



## ELECTRONIC SYSTEMS

Since 1992 we have manufactured solutions for sectors such as electronic security, doorbells, industrial electronics and sensors. We have included projects for automotive products and industrial controllers in our portfolio.

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## DOORBELLS

- **Wireless doorbell RC-300**

Reaches up to 40 meters.

- **Long-range wireless doorbell RC-300E**

Reaches up to 80 meters.



## DOORBELL SETS

### **01 pushbutton + 02 doorbells**

RC-300 1.2

### **02 pushbuttons + 01 doorbell**

RC-300 2.1

- Eliminate wiring and labor costs;
  - Easy to install;
  - “Ding-dong” sound with volume adjustment;
  - Pushbutton can be installed in outdoor environments;
  - Operation Frequency: 433.92 MHz;
  - 2-year warranty.
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## **MOTION DETECTORS**

(for automatic lighting)

- **Wall detector LF-400**
- **Ceiling detector LF-700**
- **Detector to fit in switch boxes LF-600**

Motion detectors are a practical solution for you to install in your home or workplace, and they can be fitted on the ceiling or the walls. They are ideal to turn one or more lightbulbs on when somebody is in the room.

- Sensitiveness adjustment;
  - Timer and photocell;
  - Easy to install;
  - LED indicator;
  - Up to 75% energy saving;
  - 2-year warranty.
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## PRESENCE SENSOR

### PRESENCE SENSOR IRM-400C

#### **01 doorbell + 01 presence sensor**

Presence sensors, normally installed at the room entrance, detect people's presence and transmit a signal to the doorbell, which in turn announces visitors' arrivals.

- Up to a 30-meter distance between doorbell and sensor;
  - Easy to install;
  - "Ding-dong" sound with volume adjustment;
  - Sensor with adjustable reset time: 2 seconds or 2 minutes;
  - Sensor's power outlet: 110V to 220V
  - Doorbell's power outlet: 110V/220V
  - 2-year warranty
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## HUNTING ALARM SET

**01 alarm system + 01 battery + 08 wireless infrared sensors (which reach up to 80 meters) + 01 earphone**

The hunting alarm set's sensors detect animal presence and transmit a signal to the alarm system. The system then emits a sound (buzzer or earphone) and indicates through a light signal on the display which sensor transmitted the alert.

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## STARTER KEYS

(for single-phase electric motors)

In electronic terms, starter keys play the role of plated centrifuge systems in single-phase induction motors. They are the most recommended option to replace the wide variety of existing mechanical devices on the market.

- **Type: Start capacitor 110V/220V**

**Models:**

V2: 0.5 HP

V3.15: 1.0 HP

V35.15: 1.5 HP

V4/V4.15: 2.0 HP

V5: 3.0 HP

- **Type: Double capacitor 110V/220V**

**Models:**

MR3: 1.0 HP

MR3.5: 1.5 HP

MR4: 2.0 HP

MR5: 3.0 HP



**New release:**

**Keys to “rural”-type motors 220V/440V**

**Models:**

MAX-35: 3.0 HP

MAX-40: 4.0 HP

MAX-80: 5.0 HP and 7.5 HP

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## **THREE-PHASE INVERTER**

**THREE-PHASE PWM FREQUENCY INVERTER**  
Automatic 12/24V

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## CLONER

### INFRARED REMOTE-CONTROL CLONER

- **Description:** Starttron's "duplicator" remote control uses advanced technology in order to decode and copy binary codes of other remote controls which use patterns of fixed codes. It clones a wide range of industry-standard remote control models, such as HT6P20 (binary, 24 bits), MM 53200, M1-E and HT12E (binary, 12 bits), and ternary, 9-line models, such as MC145026 and HT6026, as well as similar models which are used in alarms, receptors and new and old garage-door systems.

With Starttron's remote-control cloner, there is no need for the installer, retailer or system integrator to go to the client's house for the copying process, since it is extremely simple. All that is required is that the cloner and the remote control to be cloned are in the same Operation Frequency.

- **Applications:**

- Making copies of garage doors, and residential, commercial and vehicle alarms;
- Triggering and activation of electric charges through receptors;
- Automatic-door opening using electronic commands through receptors.

- **Technical Information:**

- Outlet power: 12V standard battery, model 23A;
- Operation Frequency: 299 or 433MHz (consult us for other frequency options);



- Number of keys: 3 keys on version A, 2 keys on version B;
- Fixed code pattern: 24 bits (binary), 12 bits (binary) and 9 lines (ternary);
- Modulation: A.S.K.;
- Energy consumption when in stand-by: 0 mA;
- Energy consumption when operating: 7.5 mA;
- Average range without interference: >50 meters.

**Important:** This product is exclusively made for copying alarm controls, receptors and garage-door commands. STARTTRON Sistemas Eletrônicos LTDA. does not take any responsibility for the use of this product for other purposes.

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## **RECTIFIER BRIDGES** (for brake motors)

Brake motors help prevent load slippage by blocking the motor at the time of stopping. In order for the motor brake to work properly, an electronic circuit called “rectifier bridge” is necessary, as it converts the alternating current into a direct current, thus activating a coil which will decouple the brake motors.



- **Models:**

WEG: 110V-240V/ 3 A

WEG: 380V-440V/ 3 A

WEG: 575V/ 3 A

EBERLE: 110/220/380/440V/ 3 A