

Operating & Installation Manual



**Variable Speed AC Motors
0 to 2 hp (1.5 kw)
115/230/460 VAC, 50/60 Hz**

**Models: 711-3111
711-3211 & 711-3212
711-3231 & 711-3232
711-3431 & 711-3432**

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1.0 Safety Considerations

	WARNING	
Disconnect power at source before opening door of <i>impac</i> 100 Conveyor Controller.		



— 1.1 Grounding

	WARNING	
Both control enclosure and motor must be securely mounted and properly grounded. Failure to properly ground either device may cause injury to personnel.		



— 1.2 Fusing

	WARNING	
If fuses need to be replaced, they must always conform to the values and ratings specified on the controls labels.		

— 1.3 Power Wiring to Controller

	WARNING	
The branch circuit, which provides power to this control, must be protected. The circuit protection must be properly sized to meet the current requirements and must comply with all applicable codes.		

2.0 Introduction

	WARNING	
Read this Manual completely and carefully. Pay special attention to the Warnings, Precautions, and Safety Rules listed. Failure to follow the instructions could produce Safety Hazards to personnel or lead to damage of the Conveyor Controller and/or the optional Accessory Kits. Due to the wide variety of setups & applications, guarding is the responsibility of the end user.		

This manual contains the information needed to install, operate, and troubleshoot the Dorner *impac* 100 Conveyor Controller. It is organized in a step-by-step fashion so that the Conveyor Controller may be safely set-up, in the shortest possible time.

3.0 Product Description

The *impac* 100 Conveyor Controller is a low-cost Industrial Multi-Purpose Application Controller that can be used to control a Conveyor motor on/off operation as well as vary the speed of the motor. The Conveyor Controller is user-installable with control options that allow it to meet the needs of a wide range of Conveyor control applications (indexing, jogging, accumulation, variable speed, automatic end-stop, emergency-stop, clutch-brake, merging of Conveyors, linking multiple Conveyors, ...etc.).

The *impac* 100 Conveyor Controller's motor control circuit is designed to support electrical interconnections to a variety of accessory kits (photo-eyes, E-stops, jog buttons, foot switches, E-stop pull cord units, process machine/PLC/PC dry contact interface, and more). Each kit includes brackets for mounting the unit to a Dorner 2100/3100/LPZ conveyor, cabling to wire the unit to an *impac* 100 Conveyor Controller, and instructions for mounting/wiring/operating the unit. The kits are connected to the *impac* 100 Conveyor Controller using convenient terminal point connections, inside the Controller. This allows the user to configure the kits to fit specific application needs and to re-configure the kits to perform new functions.

The *impac* 100 Conveyor Controller comes with mounting hardware to allow mounting to a Dorner 2100, 3100 or LPZ Conveyor side rail (or Conveyor stand). The unit is housed in an NEMA 12/IP54 enclosure with Power "ON" and Motor "RUNNING" LED's, a locking "ON/OFF" switch, a 24 volts D.C. power supply, adjustable motor overloads with manual reset, and pre-wired motor and AC line cords.

Overall Conveyor system reliability is enhanced by the *impac* 100 design features. Components meet applicable ANSI/NEC/IEC machine safety standards. Local on/off control and built-in motor & circuit overload protection enhance operator and application safety. Low voltage (24 volts D.C.) control circuits reduce installation and maintenance time as well as increase safety. A complete Conveyor Controller wiring schematic and troubleshooting guide are attached to the inside of the Conveyor Controller cover.

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4.0 Product Specifications

impac 100	711-3111	711-3211	711-3212	711-3231	711-3232
Input Voltage	100 - 120 volts A.C. 1 Phase 50/60 Hz	200 - 240 volts A.C. 1 Phase 50/60 Hz		200 - 240 volts A.C. 3 Phase 50/60 Hz	
Input Line Fuse	(1) 15 Ampere	(3) 10 Ampere	(3) 15 Ampere	(3) 10 Ampere	(3) 15 Ampere
Input Current	10 Amperes	7 Amperes	10 Amperes	7 Amperes	10 Amperes
Output Voltage	230 volts A.C., 3 Phase @ 60 Hz. Note: Models 711-3111, 711-3211 & 711-3212 have a single-phase input with a three-phase output to the motor.				
Speed Reference	Standard Speed Potentiometer mounted on cover of enclosure or Optional Isolated -10 to +10 volt analog input, 0 to +10 volt analog input, 4 to 20 milliampere input				
Motor Range in hp (watts)	0 to 1/2 (1 to 373)	0 to 3/4 (1 to 559)	Above 3/4 to 1 (560 to 746)	0 to 1 (1 to 746)	Above 1 to 2 (747 to 1500)
Operating Temperature	0 to 40° C to 95% Humidity (Non-condensing)				
A.C. Line Cord	8 Ft (2.4 m) Pre-wired with NEMA 5-15P Plug	8 Ft (2.4 m) Pre-wired with NEMA 6-15P Plug		8 Ft (2.4 m) Pre-wired with NEMA 15-20 Plug	
Motor Cord	5 Ft (1.5 m) Pre-wired NEMA L15-20 Receptacle				
Enclosure	NEMA Type 12 / IP54 Continuous Hinge, Weight: 23 lb (10.5 kg) Dimensions: 12" (305 mm) High x 10" (254 mm) Wide x 6" (152 mm) Deep				
Internal Power Supply	24 volts D.C. @ 1.1 Amperes with Over-current and Short-circuit Protection				
Standard Features	<ul style="list-style-type: none"> ● Lockable Disconnect Switch ● Line Fuses(s) ● Angled Terminal Block for Easy Field Connections ● 24 volt D.C. Power Supply Rated @ 1.1 Amperes for Field Devices ● Power "ON" and Motor "RUNNING" Indicator Lights ● Mounting Brackets and Hardware ● Pre-wired Motor and AC Line Cords ● Schematic Diagram Inside of Door ● Four (4) 1/2" NPT Knockouts with NEMA 12 Plugs ● Speed Potentiometer Mounted on Enclosure Door ● Reversing Switch Mounted on Enclosure Door 				

