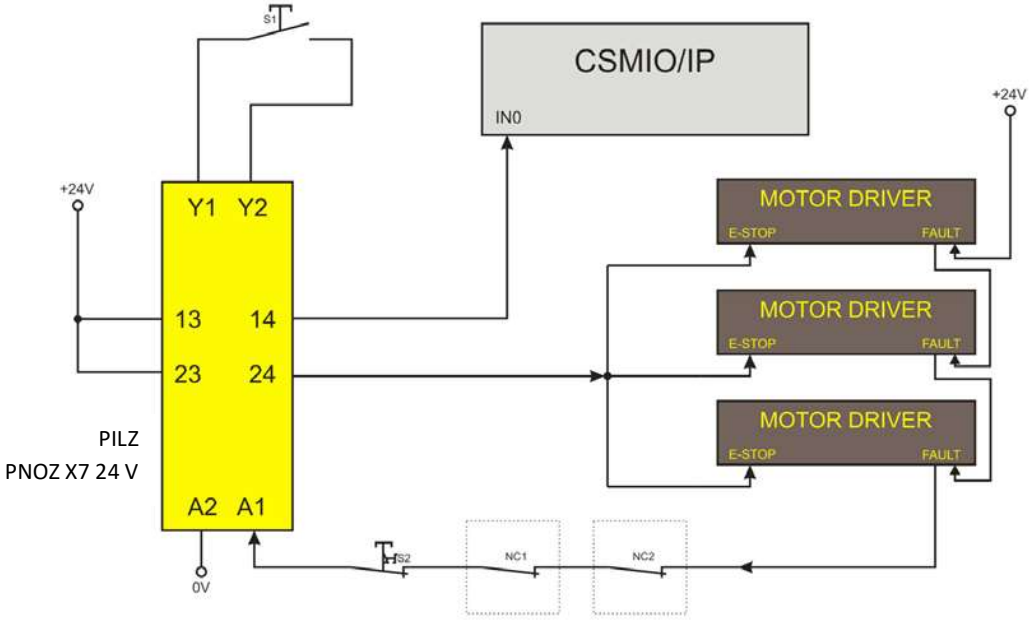
2.1 Example of E-STOP signal conn



The simple example above shows the E-Stop signal connectio MIO/IP-M controller a the axis drives, using a Pilz company safety relay (PNOZ X7 24V). S1 is a reset button (safety switching on), S2 is an emergency sto

This module has one input with all the alarm sources connected to this input (A1). In addition to the mentioned emergency stop (S2) there NC contacts - NC1 and NC2, which may be, i.e. opening sensors for the cover and the control cabinet. Moreover, there are dr FAULT signals connected in series. Two outputs of the safety relay were used as an E-Stop signal for t MIO/IP-M controller and axis drives

This combination assures the machine stops in case of failure on any axis FAULT signals of the drives), by pressing emergency stop mushroom and opening the cabinet or cover. Separation of the safety relay output channels gives double protection for the system and significantly increases the reliability of the entire system.

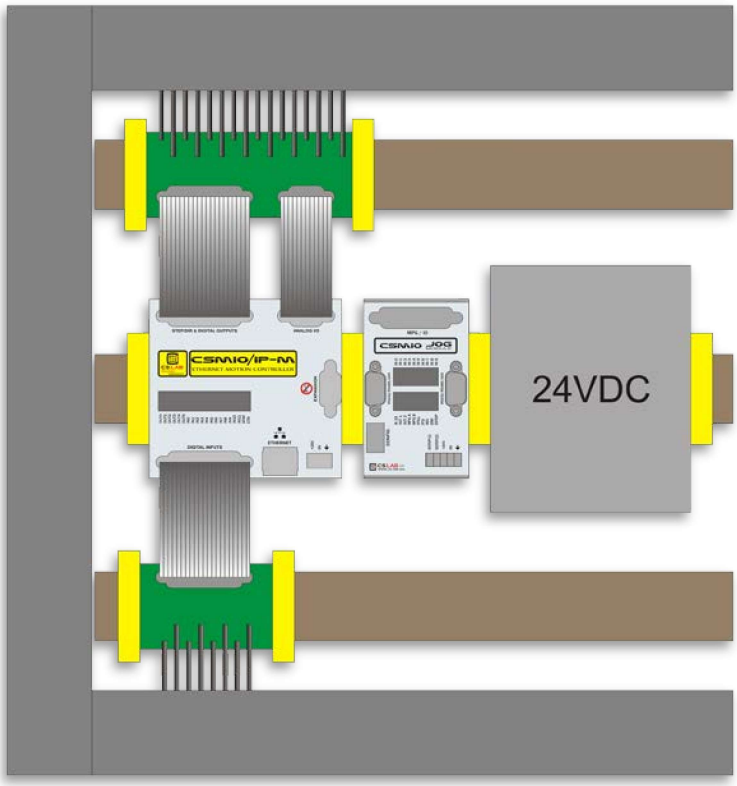
3. Recommendation for mechanical installatio

CSMIO/IP-M controller and DB->Terminal block - connection modules were designed to be installed on standard DIN-rail. It is the quickest and best way of installation.

