

ROCKFORD SYSTEMS, LLC

INSTALLATION MANUAL FOR FERROCODE CODED MAGNETIC SAFETY SWITCH AND CONTROL UNIT

INTRODUCTION

This high-integrity system consists of an electromagnetically coded magnetic safety switch, actuator, and control unit. The switch and actuator can be used as a stand-alone system for low power, low risk machines or with the control unit for applications requiring a higher level of integrity. The control unit should be used when monitoring and checking of the circuit is required. The 115/230-V AC unit monitors and checks up to six coded magnetic safety switches (wired in series); the 24-V AC/DC unit monitors up to fifteen coded magnetic safety switches (wired in series). If a failure is detected in any switch or in the control unit at a machine off/on cycle, a stop signal will be sent to the guarded machine. The control unit also provided monitoring of the machine's control contactor.

The switch and actuator are completely sealed. There are no moving parts and no physical contact of the two are required. An anti-tamper code allows use only from the special actuator. The LED on the end of the sensor illuminates when the guard is closed.

INSTALLATION

Mount the switch and actuator on nonferrous materials using the screws provided. The gap between the switch and actuator should be 2 mm and should be parallel when the guards close (see Figure 1). When mounting more than one adjacent safety switch, make sure they are a minimum of 25 mm apart (see Figure 2). The control unit should be mounted on a 35-mm DIN rail (see Figure 3).

CAUTION

The actuator must not strike the sensor.

CAUTION

Use of anaerobic thread-locking compounds can have a detrimental affect if they come into contact with the plastic switch case.

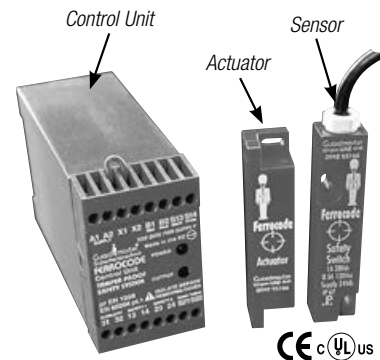


Figure 1

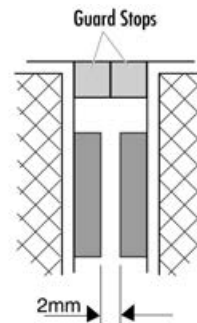


Figure 2

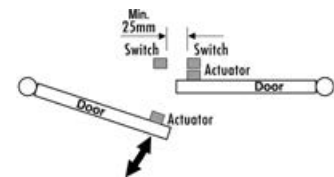


Figure 3

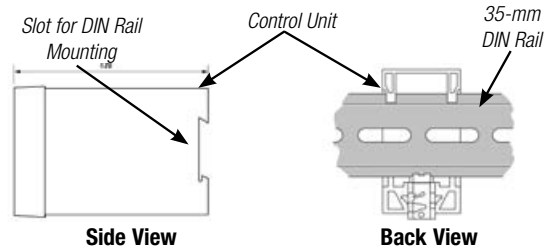
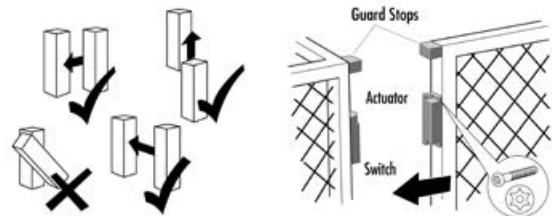


