

# Alpha 500 Series

INDUSTRIAL RADIO REMOTE CONTROL SYSTEMS



Low Cost  
Reliable & Safe  
Durable & Rugged  
Ultra Power Saving  
100% Water-resistant  
Compact & Lightweight





# Designed



## Advanced System Software

The Alpha 500 series utilizes advanced microprocessor control with highly evolved system software that has redundant error checking and correcting capabilities to ensure 100% error-free encoding, transmitting, receiving, decoding and controlling of all output relays. This highly evolved system software includes CRC (Cyclical Redundancy Check) and Hamming Codes (Error Recovery).

## Safe and Reliable Operation

To ensure maximum operating safety the system incorporates numerous important safety features, which include transmitter pushbutton fault-detection → visual warning → auto-shutoff, transmitter low-voltage detection → visual warning → auto-shutoff, receiver fault-detection → auto-shutoff, and receiver MAIN relay auto-disconnect when the system is in sleep mode, radio interference, system out of receiving range, and when transmitter low-voltage condition is detected.

## Secure Operation

Both transmitter and receiver utilize advanced microprocessor control. The availability of 32,768 sets of unique ID codes + 20 distinct RF channels ensure that only commands from a matching control transmitter can be carried out, reducing the risk of interference from outside sources.



## Safety MAIN Relay Circuits

For added safety the receiver system utilizes a special "Safety Relay" for the receiver MAIN relay circuits. If the receiver MAIN relay is defective (example: fails to open or close during operation or not responding to a "Stop" command) a fault will be detected and the system will be shut down immediately to avoid possibility of any accidents occurring.

## Power Saving Circuits

The transmitter utilizes advance power-saving circuits providing more than 150 hours of continuous operation between battery replacements using just two (2) off-the-shelf "AA" alkaline batteries. The extremely long battery life eliminates the need for frequent replacing or recharging of batteries.





# d with Safety in Mind



## 20/30 User-Selectable RF Channels

The receiver is equipped with a PLL (Phase Lock Loop) synthesized RF module with 20(301MHz) / 30(433MHz) sets of user-selectable RF channels (narrow band FM) adjusted via simple dip-switch settings. The transmitter is equipped with a unique removable transmitting RF board for easy replacement of transmitting RF channels.

## Lightweight and Compact

The keypad arrangement results in a transmitter that is ultra lightweight and compact in design. Including batteries, the transmitter handset is weighted at only 200g for the 4-button models, 240g for the 6-button models, and 290g for the 10-button models. This optimized design is almost 50% smaller and lighter than most competitive models and much easier to carry and operate.

## Waterproof and Durable

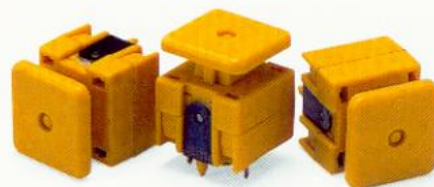
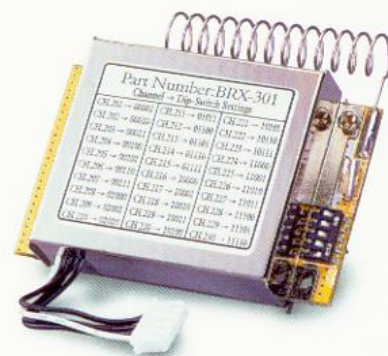
The transmitter and receiver enclosure are constructed from high-grade composite materials that resist cracking and deformation commonly occurred from frequent drops and long term exposure to heat, sunlight and harsh environments. The enclosures are fully sealed and impervious to dust, water, oil, acids, alkaline, heat and sunlight, which provide trouble-free operation in high moisture environments and outdoor applications.

## Industry's Best 2-speed Pushbutton

Custom in-house designed 2-speed pushbuttons are extremely durable and reliable for a minimum of one million press cycles. Unlike most 2-speed pushbuttons available from other radio control manufacturers, these pushbuttons are easily manipulated even when the operator is wearing gloves. The snap-action steps provided positive tactile feedback to the operator.

## Full Compliance

The Alpha 500 series are designed and manufactured in accordance with FCC Part 15 Rules, European Directives (CE/CB), Industry Canada specifications (IC) and ISO 9001 guidelines. No site license is required.



