

The task of this application is as follows:

For an existing Application which is driven by an three-phase a.c. motor a safety application shall be installed. Only the safety functionality shall be controlled by the easySafety.

The control of the application is not mentioned.

To protect the operator against injuries, the application shall be updated with a safety gate and an emergency stop function, without taking effect on the standard control function.

The emergency-stop function has to be provided with a 2 channel input circuit. The proper actuating of the emergency-stop has to be displayed on the device. Short circuit, cross circuit and wire breakage have to be discovered and the motor must be deactivated.

The safety gate of this application has to be provided with a 2 channel switch monitor. If the gate is opened, the motor must be deactivated immediately like in case of an emergency stop. Short circuit, cross circuit and wire breakage have to be discovered, too.

The motor is not allowed to run automatically after unlocking. For unlocking the main power circuit, a "Power on" push button has to be used by the operator. With this button, the operator gives the start instruction for the safety gate and emergency-stop functions.

To take no effect on the functionality of the application, the main power circuit has to be equipped with two power contactors. These contactors realize the power-down. To control the proper function of the "power on"-button, it has to be controlled, if it is going back to its original state before the actuating.

Also the it has to be monitored, if the power contactors have switched off safely before activating them for a new time.

The safety control relay has to be protected against program changes by a password.

This looks as follows in the electrical circuit diagram:

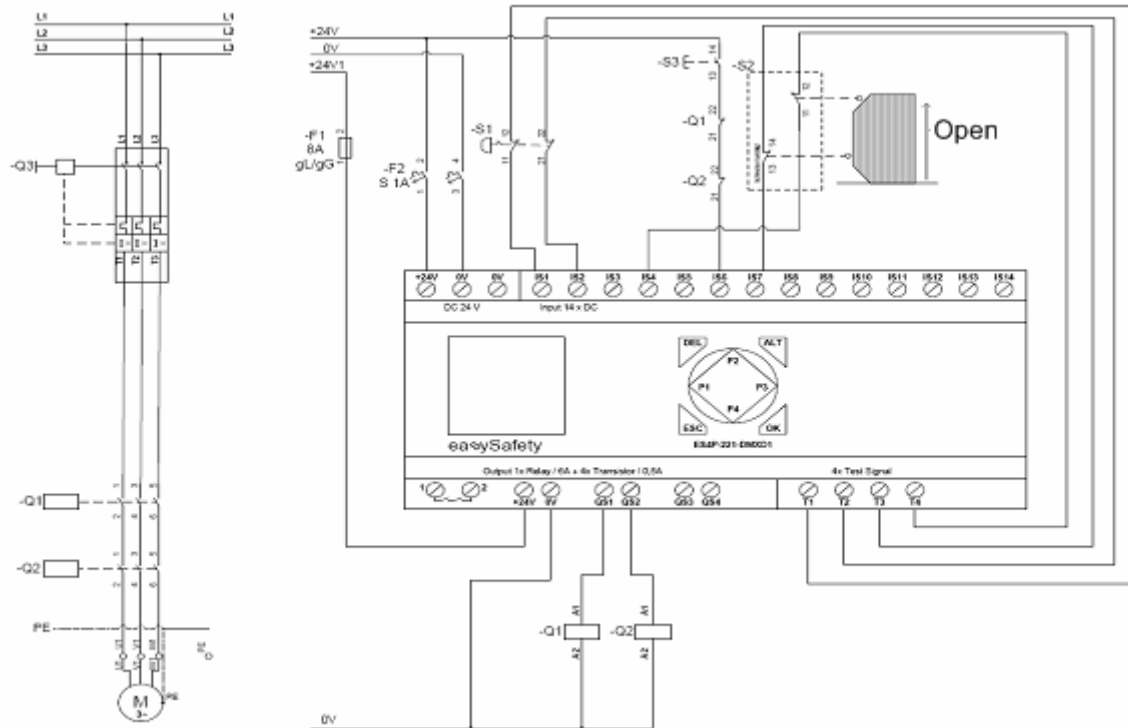


Figure 1:Electrical circuit diagram

Please note: The master-password for the downloadable example files is: "111111".