

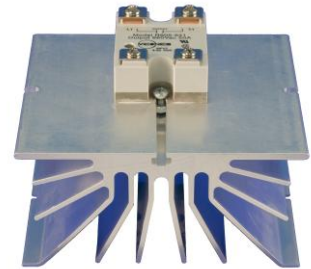


R810 SERIES REV2 POWER SWITCHING MODULES SOLID STATE RELAYS (SSR'S)

Product overview

The Viconics **R810** series power switching modules are designed for cost effective, precise modulation of electric loads for most electric heating applications.
(Applicable on resistive loads only)

The **R810** series consists of SSR's (solid state relays), c/w factory assembled heatsink for surface or in-panel mounting.



Models available

Part No.	Voltage	Phase	Current
R810-211-REV2	240 Volts	1	10 Amp
R810-213-REV2	240 Volts	3	10 Amp
R810-321-REV2	347 Volts	1	25 Amp
R810-323-REV2	347 Volts	3	25 Amp
R810-341-REV2	347 Volts	1	45 Amp
R810-343-REV2	347 Volts	3	45 Amp
R810-421-REV2	480 Volts	1	25 Amp
R810-423-REV2	480 Volts	3	25 Amp
R810-441-REV2	480 Volts	1	45 Amp
R810-443-REV2	480 Volts	3	45 Amp
R810-471-REV2	480 Volts	1	75 Amp
R810-621-REV2	600 Volts	1	25 Amp
R810-623-REV2	600 Volts	3	25 Amp
R810-641-REV2	600 Volts	1	45 Amp
R810-643-REV2	600 Volts	3	45 Amp
R810-671-REV2	600 Volts	1	75 Amp

Features

Feature	Benefit
⇒ Complete assembly with factory installed heat sink.	⇒ Reduced total installation cost
⇒ Designed for surface or panel mounting	⇒ Covers wider array of application with same component.
⇒ UL Recognized	⇒ Easily integrated into complete assembly requiring industry listings.
⇒ Status LED	⇒ Quick field troubleshooting.
⇒ High quality assembly with 2 year warranty	⇒ Reduced field service calls.
⇒ Full line of matching peripheral temperature controllers	⇒ Simplified component sourcing and matching for reliable operation

Power modules installation

Important:

- All external safety devices like: contactors, relays, flow switch & thermal protections are to be supplied and installed by other.
- When the modules are installed inside a panel, the enclosure needs to be adequately louvered for proper ventilation and heat dissipation. Call the factory for the derating amperage curves for these specific applications.
- Electronic controls require special care for wiring and startup. To avoid problems, carefully follow the procedures below.

Look at the wiring diagrams, and study them carefully. Be sure that you understand how the system is supposed to work.

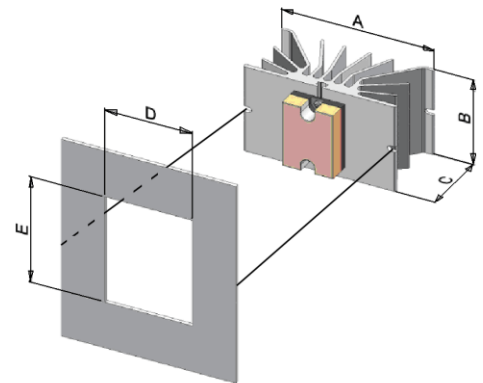
A) Location:

- 1- Can be installed inside a louvered approved cabinet or with the heatsink mounted externally.
- 2- Must be installed away from excessive heat source.
- 3- Nothing must restrain air circulation to the heatsink.

