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## Description

The Allen-Bradley Guardmaster Minotaur MSR125H/ HP is a logic unit for monitoring and interfacing two hand control devices with a safety related circuit. The MSR125H/ HP is for use with mechanical switches and the Allen-Bradley Bulletin 800 Z Zero-Force Touch Buttons.

The MSR125H/ HP has 2 N.O. safety outputs. The safety outputs have independent and redundant internal contacts to help ensure the safety function.

The MSR125H/ HP requires the two switches to be operated within 0.5 seconds of each other and will only authorize the O N state while both switches are held down. If one of the switches is released, the output goes to the OFF state and the machine cannot be restarted until both buttons are released and then operated simultaneously.

The MSR125H/ HP conforms to EN574 Category IIIC, which gives specific requirements for two hand control units and logic devices.

The MSR125H has fixed terminals and the MSR125HP has removable terminals.

## Features

- Category 4 per EN 954-1
- Safety category IIIc per EN 574
- Two-hand control unit
- 2 N.O. safety outputs
- Removable terminals
- 22.5 mm wide housing

Specifications

| Standards | EN 574, EN 954-1, ISO 13849-1, IEC/EN 60204-1, IEC 60947-4-1, IEC 60947-5-1, AN SI B11.19, AS4024.1 |
| :---: | :---: |
| Category | Cat. 4 per EN 954-1 (ISO 13849-1) <br> Cat. IIIC per EN 574 |
| Approvals | C-Tick, CE marked for all applicable directives, cULus \& BG |
| Power Supply | 24 V DC, 115V AC or 230 V AC |
| Power Consumption | 2W |
| Safety Inputs | 1 N.C. and 1 N.O. |
| Input Simultaneity | <0.5s |
| Maximum Input Resistance | 40 ohms |
| Reset | Automatic |
| O utputs | 2 N . O. Safety |
| O utput Utilization per IEC 60947-4-1 (Resistive) | $\begin{aligned} & \mathrm{AC}-1: 6 \mathrm{~A} / 250 \mathrm{~V} \text { AC } \\ & \mathrm{DC}-1: 6 \mathrm{~A} / 24 \mathrm{~V} D \end{aligned}$ |
| (1) 0 utput Utilization per IEC 60947-5-1 (Inductive) | $\begin{aligned} & \text { B300, AC-15 } \\ & \text { 6A/250V AC, 6A/125V AC } \\ & \text { P300, DC-13; 3A/24V DC } \\ & \text { 6A/24V DC @ } 6 \mathrm{ops} / \mathrm{min} \end{aligned}$ |
| Thermal C urrent (non switching) | $1 \times 6 \mathrm{~A}, 2 \times 4 \mathrm{~A}$ |
| Fuses O utput (external) | 6A slow blow or 10A quick blow |
| Min. Switched Current/Voltage | 10mA/10V |
| Power On Delay | 1 s |
| Response | 20 ms |
| Recovery Time | 500 ms |
| Indication LED s | $\begin{aligned} & \text { Green }=\text { Power on } \\ & \text { Green }=\text { CH1 O utput Active } \\ & \text { Green }=\text { CH2 O utput Active } \end{aligned}$ |
| Impulse W ithstand Voltage | 2500 V |
| O perating Temperature | $-5^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}\left(+23^{\circ}\right.$ to $\left.+131^{\circ} \mathrm{F}\right)$ |
| Humidity | 90\% RH |
| Enclosure Protection | IP40 (N EMA 1), DIN 0470 |
| Terminal Protection | IP20, DIN 0470 |
| Conductor Size | 0.2-4mm ${ }^{2}$ (24-12AW G) |
| Installation Group | C in accordance with VDE 0110 |
| Pollution D egree | 2 |
| Torque Settings- term. screws | 0.4-0.5N •m (3.54-4.43lb•in) |
| C ase Material | Polyamide PA 6.6 |
| Mounting | 35 mm DIN rail |
| Weight 24V DC 115 and 230V AC | $\begin{aligned} & 210 \mathrm{~g}(0.463 \mathrm{lbs}) \\ & 260 \mathrm{~g}(0.573 \mathrm{lbs}) \end{aligned}$ |
| $\begin{array}{r} \text { Electrical Life (w/Surge Supp.) } \\ 250 \mathrm{~V} A C / 6 A / 1500 \mathrm{VA} \cos \varphi=1 \\ 250 \mathrm{~V} \mathrm{AC} / 2.5 \mathrm{~A} / 625 \mathrm{VA} \cos \varphi=1 \\ 250 \mathrm{VAC} / 1.5 \mathrm{~A} / 375 \mathrm{VA} \cos \varphi=0.35 \\ 250 \mathrm{~V} A C / 5 \mathrm{~A} / 1250 \mathrm{VA} \cos \varphi=0.6 \\ 24 \mathrm{~V} D C / 2 \mathrm{~A} / 48 \mathrm{~W} \\ 10 \mathrm{~V} D C / 0.01 \mathrm{~A} / 0.1 \mathrm{~W} \end{array}$ | 100,000 operations 500,000 operations 300,000 operations 100,000 operations 1,000,000 operations 2,000,000 operations |
| Mechanical Life | 2,000,000 operations |
| Vibration | $0-55 \mathrm{~Hz} 0.35 \mathrm{~mm}$ |
| Shock | $10 \mathrm{~g}, 16 \mathrm{~ms}, 100$ shocks |

(1) See 0 utput Ratings on page 1-29 for details. C onsult factory for ratings not shown.

Product Selection

| Inputs | Input Buttons | Safety O utputs | Terminals | Power Supply | Catalogue Number |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1 \mathrm{~N} . \mathrm{C} . \\ & 1 \mathrm{~N} .0 . \end{aligned}$ | Mechanical or Bulletin $800 Z$ | 2 N. 0. | Removable MSR125HP | 24V DC | 440R-D23171 |
|  |  |  |  | 115 V AC | 440R-D23169 |
|  |  |  |  | 230 V AC | 440R-D23168 |
|  |  |  | Fixed MSR125H | 24V DC | 440R-D23166 |
|  |  |  |  | 115 V AC | 440R-D23164 |
|  |  |  |  | 230 V AC | 440R-D23163 |

Dimensions-mm (inches) Block Diagram


Typical Wiring Diagrams



Two-H and Control, Dual Channel, Auto Reset, Output M onitoring

