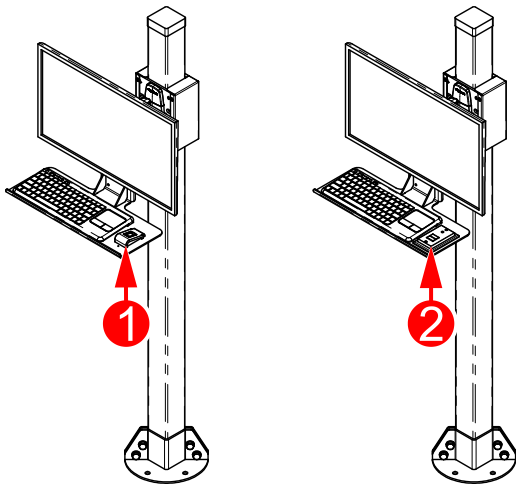
Chapter 6 DecoSpector Control Enclosure and User Interface

This section contains an overview of the components in the control enclosure and user interface.

DecoSpector User Interface

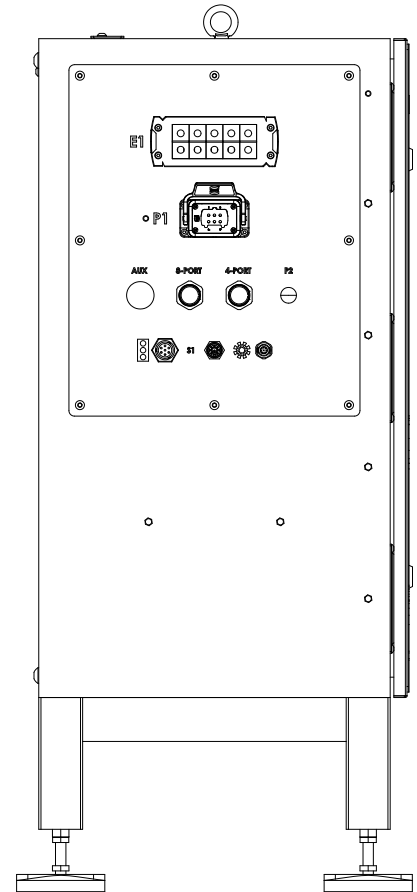
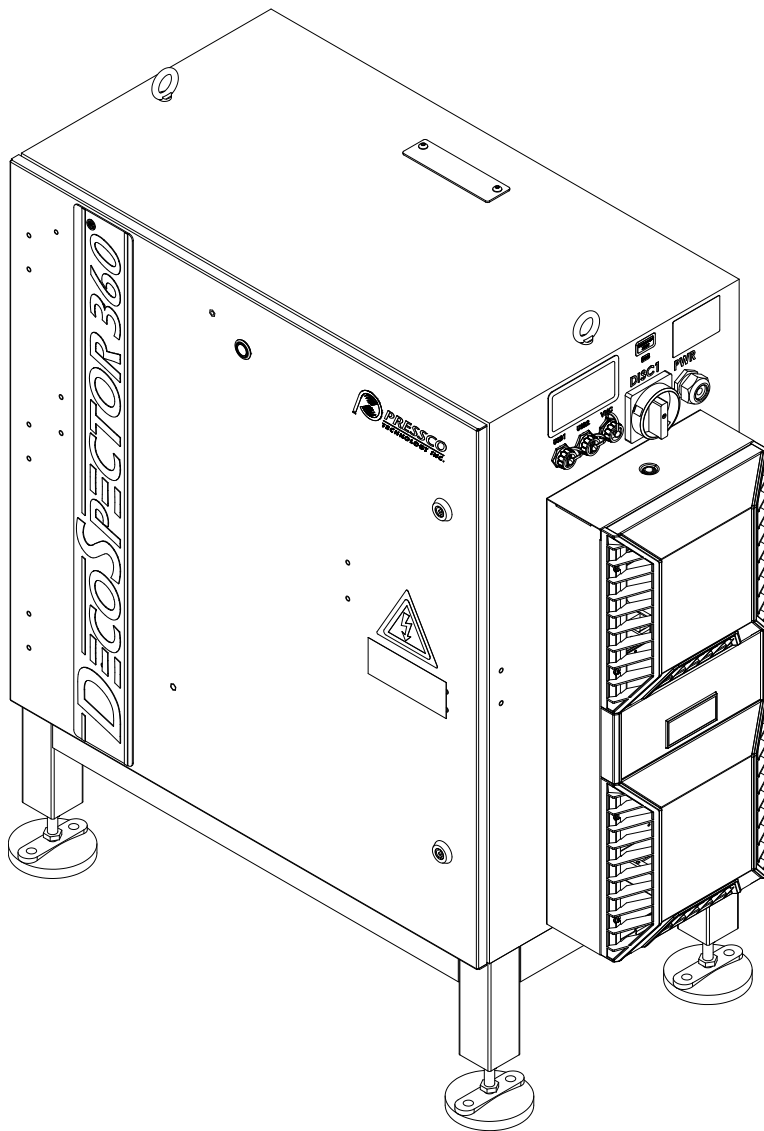
This is the user interface, which includes the monitor, keyboard, and login device (optional).

Your system has user interface hardware to operate the system. For logging into the system, your system may have the optional 1) biometric fingerprint reader or 2) RFID card reader.



DecoSpector Vision Processor

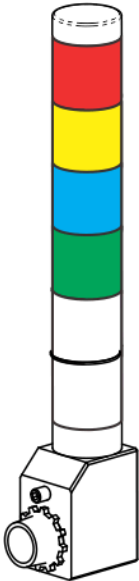
This is the vision processor (with computer) for the DecoSpector system.



5-Light Tree (Optional)

The lights on the optional light tree will turn on, off, or blink depending on status of certain hardware. Each lane has its own light tree.

Note: the light tree on your system may look different than the picture shown

5-Light Tree	Light color	Condition	What it means
	Red	On - steady	Alarm condition
	Red	On - blinking	Part tracker board lost communication with the host PC or has an error and needs to initiate an alarm
	Red	Off	No alarm (OK)
	Amber	On - steady	Warning alarm condition
	Amber	Off	No warning (OK)
	Amber	0.5 second flash	System automatically resets Asynchronous Correlation FIFO (not used in all systems)
	Blue	On	Not assigned
	Blue	Off	Not assigned
	Green	On - steady	Lane is online
	Green	Off	Lane is offline
	White	On - steady	Power On (Part tracker board has power)
	White	Off	Power Off (Part tracker board has no power)

Power On and Off at the Control Enclosure

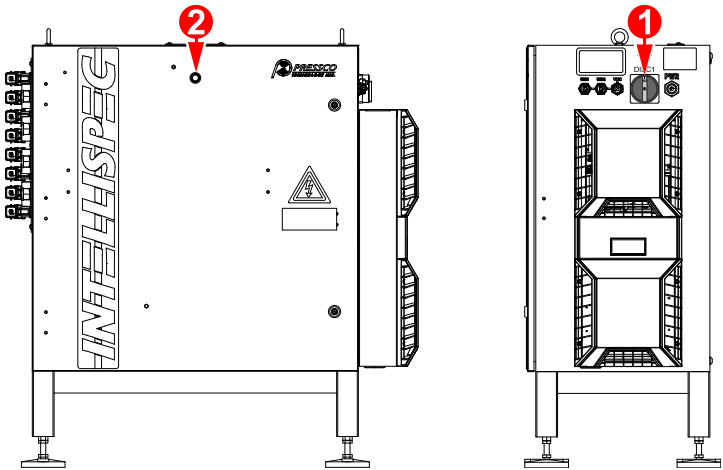
Power on: Turn on the switch DISC 1 [item 1]. The power indicator [2] will illuminate. The software will start automatically. (You must log in and put the system online to begin inspection)

Note: it takes about a minute for the computer to start after the main power switch is turned ON

Power off: Turn off the switch. The system, including the computer, shuts down. The UPS shuts down.

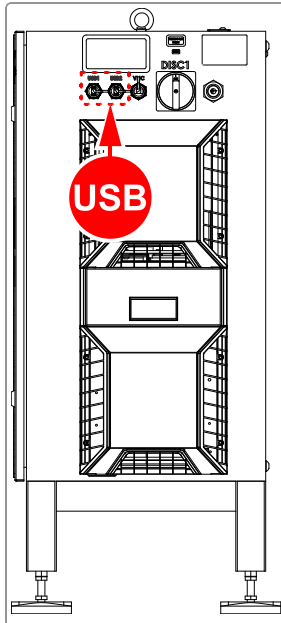
 **WARNING** - When you shut down power using this switch, there is still voltage present on the UPS inside the unit until it discharges.

 **Important** - If you want to restart the system, turn off the power, let the software and components completely shut down, and leave the power off for about one minute before turning it back on. This allows the electronic components to correctly reset.



USB Ports DecoSpector Cabinet

There are two USB ports on the side of the cabinet.



The USB ports are not for charging your phone!

Use the USB ports when you are:

- Creating a Support Package
- Saving images, especially to send with a support package

Biometric Login Device

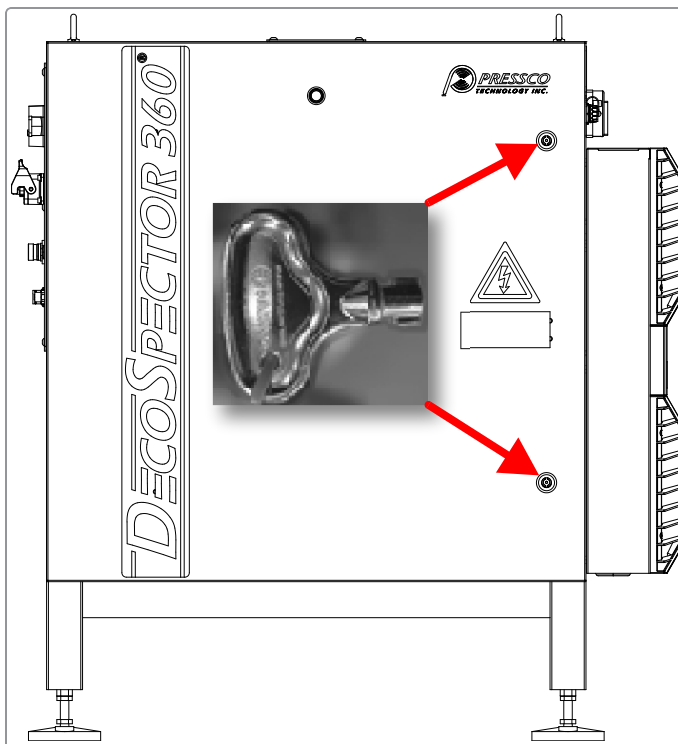
The Biometric Identification login device is used to log in and out of the Pressco system. This device is optional and must be purchased with the system.



To log in with this device, press your finger to the device. The following are conditions for use:

- You must use the same finger as initially set up by your administrator
- If you do not know how your account was set up (or which finger you used), contact your administrator
- If, after three tries, the Pressco does not recognize your finger print, you must log in using the On Screen Keyboard (OSK)

Accessing the Internal Components with the Power Off



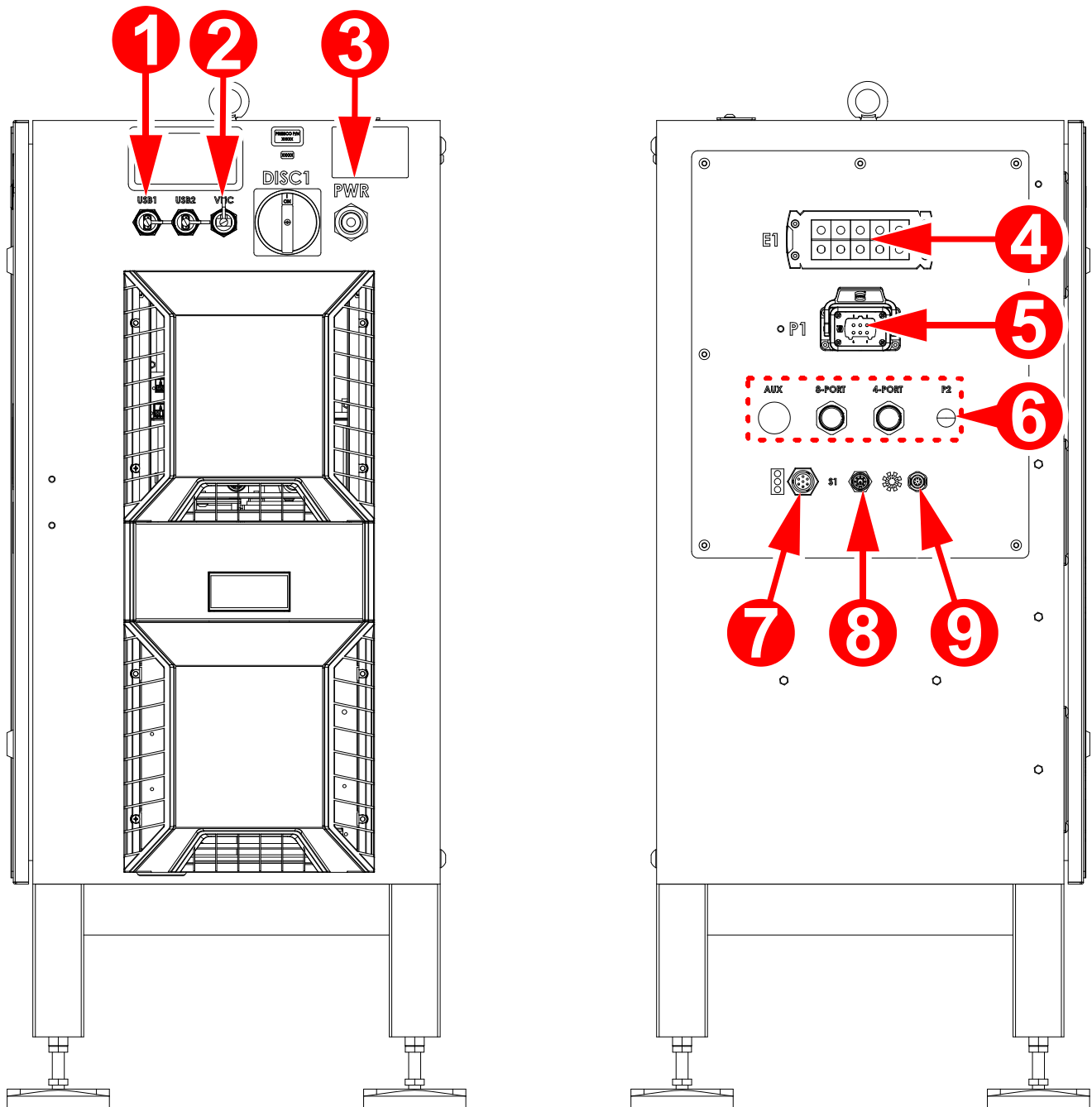
To access the components inside of the control cabinet, you will need the keys (supplied by Pressco).

WARNING - When the system is powered down, there is still voltage present at the UPS. Only **AUTHORIZED PERSONNEL** should attempt to open the system. We recommend that only **AUTHORIZED PERSONNEL** have access to the keys.

Chapter 7 Components and Wiring Diagrams

This section provides a list of components in the control enclosure, as well as wiring diagrams.

External Connections



1) USB1 and USB2 - for data transfer

2) VNC - Ethernet connector

Chapter 7

3) P1 or PWR- Incoming power (Note: your cabinet may be labeled either with P1 or PWR at this location)

4) E1 block connector - inspection module connections

P1) Inspection Module power 12Vdc /24Vdc /48Vdc

6) Four connectors:

- Aux - Auxiliary input
- 8-port I/O (part detection and rejection)
- 4-port I/O (correlation sensors). Alternately, this may be connected with cable 85348 for optional Deco Part Trip Settings function.
- P2 - Used for optional Deco Part Trip function.

7) Light tree

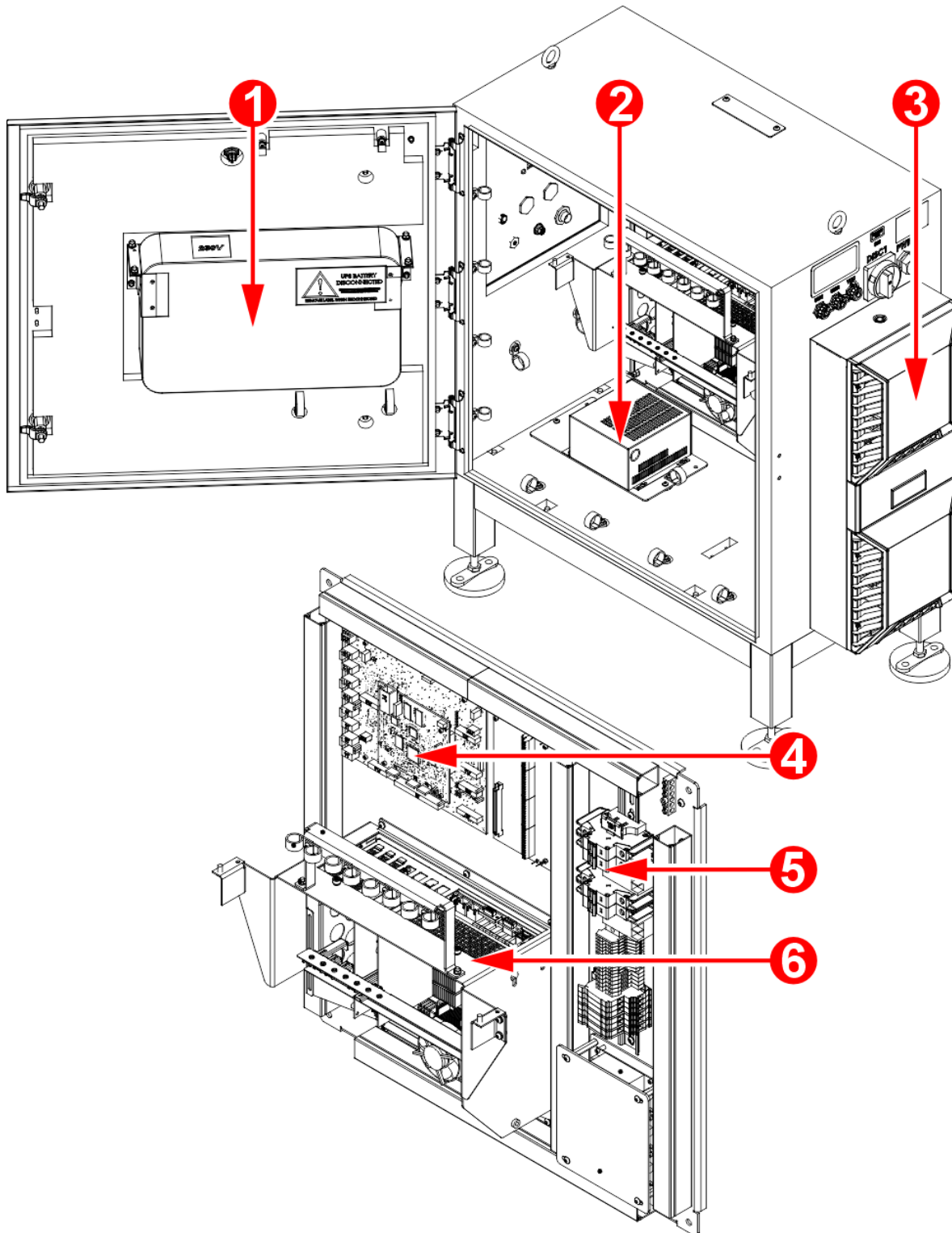
8) S1 (85345) Trigger (camera)

9) Encoder

Included Components

The components in the diagram are installed in your system.

Note: Your system will be configured for your application. You may have more or fewer components than this illustration.



1) UPS 1500VA Rack Mount 900W

- for 120V models: Part number 81717
- for 230V models: Part number 81718

Chapter 7

2) SUB-ASSY FRU POWER SUPPLY DS360 S6 (part number 85143).

3) Air Conditioner:

- for 120V models: 670W 120V 50/60HZ (part number 85022)
- for 230V models: 670W 230V 50/60H (part number 85023)

4) Part Tracker - ASSY 8 CHANNEL DPT STACK SV (part number 59620)

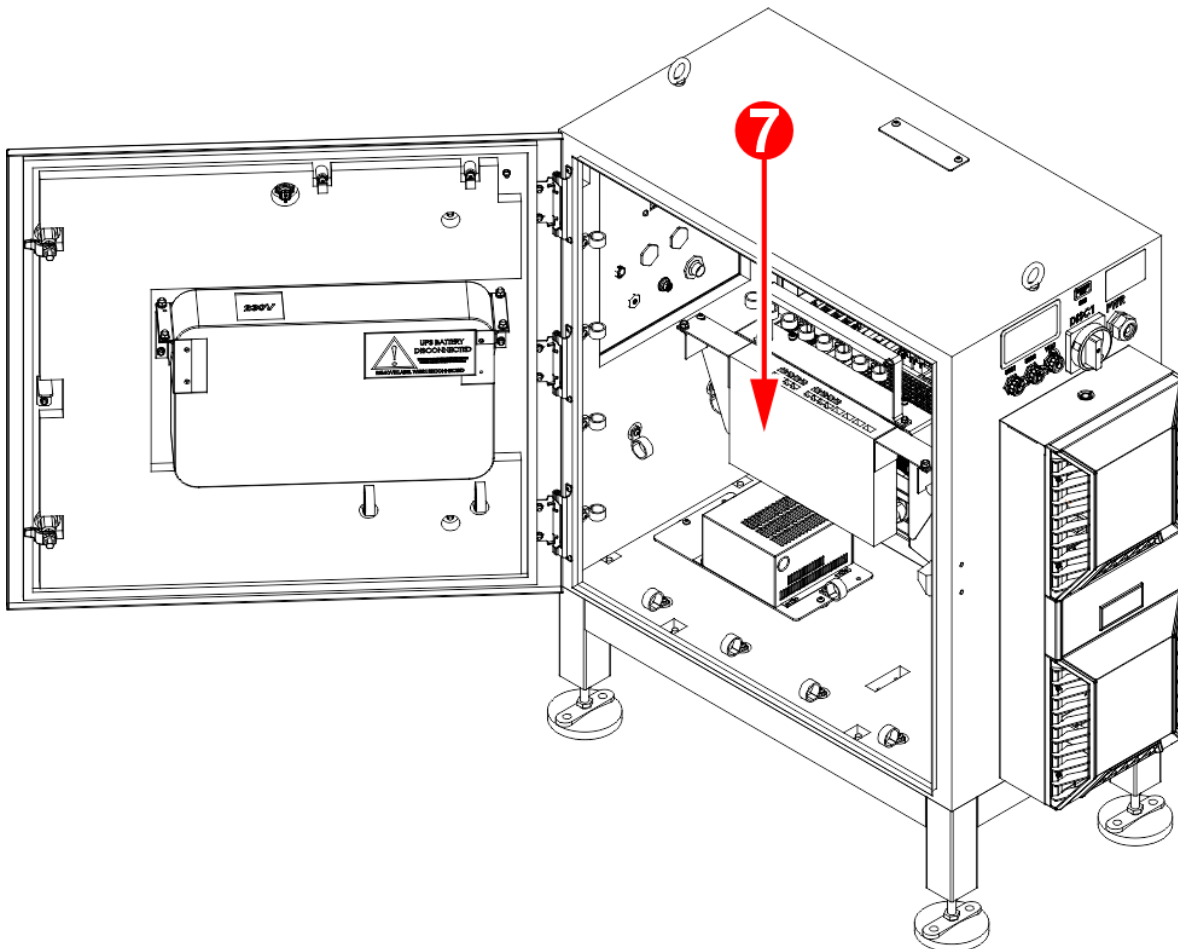
5) Assembly TB1

- for 120V models: ASSY TB1 AC POWER 120VAC DS360 MIP (part number 85334)
- for 230V models: ASSY TB1 AC POWER 230VAC DS360 MIP (part number 85335)

6) Vision Processor Computer DECO GEN3 FRU- Field Replaceable Unit (part number 83040)

Additional component

An additional component, the Ethernet switch, is mounted over the electronics panel.



7) Ethernet switch - SWITCH MANAGED PROG 3C/3C/4RUI/6PDN) (part number 77901)

Fuse Replacement

The fuses are located in **Terminal Block TB1**, which is located on the back panel inside the control enclosure.

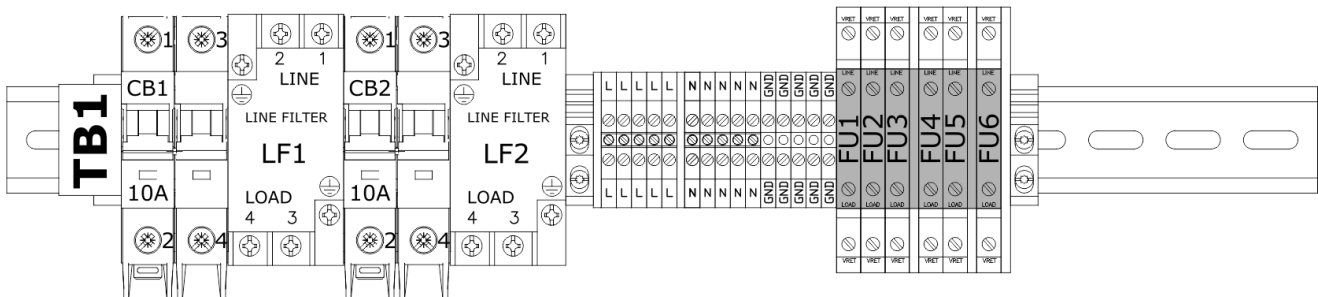
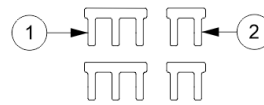
⚠ WARNING - For continued protection against fire hazard, replace fuses only with the same type and ratings. The use of other fuses or materials is prohibited.

