



## MK



The MK (Metal Keypad) Controllers give operators of heavy equipment the best of both worlds: a small, hand-held, push-button controller with a tough, metal housing. Like all Cattron products the MK controllers are built to excel in heavy duty industrial environments. They are rugged, lightweight units that are ergonomically designed and available for use with any of the current Cattron Portable Radio Remote Control Systems. The MK controllers are designed to provide message security, long battery life, quick response time, and safe, accurate control of overhead cranes and other industrial equipment.

### Durable Construction

MK controllers are high quality units, both inside and out. The main housing that surrounds and protects the electronic circuitry is made of extruded aluminum with a hard, anodized exterior. The ends of the housing are fitted with armorized rubber endcaps for switch protection and high-impact resistance. These endcaps are especially shock resistant and have been designed to protect the inner-workings of the controller. In addition, the body of the controller is fitted

with rubberized "grips" to make operator handling easier. The reliability and construction of the MK controllers has been field-tested and proven under extreme conditions. Total water and dust sealing makes them suitable for indoor and outdoor operation. The MK controllers also have large, tactile-feel push-buttons that are coated with clear epoxy for better endurance.

### Keypad Operation

MK controllers send command messages in variable lengths. This improves efficiency with integrity, prevents waste of air time when channel sharing, and maximizes battery life. Each MK comes with an i-Key. This stainless steel, removable electronic key is required for operation and is mounted in a receptacle on the top endcap. Because frequency, address, personality and other programming information is stored on the i-Key, all controllers at a user site can be identical - just the i-Keys are different. Each key is labeled for an intended machine. Therefore, one MK controller will run multiple decoders as long as the correct i-Key is used, minimizing the need for specific spare controllers.

All commands from MK controllers respond within milliseconds of pressing a push-button and are absolute functions; that is, a positive ON command is sent when the button is pressed, and a positive OFF command is sent when the button is released. Additionally, a mainline ON command is sent whenever the controller is turned on. Internally, a microcomputer performs self-diagnostics, interprets switch commands, and controls the radio transmitter. MK controllers are also equipped with audio speakers which beep when any function key is pressed (after power-on self test) and also indicate when the battery is low. The MK is available in dual-pressure models. dual-pressure models offer 12 or 16 operator-commanded functions (simultaneous, any combination). Dual-pressure MK controllers provide two-speed operation and VFD (Variable Frequency Drive) operation with a single push-button.

The MK controllers are equipped with an internal antenna, and the typical operating range is in excess of 500 ft. (150+ meters). It should be noted that operating range will vary with the environmental conditions. Should the transmitter go out of range of the corresponding receiver/decoder, all motions will cease.

## M K CONTROLLER FEATURES & SPECIFICATIONS

### Key Features

- For use with most Cattron Radio Remote Control Systems
- Can be used to upgrade existing single- and dual-pressure keypad controllers
- Color-coded "i-Key" adds security and eliminates need for specific spare controllers
- Extremely durable housing made of extruded aluminum ergonomically designed with curved housing and rubber grips for comfortable handling
- No need for additional carrying cases or protective housings
- Separate watertight power ON/OFF switch and twist-on/twist-off STOP switch protected by rubberized end-cap "bumpers"
- Sealed elastomer keypad with large, epoxy-coated push-buttons for single- and/or dual-pressure operation
- Combined switch board and encoder board eliminate interconnect wiring and therefore increase controller reliability
- Dual pressure models especially suited for VFD operation



### Specifications

**Case Material:** Extreme duty NEMA 4, IP66 watertight aluminum housing

**Approx. Weight:** 1.4 lbs./640 grams (including battery pack)

**Dimensions:** 6.4" x 3.0" x 2.0", plus 1.0" protective top and 0.5" protective end caps (approx. 16.3 cm x 7.6 cm x 5.1 cm, plus 2.5 cm protective top and 1.3 cm protective end caps)

**Operating Temperature:** -22°F to +140°F (-30°C to +60°C); Consult factory for temperature requirements beyond those listed.

**Maximum Functions:** Dual-Pressure MK Models: 6, 12, 16 (simultaneous, any combination); auxiliary functions can be added for either model, i.e., crane select, hoist select, address select, etc.

**Switch Options:** 12, 16 push-buttons; dual-pressure

**Switch Type:** Mechanical push-button with sealed silicone elastomer keypad; dust, water, oil, acid resistant elastomer pad with "tactile feel," clear epoxy-coated push-buttons

**Battery Life** (continuous operation): 3 Volt alkaline battery pack or rechargeable Ni-Cad Battery pack. In U.S., Canada and non-EC Countries, battery life is: Ni-Cad pack - 65 hours, Alkaline pack - 150 hours. In EC Countries, battery life is: Ni-Cad pack - 40 hours, Alkaline pack - 95 hours.

**Transmit Indicator:** Green LED flashes with every transmission

**Low-Battery Indication:** Yellow LED flashes for low battery; low battery alert signal beeps every 10 seconds

**Battery Charging:** Internal or External Ni-Cad (External Ni-Cad availability pending). 10 hour charger is standard, 1 hour charger is optional.

**Audio Speaker:** For "key click," diagnostics and low battery indication

**Antenna:** Internal

**Transmitter Frequency:** 425 - 447 MHz (M); 447 - 473 MHz (H)

**Approvals:** U.S. FCC, Industry Canada Part 15, non-licensed approvals; European approvals pending.

**Modulation:** FM, digital

**Operating Range:** 500+ ft. nominal (150+ m)

**Labels:** Sheet of self-adhesive Mylar, reverse-printed labels supplied. Optional reverse engraved custom faceplate available.

**Carrying Straps:** Belt loop strap standard; shoulder strap optional

\*Specifications are subject to change or revision without notice. Consult the factory for verification.

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