NOTE:

For additional information, refer to the following Dorner Publications:

- *impac* 100 Catalog (Dorner Publication # 851-151)
- *impac* 100 Accessory Kits Setup & Installation Guides (Dorner Publication # 851-108 through # 851-123)
- *impac* 100 Application Guide (Dorner Publication # 851-124)

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5.0 Conveyor Controller Installation

5.1 Inspecting the Controller

Carefully examine your Controller for shipping damage. Check to be certain that the controller you ordered is the one you received. Also check any optional accessory kits which you received.

5.2 Mounting the Controller

Select the desired location and mount the *impac* 100 enclosure to the conveyor T-slot channel (Figure 2) or an aluminum support stand leg (Figure 3) or steel support stand leg (Figure 4), using the hardware provided.

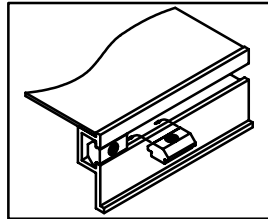
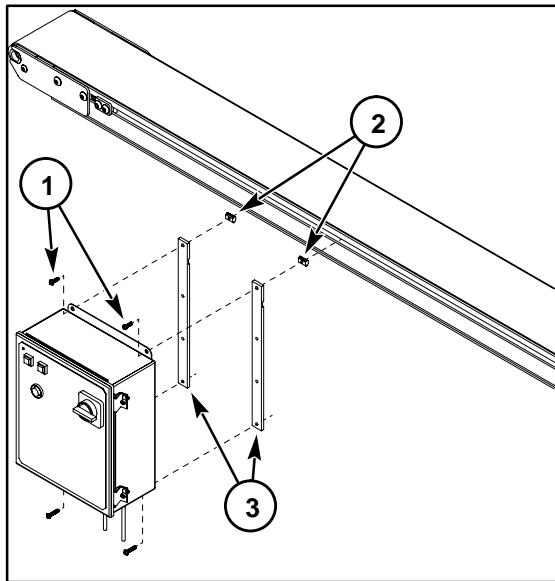


Figure 1: Drop-in T-bar Installation Detail

Mounting in Conveyor T-slot

- Insert the two Single Drop-in T-bars into conveyor T-slot by rolling each one into position (Figure 1).
- Select the desired location and attach the *impac* 100 enclosure (in the same way it was packaged, when shipped) to the conveyor T-slot in the manner shown in Figure 2 using the two (2) M6 x 8 mm Button Head Cap Screws through the clearance hole in each Mounting Bar. Tighten the Screws with a 4 mm Hex Key Wrench.

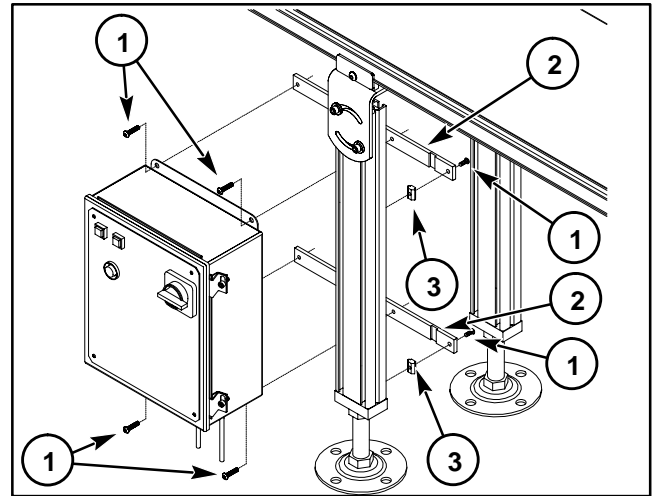


- 1—M6 x 8 mm Button Head Cap Screws (2 each)
- 2— Single Drop-in T-bars (2 each)
- 3— Mounting Bars (2 each)

Figure 2: Conveyor T-slot Attachment Detail

Mounting to Aluminum Support Stand Leg

- For an Aluminum Support Stand Leg, refer to Figure 3 and detach, rotate and re-attach the Mounting Bars to the *impac* 100 enclosure in the horizontal position.
- Select the desired mounting location and insert the two Single Drop-in T-bars into Leg channel by rolling each of them into position (see Figure 1).
- Then, attach the *impac* 100 enclosure to the two Single Drop-in T-bars, using the M6 x 8 mm Button Head Cap Screws. Tighten Screws with a 4 mm Hex Key Wrench.

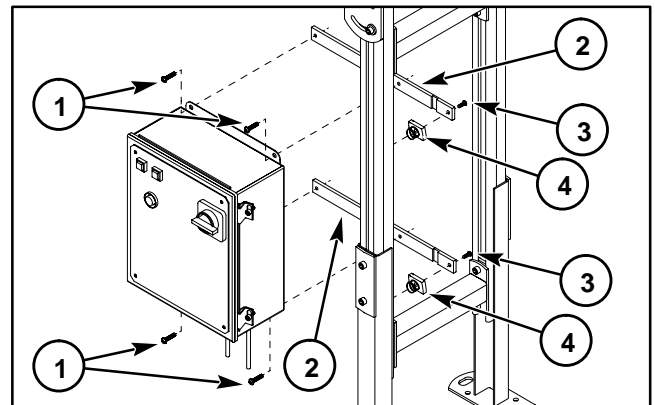


- 1—M6 x 8 mm Button Head Cap Screws (6 each)
- 2— Mounting Bars (2 each)
- 3— Single Drop-in T-bars (2 each)

Figure 3: Aluminum Leg Attachment Detail

Mounting to Steel Support Stand Leg

- For the Steel Support Stand Leg, refer to Figure 4 and detach, rotate and re-attach the Mounting Bars to the *impac* 100 enclosure in the horizontal position.
- Then, attach the *impac* 100 enclosure to the M6 Spring Nuts, using the M6 x 18 mm Button Head Cap Screws through the clearance hole in each Mounting Bar. Tighten the Screws with a 4 mm Hex Key Wrench.