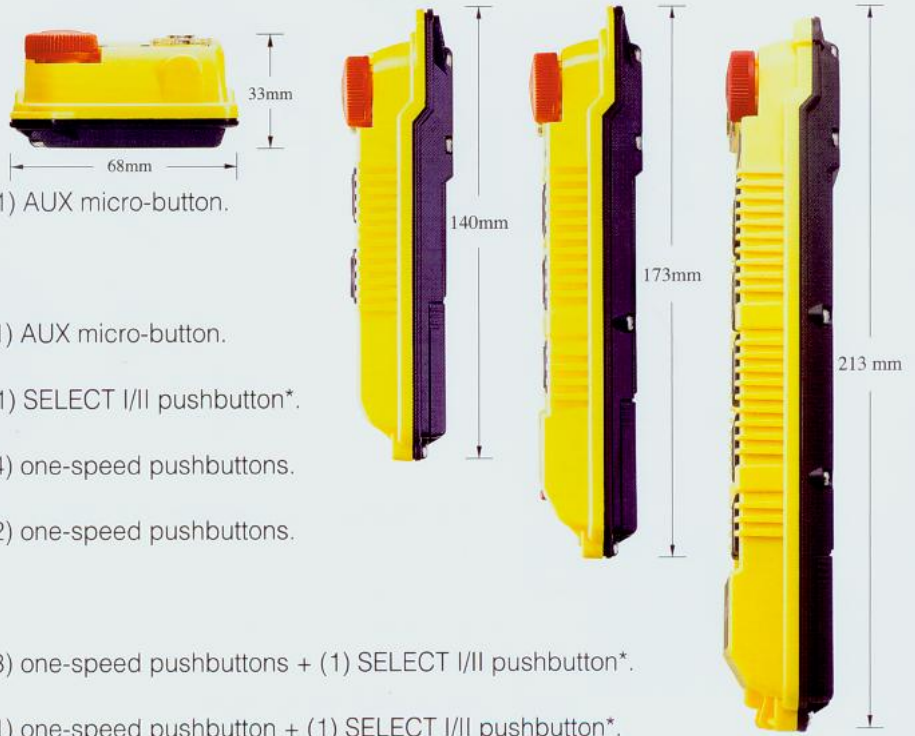
**ALPHA 500 SERIES**

Web Site : [www.fomotech.com](http://www.fomotech.com)



# 10 MODELS

- Alpha 520** (4) two-speed pushbuttons.
- Alpha 540A** (6) one-speed pushbuttons + (1) AUX micro-button.
- Alpha 560S** (6) two-speed pushbuttons.
- Alpha 560A** (6) two-speed pushbuttons + (1) AUX micro-button.
- Alpha 580B** (9) one-speed pushbuttons + (1) SELECT I/II pushbutton\*.
- Alpha 580C-1** (6) two-speed pushbuttons + (4) one-speed pushbuttons.
- Alpha 580C-2** (8) two-speed pushbuttons + (2) one-speed pushbuttons.
- Alpha 580D** (10) two-speed pushbuttons.
- Alpha 580E** (6) two-speed pushbuttons + (3) one-speed pushbuttons + (1) SELECT I/II pushbutton\*.
- Alpha 580F** (8) two-speed pushbuttons + (1) one-speed pushbutton + (1) SELECT I/II pushbutton\*.



\* For crane systems with auxiliary hoist and trolley changeover function (5~6 motions)

## ALPHA 500 SPECIFICATIONS

TRANSMITTER		RECEIVER	
Frequency Range	301 & 433 MHz	Demodulation	Narrow Band FM
Channel Spacing	25KHz	Decoding Reference	Quartz Crystal
Transmitting Range	100 meters	Frequency Control	Synthesizer (PLL)
Hamming Distance	6	Sensitivity	-120dBm
Frequency Control	Quartz Crystal	Responding Time	40mS
Transmitting Power	1.0mW	Output Contact	250V @ 10A
Enclosure Rating	IP-66	Enclosure Rating	IP-65 / IP-66
Source Voltage	3.0V ("AA" x 2)	Source Voltage	AC 24V ~ 440V, 12-24VDC available
Current Drain	10~18mA	Power Consumption	11VA
Operating Temperature	-10°C ~ +70°C	Operating Temperature	-10°C ~ +70°C
Dimension (500~520)	140 x 68 x 33 (mm)	Dimension (500~520)	310 x 134 x 72 (mm)
(540~560)	173 x 68 x 33 (mm)	(540~560)	310 x 134 x 72 (mm)
(580)	213 x 68 x 33 (mm)	(580)	300 x 230 x 86 (mm)
Weight (500~520)	200g (with batteries)	Weight (500~520)	1,625g (with output cable)
(540~560)	240g (with batteries)	(540~560)	1,700g (with output cable)
(580)	290g (with batteries)	(580)	3,400g (no output cable)

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