

## Radio Remote Control Systems

### MC-3200/MC-3300



**Cavotec is a global engineering group that manufactures power transmission, distribution and control technologies that form the link between fixed and mobile equipment in the Ports & Maritime and Airports & Industry sectors.**

**One of Cavotec's seven Centres of Excellence, Cavotec Micro-control engineers advanced radio remote control systems in close co-operation with customers worldwide.**

#### Benefits

- Widely recognised as one of the most flexible compact radio remote control operator terminals on the market.
  - Digital and analogue functions.
  - Covers a wide range of applications, starting from control functions up to complete process control and supervision.
  - Suitable for all types of electrical control of hydraulics.
  - The MC-3300 has a dual battery compartment for extended operation, and the option of hot swapping batteries.
  - Adaptable to most known PLC including frequency drive and serial communication.
  - Their compact size makes these units ergonomically sound and lightweight; waist belt or neck strap mounting allows unhindered movement.
  - Suitable for the harshest of environments including maritime applications.
  - High mechanical and chemical resistance due to moulded housing design.
- Operator terminal layouts are configured according to application and customer requirements:
    - Can be fitted with analogue or digital joysticks, push-buttons toggle switches and rotary switches.
    - Safety features with start-stop push-button, On/Off switch.
    - Optional: LEDs and ASCII / graphical displays and cable back-up.

#### Applications

- Oil skimmers, drilling rigs, raiser chutes, roughnecks, pipe handlers, A-frames.
- Forestry winches, recovery vehicles, concrete pumps, conveyor belts, fire fighting systems, fuelling systems.
- Drag lines, shovels, stackers, reclaimers, overhead cranes, crushers.
- Seismic, gun reels, streamer reels, wide tow, marine cranes, L.A.R.S.



MC-3200 fitted with text display



MC-3200 end view



An MC-3300 fitted with multiple functions

## Technical characteristics

### Terminal MC-3200/MC-3300

- Complete operational control with unique signal encoding prevents unintended actions.
- Activity check on start up to guarantee safe operations.
- Automatic or manual frequency changes according to requirements.
- Stop relay activation in 50/500ms.
- Redundant radio solution.
- License free frequency with low power outputs.
- 418-870 MHz (other frequencies available on request).
- PLC functionality for interlocking, sequencing and timing functions programmed directly without additional hardware.
- Digital and analogue feedback.

### Receiver Unit

- The MC-IRX receiver unit is highly flexible as it can have multiple digital and analogue inputs and outputs.
- Easy use with direct connections to most available fieldbus systems: ProfiBus, ModBus RTU, CANopen, Device Net, ModBus Plus, ModBus TCP, Ethernet IP.
- Back up solution with cable connection for programming and control.
- Multiple terminal and/or multiple receiver unit systems possible, e.g. for tandem operation.

### General data

Digital functions	Depending on functionality
Analogue functions	Depending on functionality
LED	Red, Green, Yellow, Blue, White
Display	Graphical or character display
Battery	Rechargeable 7.2 V 1700 mAh Li-Ion
Battery charger	12-24 VDC, 110-230 VAC
Operating time	Typical 20 hours, depending on configuration & temperature
Dimensions	280 x 180 x 180 mm (11,02 x 7,08 x 7,08 inch) & 340 x 230 x 185 mm (13,38 x 9,05 x 7,28 inch)
Weight	Min. 2 kg, max. 4 kg (depending on configuration)
IP	IP65 standard, IP66 optional
Temperature	-25°C to +60°C, -13°F to 140°F
Operating distance	Approx. 200 m line of sight
Frequency	According to local authority guidelines

## Approvals & Standards

Cavotec radio remote control systems comply with a variety of international rules and regulations. All systems are CE marked and can be used with our FCC Part 90 approved radio. The systems are designed in accordance with the Machinery Directive and comply with IEC 60204 and ISO 13849. In addition we have a wide range of compliant radios that can be used in type approvals of systems for specific countries worldwide.