

MicroPAQ-940R Control Output Module



Control Expansion for MicroPAQ-940P and ePAQ-9410/20

The MicroPAQ-940R is a microprocessor-controlled expansion module for the MicroPAQ-940P and ePAQ-9410/20, providing up to eight momentary or four latching relay outputs (four control points).

Each control point consists of two functions: “Trip” (Off) and “Close” (On). Two control points are available at TB1, and two control points at TB2. Each control point can be a “momentary” or “latching” control point. A momentary control point consists of two momentary relays. Each momentary relay has a single coil to energize that specific relay. There is one relay for a “trip” function, and one relay for a “close” function. A latching control point consists of a single latching relay, having two coils (reset/set) in the same relay. The “reset” coil in the latching relay is for “trip” functions, and the “set” coil in the latching relay is for “close” functions.

Whether momentary, or latching, each relay consists of a Form 1C contact set (SPDT) that is accessible at terminal blocks TB1 and TB2. Control point output connections are made via 5.08mm plug-in terminal blocks. The terminal blocks can accommodate up to 12 AWG wire. See the Specification section of this guide for relay contact ratings.

Each MicroPAQ-940R module includes an RS-422 port for communications with the MicroPAQ-940P Main Processor Module. The RS-422 port uses two RJ45 connectors, allowing multiple -940R modules to be daisy chained together, along with other types of expansion modules.

A bank of 8 dip switches on each module allows for addressing of up to 256 modules, for a total capacity of up to 1024 control points (256 x 4). LED indicators are included for relay “on” indication, unit diagnostics, and RS-422 communications.

- **Each Relay Output Assembly (ROP) contains 8 (KUP) Relays (4 trip/close pairs) or 8 Magnetically Latching (KUL) Relays**
- **DIN rail or panel mountable**
- **Expansion of up to 256 modules (4 Control Points) per each Micro-PAQ940R Board (for up to 1,024 Control Points)**
- **Communications: Each MicroPAQ-940R has RS 422 communication lines. (for communication with MicroPAQ-940P or ePAQ-9410/20)**
- **Input Voltage: 24 VDC Nominal**

SPECIFICATIONS

Control Outputs	The MicroPAQ-940R includes 4 control points. Each control point consists of two functions: "Trip" (Off) and "Close" (ON). Two control points are available at TB1, and two control points are available at TB2. Each control Point can be a "momentary" or "latching" control point.
Relay Ratings	Momentary: 10 Amps on N.O. contact (momentary closure). 5 Amps on N.C contact. Latching: 5 Amps both contacts. Momentary/Latching Voltage Rating: 250VAC or 30Vdc
Placement	Din Rail or Panel Mounted MicroPAQ-940R may be stacked at one location or distributed via RS-422 links where Control outputs are required.
Isolation	Inputs are isolated from logic circuits using optical isolation and DC-DC Converters Minimum 2KV RMS (analog input to logic isolation) SWC/fast transient – IEEE C. 37.90.1, IEEE Standard 1613-2009 Power line surge – IEC 1000-4-2 Electromagnetic emissions – FCC Part 15, Class B Electromagnetic compatibility – ED 61000-4-3 Dielectric rating – 1000 Vdc, on all inputs Overload rating 500 Vdc (common mode to ground)
Configuration	Configured via MicroPAQ-940P or ePAQ-9410/20
Baud Rate	115.2 kbit
Ports	RS-422 Port (non-isolated). Two 8-pin RJ45 jacks in parallel provided for daisy-chaining multiple I/O modules. Baud rate is 115.2kbit. Plug-in jumpers J3 (TX) and J4 (RX) provide 120 ohm termination resistors as Necessary (jumper IN=termination provided).
Power	24 Vdc nominal The MicroPAQ-940P can power a single MicroPAQ-940R Module without the need for an external power supply For powering one or more modules, the MicroPAQ-940R can accept an isolated +24Vdc input nominal.
LED Indicators	Three (3) LED front panel indicators to monitor power, communications and central processor health and the local/remote status. Each control point has an LED to show when the relay coil is energized.
Physical	5.45"H X 4.13 "W X 2.5"D
Environment	-40° to +85°C, (-40° to 175°F) 0-95% humidity (non-condensing)

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