

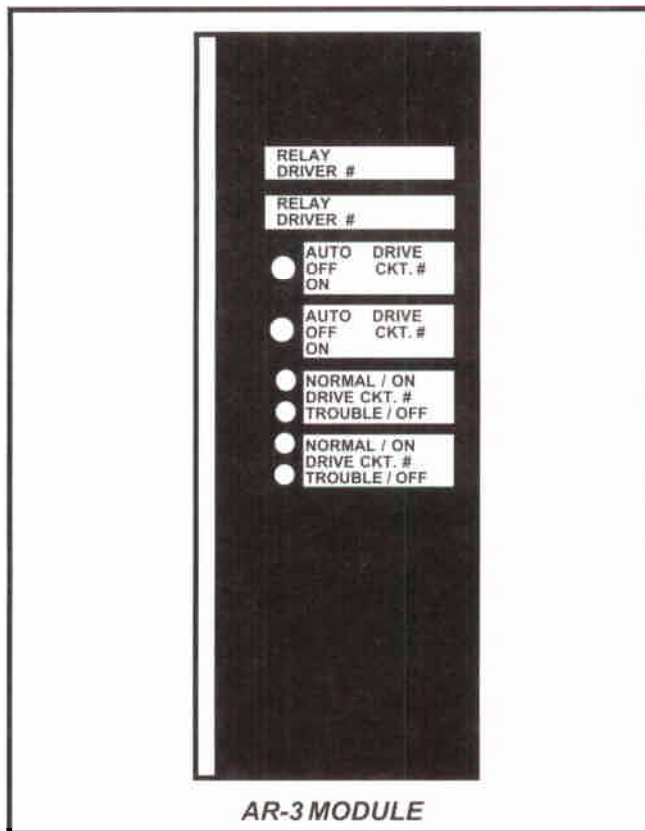
**FEATURES**

- UL listed, File #S405, Standard #864 under the MPC-2000 system control unit
- Dual supervised auxiliary relay drive circuits Class "B" (Style "Y")
- Individually software programmable drives
- On/Off/Automatic switch per drive circuit
- Normal/On/Trouble/Off indications per circuit
- Custom labeling area per drive circuit on module front
- Power limited with built-in transient protection
- Automatic disconnect circuitry upon short circuit detection
- Software selectable individual time delay on/automatic cutoff
- Capacity up to 2.5 Amp. @ 24VDC per module
- EOL resistors supplied with module
- IBEW/USA Quality crafted

**GENERAL**

The AR-3 dual relay driver module provides for the supervision and operation of two "2-wire" / Class "B" (Style "Y") field auxiliary relay circuits. These two circuits are commonly powered but are individually programmable. The AR-3 module supervises all circuits individually for field wiring faults such as open circuits, short circuits, and positive/negative ground conditions. Each circuit is capable of powering compatible listed 24VDC polarized parallel auxiliary relay devices. Each relay driver circuit also provides access to software enable timing formats. Each circuit has an associated on/off/automatic selector switch as well as a green "normal" LED, a red "on" LED and a yellow "trouble/off" LED indicator on the module front. A custom labeling area is provided adjacent to the switches and indicators for proper identification of field circuits. All relay circuit wiring is power limited thus eliminating the necessity of externally fusing the wiring and allowing for the use of power limited cabling. Field wiring connections are made via pressure type screw terminals to insure positive connections.

The AR-3 module includes a supervisory network to detect open circuits, grounded wiring faults and shorted circuits. In the event that a shorted circuit is detected, the module will automatically disconnect the effected circuit so that system power supply shutdown will not occur thus rendering any other circuits non-operable. Detection of any fault condition will light the appropriate yellow circuit "trouble" LED as well as activate the MPC-2000's system trouble circuitry and system status display(s). In the activated condition (automatically thru system alarm software or manually via "on" switch position) the appropriate relay drive circuit(s) will reverse polarity and operate all associated auxiliary relays. The appropriate operated driver circuit's green "normal" LED will change to the red "on" status indication. If the circuit is then forced off via the "off" switch position, the LED will again return to the green "normal" status indication. The circuit's yellow "off" LED will also illuminate thus indicating the "off-normal" bypassed condition.



**DESCRIPTION**

The AR-3 dual auxiliary relay driver circuit module serves as the focal point of supervision and alarm activation for two independent relay drive circuits. All field mounted auxiliary relays are connected to the AR-3 module(s) via monitored "hard wired" loops. The module constantly checks this wiring for opens, shorts and positive/negative ground fault conditions and reports these status' as trouble conditions. If a short circuit condition is found by the automatic sensing circuitry, the effected circuit will be automatically removed from the system so that other circuits will not be affected. The AR-3 module will operate on an alarm condition automatically as directed by the system programming stored in the MPC-2000's CU-2 control module, or manually by the "on" position of the associated circuit control switch. In addition, the appropriate relay drive circuit may be cutoff or by-passed via the "off " position of the associated circuit control switch. Drive circuit status indications are provided for "normal" (standby), "on" (activated), "off" (by-passed), and "trouble" (open, short, ground) conditions by circuit.

