Emerson KC3020X1-BA1 12P6732X062

DeltaV 32-Channel 24 VDC High-Side Digital Output Module



Emerson KC3020X1-BA1 12P6732X062 is a DeltaV DO Plus module for controlling discrete field loads through 32 high-side, 24 VDC digital output channels. It translates the system's on/off commands into powered output signals, providing a concentrated group of discrete control points within the I/O assembly. The high-side output arrangement, channel count and per-channel load rating define its application and distinguish it from analog-output or lower-channel-count cards. Its B4 terminal-block key identifies the matching I/O-card arrangement for this specific hardware.

Technical Specifications

Product Identity	
Product type	DO Plus high-side digital output module
Functional Configuration	
Output channels	32
Field output type	24 VDC high-side
Terminal-block key	B4
Performance & Power	
Local-bus rating	12 VDC at 150 mA
Bussed-field rating	24 VDC at 3.2 A/card
Field-circuit rating	24 VDC at 100 mA/channel
Environment	
Ambient temperature	-40 to +70 °C
Relative humidity	5–95%, non-condensing
Airborne contaminants	ISA-S71.04-1985 Class G3
Shock	10 g half-sine, 11 ms
Vibration	1 mm peak-to-peak, 2–13.2 Hz; 0.7 g, 13.2–150 Hz

Selected original manufacturer material follows on page 3.

Compatibility & Selection Guide

System compatibility. For KC3020X1-BA1 12P6732X062, confirm the DO Plus type and the B4 terminal-block key before choosing a replacement. The applicable Emerson instruction sheet identifies the DeltaV system and requires terminal-block keying to match the I/O card; a similar-looking module or matching voltage alone does not establish compatibility.

Wiring & Installation Reference

Power and terminal-block checks

Local bus · 12 VDC, 150 mA · System power must be de-energized for insertion/removal

Bussed field · 24 VDC, 3.2 A/card · Remove field power before connecting/removing

Field circuit · 24 VDC, 100 mA/channel · Check the load against the channel rating

Terminal-block key · B4 · Match the terminal keys to the card before insertion

Module handling

1. Confirm the assembly Check the complete KJ/KC type, 12P part number, hardware revision and matching terminal block.

2. Isolate the required circuits Remove system power and all field power before inserting, removing or connecting this device.

3. Check keying and connections Set the terminal-block keys for this card and follow the current DeltaV hardware instructions for the installed assembly.

Installation precautions

Remove system power and all field power before inserting, removing or connecting this device.

For hazardous areas, apply Emerson document 12P2046 and the applicable hardware manual; this summary does not replace those installation instructions.

The unit contains no user-serviceable parts. Do not disassemble it.

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KC3020X1-BA1 DO Plus, 32-Ch 24VDC High-Side

Hazardous Atmosphere

II 3 G Ex nA nC IIC Gc
FM15ATEX0004U
IECEx FMG 15.0001U

Power Specifications

Local Bus Power	12 VDC at 150 mA
Bussed Field Power	24 VDC at 3.2 A/Card
Field Circuit	24 VDC at 100 mA/Ch.

Environmental Specifications

Ambient Temperature	-40 °C to +70 °C
Shock	10 g half-sine wave for 11 ms
Vibration	1 mm peak to peak from 2 to 13.2 Hz; 0.7 g from 13.2 to 150 Hz
Airborne Contaminants	ISA-S71.04 –1985 Airborne Contaminants Class G3
Relative Humidity	5 to 95% Non-Condensing
Terminal block key position	B4

Note: Refer to the product label for serial number and location and date of manufacture.

Warning: This product has specific instructions for installation, removal and operation in hazardous areas. Refer to document 12P2046 *"DeltaV™ Scalable Process System Zone 2 Installation Instructions".* Other installation instructions are available in the *"DeltaV™ S-series and CHARMs Hardware Installation"* manual.

Removal and Insertion

Field power supplied to this device, either at the field terminal or as bussed field power through the Carrier, must be removed before removing or connecting the device.

This unit cannot be removed or inserted with system power energized.

A rotary keying system ensures compatibility between I/O cards and terminal blocks after installation is complete. The terminal block must have the keys set for the I/O card with which it is to be used.

Maintenance and Adjustment

This unit contains no user serviceable parts and should not be disassembled for any reason. Calibration is not required.

Other Safety Approvals

FM APPROVED
CL. 1 Div. 2
GP. A,B,C,D
HAZ. LOC.
TEMP. Rating T4

EMERSON. Process Management