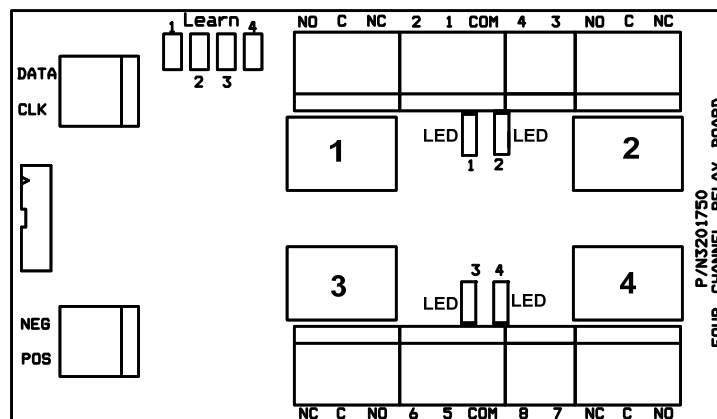


4 OUTPUTS RELAY EXPANDER BOARD OUTPUT MODULE 12V/1A

Installation Instruction



X 4



⚠ Before starting to install and work with this device
Please read the *Safety Instructions*.

1. Scope of delivery

- RELAY Board
- Plastic board holder (x4)
- Installation Instruction

2. Introduction

The RELAY board has been designed for internal installation inside a plastic enclosure. The RELAY board connects to the control panel main board via the 4 wire keypad buss.

The RELAY board provides four independent changeover relay contacts that can be used to interface to other devices such as garage doors, automatic gates, etc.

3. Operation Instructions

The CROW control panel allows for up to 8 programmable alarm outputs. 4 of these outputs are available as standard on-board on the control panel and the additional outputs can only be accessed via this optional relay board.

The Relay unit has 8 Open Collector transistors' outputs and 4 Relays outputs. The Open Collectors switch to 0V when the output is ON. Every control to this board activates one relay output and one Open Collector Outputs.

4. Mount the RELAY board

⚠ Be sure that the Control Panel's AC plug and battery are unplugged before connecting the unit.

- A. Insert the plastic holders to the 4 holes at the corners of the RELAY board.
- B. Remove the cover from the glue side of the plastic holders.
- C. Attach the board and glue it to a free area at the right side of the control panel base.
- D. Connect the 4 Bus wires to the Terminal Block (Data, Clock, Neg, Pos).

⚠ Use only the supplied plastic holders.

5. Outputs Setting

There are 4 jumpers on the RELAY board labeled as "Learn" from 1 - 4. These jumpers are used to select the control outputs and relate them to the output relays.

The first jumper labeled as "1", relates to Relay #1, through to the jumper labeled "4" that relates to Relay # 4. If the jumper #1 is in OFF position then relay #1 will follow the programmed options for output # 1, if jumper #1 is ON then relay #1 will follow the programmed options for output # 5.

If jumper #2 is OFF then relay # 2 follows output # 2, if jumper #2 is ON then relay #2 follows output # 6, etc, up to jumper 4 making relay # 4 follow output #4 or #8.

ℹ Please refer to the following table for more details;

JUMPER ↓	RELAY # 1 JUMPER # 1	RELAY # 2 JUMPER # 2	RELAY # 3 JUMPER # 3	RELAY # 4 JUMPER # 4
OFF	Output #1	Output #2	Output #3	Output #4
ON	Output #5	Output #6	Output #7	Output #8

6. Control Panel setup

The following option must be turned ON in the Control Panel for the RELAY activation :

P25E10E OPTION 6 MUST BE ON

7. Technical Data

Data a Protocol	CROW CONTROL PANEL BUS
Operation Voltage	11 to 16Vdc
Current Consumption	Active: 20mA per active Standby: 15mA
Relay Contacts	24VDC 1A
Open Collector Drive Outputs	12VDC 50mA
LED Indicator	Individual LED for each relay
Operating temperature	-10 - +50 °C
Storage temperature	-20 - +60 °C
Humidity (EN60721)	< 85 % r.h., non condensing
EMI rejection up to 1 GHz	> 10 V/m

**COMPILES WITH: EN 50130-4+A1+A2,
EN301489-3, EN300220-3, EN60950-1,
EN61000-6-3, EN55022 KL. B, EN50371**



CROW ELECTRONIC ENGINEERING LTD. ("Crow") - WARRANTY POLICY CERTIFICATE

This Warranty Certificate is given in favor of the purchaser (hereunder the "**Purchaser**") purchasing the products directly from Crow or from its authorized distributor.

Crow warrants these products to be free from defects in materials and workmanship under normal use and service for a period of 24 months from the last day of the week and year whose numbers are printed on the printed circuit board inside these products (hereunder the "**Warranty Period**").

Subject to the provisions of this Warranty Certificate, during the Warranty Period, Crow undertakes, at its sole discretion and subject to Crow's procedures, as such procedures are from time to time, to repair or replace, free of charge for materials and/or labor, products proved to be defective in materials or workmanship under normal use and service. Repaired products shall be warranted for the remainder of the original Warranty Period.

All transportation costs and in-transit risk of loss or damage related, directly or indirectly, to products returned to Crow for repair or replacement shall be borne solely by the Purchaser.

Crow's warranty under this Warranty Certificate does not cover products that is defective (or shall become defective) due to: (a) alteration of the products (or any part thereof) by anyone other than Crow; (b) accident, abuse, negligence, or improper maintenance; (c) failure caused by a product which Crow did not provide; (d) failure caused by software or hardware which Crow did not provide; (e) use or storage other than in accordance with Crow's specified operating and storage instructions.

There are no warranties, expressed or implied, of merchantability or fitness of the products for a particular purpose or otherwise, which extend beyond the description on the face hereof.

This limited Warranty Certificate is the Purchaser's sole and exclusive remedy against Crow and Crow's sole and exclusive liability toward the Purchaser in connection with the products, including without limitation - for defects or malfunctions of the products. This Warranty Certificate replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise. In no case shall Crow be liable to anyone for any consequential or incidental damages (inclusive of loss of profit, and whether occasioned by negligence of the Crow or any third party on its behalf) for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. Crow does not represent that these products can not be compromised or circumvented; that these products will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that these products will in all cases provide adequate warning or protection.

Purchaser understands that a properly installed and maintained product may in some cases reduce the risk of burglary, fire, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result.

Consequently, Crow shall have no liability for any personal injury; property damage or any other loss based on claim that these products failed to give any warning.

If Crow is held liable, whether directly or indirectly, for any loss or damage with regards to these products, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of these products, which shall be the complete and exclusive remedy against Crow.



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