- 1— M6 x 8 mm Button Head Cap Screws (4 each)
- 2— Mounting Bars (2 each)
- 3— M6 x 18 mm Button Head Cap Screws (2 each)
- 4— M6 Spring Nuts (2 each)

Figure 4: Steel Leg Attachment Detail

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5.3 Power Connections to Controller

Each Conveyor Controller has a pre-wired plug for power. The type of plug is dependent on the Controller voltage.

WARNING

Disconnect power, at power source, before opening the door of the *impac* 100 Conveyor Controller and attempting to make any electrical connections. Connections to the power source should always be the very last connections made.

5.4 Conveyor Controller Power-up Testing

Test the Conveyor Controller before the motor is connected, and before any *impac* accessory kits are installed. Plug the Controller into the appropriate power source and turn the Controller disconnect switch ON. The Power “ON” and the Motor “RUNNING” indicator lights, on the front of the *impac* Conveyor Controller, should illuminate.

5.5 Motor Connections to Conveyor Controller

Plug the motor cord into the *impac* 100 Conveyor Controller receptacle cord.

Each Conveyor Controller has a pre-wired receptacle for a motor. The type of receptacle is dependent on the Controller voltage. If a motor was ordered along with the Controller, then the motor was pre-wired with a mating power plug. The motor can also be hard-wired to the Controller by first removing the receptacle and wiring directly to the terminals “T1”, “T2”, “T3” and “GND”, inside the Controller. See the Controller panel layout (Figure 5) and the schematic diagrams (Figures 6 & 7) for more information.

5.6 Motor and Conveyor Controller Power-up Testing

WARNING

When power is supplied to the *impac* 100 Conveyor Controller and the disconnect switch is turned “ON”, the Conveyor belt will begin to move.

After connections are made to the *impac* controller, move the main speed potentiometer, located on the front panel of the enclosure, to zero and the FORWARD-STOP-REVERSE switch to the “STOP” position (see picture on cover of this

manual). Plug the controller into the appropriate power source and turn the controller disconnect switch ON. The Power “ON” indicator light, on the front on the controller, should illuminate. Move the FORWARD-STOP-REVERSE switch to “FORWARD”, the Motor “RUNNING” indicator light, on the front on the controller, should illuminate. Slowly advance the main speed potentiometer until you reach the desired speed. The motor should run and the conveyor belt will move. If the motor runs opposite of the direction expected, the motor leads on the terminals at the bottom the the Controller which are marked “T1” and “T2” will have to be reversed.

WARNING

Disconnect power, at power source, before opening the door of the *impac* 100 Conveyor Controller and attempting to make any electrical connections. Connections to the power source should always be the very last connections made.

Once the power has been removed, open the *impac* Conveyor Controller door and reverse the armature leads at the terminals, at the bottom of the controller, labelled “T1” and “T2”.

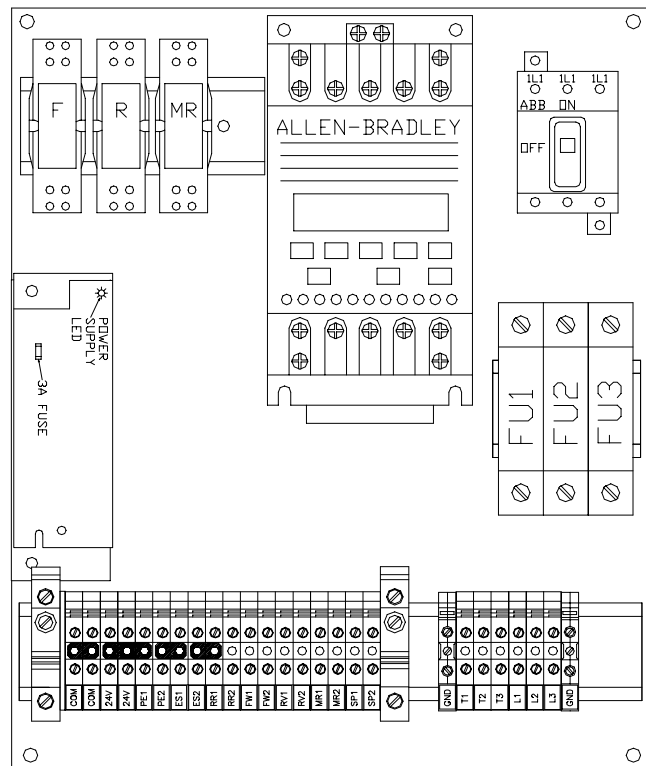


Figure 5: Sample 3-Phase Control Panel Layout (All Customer wiring is made to the Terminal Block located at the bottom of the Controller)

The VFD *impac* 100 is shipped with reversing switch disabled.

