

HEAT SINK INTRODUCTION

Solid State Relays (SSRs) generate heat while operating primarily from the semiconductor junction of the output switching device. This can be a triac, SCR or Mosfet. When utilizing an SSR it is important that the heat generated be managed via the use of the proper heat sink or alternative cooling method. Proper cooling will allow for maximum performance from the SSR. The use of the correct heat sink has a direct influence on the maximum load current that can be switched and the maximum ambient temperature the SSR can operate in.

Proper installation of a heat sink is just as important for proper heat dissipation. This includes utilizing a thermal transfer pad or thermal conductive grease to fill the gap between the relay and heat sink and utilizing the proper torque while tightening the screws attaching the SSR to the heat sink. Recommended Screw Torque is 15 to 20 in lbs or 1.7 to 2.2 Nm.

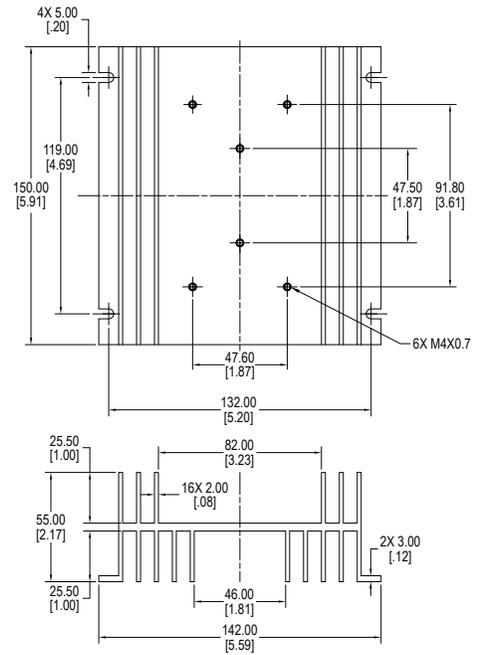
For very high performance applications, air cooling may be required in addition to the heat sink. Failure to manage the dissipation of heat by the SSR during usage may lead to failure of the SSR in either a short or open output.

Part Number	Dimensions (mm)	Thermal Resistance	Matching SSR
PCH-I-50	50 x 50 x 50	2.4°C/W	PCS15: 10 A, 15 A PCS33: 30 VDC 50 A, 200 VDC 10 A
PCH-M-120	64 x 110 x 118	1.1°C/W	PCS15: 20 A, 25 A PCS33: 400 VDC 10 A, 150 VDC 50 A, 100 VDC 20 A, 50 VDC 40 A, 30 VDC 100 A
PCH-H-150	55 x 142 x 150	0.9°C/W	PCS15: 40 A PCS33: 50 VDC 80 A, 100 VDC 40 A, 200 VDC 40 A PCS34: 40 A, 50 A
PCH-IF-110 (requires an additional 80mm cooling fan)*	80 x 100 x 110	—————	PCS28: 40 A and above PCS34: 60 A and above

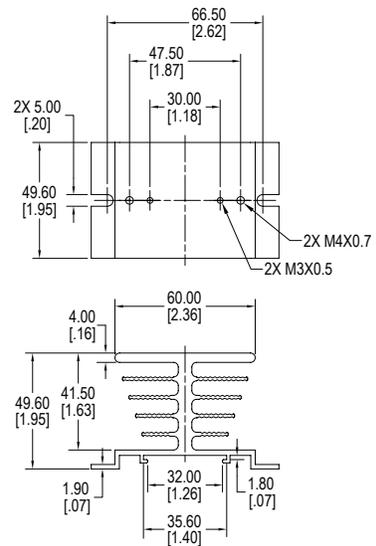
* Fan not included. Orion Fan OD8025-12HB is recommended.