⚠ WARNING - Disconnect the product from the mains supply before replacing the fuse(s).

For fuse rating, refer to the table below.

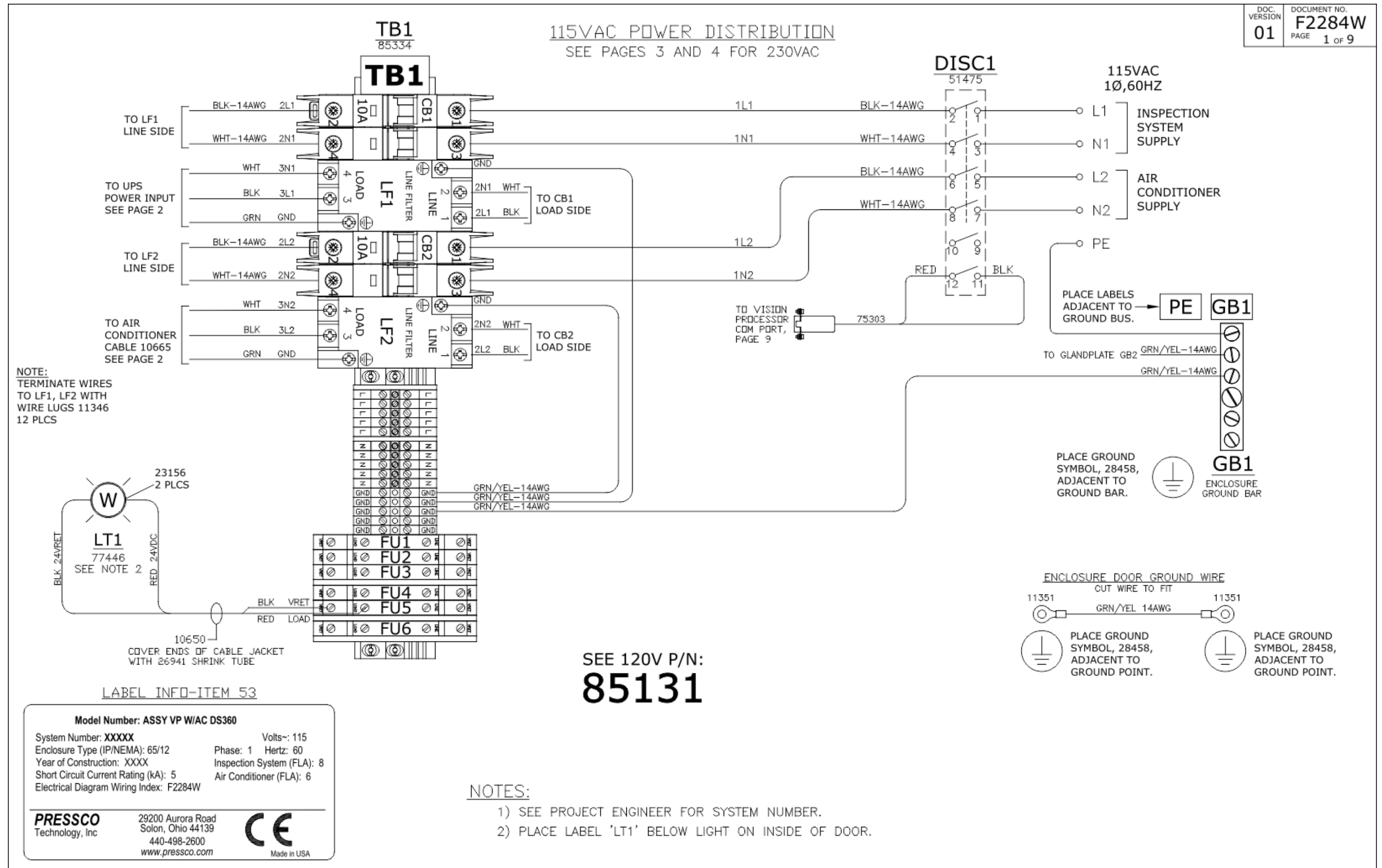
Pressco part number	Fuse Number	Value	Type
75517 - FUSE 5A 125V 5X20MM TIME DELAY	FU1	125VAC/ 5A 5mm x 20mm	BK/ GMC-5-R
26943 - FUSE 3A 250V 5X20 MM GLASS FAST ACT	FU2	250VAC/ 3A 5mm x 20mm	BK/ GMA-3-R
10895 - FUSE 1A 5 X 20 MM QUICK BLOW	FU3	250VAC/ 1A 5mm x 20mm	BK/ GMA-1-R
26943 - FUSE 3A 250V 5X20 MM GLASS FAST ACT	FU4	250VAC/ 3A 5mm x 20mm	BK/ GMA-3-R
26943 - FUSE 3A 250V 5X20 MM GLASS FAST ACT	FU5	250VAC/ 3A 5mm x 20mm	BK/ GMA-3-R
75518 - FUSE 4A 125V 5X20MM TIME DELAY	FU6	250VAC/ 4A 5mm x 20mm	BK/ GMC-4-R

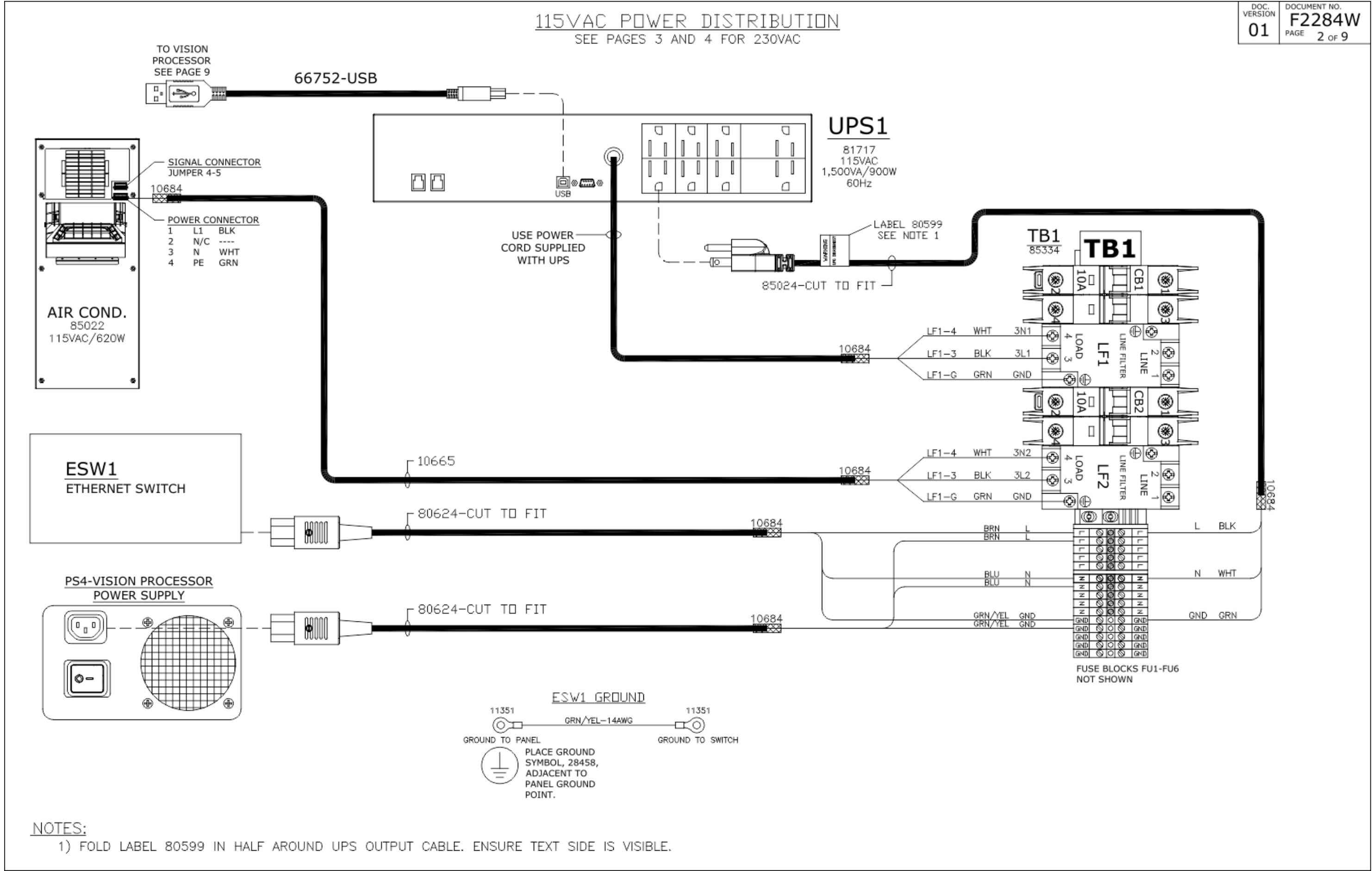
- 1) INSTALL 3-POLE JUMPERS IN VRET AND LINE OF FU1, FU2, FU3.
- 2) INSTALL 2-POLE JUMPERS IN VRET AND LINE OF FU4, FU5.



Wiring Diagrams for Control Cabinet

The following pages contain the wiring diagrams F2284W for the DecoSpector system.





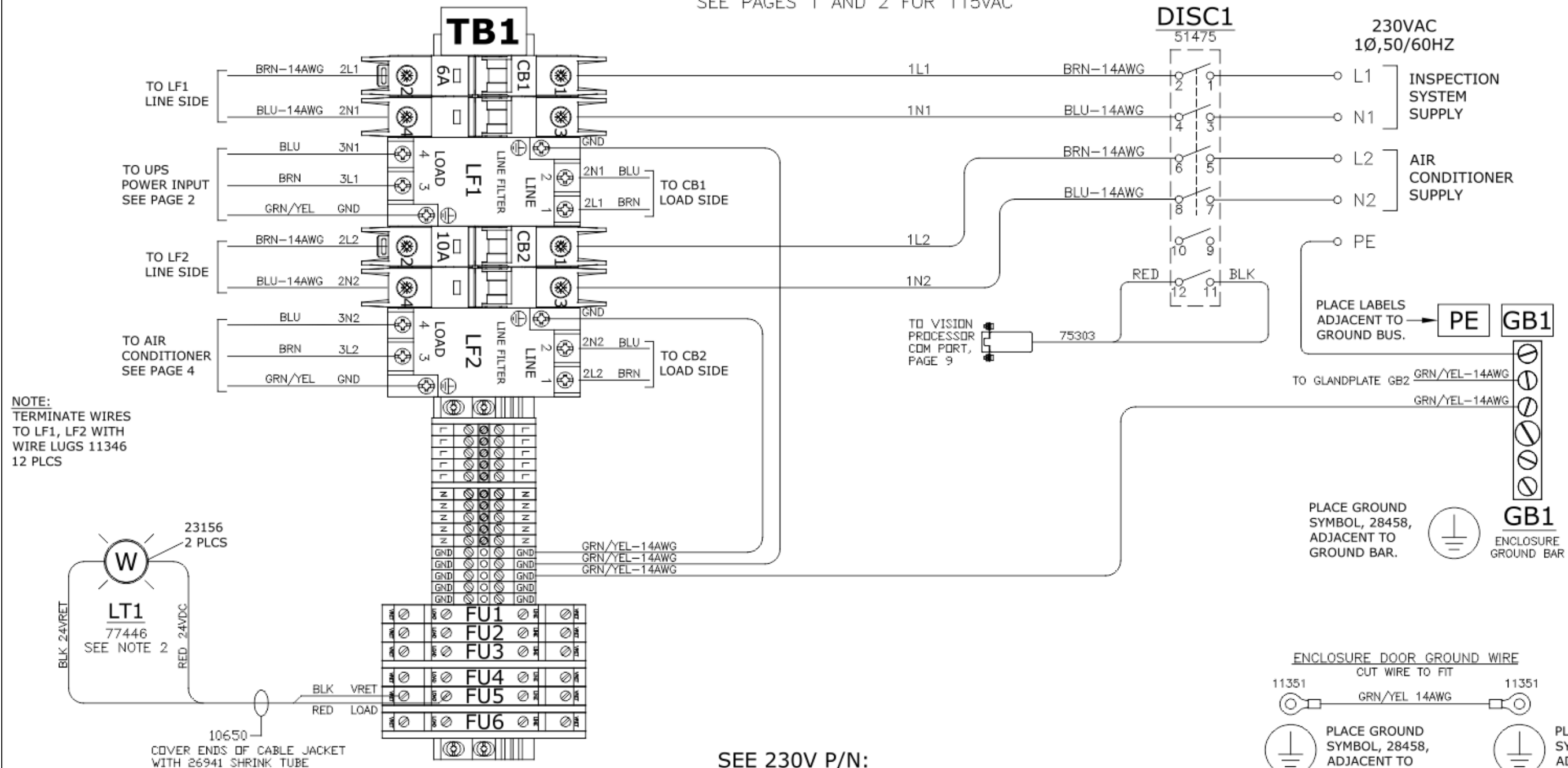
F2284W Sheet 3 of 9

230VAC POWER DISTRIBUTION

SEE PAGES 1 AND 2 FOR 115VAC

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SEE 230V P/N:
85132

LABEL INFO-ITEM 53

Model Number: ASSY VP W/AC DS360

System Number: XXXXX
Enclosure Type (IP/NEMA): 65/12
Year of Construction: XXXX
Short Circuit Current Rating (kA): 5
Electrical Diagram Wiring Index: F2284W

Volts~: 230
Phase: 1 Hertz: 50/60
Inspection System (FLA): 4
Air Conditioner (FLA): 2.7

PRESSCO
Technology, Inc

29200 Aurora Road
Solon, Ohio 44139
440-498-2600
www.pressco.com



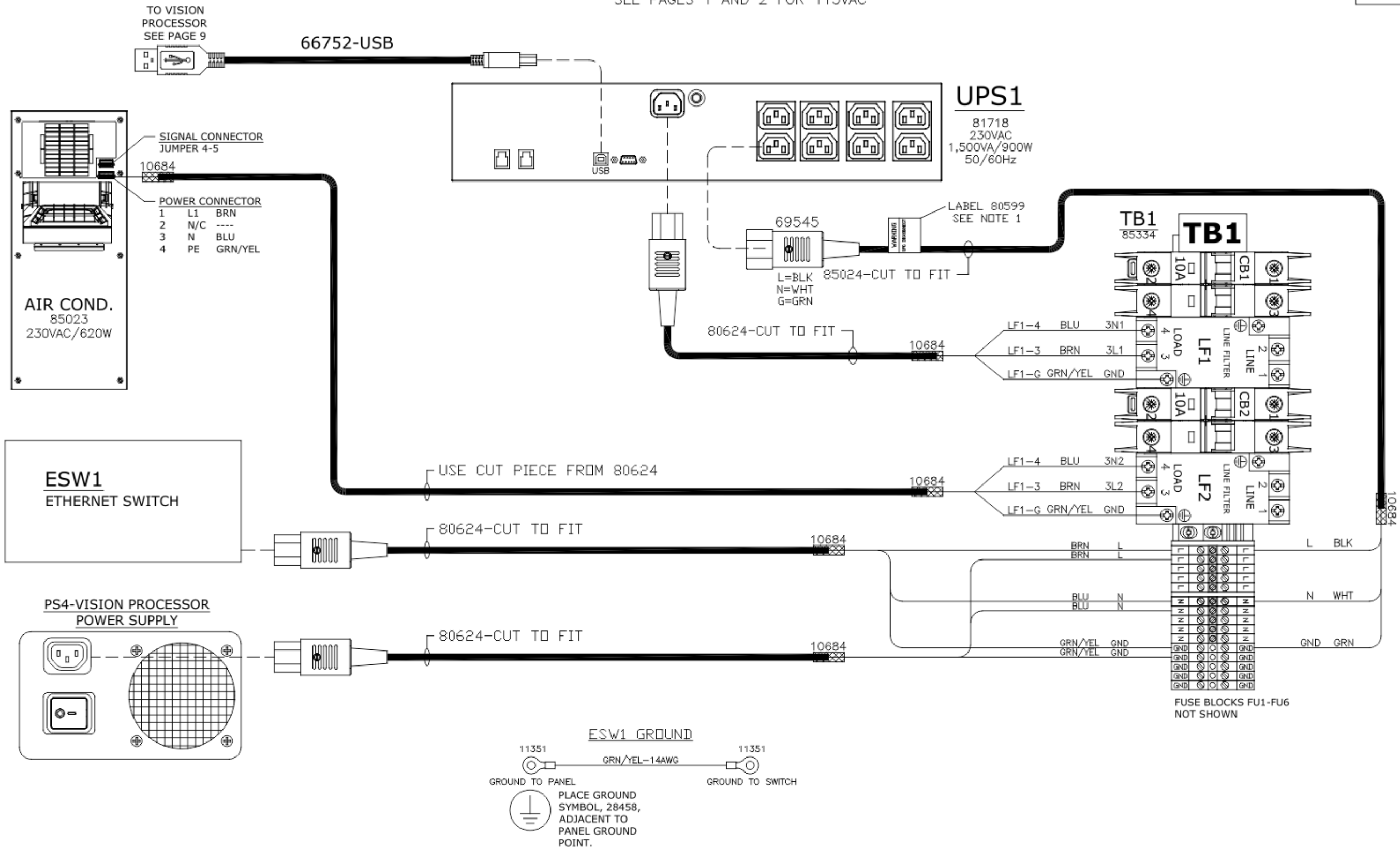
NOTES:

- 1) SEE PROJECT ENGINEER FOR SYSTEM NUMBER.
- 2) PLACE LABEL 'LT1' BELOW LIGHT ON INSIDE OF DOOR.

230VAC POWER DISTRIBUTION

SEE PAGES 1 AND 2 FOR 115VAC

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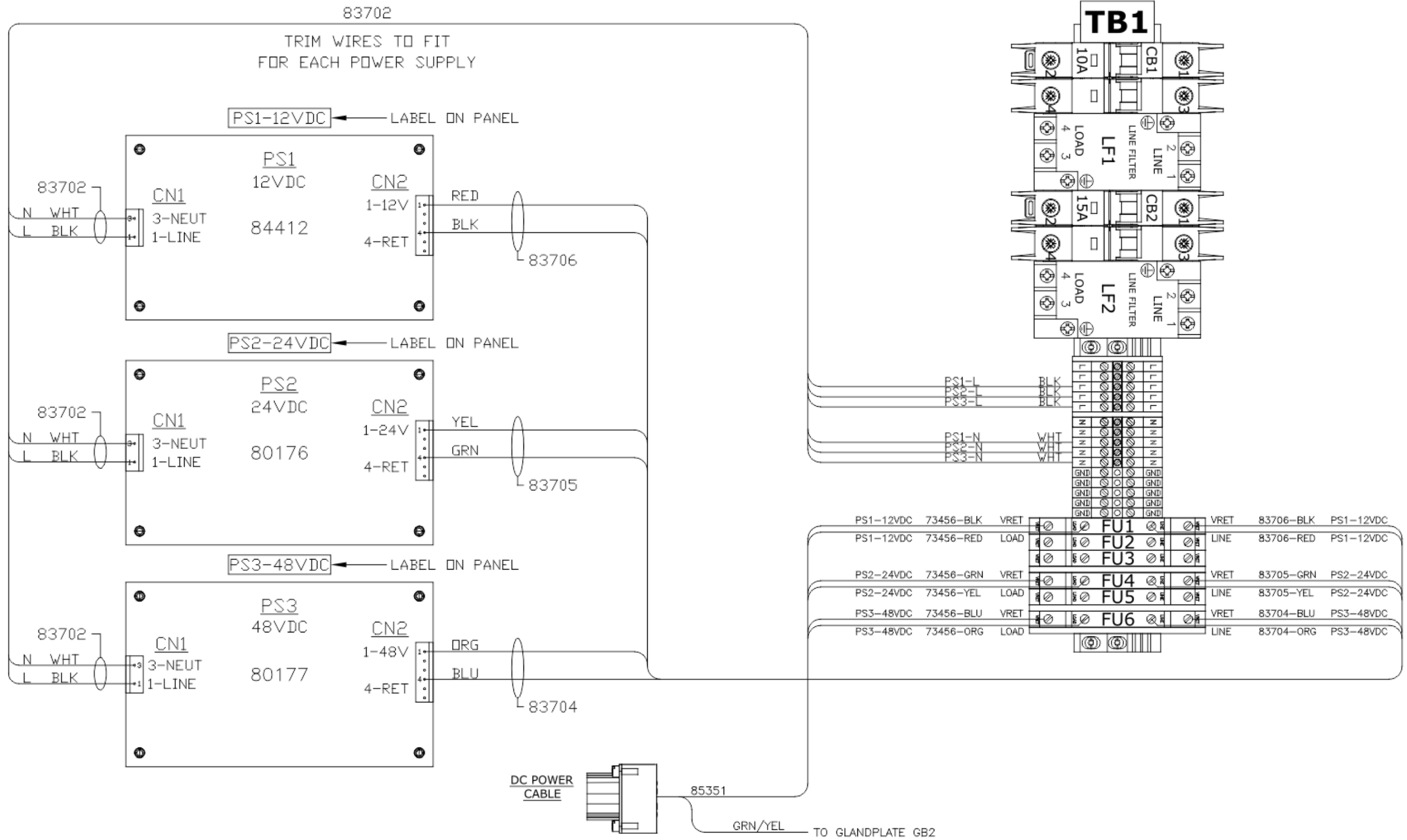


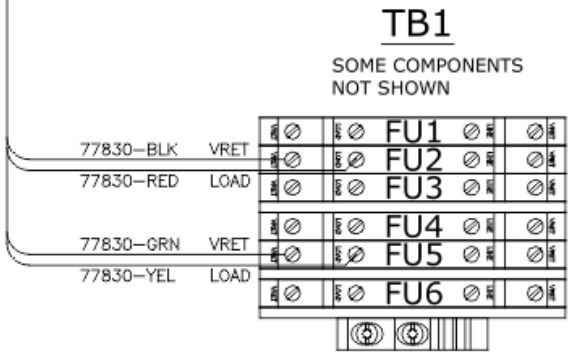
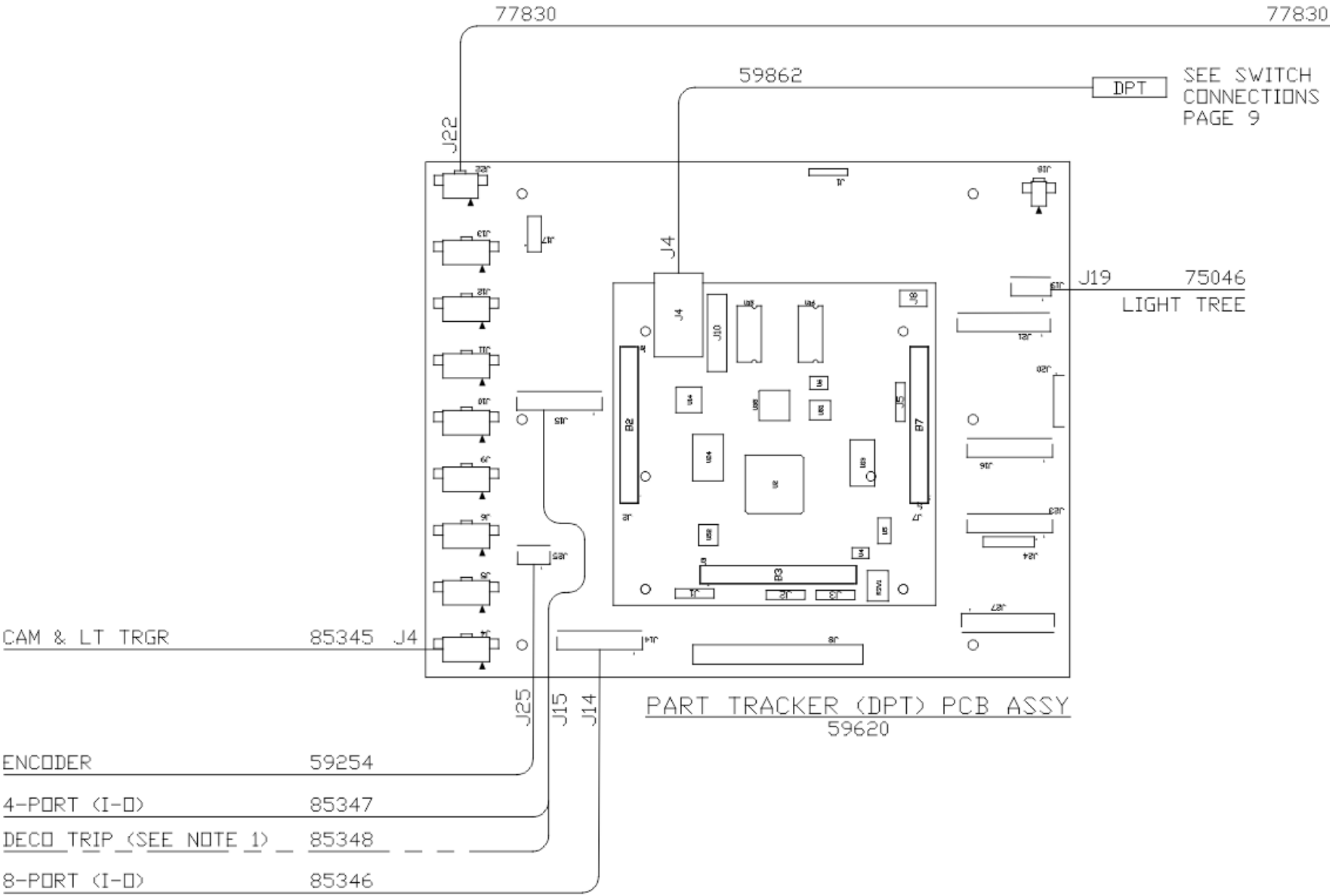
NOTES:

- 1) FOLD LABEL 80599 IN HALF AROUND UPS OUTPUT CABLE. ENSURE TEXT SIDE IS VISIBLE.

