



Mixed I/O Module
HE500OCS035 / HE500OCS065
HE500RCS065
12/24 Vdc In, Positive/Negative Logic
3A Relay Out

Mini OCS/RCS

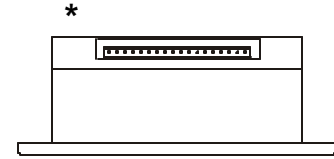
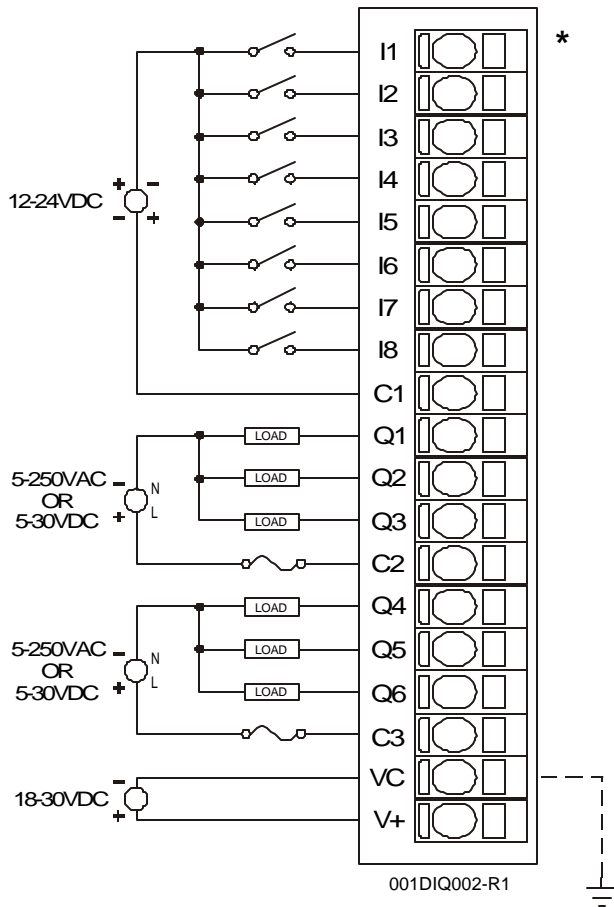
1 SPECIFICATIONS

| INPUT | | | |
|--|------------|---------------------|------------|
| Inputs per Module | 8 isolated | Input Impedance | > 10K Ohms |
| Commons per Module | 1 | Minimum ON Current | 1mA |
| Input Voltage Range | 12/24VDC | Maximum OFF Current | 200µA |
| Peak Voltage | 35VDC Max. | OFF to ON Response | 1ms. |
| ON Voltage level | Min. 9VDC | ON to OFF Response | 1ms. |
| OFF Voltage level | Max. 3VDC | | |
| Isolation (Common to Common and Channel to Common) | 500VDC | Status Indicator | 8 |

| OUTPUT | | | |
|--|---------------------|--|----------------|
| Outputs per Module | 6 relay | Maximum Leakage Current | 5µA |
| Commons per Module | 2 | Maximum Inrush Current | 3A per channel |
| Output Type | Relay | Minimum Load | None |
| Coil Voltage | 18-30VDC | OFF to ON Response | 6ms. Typical |
| Contact Voltage | 250VAC / 30VDC Max. | ON to OFF Response | .3ms. Typical |
| ON Voltage drop | 0.2V Max. | Status Indicator | 6 |
| Fuses | 10A common | | |
| Maximum Load current (resistive) per channel | 3A | Isolation (Common to Common and Channel to Common) | 500VDC |

| General Specifications | | | |
|-------------------------------|---|-----------------------|-------------------------|
| Required Power (Steady State) | 4.8W (200mA @ 24VDC) | Operating Temperature | 0° to 50° Celsius |
| Required Power (Inrush) | 900mA max. @ 24VDC for 1ms. | Terminal Type | Spring Clamp, Removable |
| Relative Humidity | 5 to 95% Non-condensing | Weight | 9 oz. (256 g) |
| CE | See Compliance Table at http://www.heapg.com/Support/compliance.htm | | |
| UL | | | |

