Magic Module™ Series

ELK-MM220 Two Input, Two Output Programmable Module

ELK-MM443 Module, 2 Input, 2 Output, Programmable
ELK-MM444 Module, 4 Input, 4 Output, Programmable
ELK-MV480 Voice Module, 400 Recordable Channels
ELK-MK400 StarterKit, Includes ELK-MM443 & ELK-MB485
ELK-MK485 Programmers Kit, ELK-MB485, Cables, Software
ELK-MK420 "Button™ Access Kit w/ MM443, MA100, MA101
ELK-MA1000 "Button™ Touchkey” Reader & Interface Pack
ELK-MA101 "Button “Touchkeys”, 10 pcs w/keying holders
ELK-MA290 Proximity / Wiegand Data Interface to MM443
ELK-MC100 Clock / Calendar Module for ELK-MM443
ELK-MT100 Temperature Sensor Module for ELK-MM443
ELK-MK410 X-10® Transceiver Kit, Programmed ELK-MM443

APPLICATION:
The ELK-MM220 is an economical stand alone field programmable controller. It can be pro-
grammed and used in a vast array of applications. It features two digital inputs, two form C relay
outputs.

Programs can be written and stored in non-volatile EEPROM memory using the ELK-MK400 Develop-
ment Kit. Typical Applications include: Programmable Delay Timer, Alarm Memory, Single Zone

FEATURES:
• Two Digital Inputs.
• Two Form C Relay Outputs.
• Four Timers, 1/100th Sec. - 255 hours.
• Four General Purpose Counters, 0 - 255.
• Four Timers, 1/10th Sec. - 255 hours.
• LED Output Indicators.

SPECIFICATIONS:
• Compact Enclosure Size: 4.5” x 3” x 1.2”.
• Operating Voltage: 9.6-15 Volts D.C.
• Current Required: 70 mA.
• Relays, 10 Amps @ 120VAC, 7 Amps @ 28VDC.

REQUIRES:
• 10 Volts D.C. Power Supply.
• Optional: Starter Development Kit (ELK-MK400).

For more information contact your local Distributor or:
ELK PRODUCTS, INC 828-397-4200 FAX 828-397-4415
http://www.elkproducts.com Email:info@elkproducts.com
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PO Box 100 • Hwy. 70W • Hildebran, NC 28637 • USA

Instructions Printed On Inside
**ELK-MM220 HOOK-UP DIRECTIONS**

The ELK-MM220 has been factory programmed with a sample application as labeled on the unit, for other applications it must be reprogrammed before installation. The Program Development Kit (ELK-MK400) is required to re-program the ELK-MM220 if desired. The Development Kit contains software and programming instructions needed to program the ELK-MM220. The program is written using the Elk Magic Module Software and debugged by using the ELK-MM443 Magic Module that is included in the development kit. The program is then download into the ELK-MM220 through a 5 conductor ribbon cable connected between the ELK-MM443 J1 connector and the ELK-MM220 J5 connector. **Note:** If using the Clock/Calendar Module(ELK-MC100), temporarily remove it to gain access to the ELK-MM443 J1 connector.

The ELK-MM220 has two digital inputs that switch from Low to High at approximately 2 Volts. Each input is jumper selectable at J1 & J2 for an onboard 2K input resistor either pulled up to +12 Volts, or pulled down to Ground. The ELK-MM220 has two form C relay outputs. Relay 2 is jumper selectable using J3 to switch the output through a transistor (100mA max). Placing J3 to the OUT position will disable Relay 2 and allow the Relay 2 COM terminal to be pulled to ground through a transistor when activated. This setting handles up to 100mA of current and is intended for applications like flashing an LED. If more current or dry contacts are required then set J3 to IN and use the Relay 2 contacts, the transistor will be disabled.

Test the ELK-MM220 after downloading the program to ensure that it functions as desired. The ELK-MM220 can be reprogrammed multiple times.

**Example Hookup: ELK-MM220 used as a Single Zone Security System**

IN1 is a Momentary Key Switch, IN2 is a Normally Closed Burglar Loop, Relay 1 is the Alarm Output, Relay 2 is the Status LED

![Diagram of ELK-MM220 Hookup](image)

**Input Hookup Types for IN1 and IN2**

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