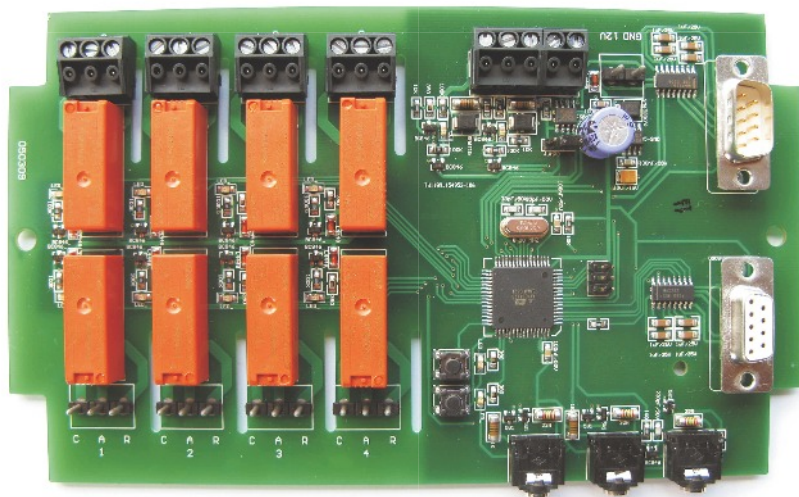


# LinTronic

## CommandConverter RELAY 208 - customized firmware



# Production of wireless temperature sensors



# Production of wireless temperature sensors

## Short description

- Customers computer generates a list of serialnumbers.
- We read serialnumber from barcode and strip off stock information (USB).
- Send RS232 command through the RELAY 208 board, to instruct the ink-printer to change the text into the correct serialnumber.

Only forward commands following the ink-printers communication protocol:

```
<StartOfText><SelectFile><ChangeText><NewText><EndOfText>
```

- Send instruction to the RELAY 208, instructing it to rotate the motor, making the wireless sensor spin at 35 rounds pr minute.

Do not forward commands to the printer following the LinTronic communication protocol:

```
<StartOfText><Address><Command><Data><Checksum><EndOfText>
```

- Control/Trigger the ink-printer in order to print the serialnumber correct
- Print out a revised serialnumber as barcode on a Brother 9700PC label-printer (USB)
- Created a Windows program handling everything, updating customers database and saving both their production and packaging a lot of time.

### Note:

It took 2 weeks to build, develop, test and approve the setup.

In 2012, this setup produced approximately 12.000 sensors - without a single error.

The customer is still very happy with this customized LinTronic solution.

# IMPORTANT: When powering up the RELAY 208

The RELAY 208's main purpose, is to control lights On/Off, curtains Open/Close and screens Up/Down.

However, it is often used as a CommanConverter when for example a projector is replaced with a different brand.

As a CommandConverter, the RELAY 208 works on one protocol/baudrate on one of the RS232 ports, and another protocol/baudrate on the other RS232 port.

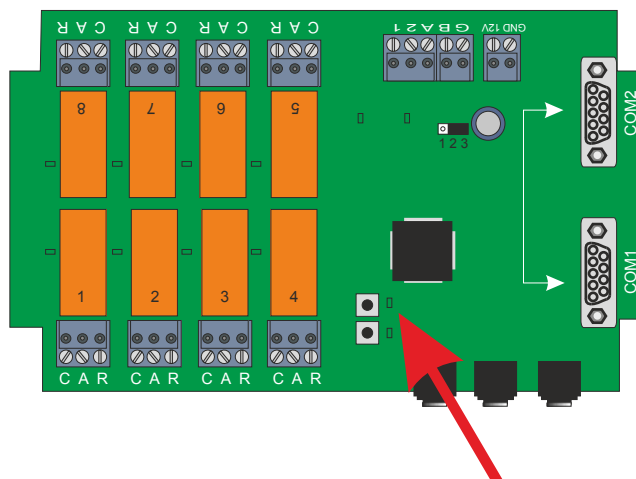
In order for the installer to adjust the timing of the relays (in case lights, curtains or screens are controlled) - a 30 seconds delay after the RELAY 208 is powered, allows the installer to get access to the configuration.

If you start communicating with the RELAY 208 during the first 30 seconds, then it will NOT enter the CommandConverter mode.

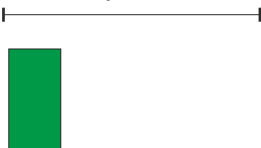
If you do NOT communicate with the RELAY 208 during the first 30 seconds, then it will enter the CommandConverter mode and the Configuration program can no longer access it.

The shown green LED will indicates which mode the RELAY 208 is working in: -

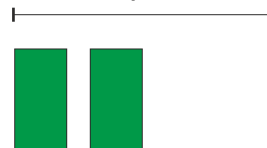
- 1 blink pr second = normal operation
- 2 blinks pr second = CommandConverter



Normal operation  
1 blink pr second



CommandConverter  
2 blinks pr second



## CommandConverter - RELAY 208

In the below we mention a projector, but any RS232 controlled device can be used:

The RELAY 208 can be used to convert one RS232 command-set into another, or timer-control relays on specific RS232 commands.

This is used for example when you have an existing installation with a controller/computer operating a projector (for example a SIM2) and you want to replace it with a different brand or typenumber (for example a Sanyo) - but the controller/computer does not support the new projector or changing the program/software of the controller/computer is not possible or expensive.

We offer customized firmware for the RELAY 208, allowing you to:

- replace an RS232 controlled device with another

- convert one RS232 command-set into another

- convert one protocol-set (parity, databits, stopbits) into another

- convert one baudrate (communication-speed) into another

- Turn timer-controlled relays on/off, on specific commands in order to control curtains, light, etc. for example when you turn the projector on/off.