

# PHOENIX OPTIONS

OPTION DESCRIPTION	CATALOG NUMBER
<p><b>Isolated 4-20 MA Process Signal Card:</b> The card can be used as both Input and Output to provide Signal Isolation.</p> <p>Board Input: 0-10 VDC Adjustments: Span, Zero Board Output: 4-20 ma or 0-10 VDC (Isolated) Required Power Supply: 120 VDC, 100MA Maximum (Typically customer supplied) Note: Output Signal will be isolated from drive common if customer provides their own 24 VDC isolated supply Availability: Factory Installed or Kit Form Special Note: Consult factory if this modification must be mounted and wired inside a Size 0 Phoenix DS or Phoenix ES Control Enclosure. An Oversized Enclosure or an Enclosure Extension may be required to accommodate this option.</p>	<b>3000-4041-120</b>
<p><b>115VAC Operator (Digital Input) Interface Card:</b> The Phoenix AC Drive is designed to accept contact closures and/or logic inputs at a 24 VDC level. If the Drive will be operated using remote Pushbuttons and Selector Switches powered at the 115 VAC level, this card should be used. This card accepts 120 VAC logic level input signals and converts them to 24 VDC logic level inputs.</p> <p>Required Power Supply: 120VAC, 30VA minimum (Typically customer supplied) Availability: Factory Installed or Kit Form Special Note: Consult factory if this modification must be mounted and wired inside a Size 0 Phoenix DS or Phoenix ES Control Enclosure. An Oversized Enclosure or an Enclosure Extension may be required to accommodate this option. See page ES10 for Enclosure Options.</p>	<b>3000-4050</b>
<p><b>Isolated Communications Card (RS-232/422/485, Modbus RTU):</b> This Communications Option Card allows the Phoenix DS or ES AC Drive to communicate via RS-232/422/485 Serial Communications. The standard Phoenix Protocol is Modbus RTU. Modbus RTU is a simple and common serial communication link. Each communication link can handle 32 devices with an address range from 1 to 247. For easy networking, a removable screw terminal connector is provided. Operational commands and drive parameters are accessible via Modbus RTU protocol.</p> <p>Availability: Factory Installed or Kit Form Special Note: Only one Communications Card (ie. 3000-4235-1, 3000-4135-2, or 3000-4145) may be added per Drive.</p>	<b>3000-4135</b>
<p><b>Encoder Feedback Card:</b> The Encoder Feedback Card allows the Phoenix ES AC Drive to operate as a Closed Loop AC Vector Drive with Speed Regulation accuracy to 0.01%. In Closed Loop Mode, extremely accurate control of Motor Speed and Motor Torque is possible at speeds to Zero RPM. The Encoder Feedback Card includes an Isolated Encoder Power Supply and includes repeated Encoder Differential Outputs for customer use.</p> <p>Required Power Supply: None - Powered by Drive. Encoder Requirements: Dual Channel, Quadrature Type, with Differential Line Driven Output. Encoder Power Supply: +12 VDC or +5 VDC at 200 ma. Required Input Signals: A+, A-, B+, B-, 5 to 12 VDC at 20 ma maximum. Optional Input Signals: A+, Z-. Output Signals: A+, A-, B+, B-, Z+, Z-, 5 VDC at 20 ma maximum. Maximum Encoder Frequency: 300 KHz Availability: Factory Installed or Kit Form - Only Available on the Phoenix ES</p>	<b>3000-4140-1</b>
<p><b>Second Encoder Input Card:</b> The Second Encoder Input Card allows the Phoenix ES AC Drive to accept two different Encoder input signals. Typically one Encoder input signal is used for Closed Loop Speed Control while the second Encoder input provides the drive reference signal (a pulse train input). Precise synchronization (digital locking) of two independent machines is possible.</p> <p>Required Power Supply: None - Powered by Drive. Encoder Requirements: Dual Channel, Quadrature Type, with Differential Line Driven Output. Encoder Power Supply: +12 VDC or +5 VDC at 200 ma. Required Input Signals: A+, A-, B+, B-, 5 to 12 VDC at 20 ma maximum. Optional Input Signals: A+, Z-. Output Signals: A+, A-, B+, B-, Z+, Z-, 5 VDC at 20 ma maximum. Maximum Encoder Frequency: 300 KHz Availability: Factory Installed or Kit Form - Only Available on the Phoenix ES</p>	<b>3000-4160</b>
<p><b>I/O Expansion Board:</b> Phoenix DS and Phoenix ES AC Drives include 8 Digital Inputs, 2 Digital Outputs, 2 Analog Inputs, and 2 Analog Outputs as Standard. If additional Inputs and Outputs are required, the Phoenix DS/ES I/O Expansion Board may be added. With the addition of the Phoenix DS/ES I/O Expansion Board, the drive can support up to 8 Digital Inputs, 7 Digital Outputs, 3 Analog Inputs, and 3 Analog Outputs. The Phoenix DS/ES I/O Expansion Board is fully configurable. You may add up to 5 Digital Outputs, 1 Analog Input, and 1 Analog Output.</p> <p>Availability: Factory Installed or Kit Form</p>	<b>3000-4150</b>
<p><b>Removable USB/RS-485 Isolated Communications Interface with Cable:</b> This Removable Communications Interface with Cable option allows the Phoenix DS or ES AC Drive to communicate via RS-485 with a Laptop. This option is very useful to field program Drives using a Laptop with Drivemaster. The interface cable is 8 feet with a standard USB connector.</p> <p>Availability: Kit Form</p>	<b>3000-4225-USB</b>
<p><b>HOA Switch:</b> A factory installed Hand-Off-Auto switch allows the operator to select how the drive will be operated. In "Hand" Mode the drive is operated using local Start and Stop Pushbuttons or the Keypad Pushbuttons and a local Speed Reference signal. In "Auto" Mode the drive is controlled by remote Start and Stop Pushbuttons or contacts and remote Speed Reference signal.</p> <p>Availability: Factory Installed Only Included as Standard on Phoenix AC Drives with Bypass Special Note: Consult Factory if this modification must be mounted and wired inside a Size 0 Phoenix DS or Phoenix ES Control Enclosure. An Oversized Enclosure or an Enclosure Extension may be required to accommodate this option.</p>	<b>PDS-HOA-SW</b>