The Controller uses a small amount of energy and creates a negligible amount of heat. The aluminum housing provides adequate cooling for the electronics inside, even if the ambient temperature reache $40^{O}C$ ($104^{O}F$).

As for the controller, there are no special precautions for ventilation and the minimum clearan distances. However, usually, next to the controller in the control cabinet, there are also inverter power supplies, motor drives - these components emit a lot of heat, so you should always remember about their proper location and proper ventilation of the cabine

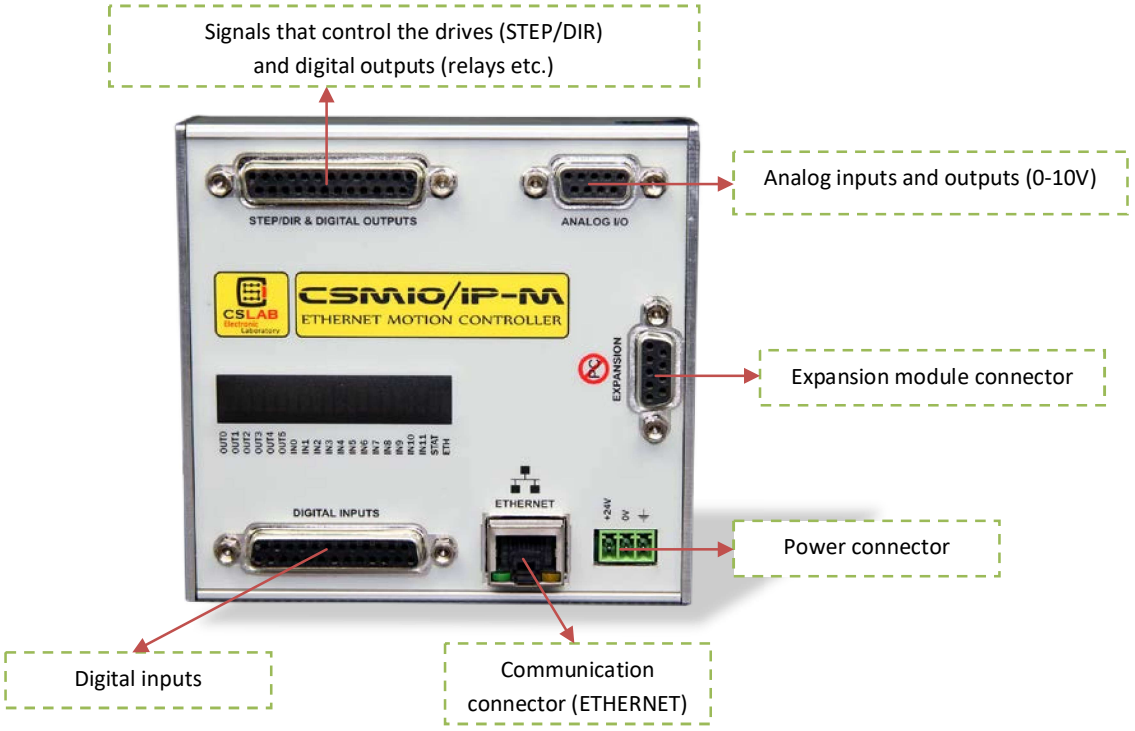
Here is an example of components arrangement in the control cabinet.



Caution is advised during the mechanical and electrical installation. Poorly tightened cable may cause many problems; it is also very difficult to find such a defect while launching/using the syst

4. Connectors, controls and electrical installation of the device

4.1 Arrangement of the connectors on the device



Detailed description of signals on individual connectors is in the following sec

DB->Terminal block modules have the same pin numbers as DB connectors in CSMIO/IP-M device. For example: the 15 pins of DB25 connector match with the 15 pins on the terminal block

Since 2015 th FP4 version for Mach4 and simCNC software support (FP4 sign placed on CSMIO/IP front panel)