DC POWER DISTRIBUTION

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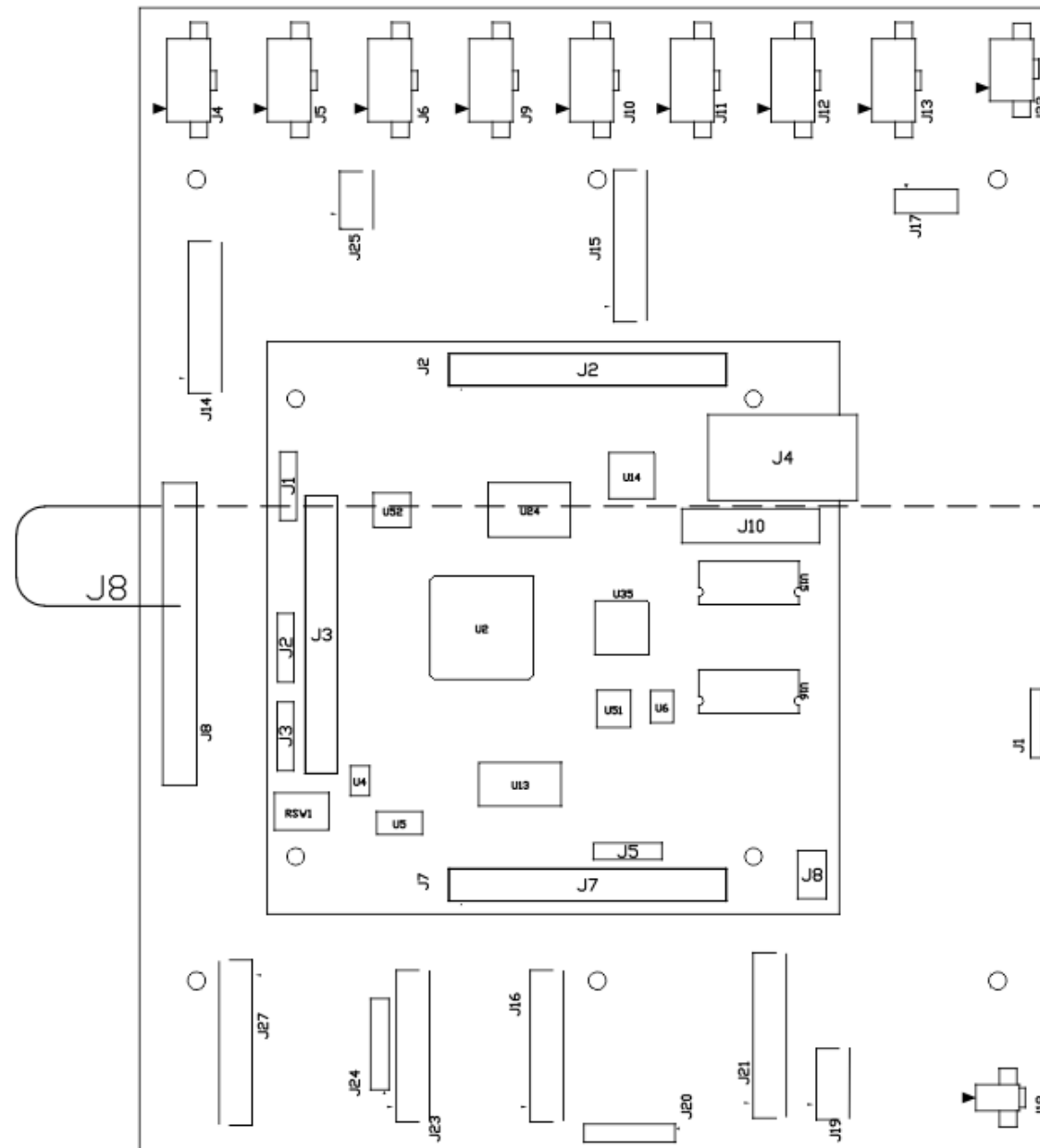




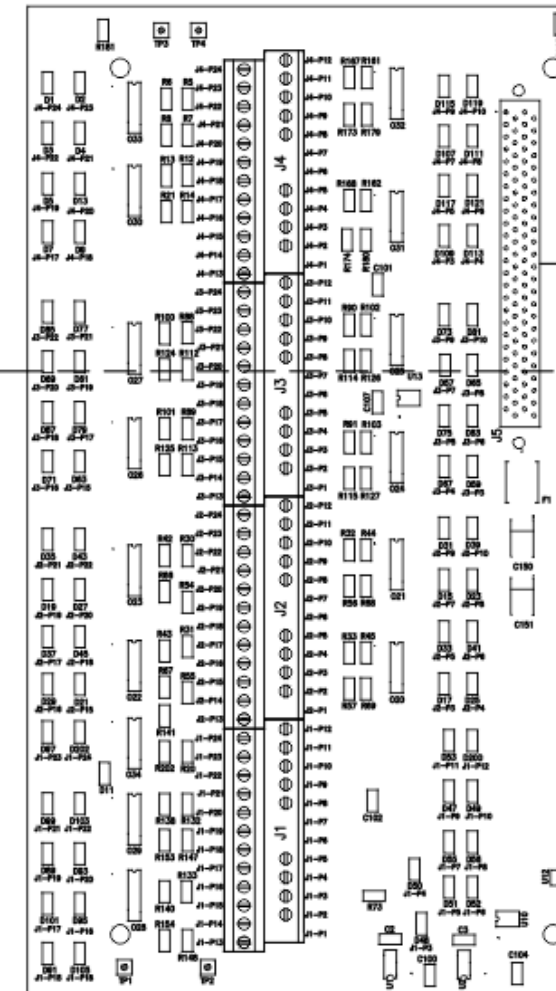
FUSE NO.	RATING	TYPE
FU1	125VAC/5A 5MM X 20MM	BK/GMC-5-R
FU2	250VAC/3A 5MM X 20MM	BK/GMA-3-R
FU3	250VAC/1A 5MM X 20MM	BK/GMA-1-R
FU4	250VAC/3A 5MM X 20MM	BK/GMA-3-R
FU5	250VAC/3A 5MM X 20MM	BK/GMA-3-R
FU6	250VAC/4A 5MM X 20MM	BK/GMC-4-R

NOTES:
1) REPLACE CABLE 85347 WITH 85348 FOR OPTIONAL DECO TRIP FUNCTION.

PART TRACKER (DPT) PCB ASSY 59620



EXTENDED I/O PCB ASSY 66043

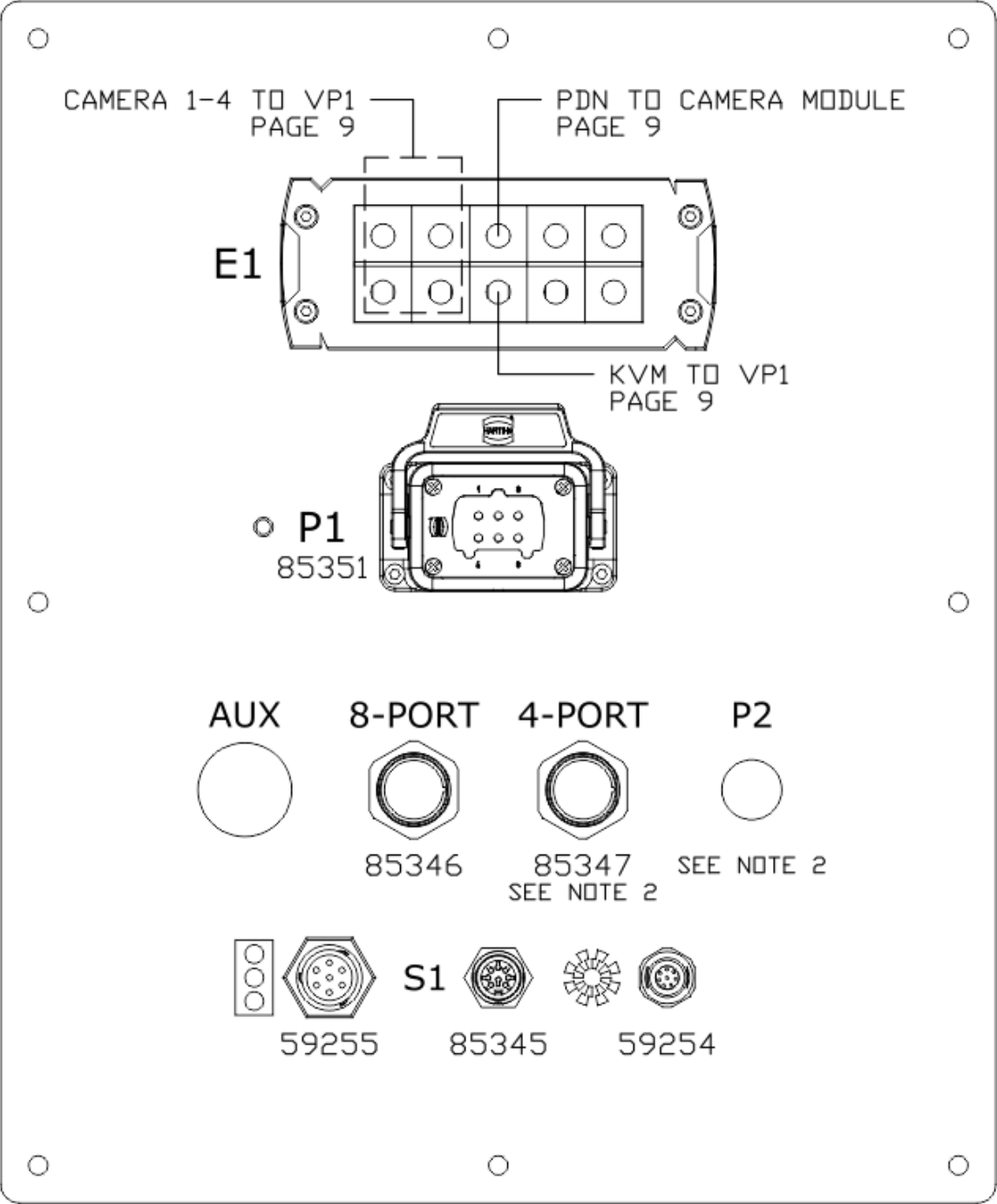


66765, 18" RIBBON CABLE
(SEE NOTE 2)

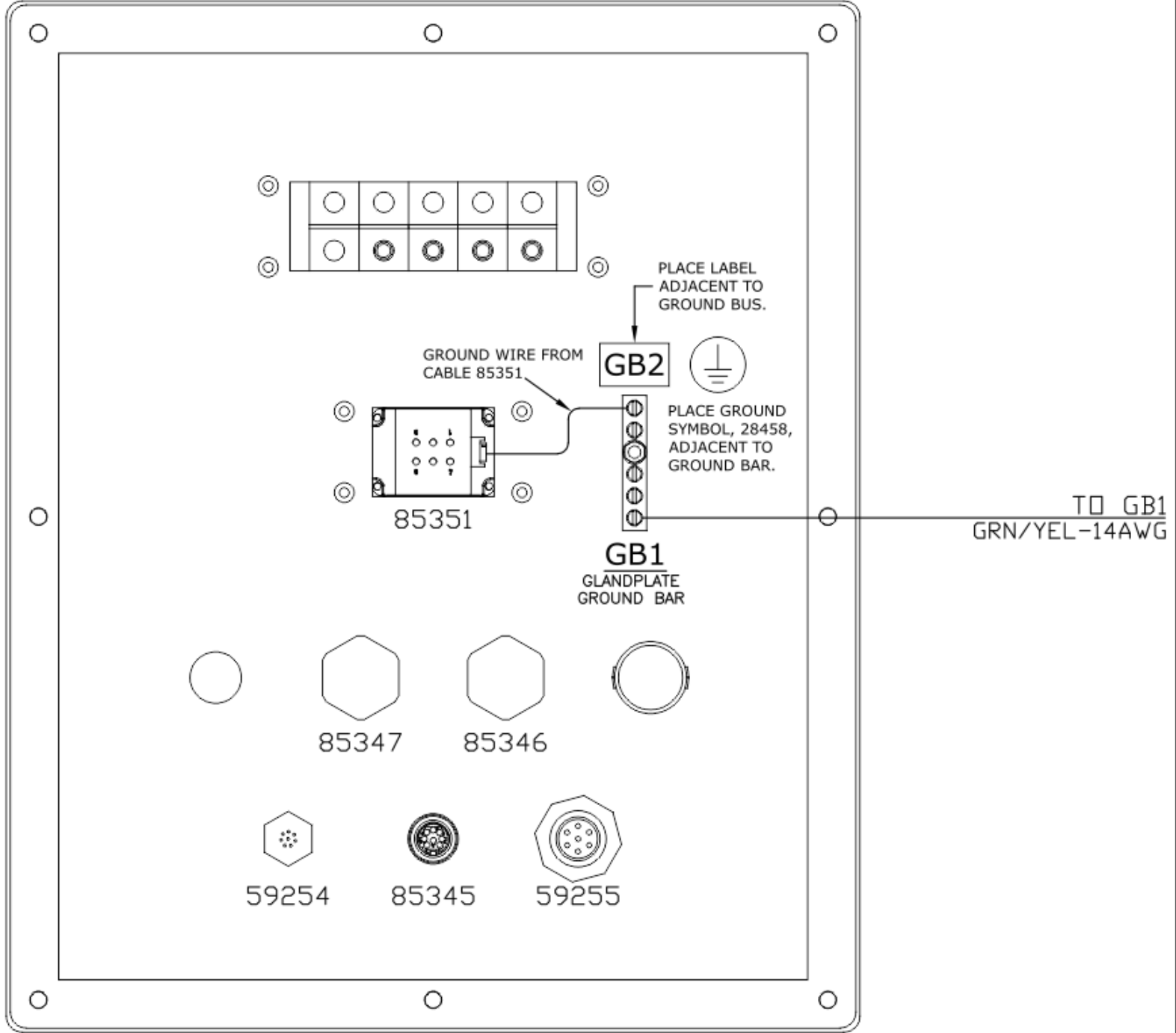
NOTES:

- 1) CUT INSULATION PAPER, 60182, TO FIT TO BACK OF PART TRACKER AND EXTENDED I/O ASSEMBLIES.
- 2) ROUTE (FOLDING AS NEEDED) THE RIBBON CABLE BEHIND THE PART TRACKER AND EXTENDED I/O BOARDS SUCH THAT THE CABLE IS SANDWICHED BETWEEN INSULATION PAPER AND BACK OF ENCLOSURE.

GLANDPLATE
EXTERNAL VIEW



GLANDPLATE
INTERNAL VIEW

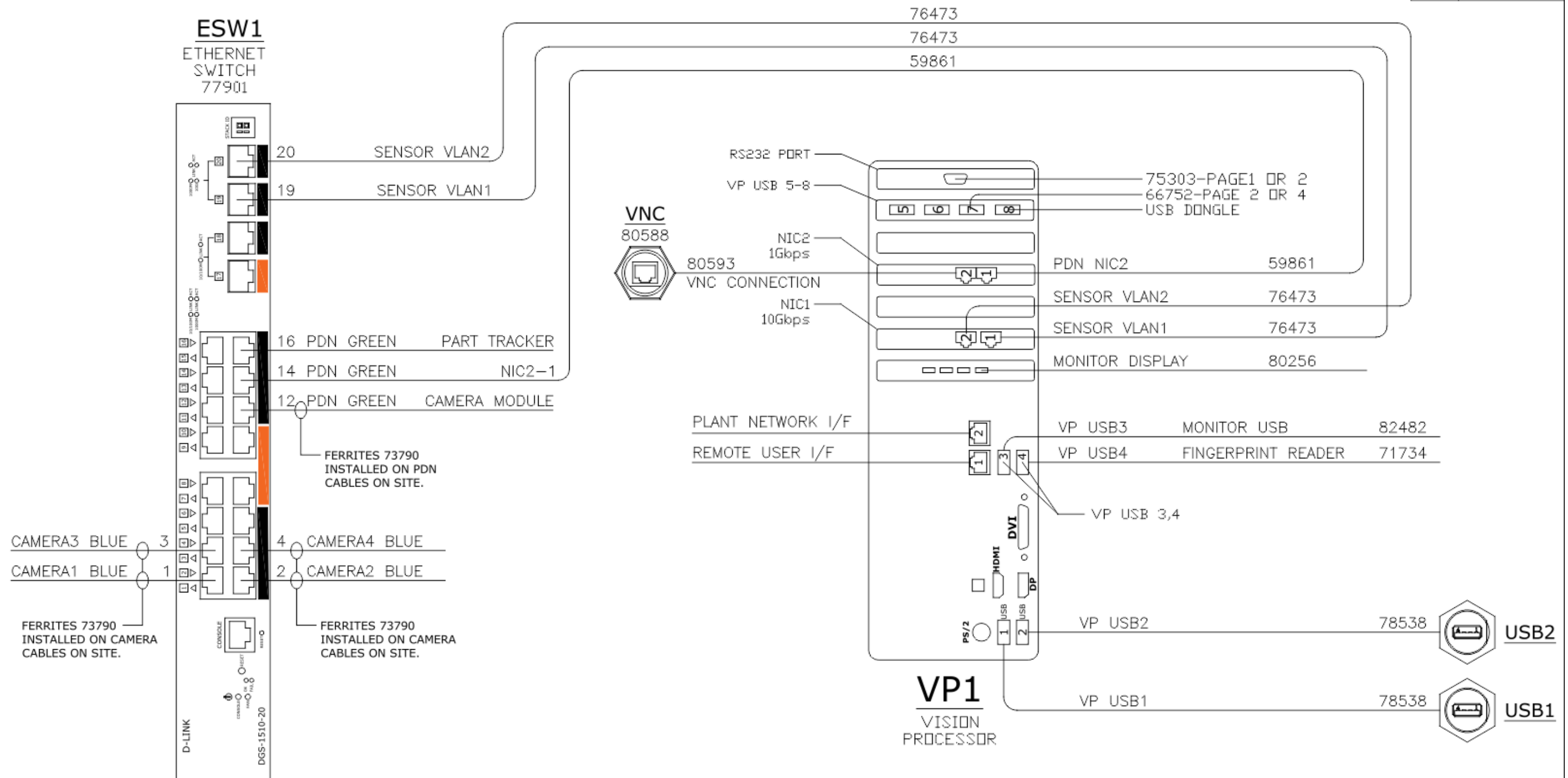


NOTES:

- 1) ROUTE DATA CABLES SEPARATE FROM POWER CABLES, MINIMUM BEND RADIUS FOR DATA CABLES 8 X OD.
- 2) INSTALL CABLE 85348 AT 4-PORT AND P2 FOR OPTIONAL DECO TRIP FUNCTION. REMOVE CABLE 85347.

F2284W Sheet 9 of 9

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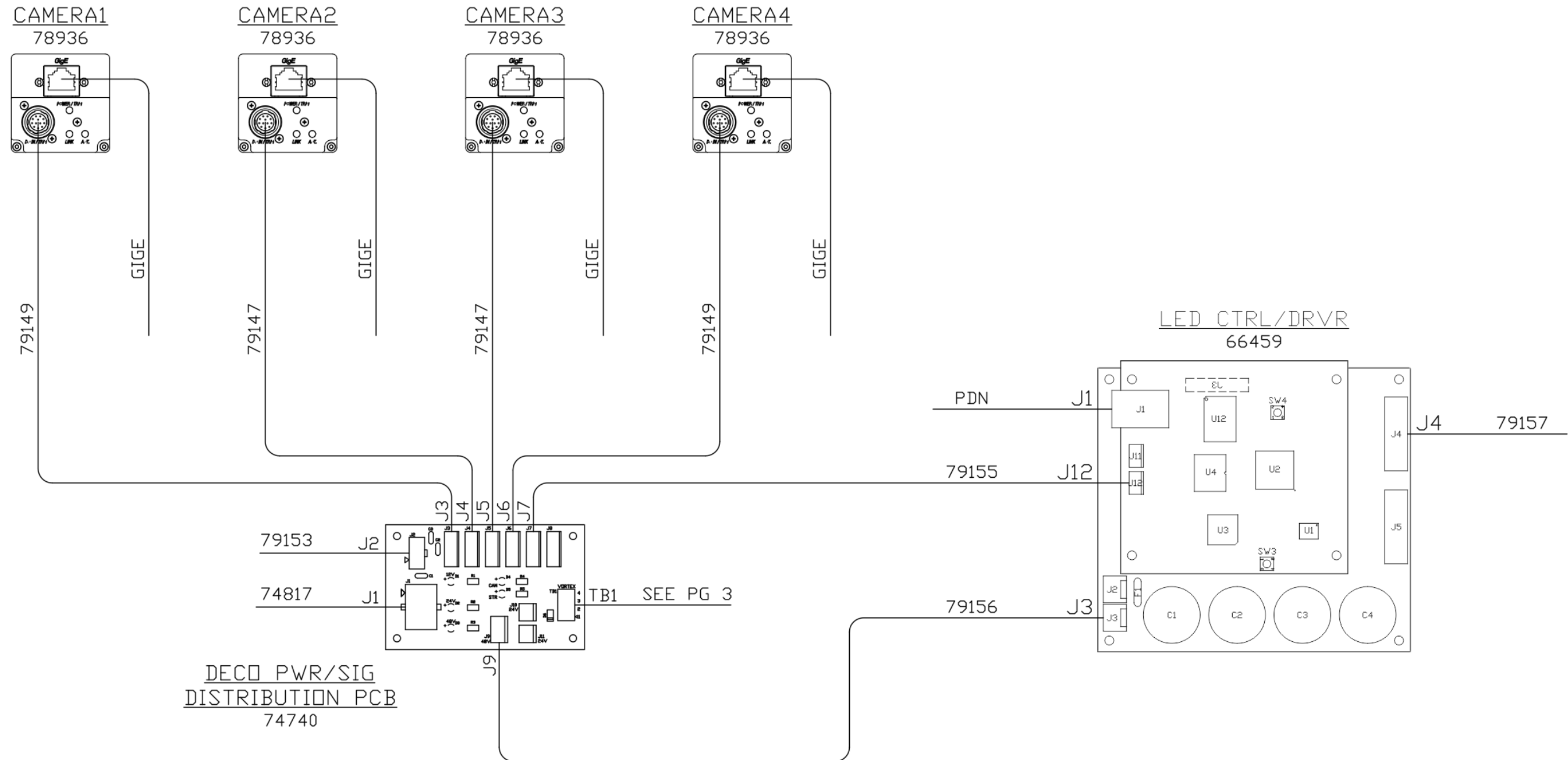
Wiring Diagrams for Inspection Modules

The wiring diagrams on the next several pages are for models DS6 - DS9 and XXL inspection modules. If your system has an earlier inspection module, contact Pressco for the wiring diagrams.