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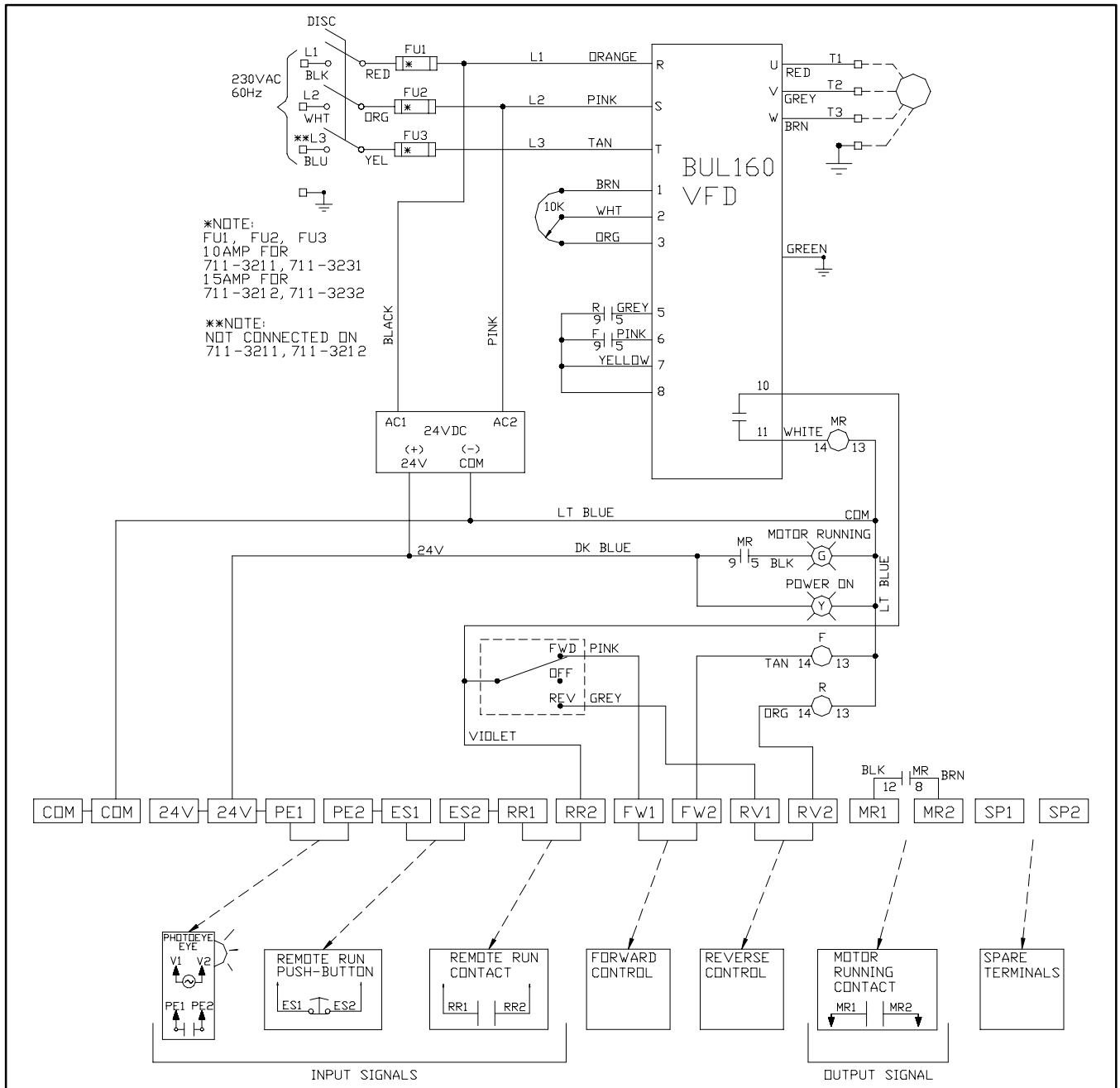


Figure 6: Schematic Diagram for impac 100 Controller
Models 711-3211 & 711-3212
Models 711-3231 & 711-3232