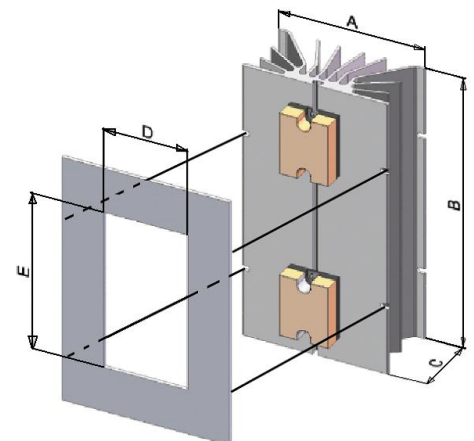
B) Installation:

- 1- Mounting instructions & templates are available from the factory.
- 2- If installed completely inside a cabinet, use the mounting tabs on the heatsink to secure the power module to the back plate of the panel.
- 3- If installed with heatsink outside the cabinet, use the proper model mounting template for the cut out dimensions and to check for mounting obstructions.
- 4- Respect mounting orientation (this side up).
- 5- Mount the heatsink vertically on the side of the cabinet for proper heat dissipation.
- 6- If mounted on top or bottom of the cabinet, derate maximum usable amperage by 25%.
- 7- Do not relocate the power switching modules on the heatsink.

R810 single phase	A	B	C	D	E	Weight (lbs)
R810-211-REV2	5.25 "	3.00 "	2.56"	3.00 "	3.75 "	1.80
R810-321-REV2	5.25 "	3.00 "	2.56"	3.00 "	3.75 "	1.80
R810-341-REV2	5.25 "	6.50 "	2.56"	3.00 "	3.75 "	2.40
R810-421-REV2	5.25 "	3.00 "	2.56"	3.00 "	3.75 "	1.80
R810-441-REV2	5.25 "	6.50 "	2.56"	3.00 "	3.75 "	2.40
R810-471-REV2	5.25 "	10.00 "	2.56"	3.00 "	3.75 "	3.50
R810-621-REV2	5.25 "	3.00 "	2.56"	3.00 "	3.75 "	1.80
R810-641-REV2	5.25 "	6.50 "	2.56"	3.00 "	3.75 "	2.40
R810-671-REV2	5.25 "	10.00 "	2.56"	3.00 "	3.75 "	3.50

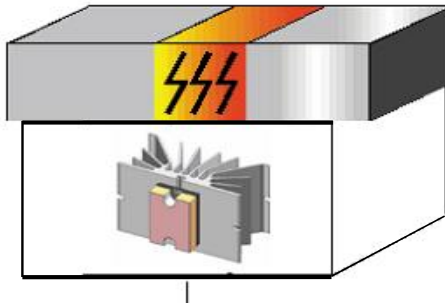


R810 three phase	A	B	C	D	E	Weight (lbs)
R810-213-REV2	5.25 "	6.50 "	2.56"	3.00 "	5.75 "	2.60
R810-323-REV2	5.25 "	10.00 "	2.56"	3.00 "	5.75 "	3.70
R810-343-REV2	5.25 "	10.00 "	2.56"	3.00 "	5.75 "	3.70
R810-423-REV2	5.25 "	6.50 "	2.56"	3.00 "	5.75 "	2.65
R810-443-REV2	5.25 "	10.00 "	2.56"	3.00 "	5.75 "	3.70
R810-623-REV2	5.25 "	6.50 "	2.56"	3.00 "	5.75 "	2.65
R810-643-REV2	5.25 "	10.00 "	2.56"	3.00 "	5.75 "	3.70



Typical applications and wiring

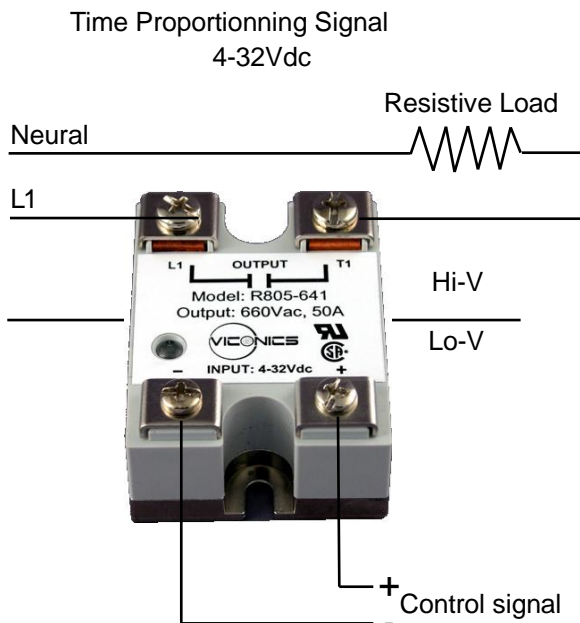
R810 SSR (Solid State Relay) Power Switching Modules For Temperature Control Of Resistive Electric Heaters.