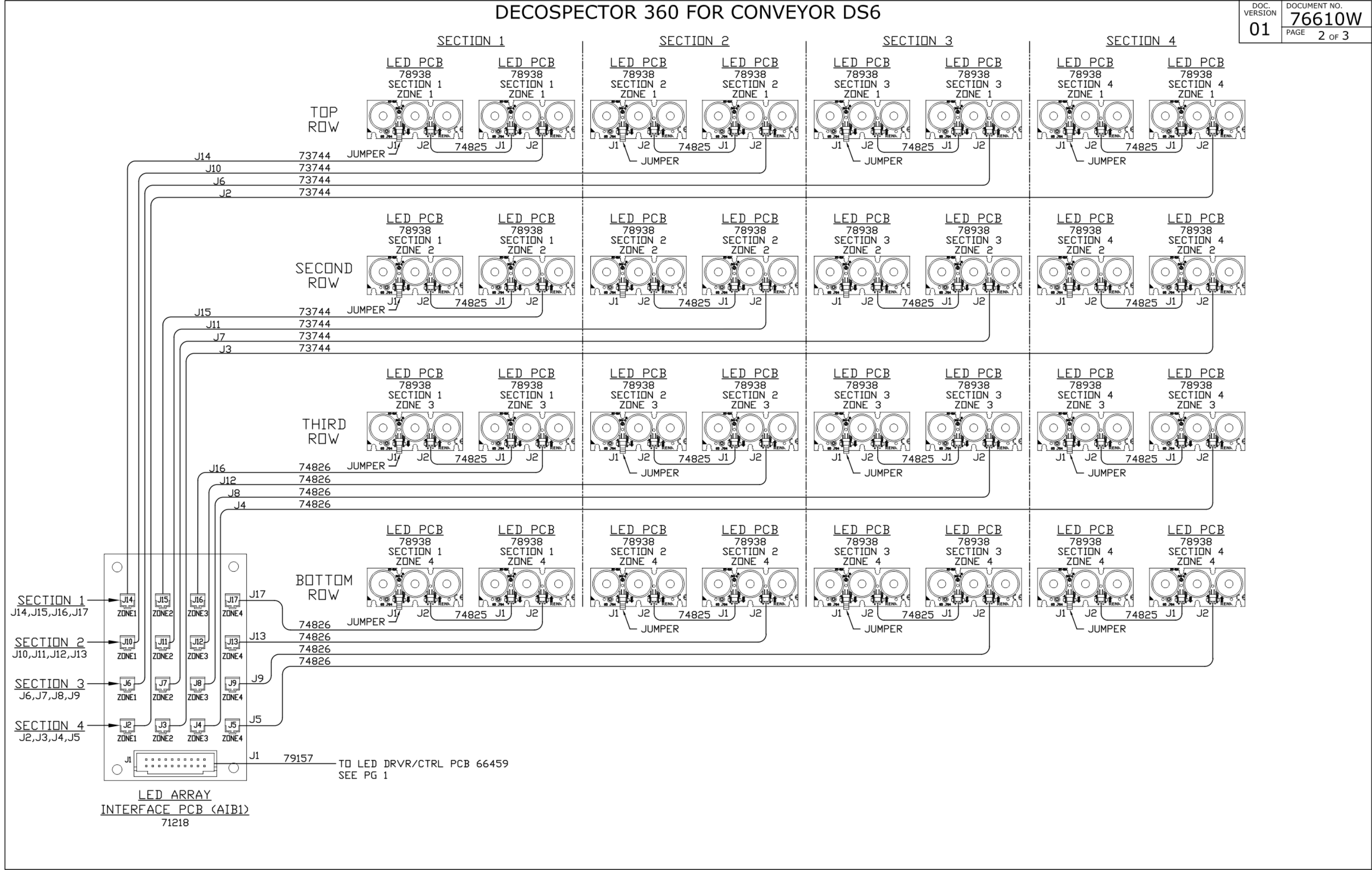
Wiring Diagram DS6 (model 76610) - 1 of 3

DECOSPECTOR 360 FOR CONVEYOR DS6

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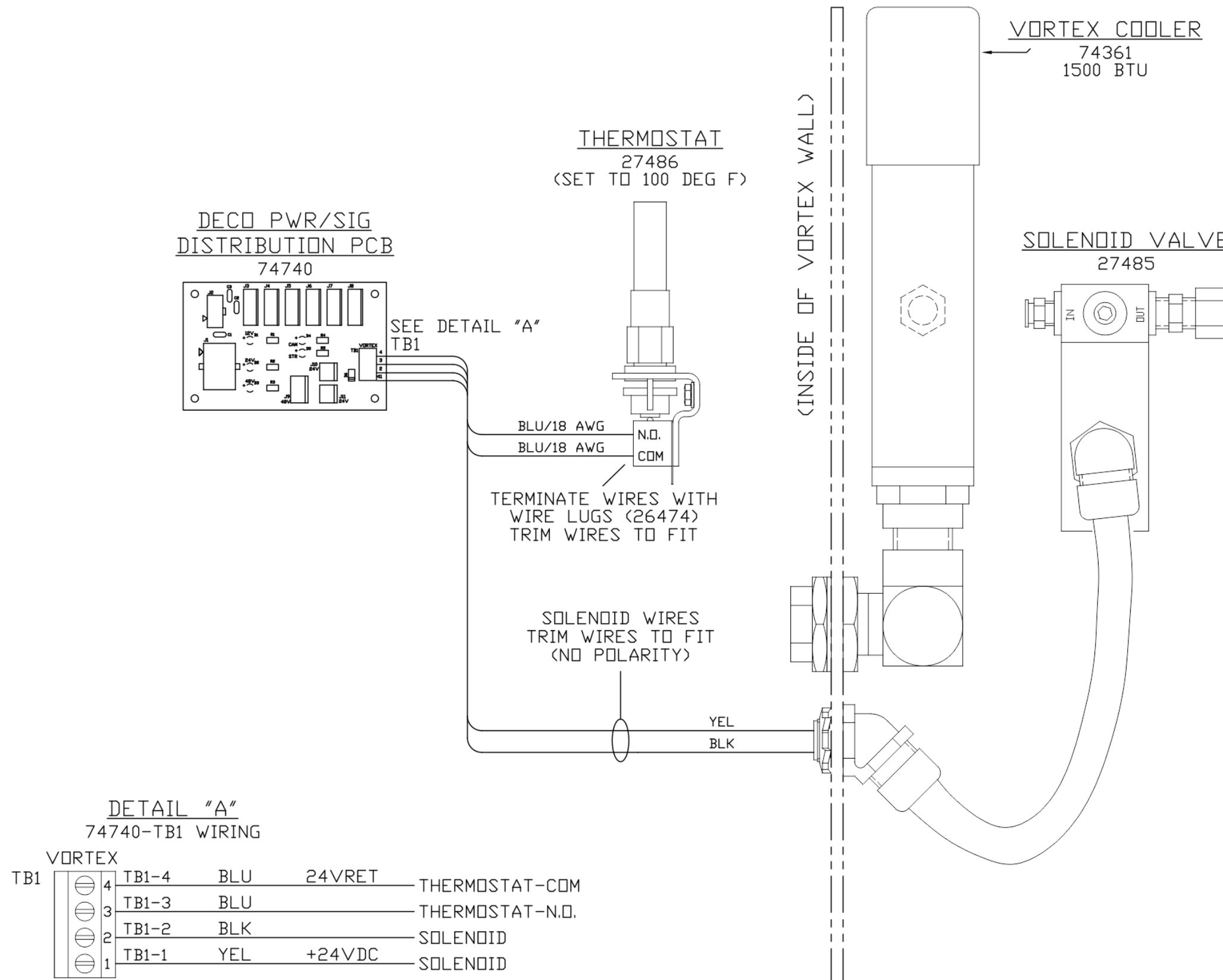
Wiring Diagram DS6 - 2 of 3



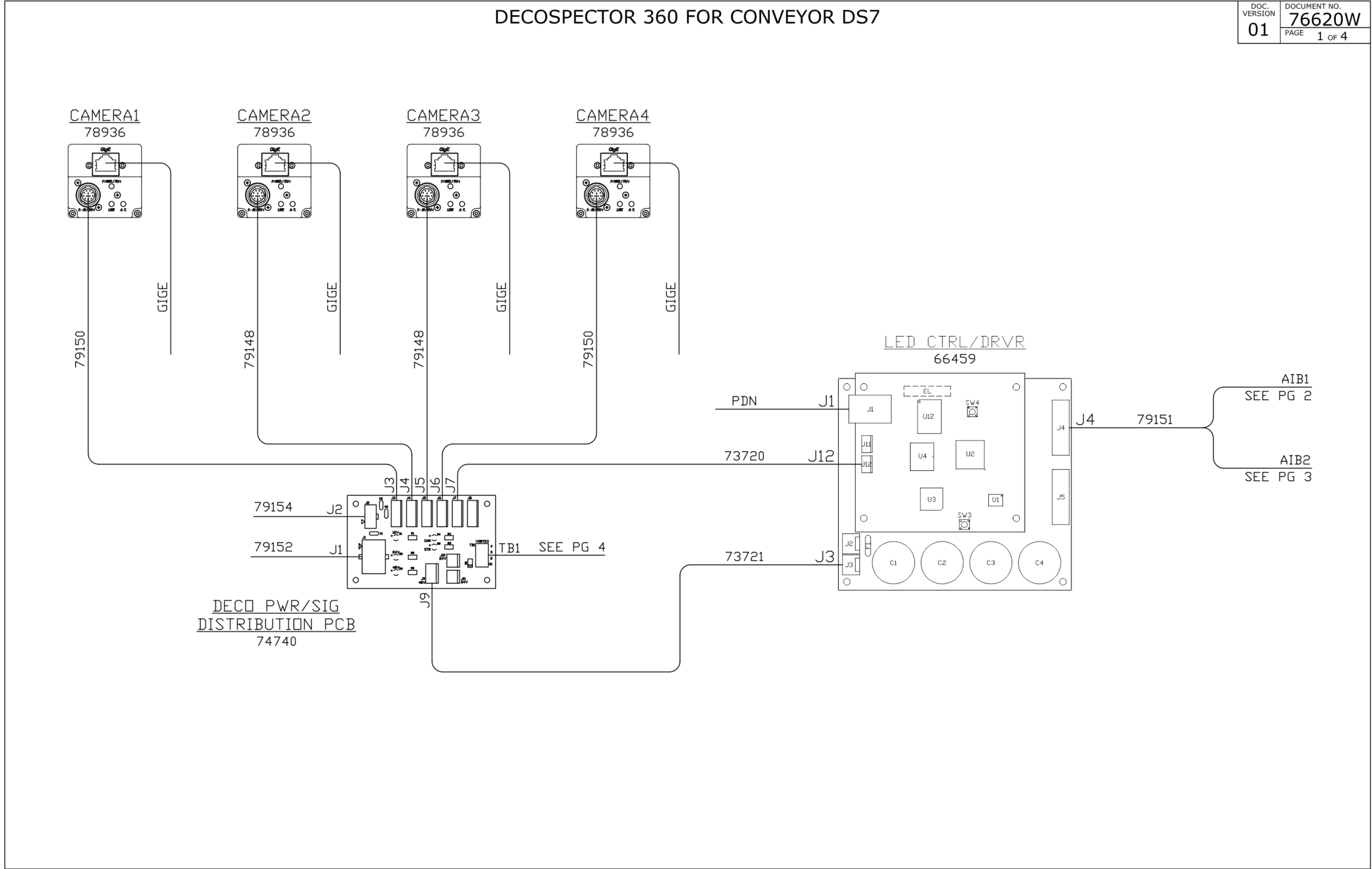
Wiring Diagram DS6 - 3 of 3

DECOSPECTOR 360 FOR CONVEYOR DS6

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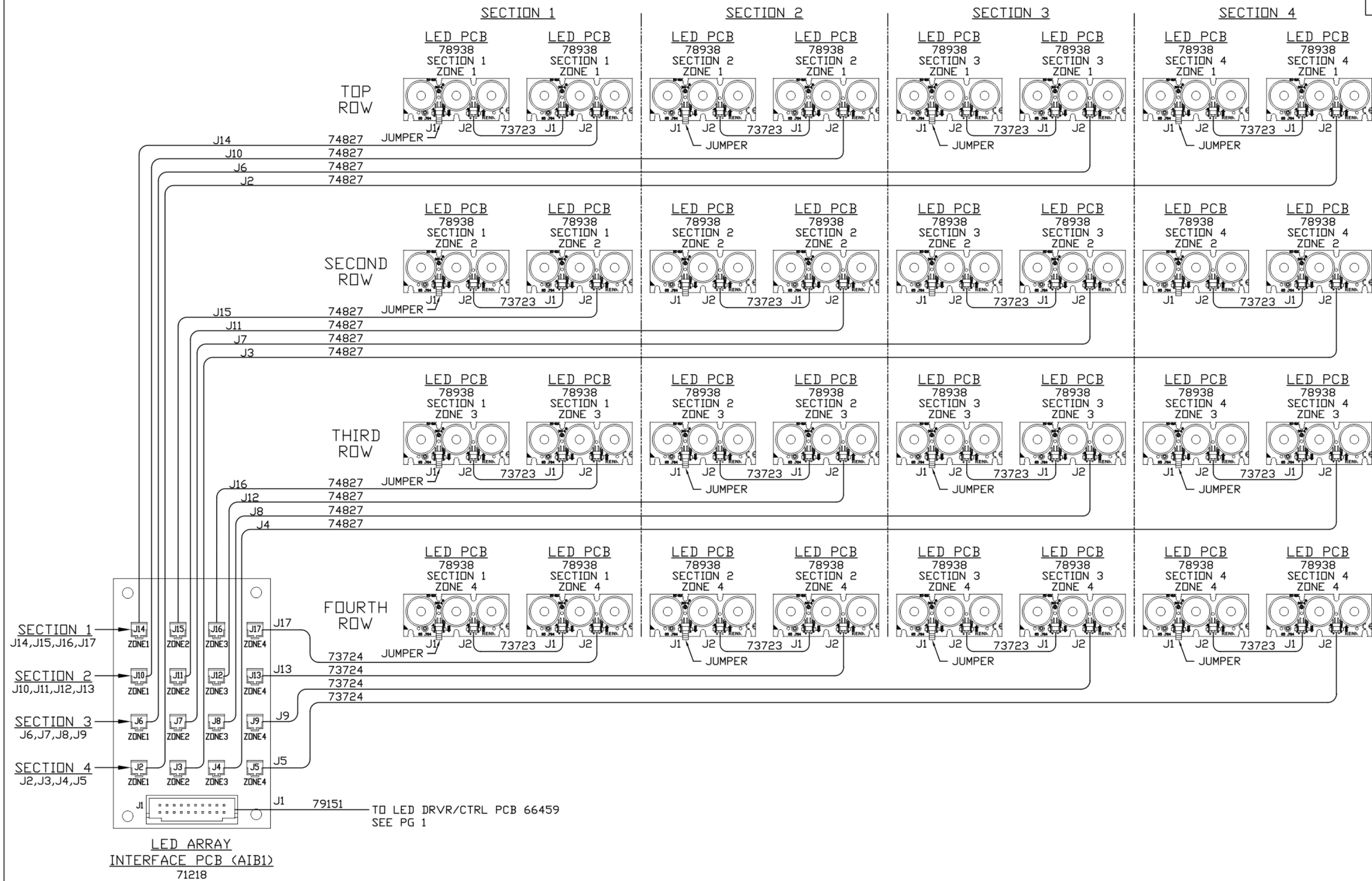
Wiring Diagram DS7 (model 76620) - 1 of 4



Wiring Diagram DS7 - 2 of 4

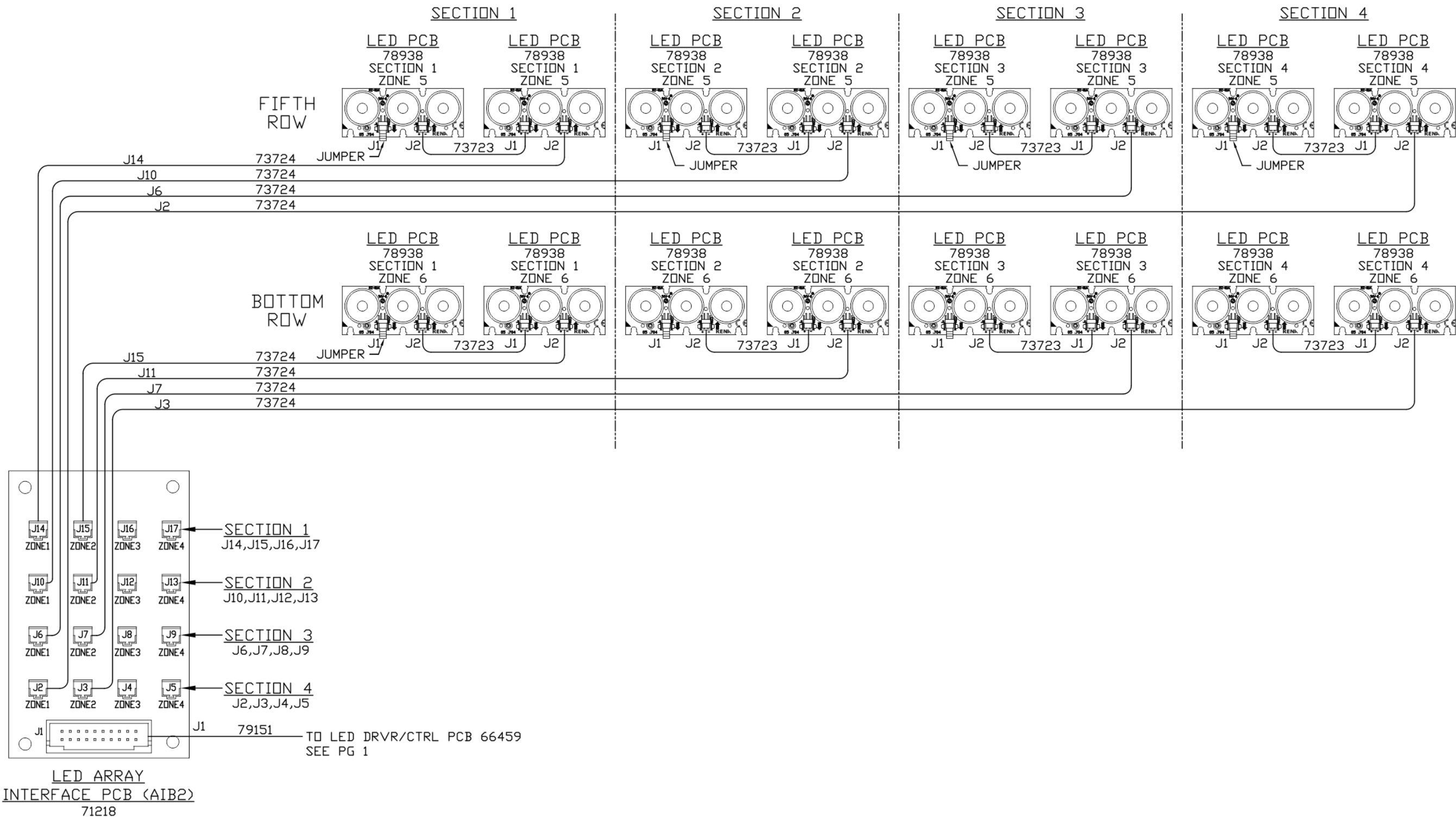
DECOSPECTOR 360 FOR CONVEYOR DS7

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	PAGE 2 OF 4



Wiring Diagram DS7 - 3 of 4

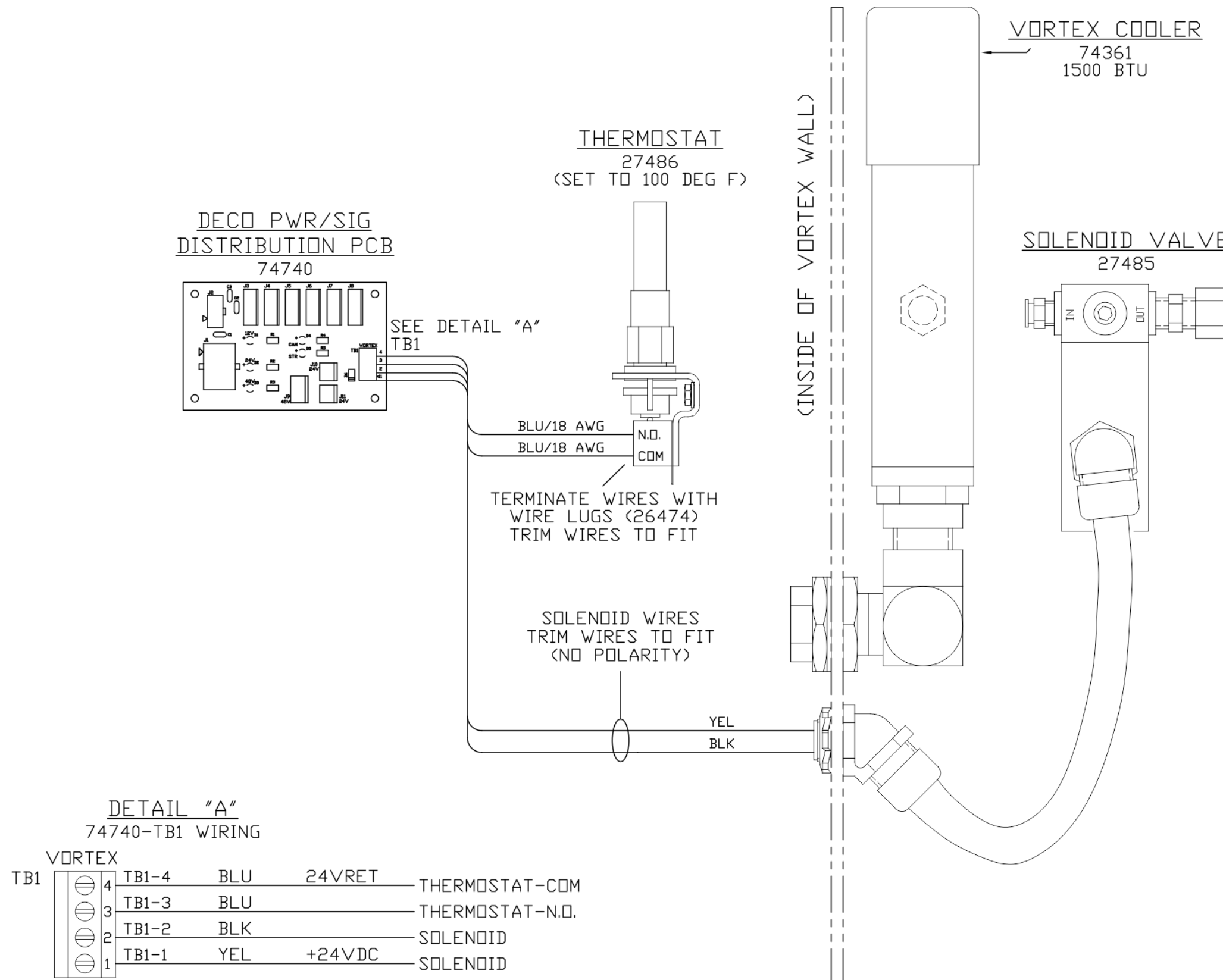
DECOSPECTOR 360 FOR CONVEYOR DS7



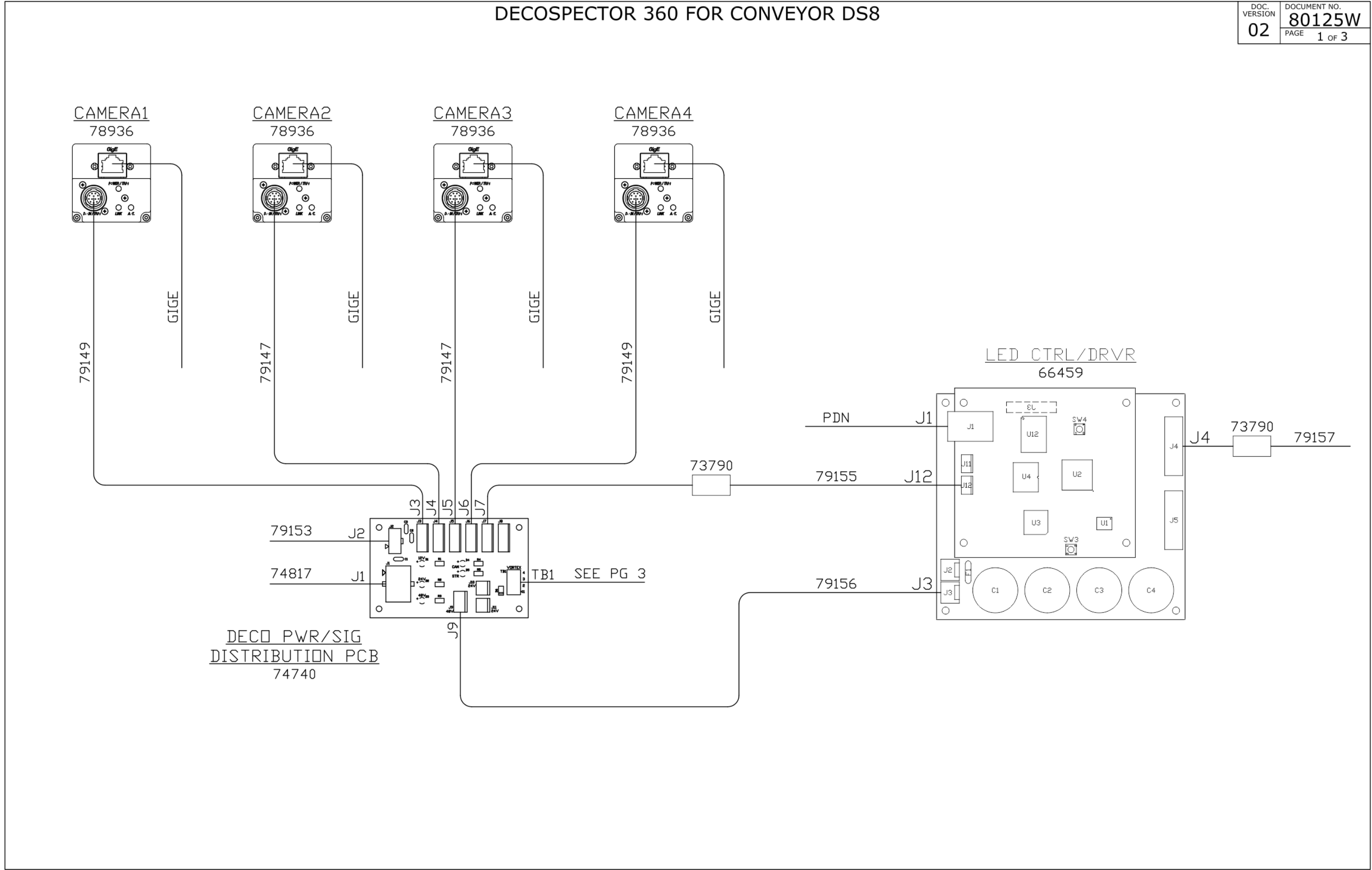
Wiring Diagram DS7 - 4 of 4

DECOSPECTOR 360 FOR CONVEYOR DS7

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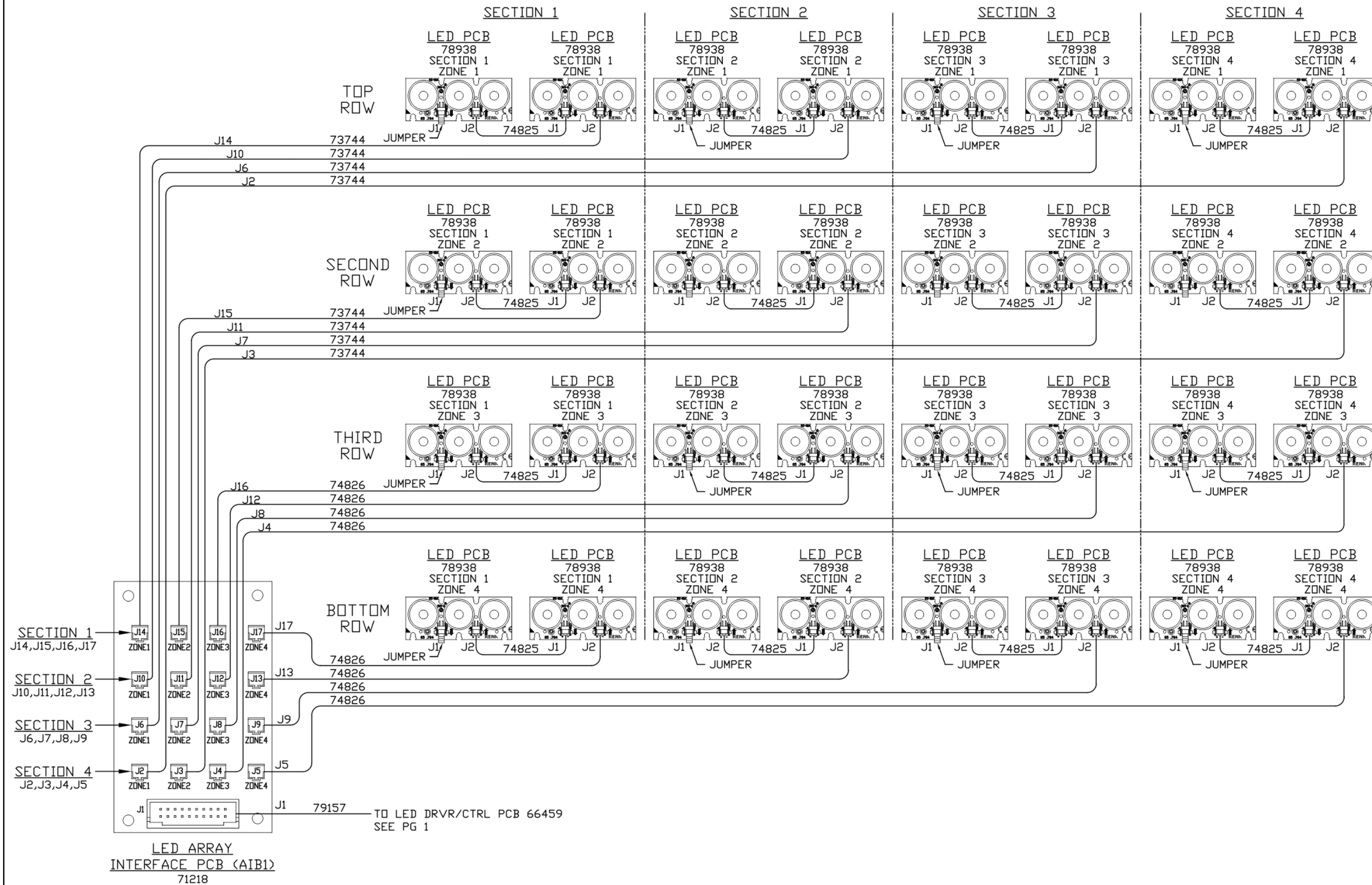
Wiring Diagram DS8 (model 80125) - 1 of 3



