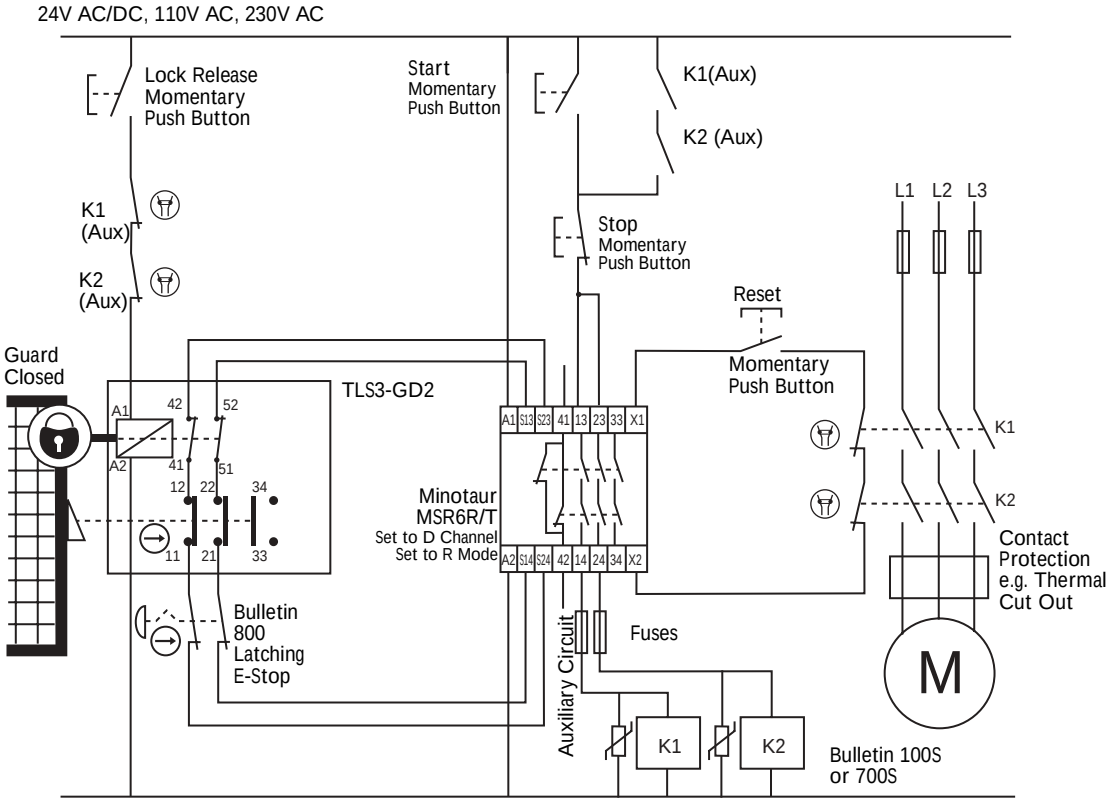


Circuit Status

Circuit shown with guard door closed and locked (solenoid not energized), ready for motor starting.

Operating Principle

Press the Reset button to energize the outputs of the MSR6R/T. Press and release the Start button to energize K1 and K2 and latch the motor on. The gate remains locked closed while the motor is running.
Press the Stop button to de-energize K1 and K2 and turn the motor off. The mechanically linked normally closed contacts of K1 and K2 complete the circuit to the Lock Release button. Press the Lock Release button to energize the solenoid of the TLS3-GD2 and open the gate. Opening the contacts in the TLS3-GD2 signals the MSR6R/T that the gate is open and prevents the motor from being restarted. To restart the motor, the gate must be closed, the Reset button pressed and released, and the Start button pressed.
The Bulletin 800 E-Stop can also be used to stop the motor.

Fault Detection

If either contactor K1or K2 sticks ON--the motor will stop on command but the guard cannot be opened (thus the fault is revealed to the operator).
A single fault which causes solenoid energization will initiate a STOP via contacts 41-42 & 51-52. A single fault within the Minotaur will prevent the closing of its outputs.
A single fault on the Minotaur input and output circuits will be detected and will result in the lock-out the system to a safe state (OFF) at the next operation of the respective input device.
An open circuit fault across the solenoid energization circuit will prevent guard opening (other than by the emergency release points on the TLS-GD2).

Comments

This system provides an interlock function of high integrity and is suitable for many high risk applications.
The solenoid is only energized when guard opening is required.
Additional safeguards must be provided to ensure that individuals are not locked in the hazard area.
Use the safety distance calculation [Ds = K(Ts + Tc +Tr) +Dpf].to ensure that the hazard is not reached before stopping. See Section 1, *Safety Principles*, for details.