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<p><b>Local/Remote Switch:</b> A factory installed Local-Remote switch allows the operator to select where the logic signals that control the drive will come from. In "Local" Mode, they will come from Local Start/Stop Pushbuttons or from the Pushbuttons on the drive Keypad. In "Remote" Mode they will come from remote Start and Stop Pushbuttons or contacts.</p> <p>Availability: <a href="#">Factory Installed Only</a>  Special Note: Consult Factory if this modification must be mounted and wired inside a Size 0 Phoenix DS or Phoenix ES Control Enclosure. An Oversized Enclosure or an Enclosure Extension may be required to accommodate this option.</p>	<b>PDS-LR-SW</b>
<p><b>Auto/Manual Switch:</b> A factory installed Auto-Manual switch allows the operator to select where the Speed Reference Signal will come from. In "Auto" Mode, the reference signal will come from the remote source. In "Manual" Mode the reference will come from a local Speed Potentiometer or the Drive Keypad.</p> <p>Availability: <a href="#">Factory Installed Only</a>  Special Note: Consult Factory if this modification must be mounted and wired inside a Size 0 Phoenix DS or Phoenix ES Control Enclosure. An Oversized Enclosure or an Enclosure Extension may be required to accommodate this option.</p>	<b>PDS-AM-SW</b>
<p><b>Speed Potentiometer:</b> A factory installed Speed Potentiometer gives local speed control by potentiometer.</p> <p>Availability: <a href="#">Factory Installed Only</a>  Special Note: Consult Factory if this modification must be mounted and wired inside a Size 0 Phoenix DS or Phoenix ES Control Enclosure. An Oversized Enclosure or an Enclosure Extension may be required to accommodate this option.</p>	<b>PDS-POT</b>
<p><b>Automatic-Bypass Adder for Size 0 Drive with Manual Bypass:</b> This factory installed option can be added to a Phoenix AC Drive with Manual Contactor Bypass to automatically transfer to Bypass Mode when a fault is detected.</p> <p>Availability: <a href="#">Factory Installed Only</a></p>	<b>PDS-ABP0</b>
<p><b>Automatic-Bypass Adder for Size 1 Drive with Manual Bypass:</b> This factory installed option can be added to a Phoenix AC Drive with Manual Contactor Bypass to automatically transfer to Bypass Mode when a fault is detected.</p> <p>Availability: <a href="#">Factory Installed Only</a></p>	<b>PDS-ABP1</b>
<p><b>Automatic-Bypass Adder for Size 2 Drive with Manual Bypass:</b> This factory installed option can be added to a Phoenix AC Drive with Manual Contactor Bypass to automatically transfer to Bypass Mode when a fault is detected.</p> <p>Availability: <a href="#">Factory Installed Only</a></p>	<b>PDS-ABP2</b>
<p><b>Automatic-Bypass Adder for Size 3 Drive with Manual Bypass:</b> This factory installed option can be added to a Phoenix AC Drive with Manual Contactor Bypass to automatically transfer to Bypass Mode when a fault is detected.</p> <p>Availability: <a href="#">Factory Installed Only</a></p>	<b>PDS-ABP3</b>
<p><b>Bezel Assembly for Keypad (ROM):</b> This metal frame covers the cutout you would normally make in the door of an enclosure to remotely mount the Realtime-Operator-Module (ROM).</p> <p>Availability: <a href="#">Kit Form Only</a></p>	<b>PDS-BZL</b>
<p><b>Ribbon Cable Extender for Keypad (ROM) - 6 Feet:</b> This cable allows the user to remove the Phoenix Realtime-Operator-Module from its normal location on the face of the drive module and remotely mount it up to six feet away. This cable is typically used when the drive module is mounted inside another enclosure (Nema 12 or Nema 4) and the Keypad must be mounted on the door of the enclosure.</p> <p>Availability: <a href="#">Kit Form Only</a></p>	<b>PDS-CBL-6</b>
<p><b>Remote Keypad (ROM) Kit:</b> Bezel with 10 foot Ribbon Cable Extender.</p> <p>Availability: <a href="#">Kit Form Only</a></p>	<b>PDS-BZL-CBL-10</b>
<p><b>Remote Keypad (ROM) Kit:</b> Bezel with 20 foot Ribbon Cable Extender.</p> <p>Availability: <a href="#">Kit Form Only</a></p>	<b>PDS-BZL-CBL-20</b>