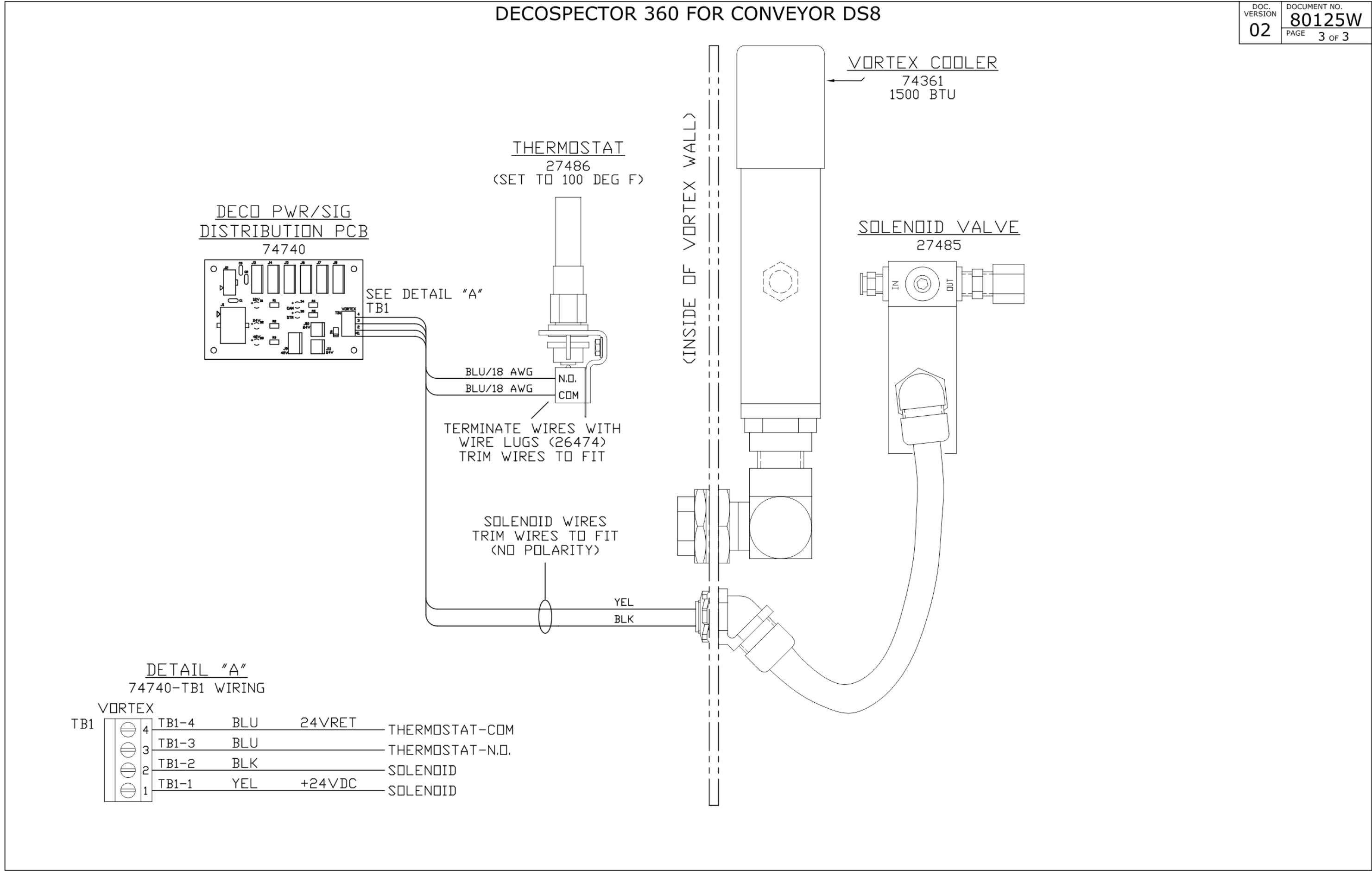
Wiring Diagram DS8 - 2 of 3

DECOSPECTOR 360 FOR CONVEYOR DS8

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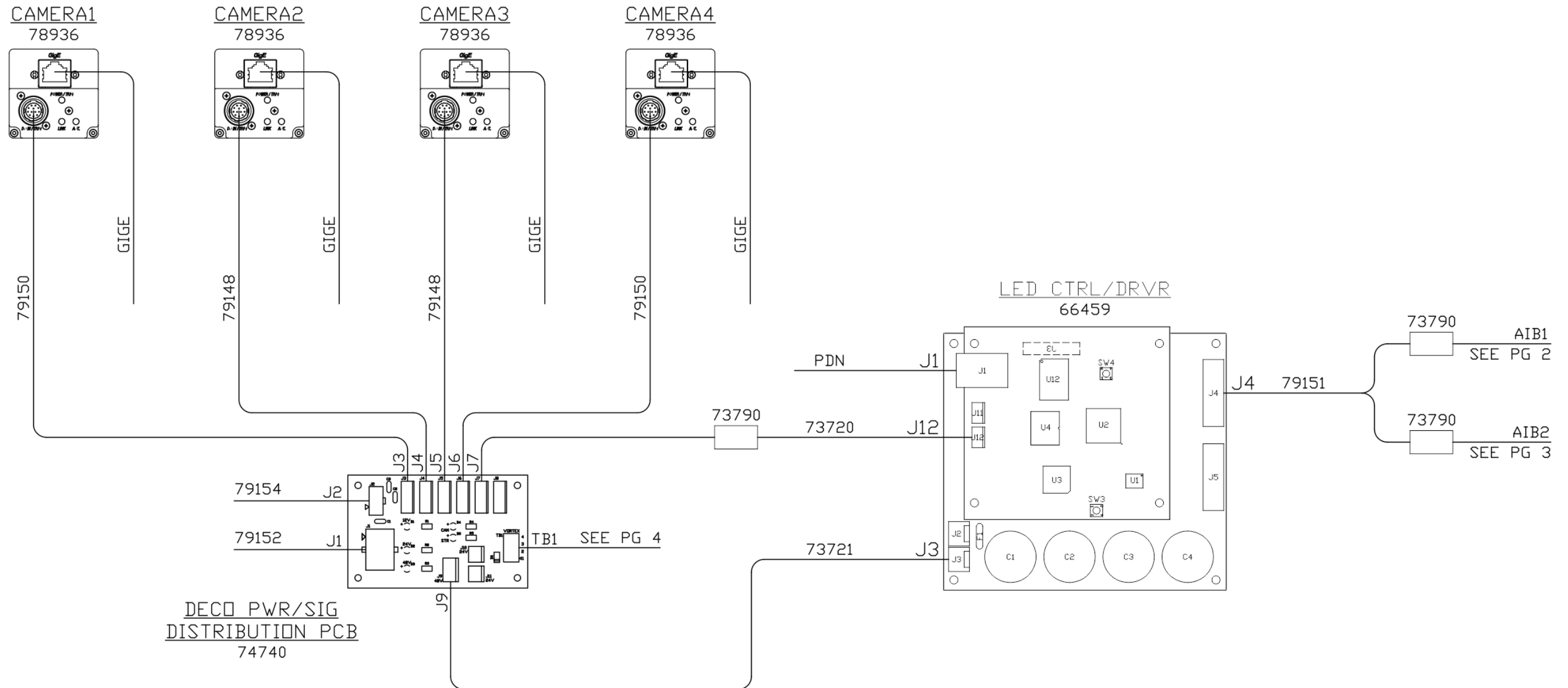
Wiring Diagram DS8 - 3 of 3



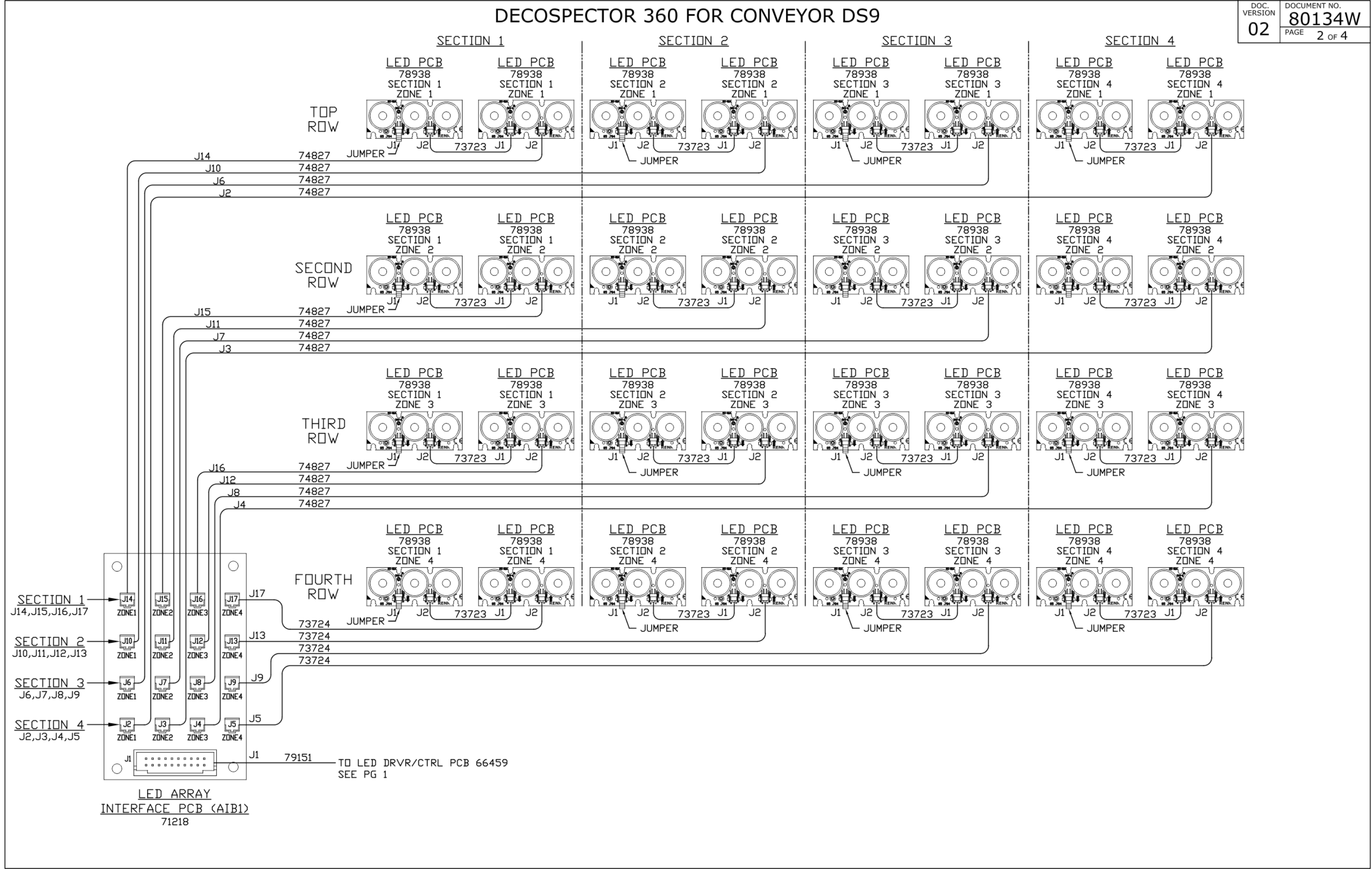
Wiring Diagram DS9 (model 80134) - 1 of 4

DECOSPECTOR 360 FOR CONVEYOR DS9

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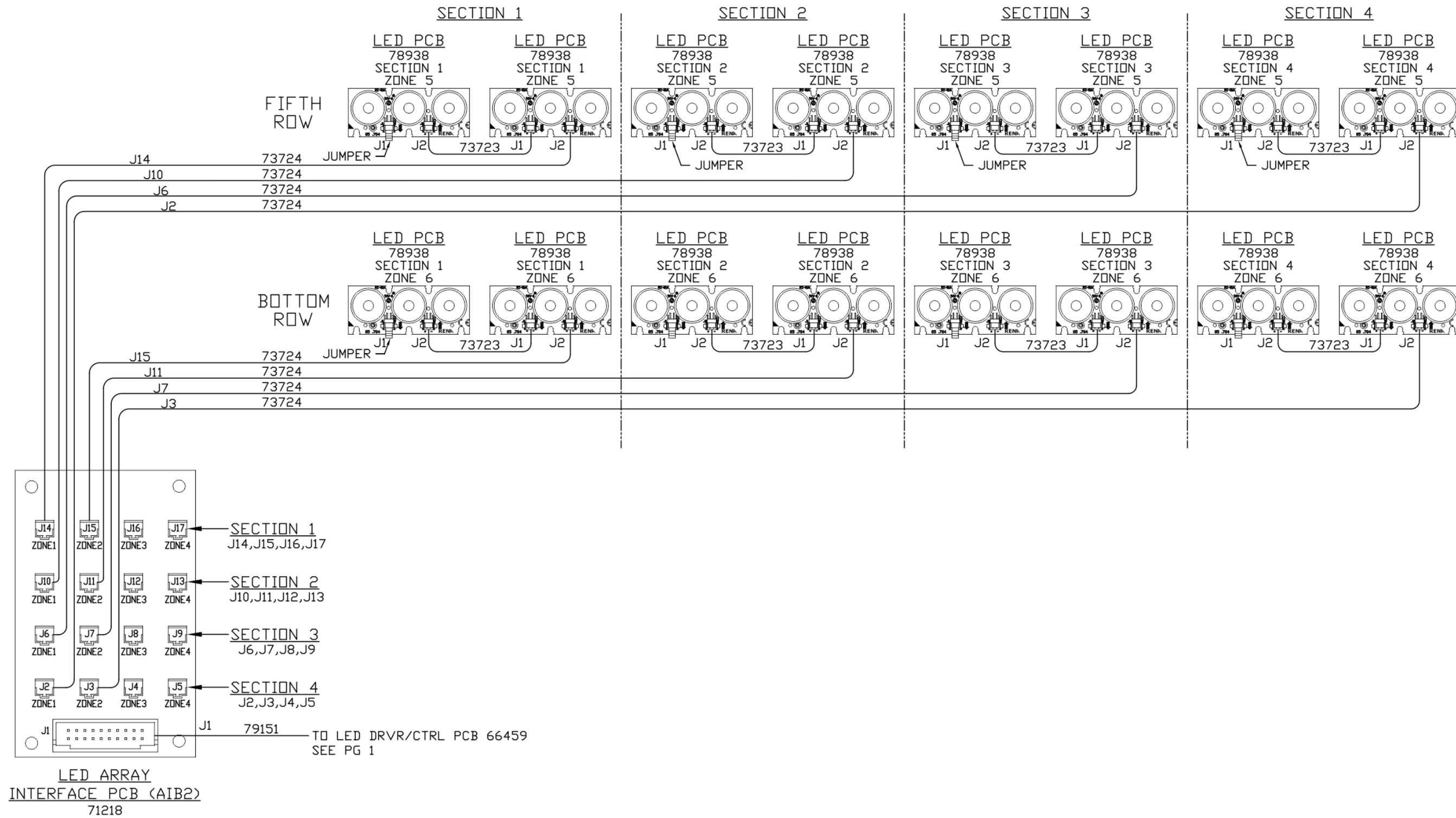
Wiring Diagram DS9 - 2 of 4