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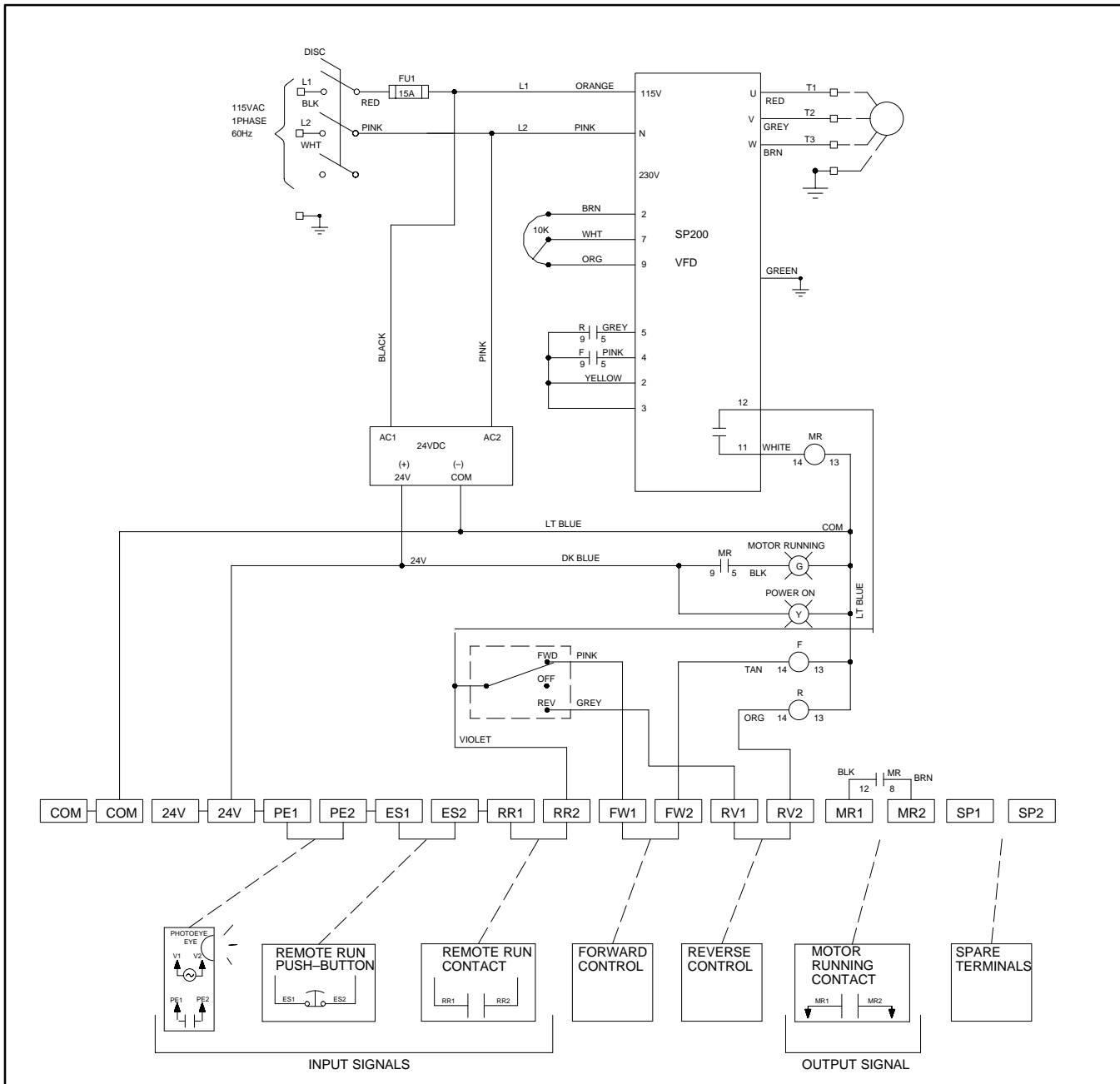


Figure 7: Schematic Diagram for impac 100 Controller Models 711-3111

5.7 Internal Drive Adjustments

1. General

All of the drive parameters are set to the drive manufacturers default values except for the parameters listed below. These variable frequency drive operating parameters are set to typical conveyor user values. A complete list of drive parameters can be found in the drive manufacturers users manual that shipped with the impac 100. The 711-3111 uses a Reliance drive. All other impac models use Allen-Bradley.

2. Acceleration Time

Allen-Bradley parameter 30/Reliance parameter 30: This is the time it takes for the motor to ramp up to full speed from a stop. This parameter has been set to 1 second, the factory default value is 5 or 10 seconds.

3. Deceleration Time

Allen-Bradley parameter 31/Reliance parameter 31: This is the time it takes for the motor to ramp down from full speed to a stop. This parameter has been set to 1 second, the factory default value is 5 or 10 seconds. If this value is set too short, the drive may fault.

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4. Minimum Frequency

Allen-Bradley parameter 32/Reliance parameter 00:
This is the lowest frequency (speed) that the drive will output. This parameter is set for 6Hz. This is 10% of full speed. The factory default value is 0 Hz.

5. Motor Overload Current

Allen-Bradley parameter 42/Reliance parameter 02:
This parameter has been set to the FLA (full load ampere) rating of the motor that was ordered with the impac. If no motor was ordered then the parameter is set to a value based on approximately 1/2 of the rating of the *impac* 100 ordered.

6. Input Mode/Start Control

Allen-Bradley parameter 46/Reliance parameter 10:
This parameter has been set to 1 for Allen-Bradley and 2 for Reliance. This defines how the input wiring is configured. DO NOT CHANGE THIS PARAMETER otherwise the forward/stop/reverse switch on the door of the *impac* and/or any installed kits will not control the drive.

7. Output Configure

Allen-Bradley parameter 47/Reliance parameter 12:
This parameter has been set to 2. This parameter controls the motor running contact (terminals MR1 and MR2) and the motor "RUNNING" indicator light.

5.8 Controller Setup

1. Reversing

The VFD *impac* 100 is shipped with the reversing switch disabled. Damage may occur to the belt of a center drive conveyor if operated in the reverse direction. If a Center Drive is not being used, reversing can be enabled as follows:

- Open the cover of the *impac* 100. Locate the terminal blocks labeled "RV1" and "RV2". Remove one of the wires from terminal "RV1" and re-connect it at terminal "RV2".
- To disable reversing, remove the jumper at terminal "RV2" and reconnect it to terminal "RV1".

2. Acceleration & Deceleration

The Variable Frequency Drive (VFD) has an adjustable value for the acceleration and deceleration. The range is 0.1 to 600 Seconds. If this time value is set too short the drive will fault. To change the acceleration, change drive parameter #30 to the desired time. To change the deceleration, change drive parameter #31 to the desired time. Refer to the drive manufacturer's user manual for parameter programming instructions and for details on an optional braking resistor that can be added for applications that require an extremely short deceleration time.

5.9 Controlling the Speed with an External Reference Signal

 **WARNING** 

Any external signal or equipment connected to the control must be electronically (e.g., optically) isolated. Using signals which are not isolated can damage the drive control board and/or any external equipment.

