

Model DMX1REL20A-JBOX & DMX1REL20A-2POLE-JBOX Installation and Operations Manual



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Product Description: The Doug Fleenor Design DMX1REL20A-JBOX and DMX1REL20A-2POLE-JBOX Relay Packs control loads attached to dry contact air-gap relays. These products receive DMX512 and use the levels to open or close dry contact relays. A relay is closed when its level exceeds 60%. The relay is opened when the level falls below 40%. The unit is wired such that when the relay is closed, the line voltage on the AC input is switched onto the AC output.

Safety Warnings:

- The DMX1REL20A-JBOX and DMX1REL20A-2POLE-JBOX should only be installed by qualified personnel in accordance with local electrical codes.
- There are no user serviceable parts in the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX. Servicing should be referred to qualified service personnel.
- Do not operate the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX without the cover installed.
- Turn off all power to the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX before installing. Do not attempt to wire or install any part of the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX with the power on.

Mounting: The DMX1REL20A-JBOX and DMX1REL20A-2POLE-JBOX can be mounted on any stable surface in compliance with local electrical codes. No clearance is needed for ventilation. Any convenient box orientation is acceptable. To mount the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX:

- Remove the cover by loosening the front panel screws.
- Select the desired mounting location.
- Locate the mounting holes using the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX as a guide.
- Secure the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX to the surface using appropriate fasteners.
- After all wiring is complete and switches have been configured, install the cover and secure it in place.

General Installation Notes:

- If enclosure knock-outs are used or if holes are punched in the enclosure for wire entries, the holes must have appropriate bushings or conduit fittings installed to protect the wires from cuts and abrasion.
- Safety grounding must be maintained through this product. Metallic conduit may be used for grounding if it is appropriately bonded to the enclosure.

Power Input (Line) Wiring: Supply the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX with a protected branch circuit of no more than 20A. The power input terminals on the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX are rated for #12AWG copper wire (maximum). The torque rating for the terminals is 5 IN/LB.

Input power wiring must enter the enclosure and route directly to the power terminals without crossing over the circuit board or any control wiring.

Power Output (Load) Wiring: The output can supply a 20A (maximum) 120VAC load for the DMX1REL20A-JBOX. The DMX1REL20A-2POLE-JBOX can supply a 20A (maximum) 240V load. The output terminals are rated for #12AWG copper wire (maximum). The torque rating for the terminals is 5 IN/LB.

Load wiring must enter the enclosure and route directly to the power terminals without crossing over the circuit board or any control wiring.

DMX Input: The DMX signal is applied to the DMX INPUT terminal with three positions for data common, data minus, and data plus. A cable appropriate for use with DMX512 must be used. Examples include Belden 9829, Belden 9729, or their equal by other manufacturers. Control cabling must enter the enclosure and route directly to the control input terminals. The installer must secure low voltage control cabling such that it cannot come in contact with high voltage line or load wiring.

The shield of the cable is connected to the DMX INPUT "C" terminal. The first twisted pair of wire is to be connected to the DMX INPUT "-" and "+" terminals. If a second twisted pair is present in the control cable, it should NOT be connected. The spare pair should either be trimmed back or secured such that it cannot come in contact with any other parts of the DMX1REL20A-JBOX or DMX1REL20A-2POLE-JBOX. The torque rating for the terminals is 12 IN/LB (maximum).

DMX Termination: No internal termination is provided. The last device on a DMX run should be terminated with a 120 ohm terminator.

Starting Address: The starting address (the address that will control the relay) is set using the three switches on the DMX address switch module. Set the number to the desired starting address.

Test Mode: Setting the address switch to 601 will close the first relay to allow testing the output without a DMX512 signal. When in test mode the signal indicator will flash. 697 closes all relays if any DMX slot is above zero, 698 closes all relays when DMX is present, and 699 closes all relays.

Power Indicator: The red power indicator will illuminate whenever power is applied.

Mimic Indicator: The green relay one indicator will illuminate when the first relay is closed, supplying power to the first output.

Signal Indicator: The green signal indicator will illuminate when a valid DMX signal is received. The indicator will flash when the unit is in test mode (Address switch set to 6XX).

Specifications:

Certification: ETL Listed to the UL 508 standard.
Power input: 100 to 240 Volts, 50/60 hertz, 4 watts (plus load).
Output rating: 15 amps.
Output device: Omron G8P. Mechanical life: 10,000,000 operations minimum.
Electrical life: 250,000 operations minimum at 5 Amps.
125,000 operations minimum at 20 Amps.
Environmental: 0-40° C (32-104° F), 10-90% humidity, non-condensing. Indoor use only.
Color: Gray.
Size and weight: 12"H x 4"D x 12"W, 8 pounds.

Limited Manufacturer's Warranty

Products manufactured by Doug Fleenor Design (DFD) carry a five-year parts and labor warranty against manufacturing defects. It is the customer's responsibility to return the product to DFD at the customer's expense. If covered under warranty, DFD will repair the unit and pay for return ground shipping. If a trip is necessary to the customer's site to solve a problem, the expenses of the trip must be paid by the customer.

This warranty covers manufacturing defects. It does not cover damage due to abuse, misuse, negligence, accident, alteration, or repair by other than by Doug Fleenor Design.

Most non-warranty repairs are made for a fixed \$50.00 fee, plus shipping.

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