Figure 4—Mounting Configurations



FERROCODE CODED MAGNETIC SAFETY SWITCH AND CONTROL UNIT

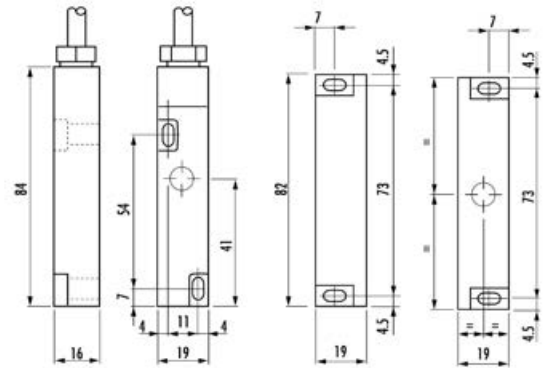
TECHNICAL SPECIFICATIONS

SENSOR AND ACTUATOR

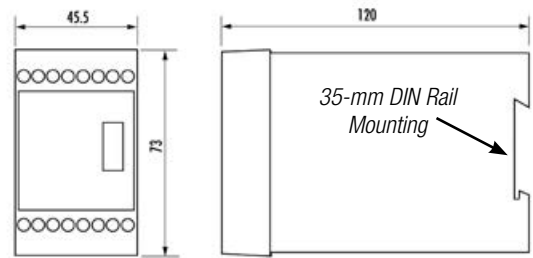
Supply Voltage.....	24 V DC
Supply Contacts.....	1 NO and 1 NC
Maximum Switching Ability.....	0.5 A @ 120 V AC
.....	1 A @ 28 V DC
Safety Contact Operating Distance	
.....	Make 0.28" (7 mm), Break 0.35" (9 mm)
Auxiliary Contact Operating Distance	
.....	Make 0.35" (9 mm), Break 0.55" (14 mm)
Case	Molded ABS plastic (red)
Operating Temperature	14° to 131°F (-10° to 55°C)
Cable	20 feet of prewired 6-conductor

CONTROL UNIT

Supply Voltage.....	24 V AC/DC or 115/230 V AC
Safety Inputs	1 NO and 1 NC
Relay Outputs	2 NO
Auxiliary Output	1 NC
Maximum Switching Ability.....	4 A @ 250 V AC
.....	2 A @ 30 V DC
Operating Temperature	14° to 131°F (-10° to 55°C)

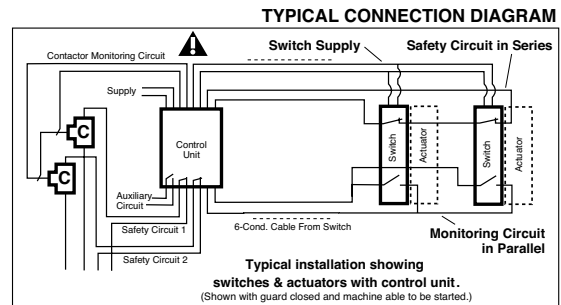
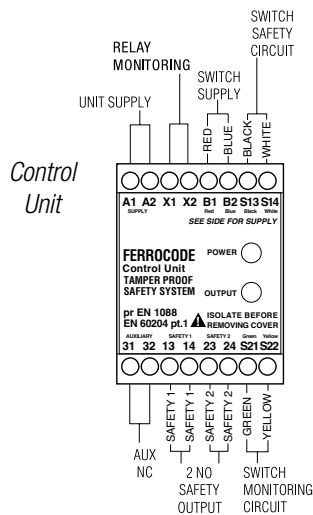


Switch Actuator
(Dimensions shown are in millimeters)

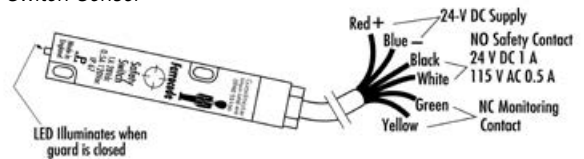


Control Unit

CONNECTION DIAGRAM



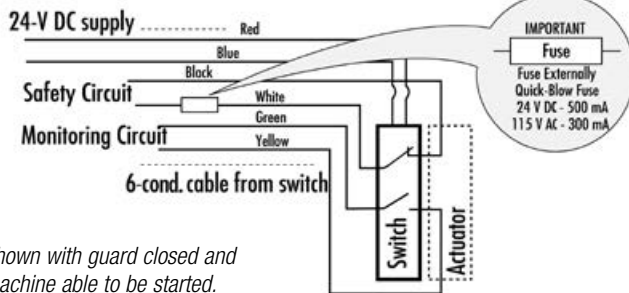
Switch Sensor



Safety contact is normally open (NO) when the actuator is not actuating the switch.

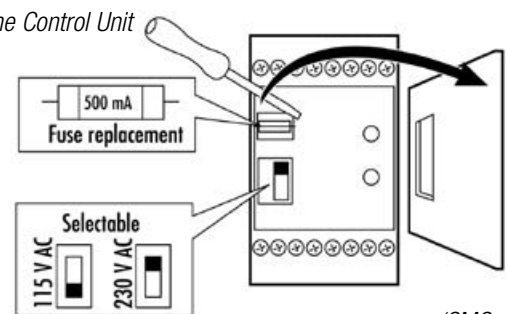
FUSE LOCATION

Without Using the Control Unit



Shown with guard closed and machine able to be started.

Using the Control Unit



(CMC-165 only)