Pulsed signal from room thermostat
OR
Pulsed signal from BAS controller

- 4-32Vdc Pulsed Time Proportioning output
- 24Vac Pulsed Time Proportioning output if used with the C24 module

Wiring



Optional: 24Vac Signal

For 24Vac signals, a converter must be used.

Converter model: C24

Converter mounting:



High voltage wiring

General cautions:

- High voltages are present on the terminals of these devices. Please read all the instruction in this manual carefully.
- The 45 & 75 Amps models need to be wired with the supplied high voltage lugs. **Attach the wire to the lug first** then screw the lug to the power module.
- Have the wiring done by a qualified and skilled professional.
- High voltage and amperage can be fatal.
- All wiring must conform to national electrical code regulations.
- The instrument must be wired before applying power.
- Protect circuits with semi conductor fuses.
- For in panel installation, derating amperage curves are available from the factory.

Specifications

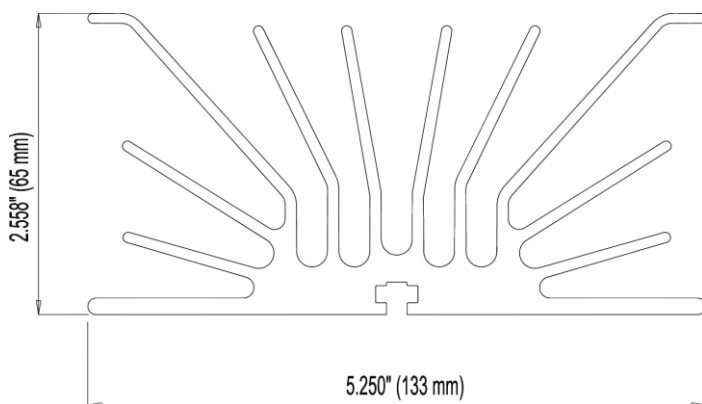
Operating Conditions: 0°C to 80°C (32°F to 176°F)
 0 % to 95 % R.H. non-condensing
See power derating curves document

Power supply: 4-32 Vdc time proportioning signal into 2KΩ resistance.

With C24 module:
 24 Vac -15%, +10% 50/60 Hz; 25 mA

Drawing and Dimensions

R810	Heatsink Length	Shipping weight (lbs)
R810-211-REV2	3.0 " (76mm)	1.80
R810-321-REV2	3.0 " (76mm)	1.80
R810-341-REV2	6.5 " (165mm)	2.40
R810-421-REV2	3.0 " (76mm)	1.80
R810-441-REV2	6.5 " (165mm)	2.40
R810-471-REV2	10.0 " (254mm)	3.50
R810-621-REV2	3.0 " (76mm)	1.80
R810-641-REV2	6.5 " (165mm)	2.40
R810-671-REV2	10.0 " (254mm)	3.50
R810-213-REV2	6.5 " (165mm)	2.60
R810-323-REV2	10.0 " (254mm)	3.70
R810-343-REV2	10.0 " (254mm)	3.70
R810-423-REV2	6.5 " (165mm)	2.65
R810-443-REV2	10.0 " (254mm)	3.70
R810-623-REV2	6.5 " (165mm)	2.65
R810-643-REV2	10.0 " (254mm)	3.70



Important Notice:

These instruments have undergone rigorous tests and verifications prior to shipment to ensure proper and reliable operation in the field. However, like other such products, they are subject to failure. It is therefore the responsibility of the installer / user / electrical panel designer to incorporate safety features and devices (such as relays, flow switch, thermal protections, etc..) to protect the entire system from catastrophic failure.