

I/A Series[®] Remote Terminal Unit (RTU) C50 Magnetically Latched Relay Module



The C50 Magnetically Latched Relay Output Module allows for the configuration of relay outputs as individual magnetically latched relays or setpoints of up to 12 bits (one bit per relay). Two pass operation, with built-in hardware checking ensures reliable control over the equipment.

The Digital Output subsystem provides security and control for latched digital outputs. This subsystem consists of: a logic board with an onboard microprocessor and security components; a relay module mounted on a motherboard; and a plug and terminal assembly.

FEATURES

- Intelligent high security control output logic boards
- 12 independent relays
- Run/Fail indicator
- Built-in hardware and software monitoring of all control operations
- Control Isolate/Enable switch per output module
- Removable plug-connected termination board, which allows the logic card to be removed without disconnecting the field wiring
- Each output has a disconnect link with test points on either side
- Control security: Performs check before operation



Product Specifications



Figure 1. C50 Magnetically Latched Relay Module Functional Block Diagram

Digital Output Subsystem

The digital output subsystem is based on an intelligent output logic board containing relay drivers, an associated relay mother board and a termination board.

The Magnetically Latched Relay Module contains source and sink drivers for the 12 magnetically latched relays, as shown in Figure 1.



Figure 2. Front Panel

Physical Size

233.4 mm x 160 mm

Processor Type

Z80 interfaces to Electrobus via shared RAM

Number of Relays

12

Terminals

Two terminals per relay with test points and isolation links

ENVIRONMENTAL SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Ambient Temperature

0°C to 60°C (optional -20°C to 60°C)

Module Function

The module contains an onboard microprocessor, with associated RAM and ROM. Configuration data from the Master Processor Module determines the treatment of each output point by the processor.

A Control **Isolate/Enable** switch on the front panel (see Figure 2) allows servicing of the controlled equipment without risking remote operation. An external switch may also be wired from the power supply to simultaneously disable all digital output boards.

Two Pass Operation

During Pass 1, the onboard microprocessor accepts command data from the Master Processor Module through shared memory. The validity of the command is confirmed and a hardware check is done on the output driver circuits. If all tests succeed, feedback of the command is sent to the Master Processor Module.

During Pass 2, the Master Processor Module sends the execute command and the C50 Magnetically Latched Relay Module drives the required relays.

Mounting Arrangement

Relays are mounted on a removable motherboard

Control Isolate/Enable Switch

Mounted on front assembly. May also be controlled and isolated by a remote switch connected to the Power Supply Module

Humidity

10% to 95% RH (non-condensing)

FUNCTIONAL SPECIFICATIONS

Power Requirements

450 mA @ 5 V dc

Output Types

Digital Setpoint (Latching)

Isolation

2 kV rms, for 1 minute output to frame 1 kV rms, for 1 minute across open contacts 2 kV rms, for 1 minute between outputs

Transient Protection

Meets ANSI C37.90.1-1974; IEC 255-4 Class 3; IEC 255H22-4; IEC 801-4 - From Disk

MAGNETICALLY LATCHED RELAY MOTHERBOARD

Functional Specification

CONTACT RATING 5 A, 30 V dc or 240 V ac, resistive 1 A, 40 V dc, inductive 100 mA, 110 V dc, inductive RELAY COIL CURRENT 90 mA

Physical Specification

CONTACT ARRANGEMENT Output is a single pole N/O relay, with contacts connected in series to boost dc ratings

ORDERING INFORMATION	
Part Number	Description
0303383	Control Output Logic Board
0303386	Magnetically Latched Relay Motherboard
0303355	Termination Board
1050024	Control Output Firmware

NOTE

Control Output firmware must be inserted in Control Output Logic Board.

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