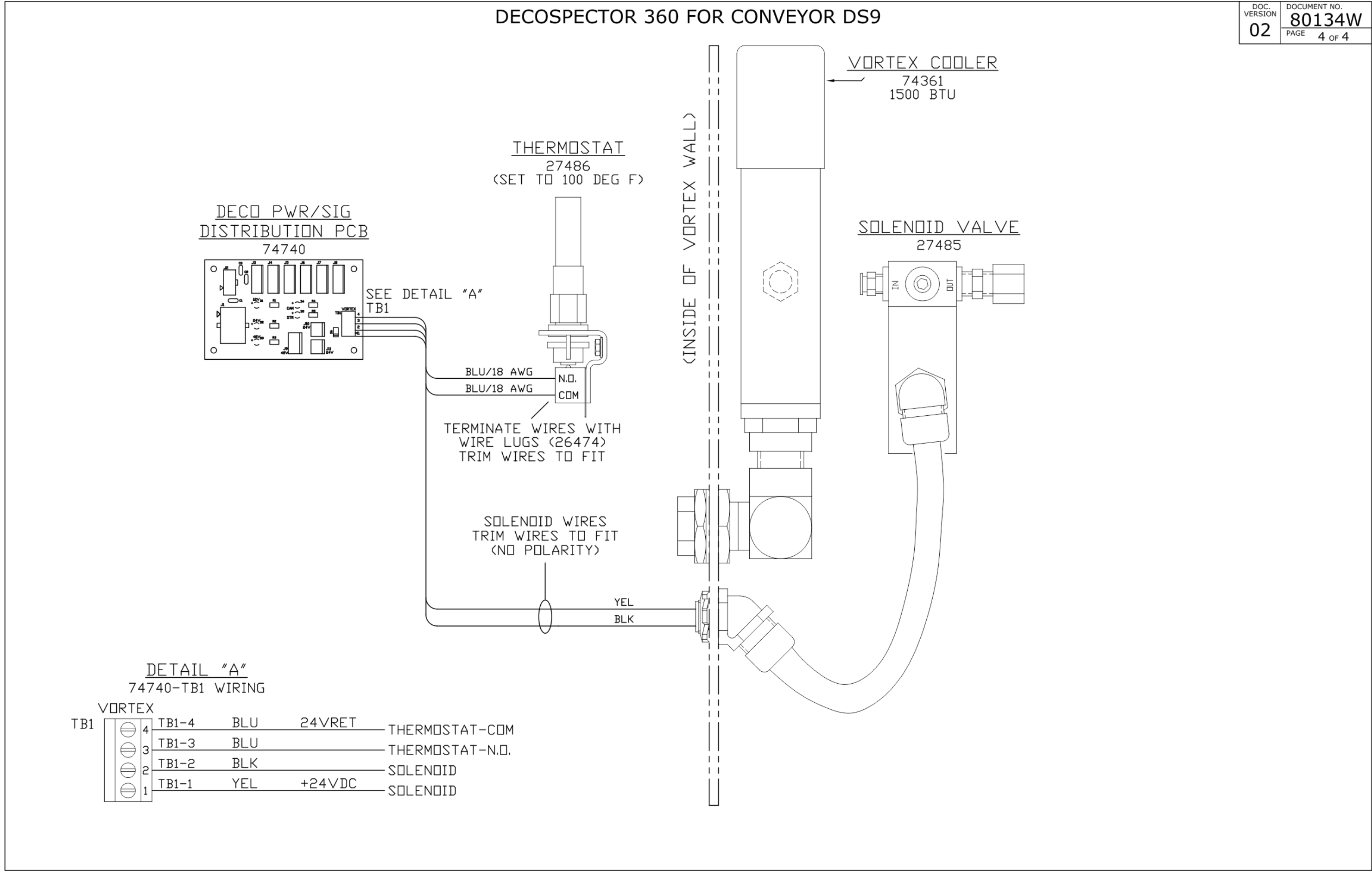
Wiring Diagram DS9 - 3 of 4

DECOSPECTOR 360 FOR CONVEYOR DS9

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02	80134W
	PAGE 3 OF 4



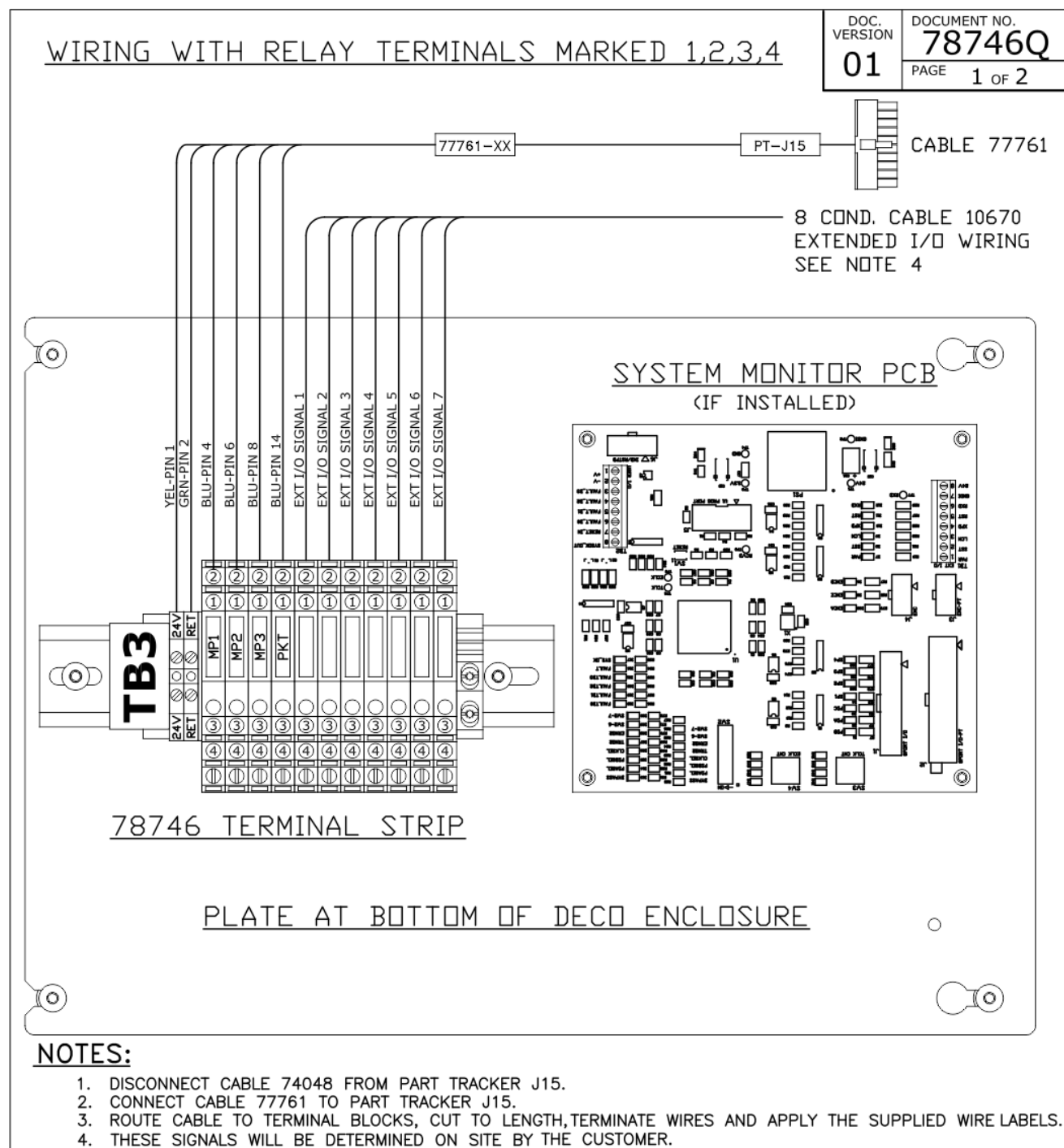
Wiring Diagram DS9 - 4 of 4



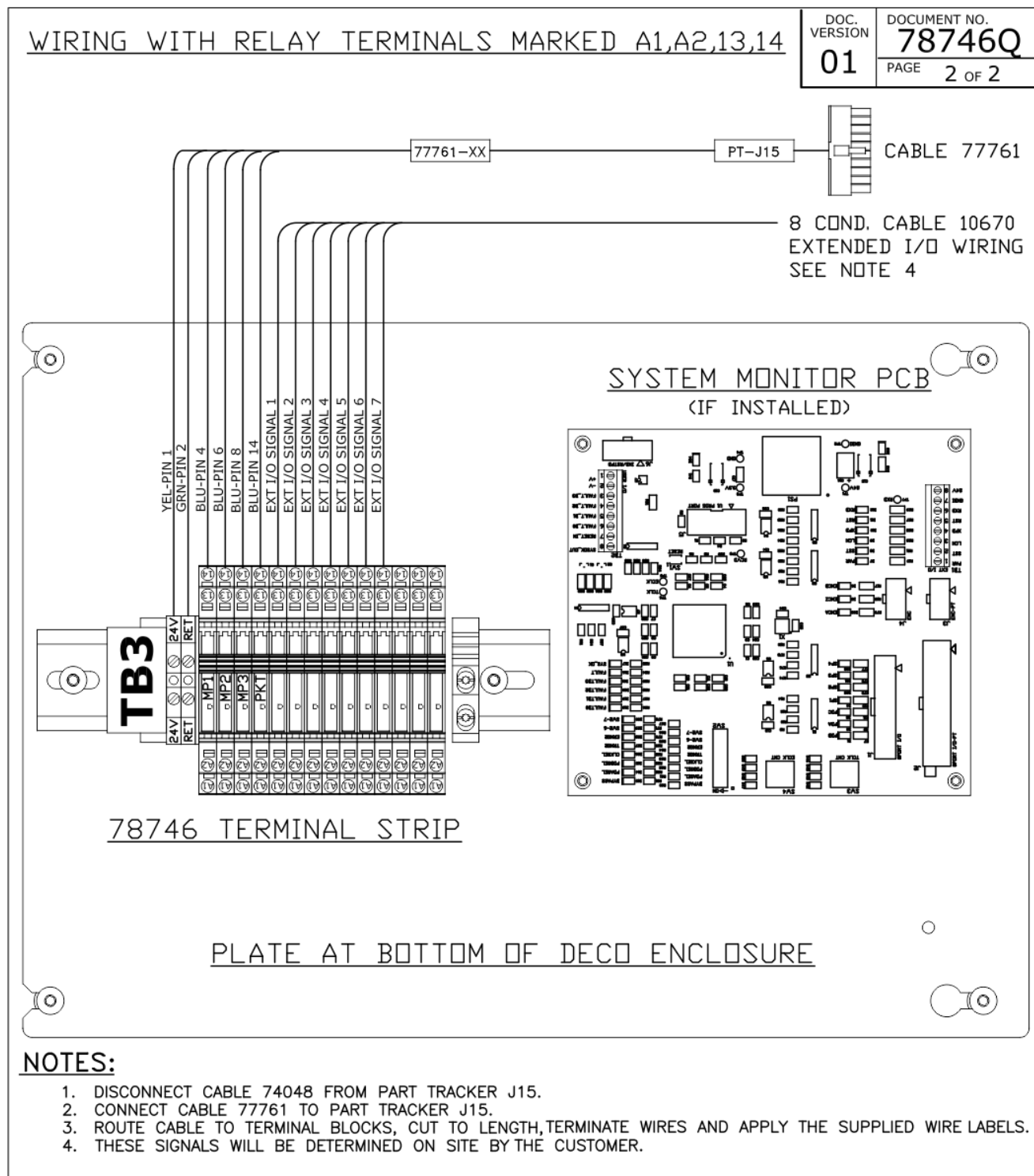
PLC Correlation, Extended I-O Opto Relays 78746 (Optional)

This terminal block (on the bottom of the cabinet) is where you connect the Extended I/O signals to your plant's PLC. Please see the Extended I/O section for wiring information.

Wiring with Relay Terminals marked 1, 2, 3, 4

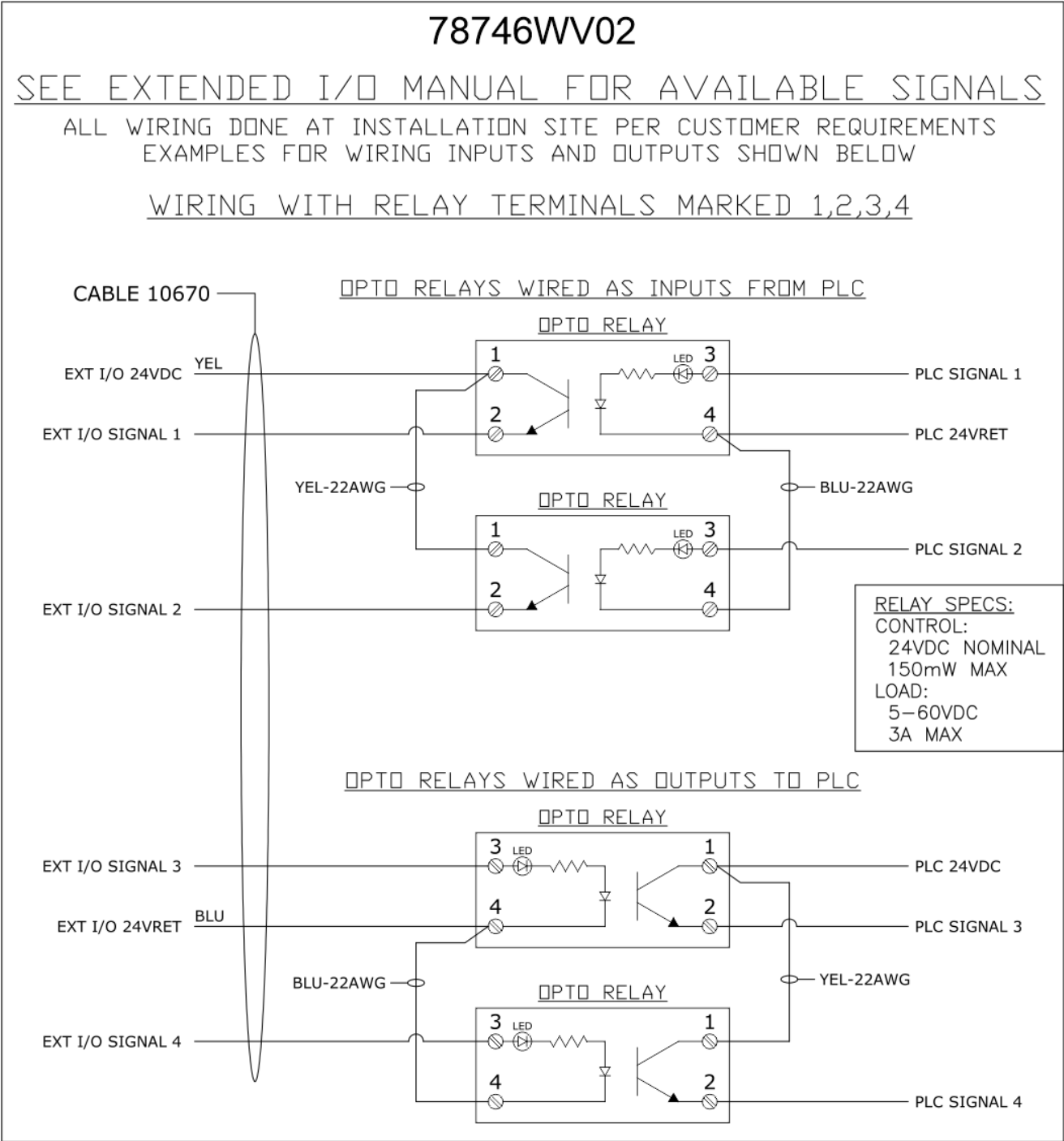


Wiring with Relay Terminals marked A1, A2, 13, 14



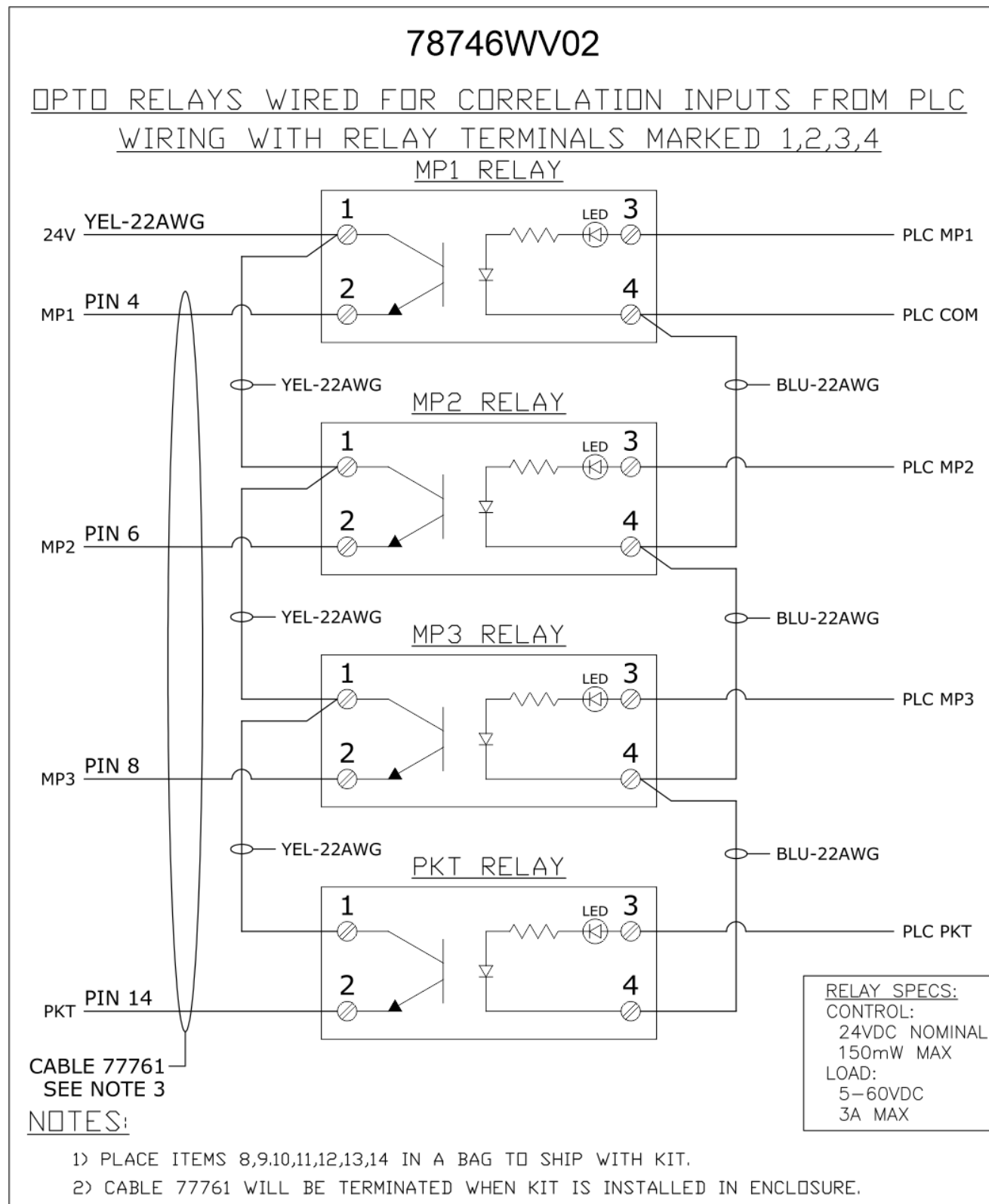
Wiring Diagram 78746 - 1 of 5

78746W Rev. 02. To see the available signals, see the section: "Deco Extended IO" on page 84.



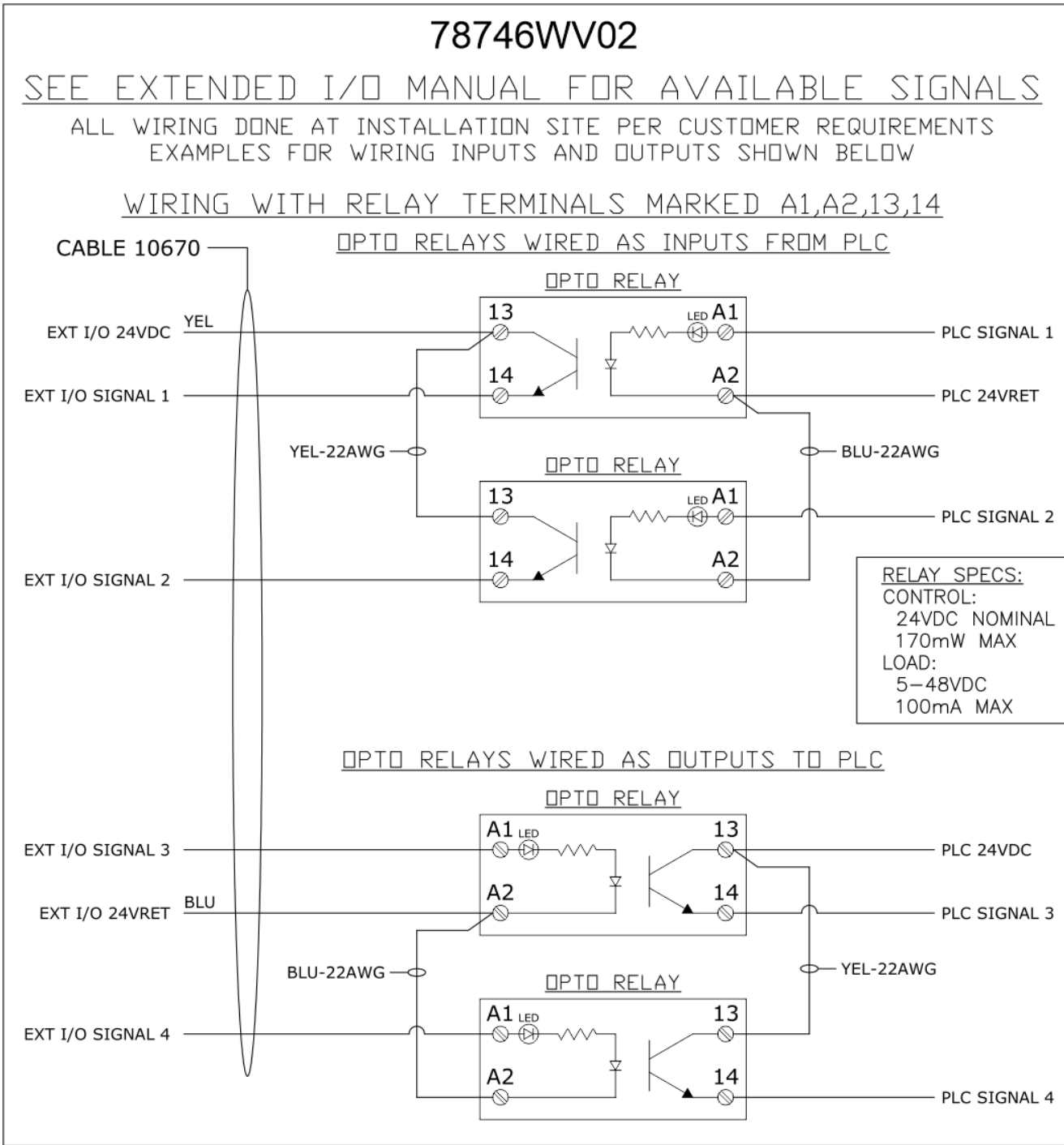
Wiring Diagram 78746 - 2 of 5

78746W Rev. 02. Opto relays wired for correlation inputs from PLC.



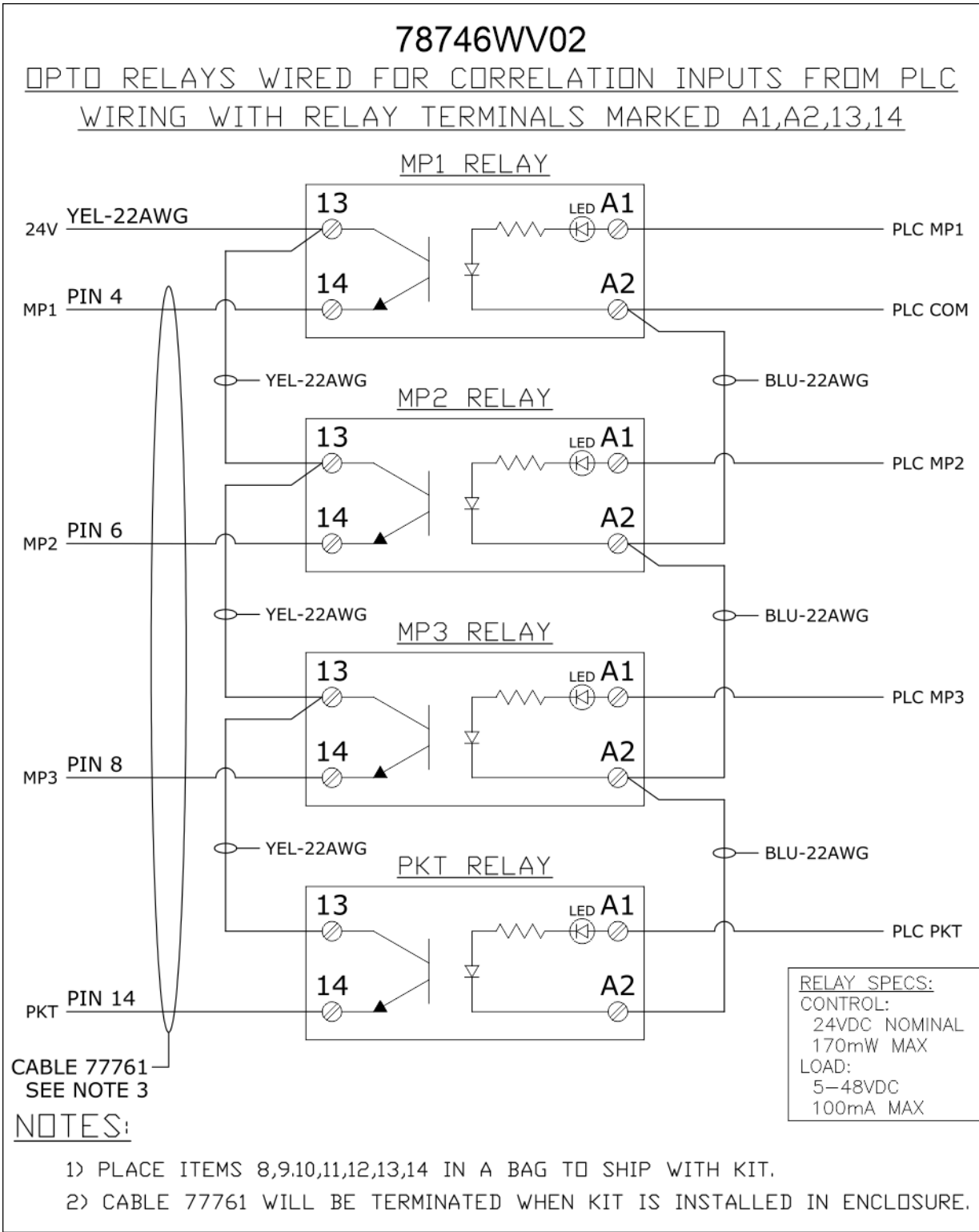
Wiring Diagram 78746 - 3 of 5

78746W Rev. 02. Examples for Opto Relays wiring per customer requirements.



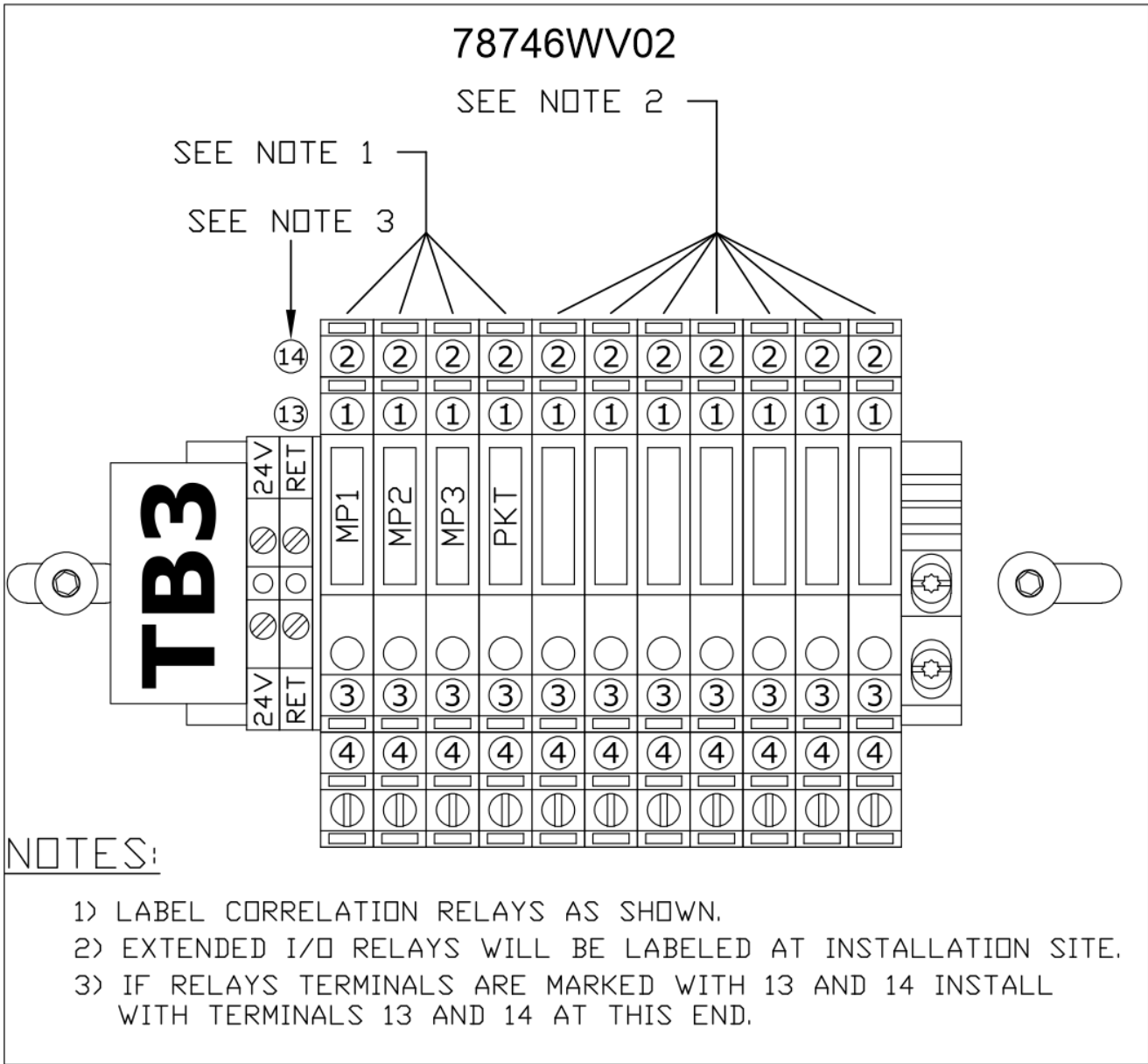
Wiring Diagram 78746 - 4 of 5

78746W Rev. 02. Opto Relays wired for correlation inputs from PLC.



Wiring Diagram 78746 - 5 of 5

78746W Rev. 02. TB3.