The *impac* 100 control is shipped with the speed pot on the front of the control as the only method to vary the speed of the motor. Some applications may require that the speed of the motor be controlled by another machine or controller. A 0 to 10 Volt *isolated* speed signal may be used to control the speed of the motor in place of the speed potentiometer on the front of the controller. A shielded cable is recommended for the external speed reference signal. The shield should be grounded at the signal source end only. To connect an external speed reference:

- Locate the terminal block near the face of the AC drive.
- Remove the brown wire from the terminal labeled "1".
- Tape the end of the exposed wire to avoid shorting to adjacent devices.
- Remove the white wire from the terminal labeled "2".
- Tape the end of the exposed wire to avoid shorting to adjacent devices.
- Remove the orange wire from the terminal labeled "3".
- Tape the end of the exposed wire to avoid shorting to adjacent devices.
- Connect the external signal V+ to the terminal labeled "2".
- Connect the external signal V- to the terminal labeled "3".

The speed pot on the door of the *impac* controller is now disabled.

5.10 Controlling the Direction with an External Signal

The *impac* 100 control is shipped with the FWD-OFF-REVERSE switch, located on the front of the enclosure, as the only method to change the direction of the motor. Some applications may require that the direction of the motor be controlled by another machine or controller. To control the direction from a remote location:

- Remove the blue jumper wires from between the terminals labeled "FW1" & "FW2", and "RV1" & "RV2". This will disable the selector switch on the front of the enclosure.
- Supply a dry contact between terminals "RR2" & "FW2". Closing this contact will command the "Forward" direction.
- Supply a dry contact between terminals "RR2" & "RV2". Closing this contact will command the "Reverse" direction.

NOTE:

Close only one direction at a time. If both "Forward" and "Reverse" is commanded at the same time, an undetermined direction can occur.

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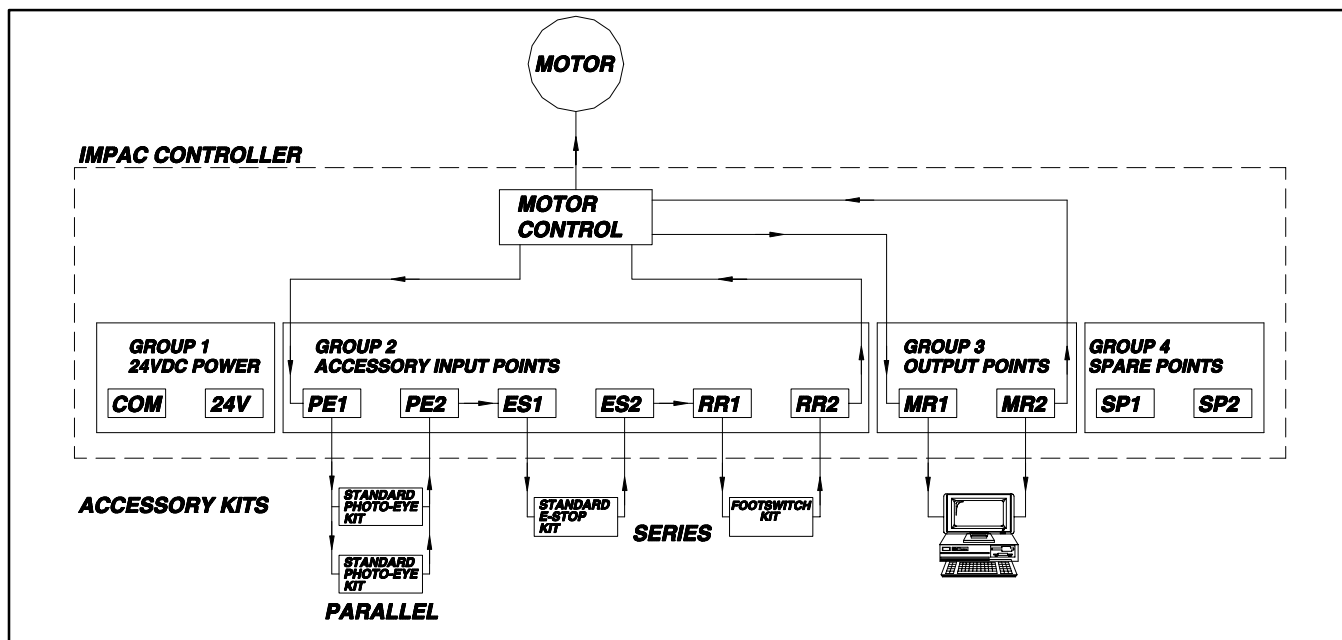


Figure 8: Simplified impac 100 Control Circuit

6.0 Implementing Conveyor Control Applications

The *impac* 100 control circuit is designed to support electrical interconnections to a variety of accessory kits (photo-eyes, E-stops, jog buttons, foot switches, E-stop pull cord units, process machine/PLC/PC dry contact interface, and more). The kits are connected to the *impac* 100 using convenient terminal point connections inside the controller. This allows the user to interconnect the kits to fit specific application control needs.

A simplified version of the *impac* 100 control circuit is shown in Figure 8. Four groupings of terminal point connections have been provided for connecting all *impac* accessory kits.

1. The first group (COM-24V) provides 24 volts D.C. power for any accessory kits that need power (photo-eyes, illuminated pushbuttons, etc.).
2. The next group (PE1-PE2, ES1-ES2, and RR1-RR2) provide three sets of control points for wiring accessory kits into the *impac* 100 control circuit. Each group is configured with a jumper when the *impac* 100 controller is shipped. When an accessory kit is to be installed the jumper is removed and the kit connected. Each set of control points represents a “series” connection to the *impac* 100 control circuit. When accessory kits are wired in “series” it means that all connected accessories must be “on” for the conveyor to run. For example, if an accessory kit is wired to PE1-PE2 and another accessory kit is wired to ES1-ES2, then both accessories must be “on” for the conveyor to run.