2 WIRING



Mini Bottom View – Shows corresponding I/O pin location

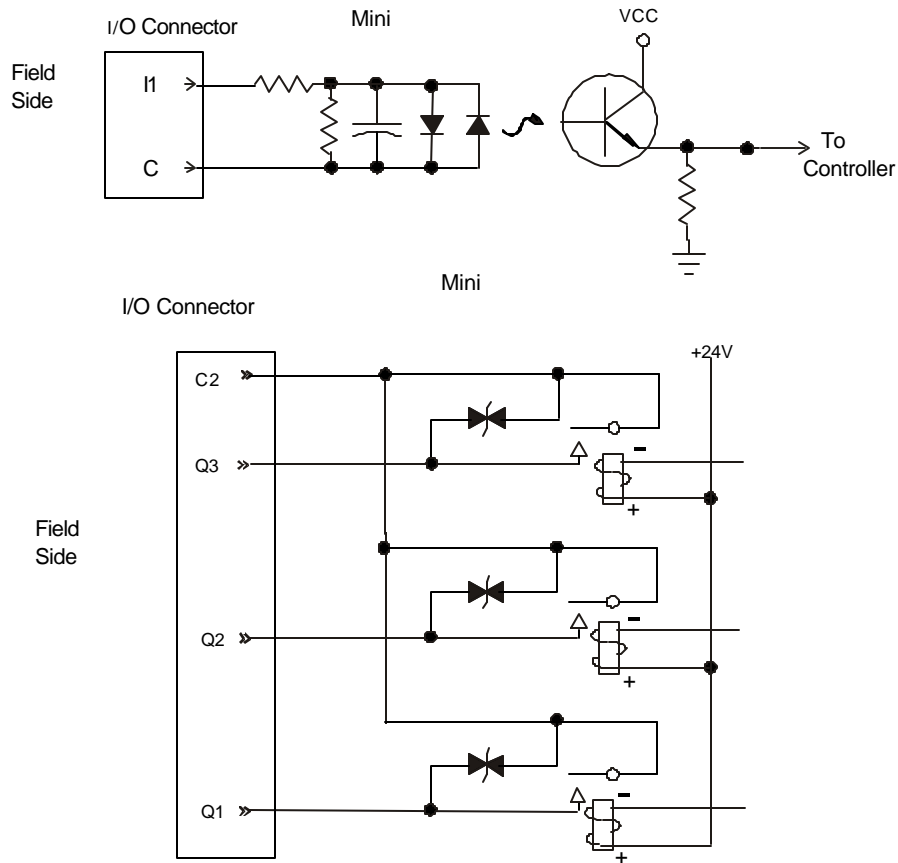
| Pin | Signal |
|-----|---------------------------|
| I1 | Input 1 |
| I2 | Input 2 |
| I3 | Input 3 |
| I4 | Input 4 |
| I5 | Input 5 |
| I6 | Input 6 |
| I7 | Input 7 |
| I8 | Input 8 |
| C1 | Common 1 |
| Q1 | Output 1 |
| Q2 | Output 2 |
| Q3 | Output 3 |
| C2 | Common 2 |
| Q4 | Output 4 |
| Q5 | Output 5 |
| Q6 | Output 6 |
| C3 | Common 3 |
| VC | Relay Coil Voltage Common |
| V+ | Relay Coil Voltage + |

Warning: To protect the module and associated wiring from load faults, use external fuses (10 A) as shown. This warning affects Mini OCS035 / OCS065, Revisions E or higher and all versions of the Mini RCS065.

Warning: Connecting high voltage to any I/O pin may cause high voltage to appear at other I/O pins.