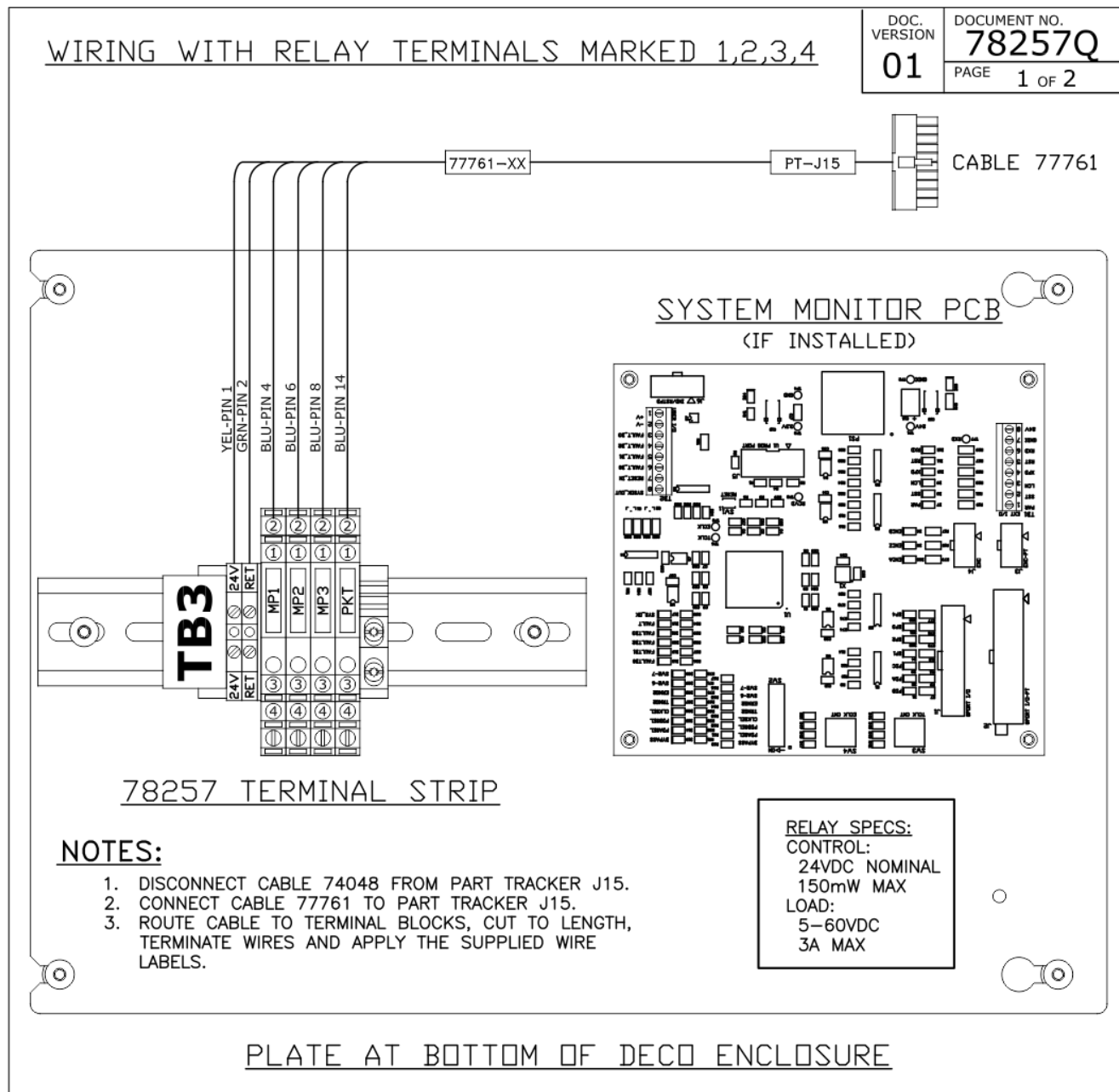


PLC Correlation Opto Relays 78257 (Optional)

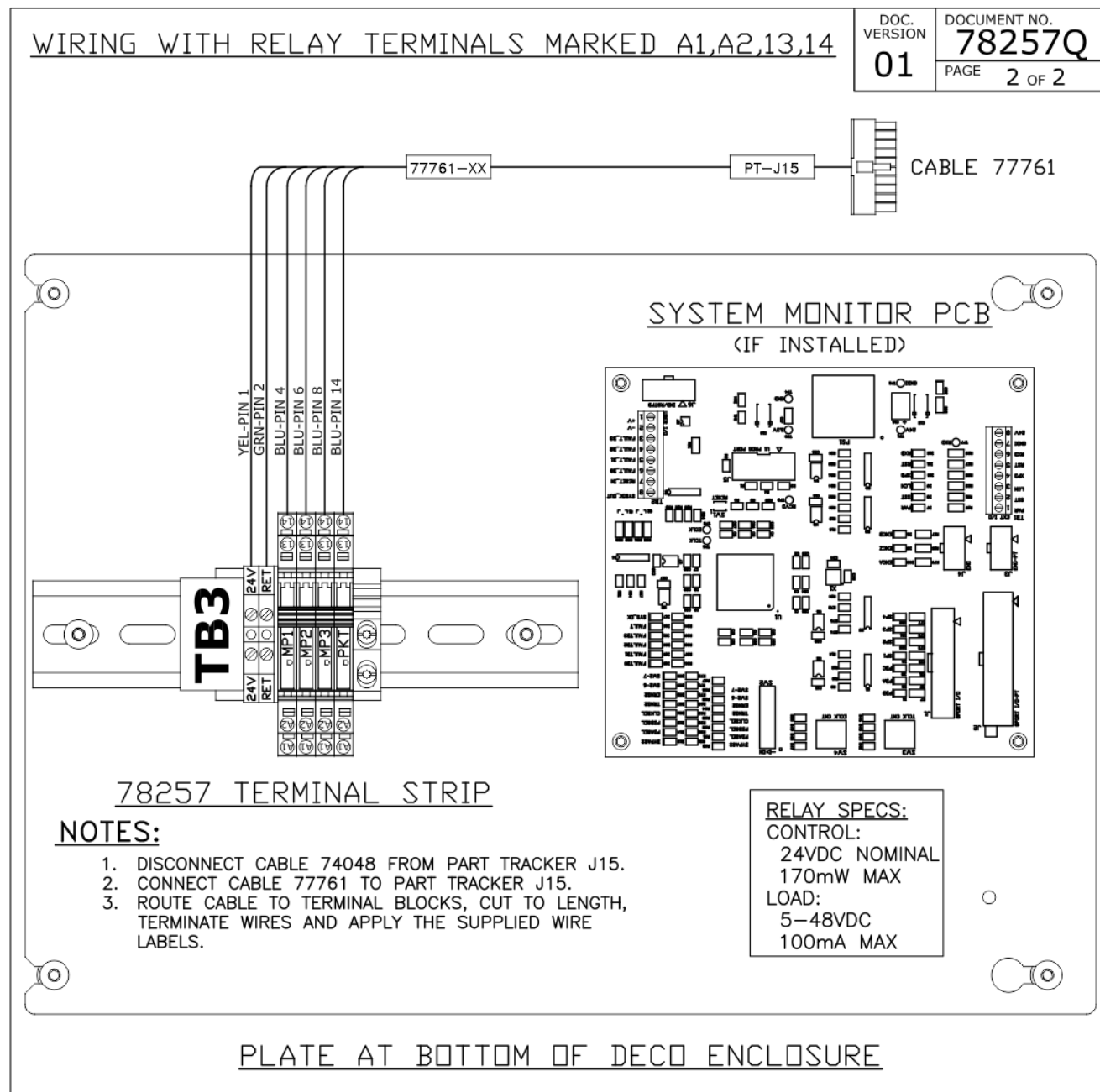
This terminal block (on the bottom of the cabinet) is where you connect the Extended I/O signals to your plant's PLC. Please see the Extended I/O section for wiring information.

The difference between this kit (78257) and kit 78746 is that 78746 provides additional relays for the PLC to interface with the Extended I/O signals.

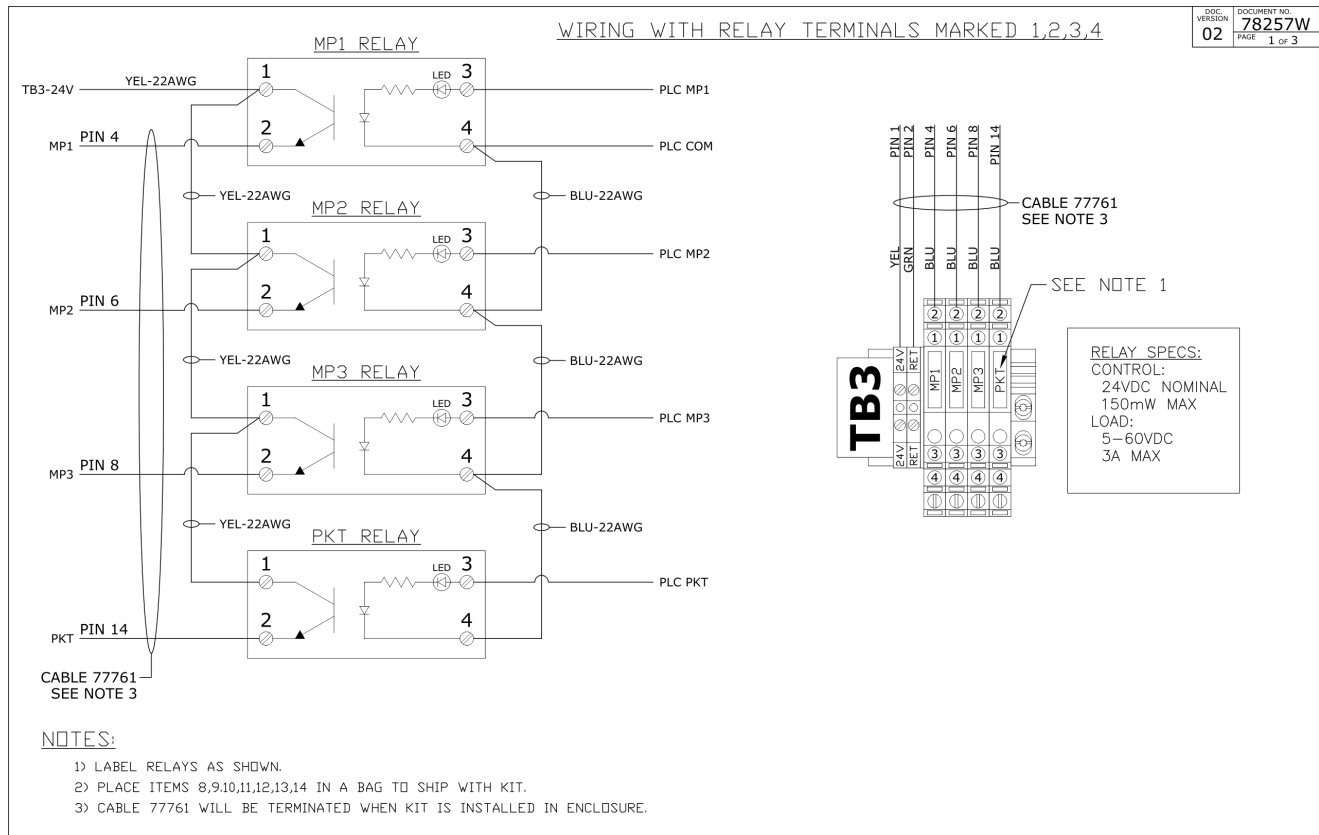
Wiring with Relay Terminals marked 1, 2, 3, 4



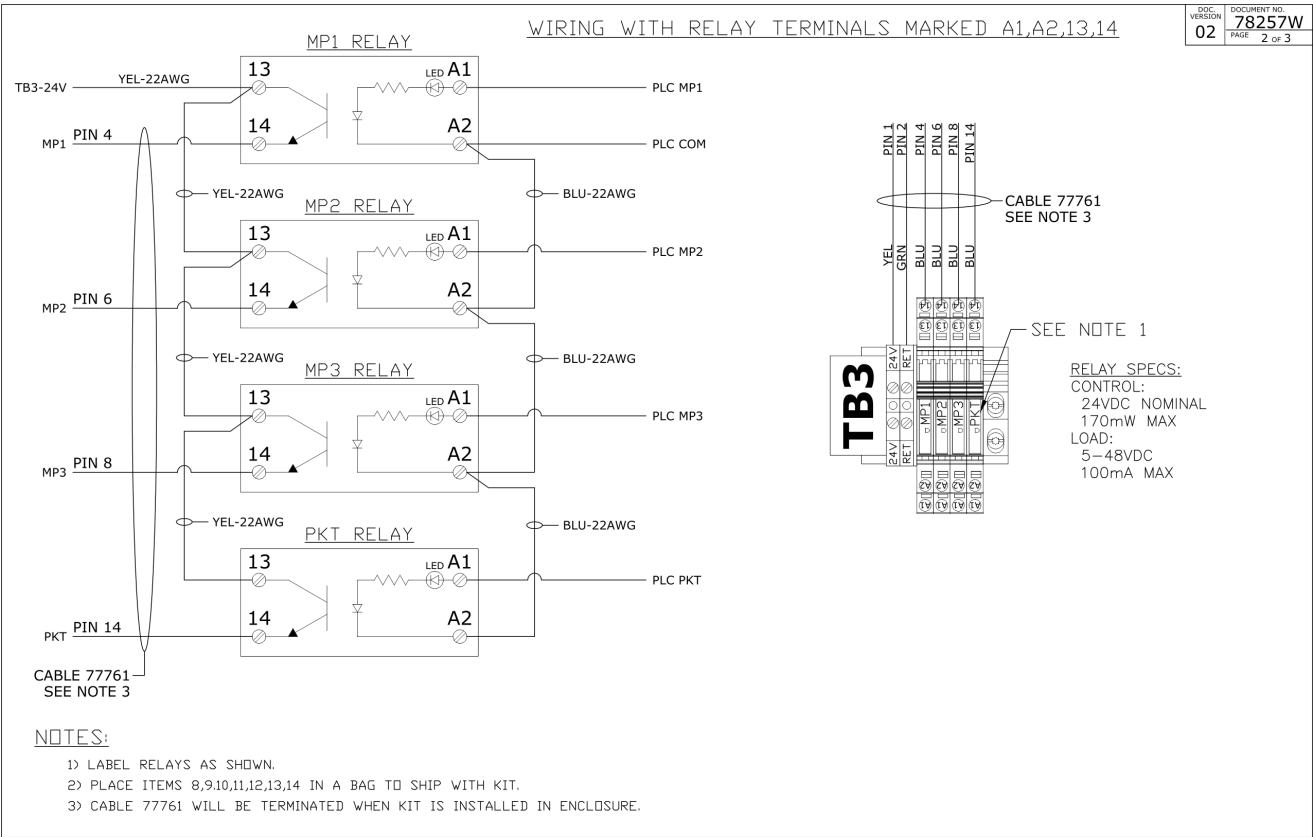
Wiring with Relay Terminals marked A1, A2, 13, 14



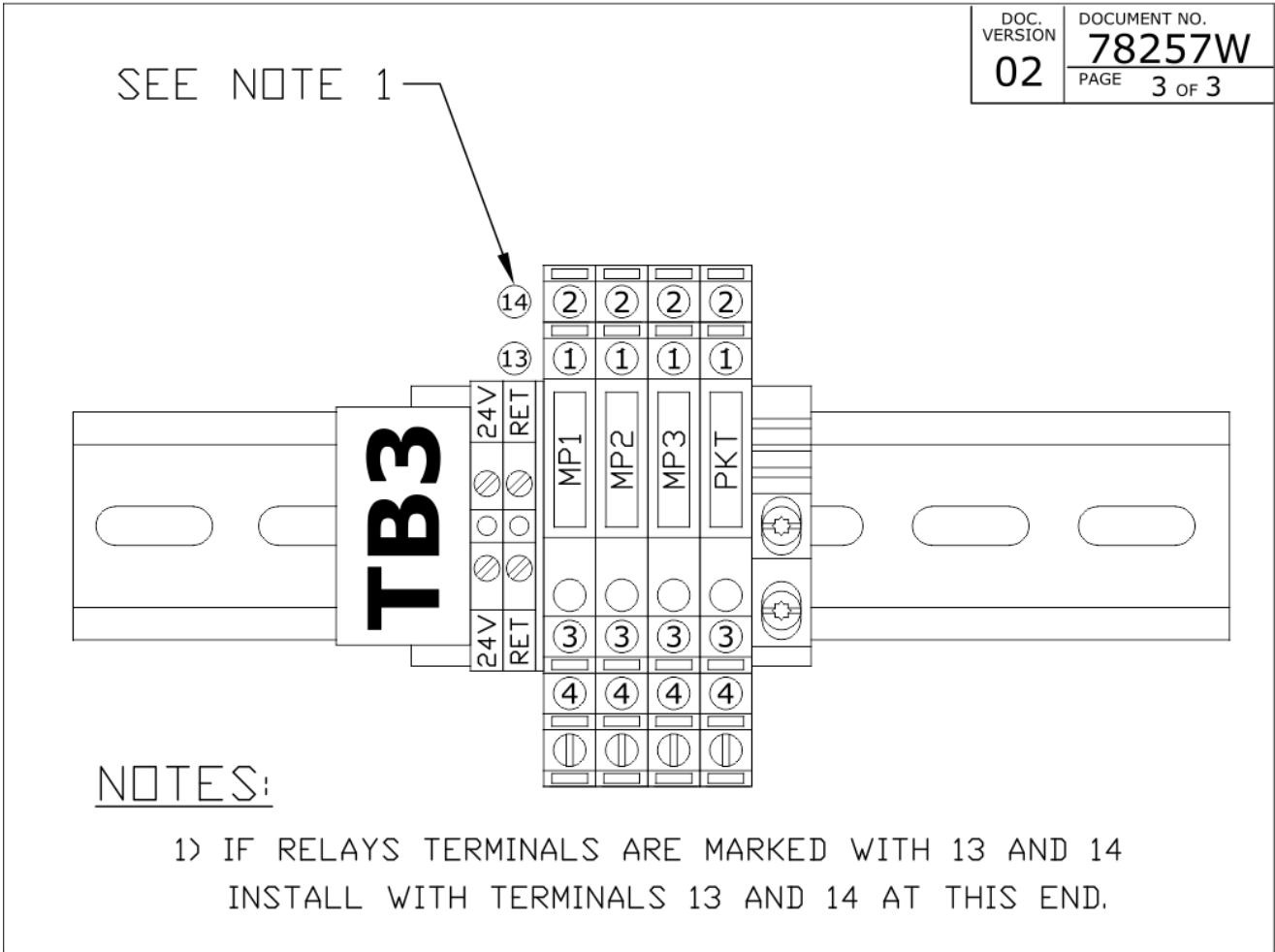
Wiring Diagram 78257 - 1 of 3 (relay terminals marked 1,2,3,4)



Wiring Diagram 78257 - 2 of 3 (relay terminals marked A1,A2,13,14)

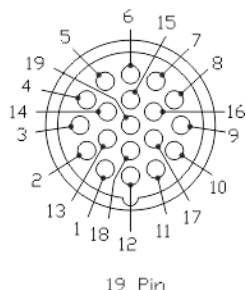
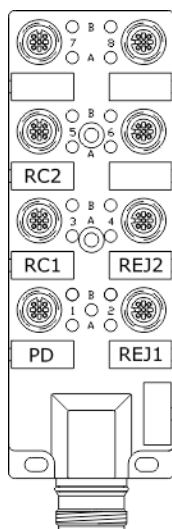


Wiring Diagram 78257 - 3 of 3 (TB3)



8 Port I-O Box

The I/O box is usually mounted near the tunnel. The cable from this box is plugged into the bottom of the control enclosure, connector A. Control Enclosure External Connections



P/D - part detector

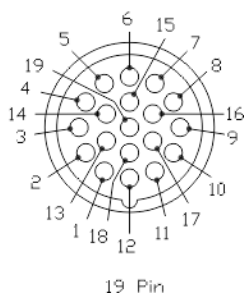
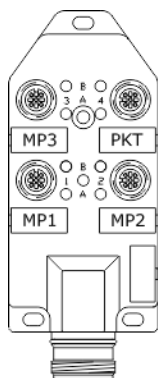
REJ1, REJ2 - rejector 1 and 2*

RC1, RC2 - reject confirm 1 and 2* (optional)

**DecoSpector 360™ does not use rejector 2 nor reject confirm 2*

4 Port I-O Box

The I/O box is usually mounted near the correlation sensors. The cable from this box is plugged into the bottom of the control enclosure, connector B.



PKT - pocket detector

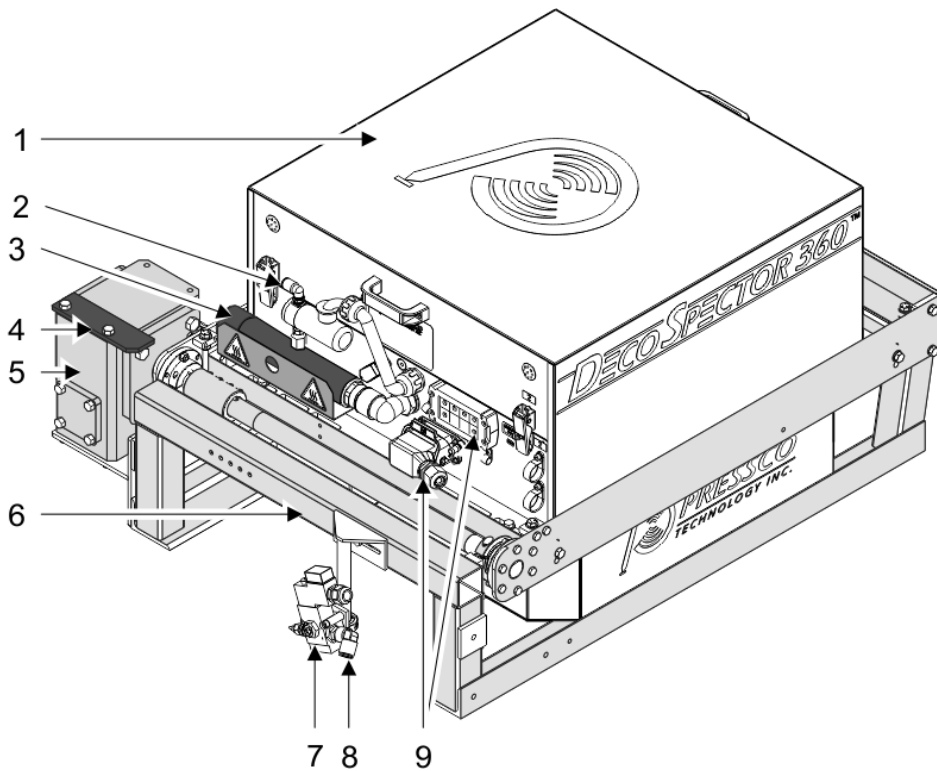
MP1 - MP3 - machine parts. These are configured through Correlation Settings

MP1 = Mandrel

MP2 - Print Blanket

MP3 = Pin Chain

Chapter 8 Inspection Module



WARNING - Keep hands away from the Vortex cooler [3] to avoid risk of burns.

- 1) DecoSpector 360™ inspection module
- 2) air connection for Vortex cooler
- 3) Vortex cooler
- 4) mechanical stop for the service frame
- 5) gear box for moving the service frame
- 6) service frame
- 7) air connection for the Vortex cooler
- 8) air connection for the rejector
- 9) connection for cables to the control enclosure

Chapter 8

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Chapter 9 Troubleshooting

This section contains some possible errors that might occur with the DecoSpector system, and actions you can take.

Symptom	Possible Cause	Action
Cannot log in Pop-up window says "Deco has stopped responding" No camera images, or cameras not being found by system	Software error or crash	Restart the system: Power On and Off at the Control Enclosure If the software is not responding, or restarting the system does not work, then: Full Power Cycle for DecoSpector
Reject rate too high, or false rejects	Learned parts or template have changed	Learn another set of parts: Relearn (or Learn Job)
	"Oil or Dirt on the Inspection Tunnel Windows" below	"Clean the Tunnel Windows" on page 96
	The incorrect can size or can style is selected	Select the proper Can Size and Can Style for your part in the job setup New Part (First Time Inspecting a Part)
Parts not being detected properly	Part location is not set properly. This often occurs when the part is not properly centered in the field of view, or there is more than one part appearing in it.	Check Part Locate Settings Check Lighting Settings

Oil or Dirt on the Inspection Tunnel Windows

You may be able to see oil or dirt on the inspection tunnel windows through the software. Look at the live images on the home screen. When you look at the image, the spot may show up in a different place horizontally for each part, but remains in the same place vertically between parts, as shown below.

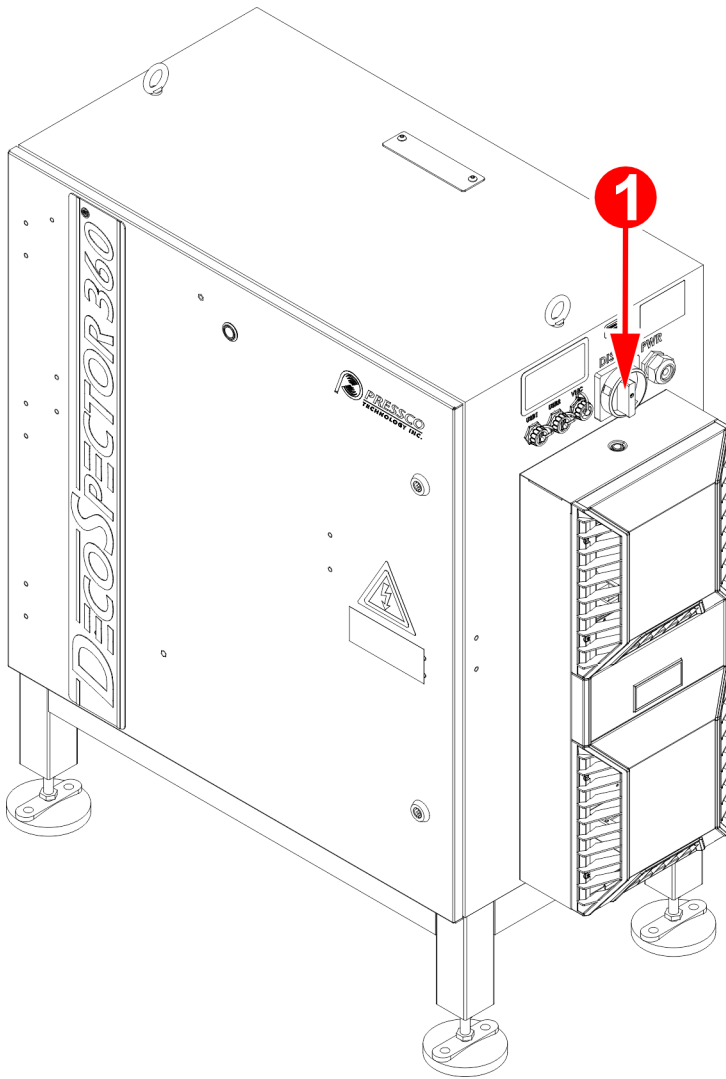
"Clean the Tunnel Windows" on page 96



Full Power Cycle for DecoSpector

Note: This topic applies to the DecoSpector cabinet with part number 85131 and 85132.