The *impac* 100 controller also supports wiring *impac* accessory kits in “parallel”. When an accessory kit is wired in “parallel” it means “if either” accessory kit is “on”

then run the conveyor. Accessories connected in parallel are connected to the same *impac* 100 terminal points.

For example, if two accessory kits are wired to PE1-PE2 then when either kit is “on” the conveyor will run. Any number of *impac* accessories can be configured in any of the above series and parallel combinations.

3. The third group of terminals (MR1-MR2) provide an output contact (dry contact) that is closed when the conveyor is running. This can be used to link multiple conveyor operations together or to provide status back to a host controller.
4. The last group of terminals (SP1-SP2) are two spare terminal points that the user can use for extra termination points for accessory kit wiring.

To select, configure, and implement a conveyor control application using the *impac* 100 Conveyor Controller and *impac* Accessory Kits the user should use the following steps.

1. **Remove power to the *impac* Conveyor Controller.**
Before installing and wiring any accessory kits, Remove power to the *impac* controller by unplugging the *impac* controller from the power source.
2. **Select Desired Control Application from the *impac* 100 Application Guide.**

Included with the *impac* 100 Application Guide are a list of conveyor control application examples that detail the following for many different conveyor control applications:

- A description of the conveyor application control requirements
- An illustration of the conveyor with the *impac* 100 controller and *impac* accessory kits mounted
- A list of hardware required to implement the control application described

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- A description of the conveyor operation
- Detailed conveyor control setup instructions
- Illustration that shows how all accessory devices are connected to the *impac* 100 controller

Based on review of the Dorner *impac* 100 Application Guide select the application example that meets the needs of the end-user application. If required, make any final adjustments to the application accessory kit control connections needed by your particular application.

3. Install all required *impac* accessory kits

Install all accessory kits required for the application. The selected Application Example in the Dorner *impac* 100 Application Guide will show the general area of where the kits are to be located on the conveyor. Follow the *impac* Accessory kit Setup & Installation Guide for mounting and cable routing details.

	WARNING	
Disconnect power, at power source, before opening the door of the <i>impac</i> 100 Conveyor Controller and attempting to make any electrical connections. Connections to the power source should always be the very last connections made.		

Each *impac* accessory kit includes: Setup & Installation Guide; brackets for mounting; cabling to wire the unit to an *impac* 100 controller; and instructions for mounting/wiring/operating the unit. There are two 1/2" NPT knockouts available for accessory kit installation at the bottom on the controller. Remove the rubber seal, and install the accessory kit cable using the cord grip provided with the kit. The only wiring that is required will be at the accessory terminal block inside the controller. A 1/8" (3 mm) flat blade screwdriver is shipped with the controller for wiring to the terminal block.

4. Connect the *impac* accessory kits to the *impac* 100 Conveyor Controller

From the selected Application Example in the Dorner *impac* 100 Application Guide Connect the *impac* accessory kit cables to the *impac* controller terminal block as detailed in the application "Setup" description.

5. Verify proper conveyor operation

Test and operate the application based on the information detailed in the selected application "Operation & Test" description.

6. File copy of the Control Application Documentation

Place a copy of the Conveyor Control Application Example, that was used in step 4, inside *impac* 100 controller.

7.0 Operating the Conveyor Controller

— 7.1 Starting the Controller

The conveyor will be "ready to run" when the *impac* ON/OFF disconnect switch is turned ON. The Power "ON" light will be illuminated whenever power is applied to the Conveyor Controller and the ON/OFF disconnect switch is turned ON. If there are no *impac* accessory kits installed, the conveyor will run. If there is(are) any installed accessory kit(s), the conveyor may run, depending on the "ON/OFF" state of the accessory kits. When an accessory kit or kits allow the conveyor to run, the Motor "RUNNING" light will be ON and the motor will run.

— 7.2 Stopping the Controller

The conveyor will be stopped when the *impac* ON/OFF disconnect switch is turned OFF. The Power "ON" light will be OFF whenever power is removed from the Conveyor Controller or the ON/OFF disconnect switch is turned OFF. If there are installed accessory kit(s), the conveyor may stop running, depending on the state of the accessory kits. When an accessory kit prohibits the conveyor from running, the Motor "RUNNING" light will turn OFF and the motor will stop.

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8.0 Troubleshooting

(Refer to Figures 5, 6 & 7, for component locations)

PROBLEM	CAUSE	CORRECTION
Motor will not run and Motor "RUNNING" indicator is ON and "POWER" indicator is illuminated.	<p>Open wiring connection between impac 100 & motor.</p> <p>Motor Cord is not connected to motor</p> <p>Defective motor</p>	<p>Remove any power and, using appropriate means, check continuity and integrity of wiring.</p> <p>Properly connect motor cord.</p> <p>Replace motor.</p>
Motor will not run and Motor "RUNNING" indicator is OFF, "POWER" indicator is illuminated and Power Supply LED is ON.	<p>*AC variable frequency drive has faulted.</p> <p>One or more accessory kits are not working properly and thus causing an OPEN contact.</p> <p>One or more accessory kit jumpers, at impac 100 are removed and kit Devices are not installed, or incorrectly installed.</p>	<p>Cycle power to the impac 100 to reset drive.</p> <p>Check and properly install and wire accessory kits per the Setup & Installation Guide information provided with kit.</p> <p>Properly install and wire accessory kits per the Setup & Installation Guide information provided with kit.</p>
Motor will not run and Motor "RUNNING" indicator is OFF, "POWER" indicator is illuminated and Power Supply LED is OFF.	<p>Power supply fuse has blown.</p> <p>One or more accessory kits are incorrectly installed and thus shutting-down the power supply.</p>	<p>Replace with correct amperage and type of fuse.</p> <p>Properly install and wire accessory kits per the Setup & Installation Guide information provided with kit.</p>
Motor will not run and Motor "RUNNING" indicator is OFF and "POWER" indicator is not illuminated.	<p>No power to impac 100 or impac 100 is not plugged-in.</p> <p>Blown line fuse FU1 and/or FU2 and/or FU3.</p>	<p>Check all related wiring and make sure impac 100 power cord is plugged-in.</p> <p>Replace with correct amperage and type of fuse and/or fuses.</p>
Motor runs unexpectedly and Motor "RUNNING" indicator is ON and "POWER" indicator is illuminated.	<p>One or more accessory kits are incorrectly installed.</p> <p>One or more accessory kit jumpers, at impac 100, is/are not correctly installed.</p>	<p>Properly install and wire accessory kits per the Setup & Installation Guide information provided with kit.</p> <p>Properly install and wire appropriate jumpers per the Setup & Installation Guide information provided with kit.</p>