DIMENSIONS mm (inches)

PCH-H-150

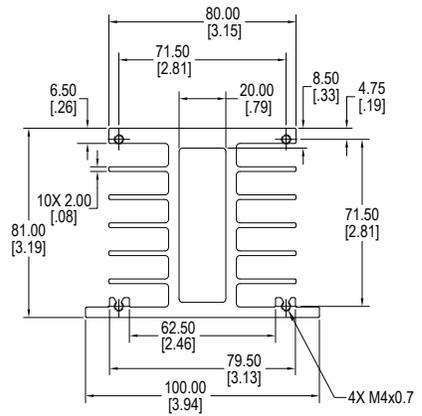
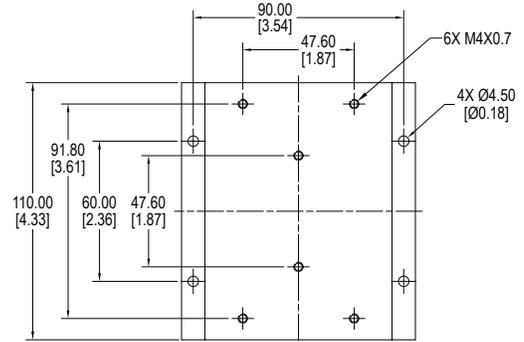


PCH-I-50

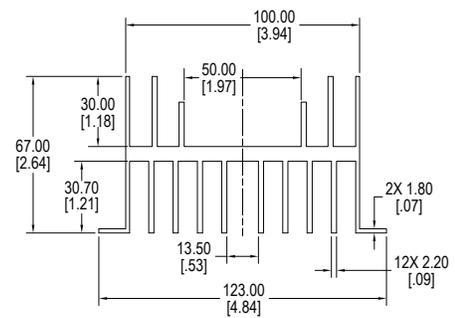
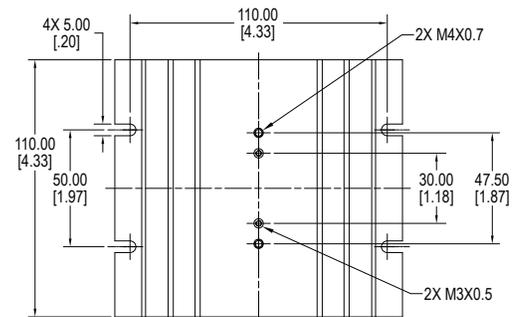


DIMENSIONS mm (inches)

PCH-IF-110

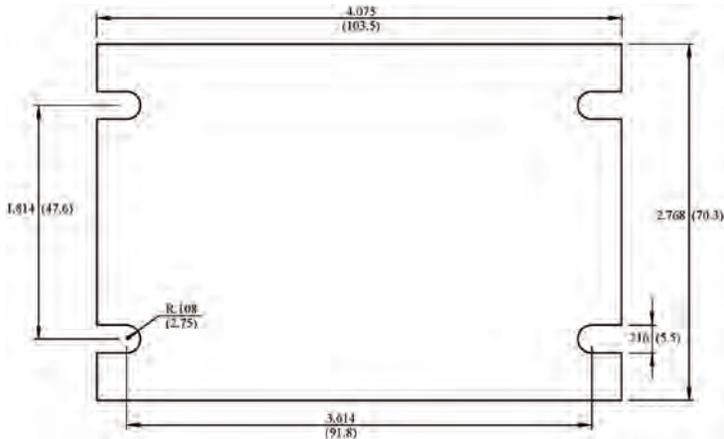
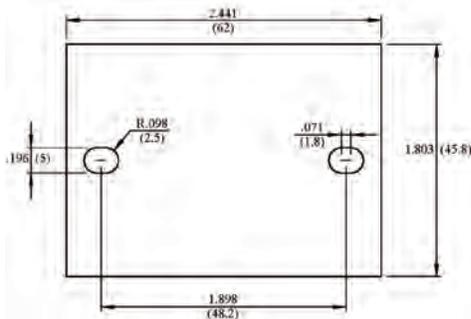
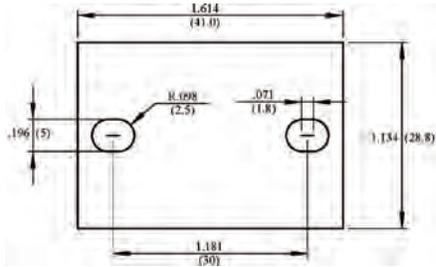


PCH-M-120



DIMENSIONS mm (inches)

Heat Transfer Pad
HTP50, HTP100, HTP300



Protective Cover
SSR100

