The RightTrack RT10 Controller and RT10 Expander are designed to facilitate the monitoring of discrete inputs and the control of discrete outputs, communicating with a host system via an Ethernet network. The modules are both economical and compact, and mount easily to a standard DIN rail.

The RT10 Controller provides 18 open drain outputs and 18 discrete inputs that can be software configured for either supervised or non-supervised operation. With terminating resistors installed, supervised inputs can detect both open circuit and short circuit faults, and can monitor the status of either one or two switches* (allowing up to 36 switches to be monitored).

The RT10 controller also includes an Ethernet port and a 200 MHz ARM9 processor (that runs the Linux operating system), and provides supply circuitry for powering up to three RT10 Expanders.

RT10 Expanders are simply “daisy-chained” (one after the other) to an RT10 Controller, with each expander providing an additional 24 outputs and 24 inputs. A total of 90 discrete outputs and 90 discrete inputs (supporting up to 180 switches) can therefore be managed by an RT10 system.

**Features**

- an RT10 Controller/Expander provides 18/24 supervised or non-supervised inputs
- with terminating resistors, each supervised input can monitor one or two discrete contacts
- supervised inputs detect open and short circuit faults in the field wiring
- 2000V transient protection on all inputs
- an RT10 Controller/Expander provides 18/24 current sinking outputs
- current limit protection on all outputs
- terminal blocks provide reliable termination of input and output wiring
- up to three RT10 Expanders can be connected to an RT10 controller
- modular architecture allows expander modules to be easily connected to the controller or other expander module

* when using two switches on a supervised input both switches must be momentary switches.

**Specifications**

**Physical**

| Physical | 2.40” H $\times$ 3.54” W $\times$ 4.25” D (61 x 90 x 108 mm) |

**Environmental**

- Operating Temperature: 32 to 122 °F (0 to 50 °C)
- Storage Temperature: -40 to 158 °F (-40 to 70 °C)
- Humidity: 0 to 95 % non-condensing

**Power Supply**

- 24 Vdc -10% + 10% @ 0.25A

**Field Connections**

<table>
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<tr>
<th>Input</th>
<th>screw terminal</th>
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</thead>
<tbody>
<tr>
<td>Output</td>
<td>screw terminals</td>
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<tr>
<td>Network</td>
<td>RJ-45 Ethernet connection</td>
</tr>
<tr>
<td>Power</td>
<td>screw terminal</td>
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</tbody>
</table>

**I/O Capacity Controller**

- 18 supervised inputs
- 18 outputs

**I/O Capacity Expander**

- 24 supervised inputs
- 24 outputs

**Output - open drain output**

- voltage: 30 Vdc max
- current sinking: 250 mA max
Ordering Information

Part number  RT10-AB
A  Controller or Expander unit
    0  Controller
    1  Expander
B  Termination
    0  Standard Switch Inputs
    9  Custom