**ORDERING**

Model #	Part #	Description
AR-3	401318	Dual Auxiliary Relay Driver Circuit Module

**COMPATIBLE DEVICES**

Model #	Part #	Description
R711-1	R711-1	Remote Polarized Control Relay Unit

## APPLICATION

- 1.) When using supervised auxiliary relay driver circuits, it is recommended that system software programming be tailored so that driver circuits:
  - A.) Operate continuously upon alarm
  - B.) Not be operated during drill test
  - C.) Not be operated during recall
  - D.) Not be "silenceable" via alarm silence switch
- 2.) The AR-3 module is a "non-powered" driver circuit hence relay operating power must be bussed into it from an AP-5 power supply module. This format allows for extended capacity (up to 2.5 Amp. @ 24VDC) and maximum flexibility in system power supply assignments.
- 3.) Shielded wire is not required on this system and in most cases will cause more problems than it prevents. Faraday alarm equipment is designed with built-in transient suppression networks thus negating the requirements of shielded cabling.

4.) Never run low voltage relay wiring in the same conduit with high voltage power wiring. Most electrical codes will not permit this as it can cause problems with any low voltage system.

5.) In addition to the basic features described in this data sheet, many other relay driver circuit features and functions are available through the use of system software. Consult the MPC-2000 owner's/programmer's manual for additional information.

## TECHNICAL

**Power Provision:** Combined each module: Up to 2.5 Amp. @ 24VDC Max. unfiltered, unregulated, power limited and non-resettable. Must be sourced from an AP-5 power supply module.

**Power Consumption:** Alarm - .085 Amp  
Standby - .025 Amp.

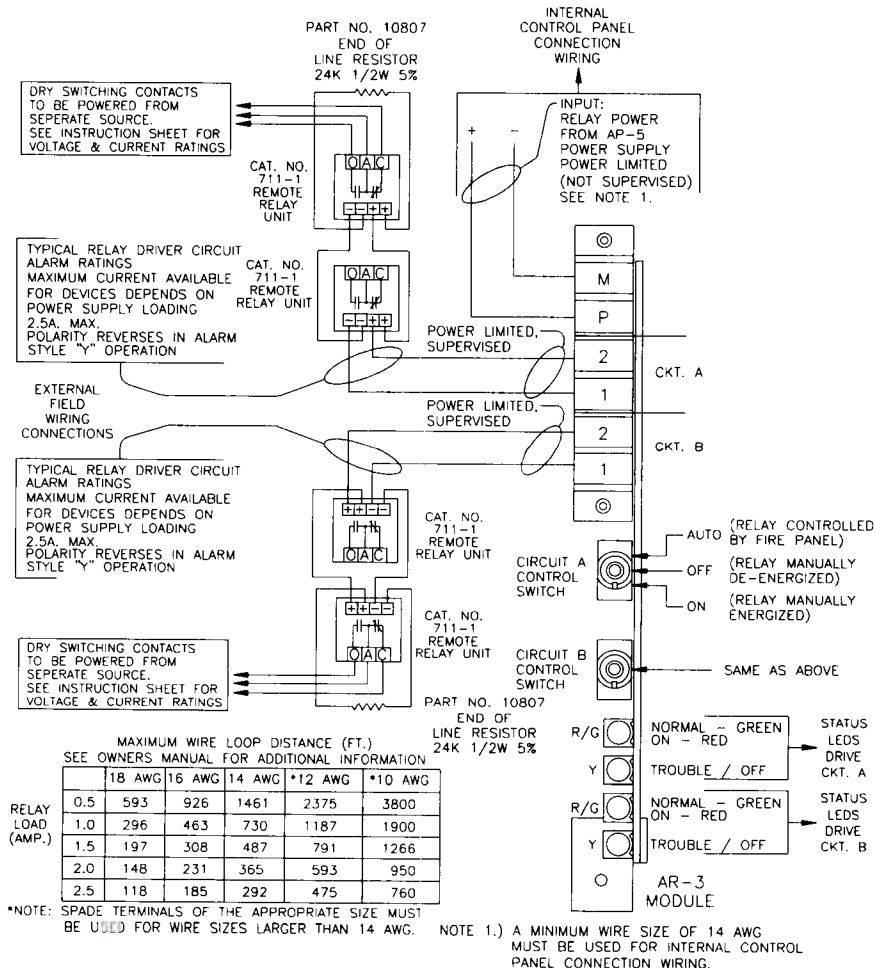
**Space Provision:** None

**Space Consumption:** (1) Module Space

**Channel Provision:** None

**Channel Consumption:** (2) Circuits on the output (indicating) channel

### TYPICAL WIRING



**WARNING** - The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information, are provided with the product and are available from the Manufacturer. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