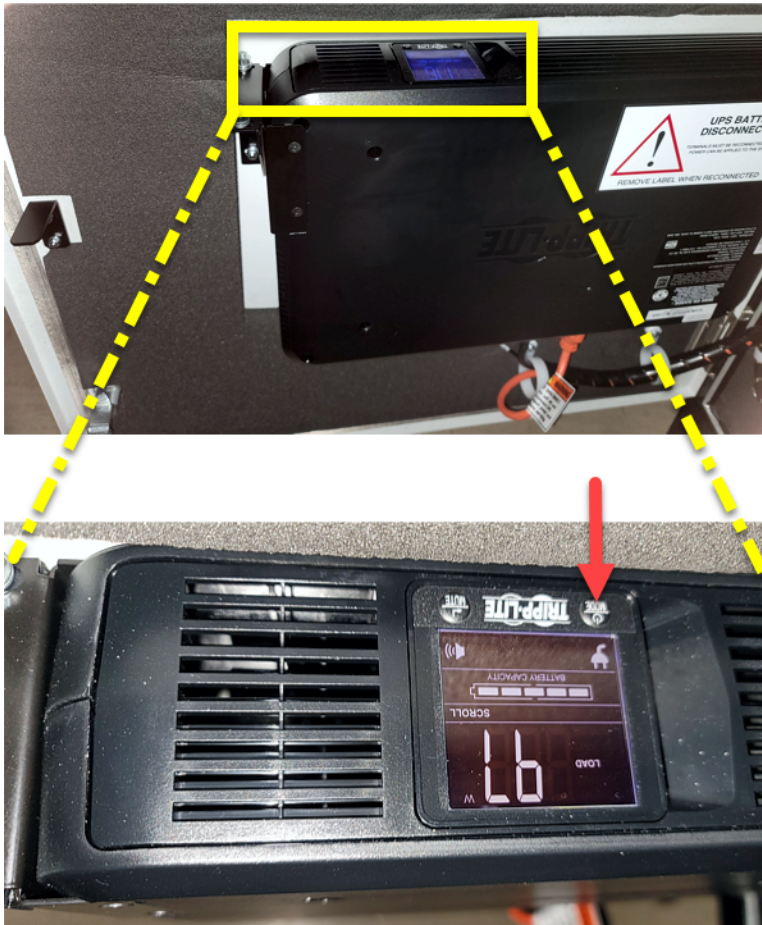
This procedure should only be performed when a standard power cycle does not work (example: the software is not responding).



⚠ WARNING - Keep clear of reject devices. Projectiles may cause injury.

⚠ WARNING - When the system is powered down, there is still voltage present at the UPS. Only **AUTHORIZED PERSONNEL** should attempt to open the system. We recommend that only **AUTHORIZED PERSONNEL** have access to the keys.

1. If the software or Windows is locked up, then use [CTRL+ALT+DEL from the mechanical keyboard] and use Task Manager to stop "Deco.exe." Shut down the PC through Windows.
2. Turn off the main power switch [1].
3. Open the cabinet door, using the keys supplied by Pressco.
4. The UPS is on the back of the cabinet door. Shut off the UPS by pressing the on/off button for 3 seconds. Wait 1 minute before turning it back on, to allow components to discharge.



5. Turn on the UPS by pressing the on/off button for 3 seconds.
6. Close the cabinet door.
7. Turn on the main power switch on the cabinet. The software will start within a few minutes.

Chapter 10 Deco Extended IO

This optional module provides additional input and output ports for communicating with the DecoSpector 360™ system. The board is connected to the Part Tracker board via a ribbon cable inside the control enclosure.

In this section:

Extended I-O Signals	84
Defect Group I-O	86
Extended I-O Board	88
Extended I-O Circuits	88

Extended I-O Signals

The Extended I/O signals are listed in the table below. The Extended I/O board is located inside the control enclosure.

Note: For connection information, see ["PLC Correlation, Extended I-O Opto Relays 78746 \(Optional\)" on page 65](#)

Some signals are standard outputs from the system, such as "System State" through "Part at Reject" in the table below.

The Inspection Alarms are user-programmable. See External I-O for Alarms

Note: some input and output pins are not currently used

Output signals are selectable to be either open collector or open emitter. However, that selection applies to ALL output signals.

The input and power LEDs are visual indicators. The output LEDs illuminate if the current reaches 40mA or higher, which is approaching maximum current. The maximum current output is 50mA. See also information about ["Extended I-O Circuits" on page 88](#).

Signal	I/O	Connector	Indicator LED	Comments/ Reference
System State	O	J4-16	D11	Indicates whether the lane is online or offline. Online = active. Offline = inactive.
Part Present (Part Detect)	O	J4-18	D9	Pulses for 12 ms when the part present sensor detects a part
Part Good	O	J4-17	D7	Pulses for 12 ms for each part declared good by the inspection
Part Bad	O	J4-19	D5	Pulses for 12 ms for each

Signal	I/O	Connector	Indicator LED	Comments/ Reference
				part declared bad by the inspection
Part at Reject	O	J4-20	D13	Pulses for 12 ms for each part that crosses the reject point (online mode only)
Group 0 - Material Handling	O	J2-3	D17	Pulses for 12 ms when an inspection fails Group Outputs are only valid with software versions 6.0.67 and higher See "Defect Group I-O" on the next page for a description of these signals. See "Extended I-O Board" on page 88 for the board layout and location of these outputs.
Group 1 - Fixture	O	J2-4	D25	
Group 2 - Wrong Color	O	J2-5	D33	
Group 3 - Scuff	O	J2-6	D41	
Group 4 - Shadow	O	J2-7	D15	
Group 5 - Color Void	O	J2-8	D23	
Group 6 - Too Much Color	O	J2-9	D31	
Group 7 - Color Zone Defects	O	J2-10	D39	
Group 8 - Miscellaneous	O	J2-15	D21	
Group 9 - Camera 1	O	J2-16	D29	
Group 10 - Camera 2	O	J2-17	D37	
Group 11 - Camera 3	O	J2-18	D45	
Group 12 - Camera 4	O	J2-19	D19	
Group 13 - Adjacent Can	O	J2-20	D27	
Group 14 - not used	O	J2-21	D35	
Group 15 - not used	O	J2-22	D43	

Signal	I/O	Connector	Indicator LED	Comments/ Reference
Inspection Alarm 0	O	J3-3	D59	Goes active when the associated alarm condition occurs and stays active until the alarm is cleared
Inspection Alarm 1	O	J3-4	D67	
Inspection Alarm 2	O	J3-5	D75	
Inspection Alarm 3	O	J3-6	D83	
Inspection Alarm 4	O	J3-7	D57	
Inspection Alarm 5	O	J3-8	D65	
Inspection Alarm 6	O	J3-9	D73	
Inspection Alarm 7	O	J3-10	D81	
Inspection Alarm 8	O	J3-15	D63	
Inspection Alarm 9	O	J3-16	D71	
Inspection Alarm 10	O	J3-17	D79	
Inspection Alarm 11	O	J3-18	D87	
Inspection Alarm 12	O	J3-19	D61	
Inspection Alarm 13	O	J3-20	D69	
Inspection Alarm 14	O	J3-21	D77	

All Connectors	
Function	Pin
Isolated ground	1, 2
24 V (isolated)	13, 14

Test Points	
Function	Test Point
24 V	2
24 V Gnd	3
3.3 V	1
3.3 V Gnd	4

Defect Group I-O

This feature is valid on systems with software version 6.0.67 and higher.

The DecoSpector 360™ system generates an output signal when specific defects are detected. The Group Outputs generate a signal for a total of 12ms when triggered. The signals are hard wired and not configurable. However, you can enable or disable the defect group outputs (all enabled or all disabled). To enable or disable the set, go to Settings | System Utilities | External I/O for Defects.

See "[Extended I-O Signals](#)" on page 84 (Group 0-15) for the pinouts of these signals.

The signals are:

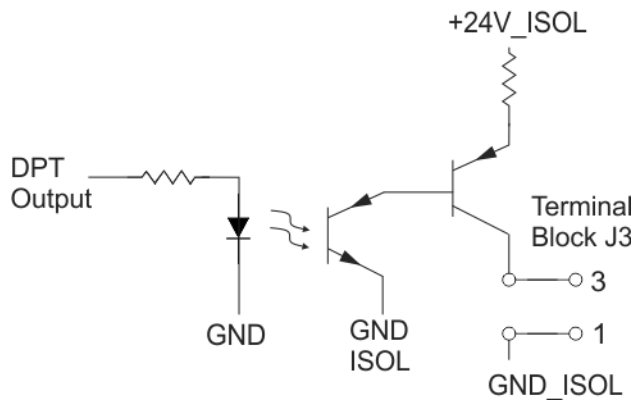
- Material Handling - includes Empty Pockets and Out of Field of View parts
- Fixture - includes Registration, Out of Round, and Orientation defects
- Wrong Color
- Scuff
- Shadow
- Color Void
- Too Much Color
- Color Zones Defects
- Miscellaneous - includes:
 - Forced Reject
 - Missed Acquisition
 - Missed Inspection
 - Missed Result
- Camera 1 - a defect occurred on camera 1
- Camera 2 - a defect occurred on camera 2
- Camera 3 - a defect occurred on camera 3
- Camera 4 - a defect occurred on camera 4
- Adjacent Cans - only triggered when the system sees an adjacent can that has a defect



Specifications:

- ### Default timing of pulsed output



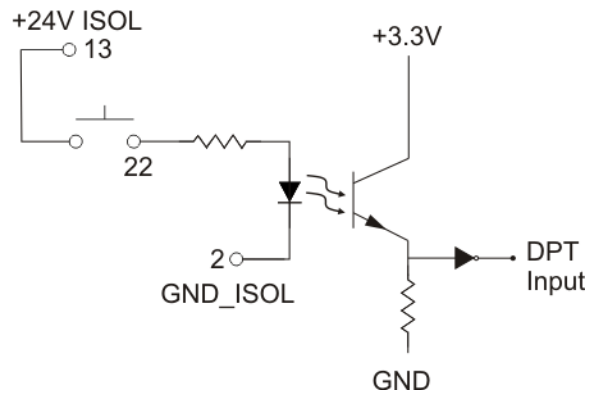
ALARM 0 OUTPUT

The following illustration shows a typical circuit that can be used to clear alarms.

Note: as of the time of this publication, extended I/O inputs are not available

CLEAR ALARMS - INPUT

Terminal Block TB4



Chapter 11 Maintenance

This instrument has been designed and tested in accordance with Publication EN61010-1 (2010) Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use and has been supplied in a safe condition. The instruction documentation contains information and warnings which must be followed by the user to ensure safe operation and to maintain the instrument in a safe condition.



WARNING - This product contains no operator serviceable parts. Refer servicing to qualified personnel. To prevent electrical shock do not open cabinet doors whilst power is connected.

When carrying out maintenance or repair work:



Disconnect master switch. For switch locations, refer to the Power Up and Power Down section.



Before starting the machine, ensure that no person is close to the machine.



If maintenance or repair requires the disconnection or removal of safety or protection systems, this operation must be supervised by authorized personnel who must ensure the prevention of personal injury or damage to the machine. All machine movements must be performed with limited speed and limited movements.



Maintenance or repair work on electrical components must be carried out exclusively by authorized, trained personnel. When running tests with power connected, you must strictly comply with the rules provided.



Personnel working on higher parts of a machine must wear a harness and hook it on to the structure and must always move with extreme caution.



Never perform lubrication or maintenance procedures on mechanical parts with the machine running.

LED Caution:



CAUTION - Possible hazardous optical radiation from LEDs. Do not stare at lamps.

When returning the unit to service:



CAUTION - Before switching on this instrument, ensure the power supply voltage is in the specified range.

Preventive Maintenance Frequency



IMPORTANT - The windows inside the inspection tunnel need to be cleaned regularly. The frequency depends on plant conditions, and could be as much as three or four times per shift.

Action	Frequency - Number of times per:					Supplies Required
	Shift	Day	Week	Month	Year	
"Clean the Tunnel Windows" on page 96	1x					Part number: 74284 - Kit Window Cleaning DS2 (includes plexi-glass cleaner and lint-free wipes)
"Clean the Air Conditioner Filter" below				1x		Recommended: "RP Super Filter Coat Adhesive." Find this on the Internet or in a hardware store near you.
Replace the two Filter/ Regulator Filters: 30 minutes "Replace the Filter-Regulator Filters" on page 98					3x	Part number: 67622 - Kit Oil Removal Replacement Filters

Clean the Air Conditioner Filter

The filter should be cleaned once a month for best results. The filter is located on the side of the cabinet. Replace with a new filter when necessary.

Note: You may need to clean the filters weekly depending on plant conditions

Does your air conditioner have a filter?

Your system may not have a filter to maintain if the air in your plant is generally clean without oil or extreme dust.

- If your air conditioner has a filter, you should be able to see it through the lower air conditioner cover. It will be a gray metallic mesh filter. If yours has the filter, then clean it as instructed below.
- If your air conditioner does NOT have a filter, then you will just see a fan grill under the cover as seen in this photo. Instead of cleaning the filter, remove dust and debris through a vacuum

or soft cloth.

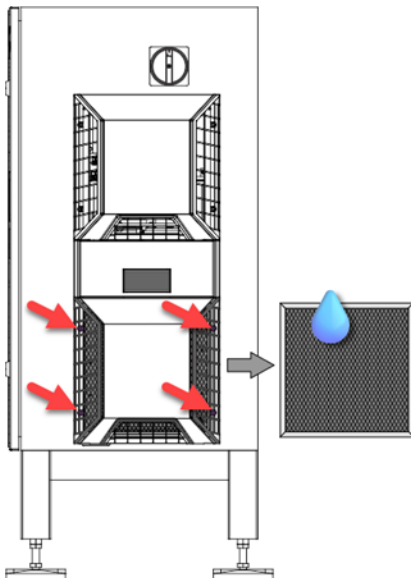


Note: your system may be equipped with a stainless steel version of the air conditioner for wash-down systems. Maintenance is the same.

What you need to clean the air conditioner filter:

- Phillips head screwdriver
- Recommended: "RP Super Filter Coat Adhesive." Find this on the Internet or in a hardware store near you.

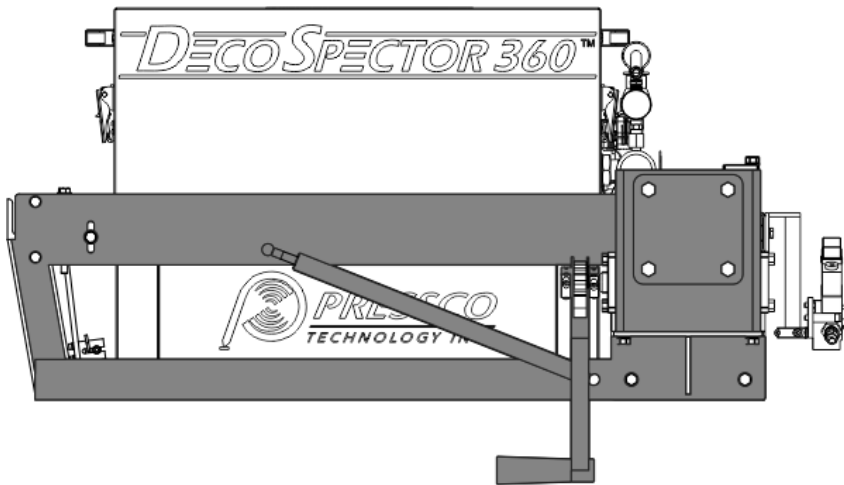
To clean the filter:



1. Loosen (do not completely unscrew) the four screws on the lower part of the cover.
2. Remove the bottom cover.
3. Remove the filter and clean it.
 - If the filter contains dry dust and dirt, rinse it in plain water
 - If the filter contains oily dust and dirt, clean it in soapy water, then rinse in clear water - DO NOT use caustic solutions
4. Dry the filter completely [placing it with a corner down will assure complete drainage].
5. Recoat the filter with "RP Super Filter Coat Adhesive." Spray both sides for best results.
6. Place the filter back inside the cabinet cover.
7. Replace the filter cover and tighten the screws on the lower cover.

Service Frame

The service frame is used during inspection module maintenance and calibration.

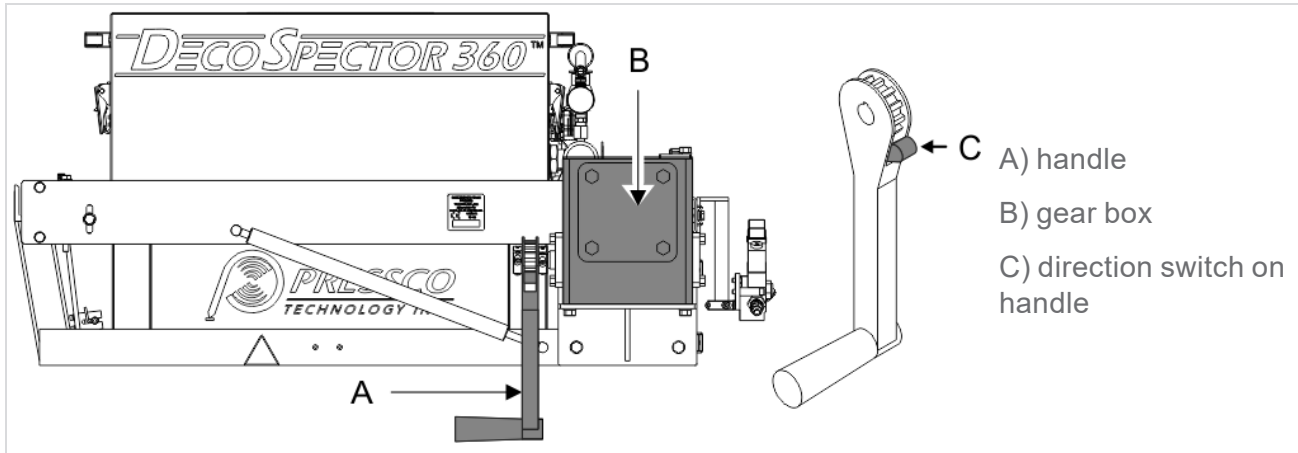


WARNING - This product contains no operator serviceable parts. Contact Pressco for service. How to Contact Pressco

- Do not open the gearbox enclosure. Oil may spill from the gearbox if it is opened.
- KEEP OFF the service frame. The service frame is not for lifting persons.
- KEEP OUT from under the raised service frame until it is secured by the locking device.

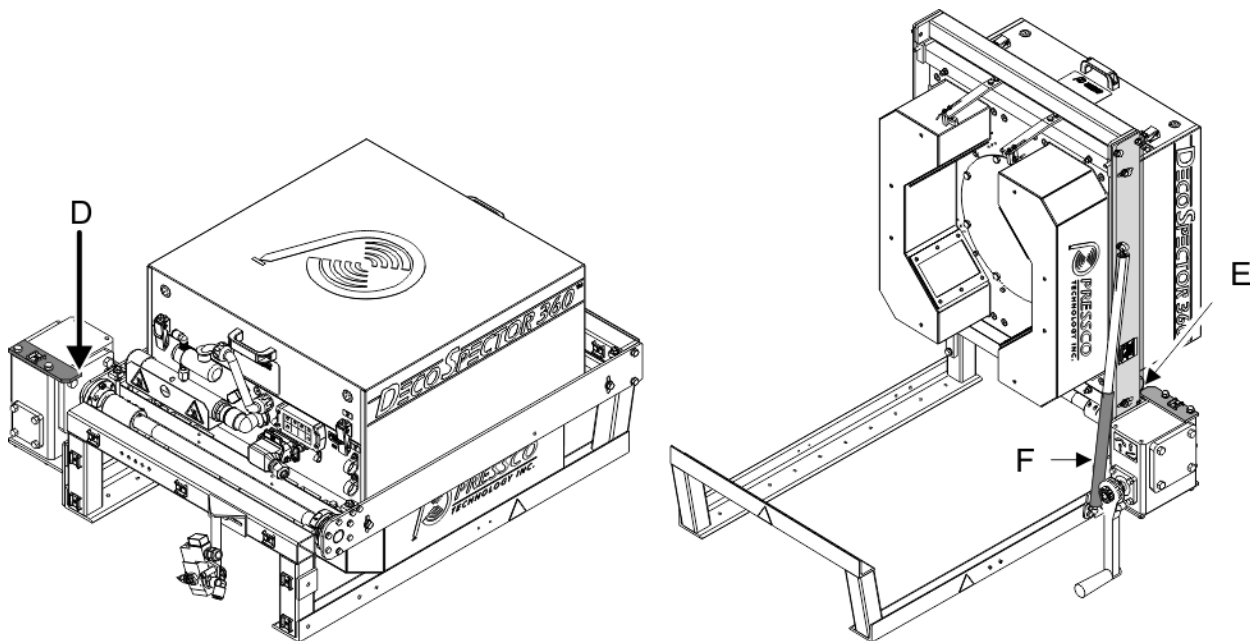
Use the Service Frame to Lift the Module for Maintenance

1. Use the handle [A] to lift the module. Turn handle [A] clockwise = module moves up. The handle contains a ratchet device, allowing movement in only one direction at a time.
2. Move the module up until it reaches the stop position [D].
3. Clean the module windows and perform other maintenance procedures as necessary.



When you are finished with maintenance:

1. Push to release the locking mechanism [F].
2. Use the switch [C] on the handle to change directions.
3. Crank the handle [A] to lower the module. Turn handle [A] counter-clockwise = module moves down.



D) mechanical stop

E) service frame does not move after reaching the mechanical stop

Chapter 11

F) locking device holds the module in place while you work

Clean the Tunnel Windows

The inspection tunnel windows need to be cleaned at least once per shift, depending on plant conditions.



Important - Debris and contamination could build up on both the glass and plastic surfaces. This dirt could appear in the inspection windows, causing false rejects of parts, missed defects, or it could degrade lighting. Clean glass and plastic surfaces often.

What you need:

- Soft, clean, oil-free cloths
 - Recommended: Part number: 81945. It includes one bottle of lens cleaning solution and one box of lens cleaning wipes.
 - You may use supplies already in your plant, designed to clean safety glasses, such as Uvex Clear S463 liquid lens cleaner, with Honeywell Uvex Clear Lens Cleaning Tissues
- Mild soap and water solution
- Flashlight to see inside tunnel area
- Stopped production line - only for a short time when you swing the tunnel open and closed

Do NOT use:



Regular paper towels to clean the surfaces. These may scratch the surfaces or leave lint.



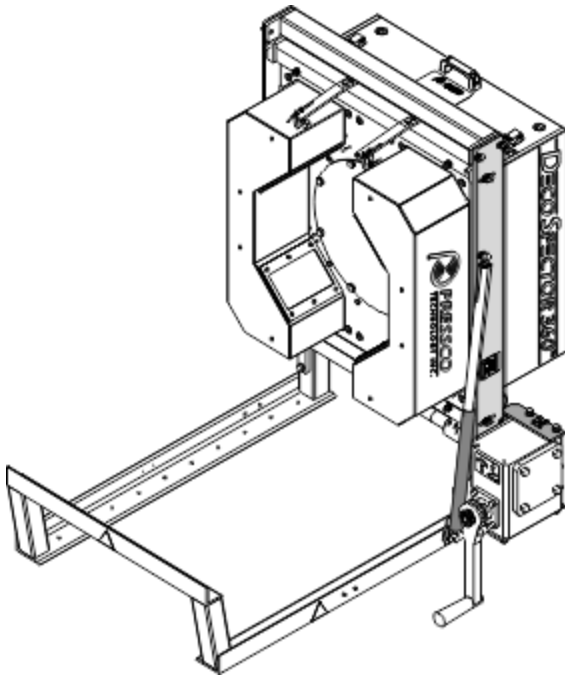
Alcohol-based solvents. These may damage the plastic surfaces.



Harsh chemicals. These may damage multiple surfaces.

To clean the windows:

1. Ensure the production line is stopped, and the area surrounding the tunnel is clear (of people, parts, equipment).
2. Turn the service frame handle clockwise to move the tunnel up and away from the production line.
3. Push the locking mechanism into place.



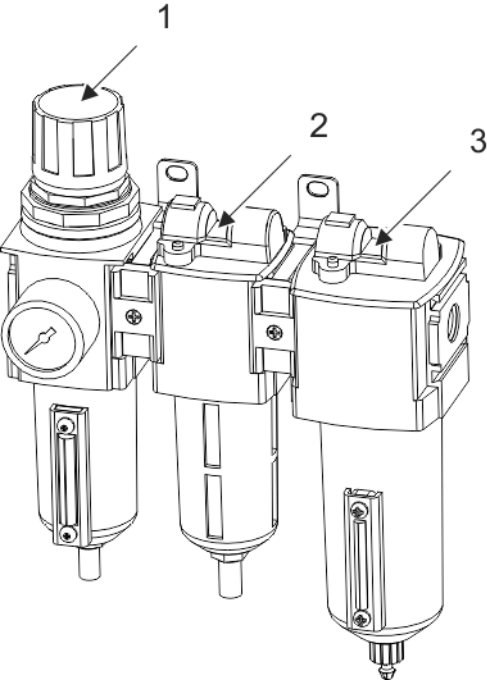
4. If desired, signal to someone in your plant to restart production, while you clean the windows.
5. Using a soft cloth and mild cleansing solution, clean all inspection and lighting windows inside the tunnel. Make sure all grease, oil, and other debris is removed.



6. If you have started production, signal to someone to stop it again.
7. Push to release the locking mechanism on the service frame.
8. Flip the switch to change directions of the service frame.
9. Crank the handle to lower the module back into place.
10. Start production.
11. Select the Relearn button in the DecoSpector 360™ software, so that the system learns parts with the newly cleaned windows.

Replace the Filter-Regulator Filters

The filter/ regulator assembly shown below is installed with the inspection module. Replace filters.



	Pressco part number	Description	Replace at least:
1		Filter/ regulator. No filter change necessary.	
	67622	Kit (contains one each of 67620 and 67621) It is easier to replace both of these filters at the same time	
2	67620	Filter oil removal	Every 2000 hours
3	67621	Filter oil vapor removal	Once per year