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PROBLEM	CAUSE	CORRECTION
Motor speed will not increase when SPEED Potentiometer is increased.	<p>Wiring connections are loose.</p> <p>“FORWARD-STOP-REVERSE” switch is not in the STOP position.</p> <p>AC drive is defective.</p> <p>SPEED potentiometer is shorted or defective.</p>	<p>Securely anchor all connections.</p> <p>Move switch to STOP position.</p> <p>Replace drive.</p> <p>Locate circuit short or replace potentiometer.</p>
Motor will not switch between FORWARD and REVERSE.	<p>Wiring connections are loose.</p> <p>“FORWARD-STOP-REVERSE” switch (S2) is defective.</p> <p>Relay (F) or relay (R) defective.</p> <p>Relay (F) or relay (R) not properly seated in mounting socket(s).</p> <p>“REVERSE” Enable Jumper is in the REVERSE DISABLE position.</p>	<p>Securely anchor all connections.</p> <p>Replace defective “FORWARD-STOP-REVERSE” switch.</p> <p>Replace defective Relay(s).</p> <p>Securely and properly seat Relay(s) in their respective socket(s).</p> <p>Move Jumper to ENABLE position.</p>
Motor “RUNNING” contact does not give indication.	<p>Wiring connections are loose.</p> <p>Relay (MR) is defective.</p> <p>“FORWARD-STOP-REVERSE” (S2) switch is in STOP position.</p> <p>*AC variable frequency drive has faulted.</p>	<p>Securely anchor all connections.</p> <p>Replace defective Relay.</p> <p>Move switch away from STOP position.</p> <p>Cycle power to the <i>impac</i> 100 to reset drive.</p>

* Refer to the drive manufacturer’s user manual “Troubleshooting and Fault Information” section (chapter 6) for additional information.

***impac* 100 Operating & Installation Manual**

Variable Speed AC Motors, Three-Phase

9.0 Replacement Parts List

Item	Description	Dorner Part Number
1	Power Supply	831-110
2	AC Drive Model 711-3211, Model 711-3231	805-869
	Model 711-3212, Model 711-3232	805-885
	Model 711-3431	805-886
	Model 711-3432	805-887
	Model 711-3111	805-997
3	AC Drive Keypad All models except 711-3111	805-985
	Model 711-3111	805-998
4	Fuse Holder All models except 711-3111	819-132
	Model 711-3111	819-134
5	Fuse Model 711-3431	819-138
	Model 711-3211, Model 711-3231 Model 711-3432	819-113
	Model 711-3212, Model 711-3232, Model 711-3111	819-103
6	Relay	805-470
7	Disconnect Switch	805-881
8	Amber Pilot Light Assembly	830-133
9	Green Pilot Light Assembly	830-134
10	Forward - Stop - Reverse Switch	830-161
11	Speed Potentiometer	805-866

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Notes

RETURN POLICY

No returns will be accepted without prior written factory authorization. When calling for authorization, please have the following information ready for the Dorner Factory representative or your local distributor:

1. Name and address of customer.
2. Item(s) being returned.
3. Reason for return.
4. Customer's original order number used when ordering the item(s).
5. Dorner or distributor invoice number.

A representative will discuss action to be taken on the Returned items and provide a Returned Goods Authorization Number to reference.

There will be a 15% restocking charge on all new items returned for credit where Dorner was not at fault. These will not be accepted after 60 days from original invoice date. The restocking charge covers inspection, cleaning, disassembly, and reissuing to inventory.

If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

- Dorner has representatives throughout the world. Feel free to contact Dorner for the name of your local representative. Our technical sales and service staff will gladly help with your questions on Dorner products.

Standard Available IMPAC Accessory Kits

- Standard Photo-Eye Kit, Fixed Mount (75-30)
- Standard Photo-Eye Kit, Adjustable Mount (75-31)
- Timing Photo-Eye Kit, Fixed Mount (75-32)
- Timing Photo-Eye Kit, Adjustable Mount (75-33)
- Emergency Stop Kit, Illuminated (75-40)
- Emergency Stop Kit, Non-Illuminated (75-41)
- Emergency Stop Kit, Pull Cord (75-42)
- Jog Kit (75-10)
- Foot Switch Kit (75-20)
- Start/Stop Kit (75-70)
- Electric Clutch/Brake Kit (75-60)
- Controller to Controller Linking Cable Kit (75-80)
- Wire Way Trough Kits
6-ft (1829 mm) (75-85-6)
12.5-ft (3810 mm) (75-85-12)
- T-slot Extension Kit (307000M)
- Light Duty End Stop Kits
2100 Series (215502M – 215524M)
3100 Series (315504M – 315540M)
- Adjustable Stop Kits
(307602M – 307640M)



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