Warning: Wiring the line side of the AC source to loads connected to outputs 1 through 6 and the neutral side of the AC source to the output common(s) would create a Negative Logic condition, which may be considered an unsafe practice.

3 INTERNAL CIRCUIT SCHEMATIC



Specification for transient voltage suppressors (transorbs) used on output circuitry is 400VDC, bi-directional 400 watts.

Electro-mechanical relays comply with IEC1131-2.

4 CONFIGURATION

Note: The status of the I/O can be monitored in Cscope Software.

Selecting the **I/O Map** tab provides information about the I/O registers. The I/O Map is not edited by the user.

The **Module Setup** is used in applications where it is necessary to change the default states of the outputs when the controller (e.g., OCS100) enters idle/stop mode. The default turns the outputs OFF when the controller enters idle/stop mode. By selecting the Module Setup tab, each output can be set to either turn ON, turn OFF or to hold the last state. Generally, most applications use the default settings.

Warning: The default turns the outputs OFF when the controller enters idle/stop mode. To avoid injury of personnel or damages to equipment, exercise extreme caution when changing the default setting using the **Module Setup** tab.

5 INSTALLATION / SAFETY

Warning: Previous versions of this product provided internal fuses on the output circuits (relay contacts). Due to CE Low Voltage Directive (LVD) marking requirements, these fuses have been removed and replaced with solid wire. Therefore, it is now the responsibility of the user of this equipment to ensure that adequate fusing is installed *externally* on each relay output circuit.

- a. All applicable codes and standards are to be followed in the installation of this product.
- b. Use the following wire type or equivalent: Belden 8917, 16 AWG or larger.

For detailed installation information, refer to Mini Hardware Manual. A handy checklist is provided that covers panel box layout requirements and minimum clearances.

When found on the product, the following symbols specify:



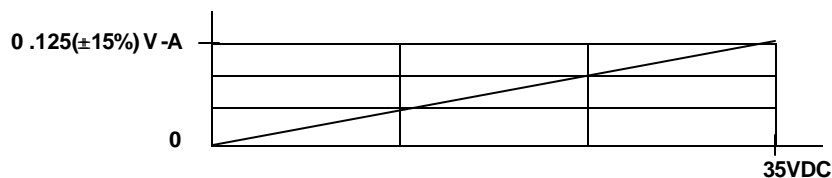
Warning: Consult user documentation.



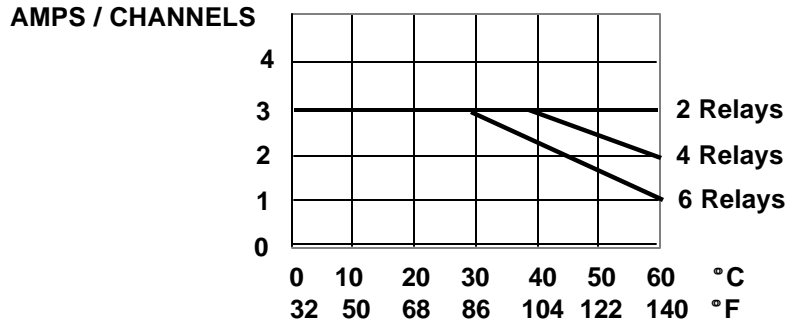
Warning: Electrical Shock Hazard.

6 INPUT / OUTPUT CHARACTERISTICS

Digital Input Chart



Derating Output Chart



| Typical Relay Life | | | |
|---------------------|--------------|-------|-------|
| Voltage (Resistive) | Load Current | | |
| | 1 Amp | 2 Amp | 3 Amp |
| 30VDC | 600K | 250K | 125K |
| 125VAC | 750K | 300K | 150K |
| 250VAC | 500K | 200K | 100K |

7 TECHNICAL SUPPORT

For assistance, contact Technical Support at the following locations.
Please visit our website for manual updates.

North America:
(317) 916-4274
www.heapg.com

Europe:
(+) 353-21-4321-266
www.horner-apg.com

NOTES