



Emergency shutdown is relayed to be returned to control board/computer. Router is set under voltage locally (always, for safety), and can be commanded by control board.

Bill of material for electric parts:

- Metallix box 400 x 300 x 80 mm
- 10 plastic cable glands.
- 2 terminal blocks for 12 wires.
- 1 box w/ 2 buttons for motor command
- 1 fuse/disjoncter 10A (Computer)
- 1 fuse/disjoncter 20A (Routers)
- 1-2 emergency shutdown button box
- 2 relays 2RT 5A 230V, coil 12V DC
- 1 solid state relay 10-25A 230V cmd 5-12V DC
- 1 lamp 230V green or white
- 1 lamp 12V red
- 1 bipolar switch

Supply :

- 1 toric transformer 150-250 VA Output voltage 18-24V AC
- 1 rectifier bridge 10 A, 40V
- 1 Polarised capacitor 22000 μ F, 40V
- 1 Voltage regulator 7812, 1.5 A

Option 2nd Router :

- 1 relays 2RT 5A 230V, coil 12V CA
- 1 solid-state relay 10-25A 230V cmd 5-12V DC
- 1 lamp 12V red

Fittings :

- Screw and nuts M3 length 10 mm
- Rail DIN : 250 mm

Logic cabling : supple cable section 1.5 mm²
 Power cabling : supple cable section 2.5 mm²
 The power lines are those which distribute and exit the power to/from static relays.

Solid-state relay must be tightened to metal box with thermal compound, or it must be equipped with a big radiator :
 1.3°C/W for 10A relay
 0.55°C/W for 25A/40A relay

If routers are of large power, or if cooling static relays is a problem, the static relays can be replaced by small contactors.

Box will be in metal.
 Minimum size 280 x 250 x 80.
 It will be set off the vertical support panel by 10mm, to allow proper cooling of static relays.
 All holes will be done before the beginning of installation and wiring of components.
 Even if options are not installed, holes will be done for spare.
 Installation of terminals is not compulsory, but recommended, at least for Control board command.
 Fuses/disjoncters and mechanical relays will be installed on a DIN rail.

Relay controlling ESD to control board must switch a current at least equal to 5mA if it is an ordinary relay. If current is lower (<1 mA), a gold plated contact relay must be used.

Emergency shutdown open the circuit.

