



## PRODUCT CHANGE NOTICE

### Scope:

This Product Change Notice serves to inform the Purchaser and Consumer of certain design and or specification changes, described herein, that Crydom will make to its line of Solid State Relay model numbers indicated in the attachment and in accordance with the described time line.

The changes are part of an on-going product improvement project referred to as the “Crydom S1 Project”. In August 2013, Crydom released the first group of Generation 4 updated models which included the basic Crydom S1 family (A, D, HA, HD, H12, H16, CSW Series). This PCN applies to the second group of S1 products being updated per the attached list of model numbers. Presently produced products are referred to as “Generation 3”, aka “Gen 3”, and the new and improved products resulting from this project are referred to as “Generation 4” aka “Gen 4”.

### Applicability:

Design/Specification Changes described herein will be applied to all listed Crydom models produced as of the effectivity date indicated in the PCN. Crydom will disclose manufacturing codes (e.g., date codes) applied to the products produced subsequent to the design changes.

Gen 4 Products are form, fit and functionally the same as Gen 3 versions excepting one provision for Printed Circuit Board mounting and one for off angle wire termination, which solutions for both are described below. Performance and Specifications for Generation 4 products otherwise will meet or exceed equivalent Generation 3 models in every aspect.

### Products/Models this PCN applies to:

See attached list.

### Description of Changes:

- 1) The Main SSR plastic housing and cover have been changed and now include anti-rotation plastic barriers on the top cover adjacent to the input and output terminals to better retain connecting wires, ring terminals and lugs, etc., improving reliability.
- 2) The new plastic barriers extend slightly above the top surface of the SSR cover and therefore require the inclusion of optionally available standoff terminals (referred to as option “K” for Generation 4 SSRs) in those applications where printed circuit boards are either mounted to the SSR terminals or the SSR is mounted directly to printed circuit boards. Inclusion of the “K” standoffs in the Gen 4 products results in the same overall height of the product compared to Gen 3 versions measured from the base of the SSR

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of the terminals, and therefore fit and function will remain the same with Gen 4 SSRs in those applications.

- 3) Terminal hardware has been significantly improved and now includes a SEMs type screw and captive clamping washer, replacing the cap screw and saddle clamp, to prevent wire rotation upon tightening and offers both single and dual wire connection with improved retaining force. Wire terminals and lugs may still be attached to the SSR but off angle termination toward the sides of the SSR requires an optionally available hardware accessory kit (HK4) be utilized on the output terminals.
- 4) Generation 4 SSRs no longer incorporate epoxy encapsulation, thus decreasing weight (reducing freight costs) and therefore making them more environmentally friendly. Coatings are utilized internally to protect voltage sensitive circuits and components.
- 5) Copper lead frames are utilized to make direct connections between the SSR terminals and the power circuit components, eliminating solder joints in the power circuit, lowering internal power losses and improving reliability.
- 6) Direct Bond Copper (DBC) insulators are incorporated to reduce thermal impedances associated with the power components, lowering internal operating temperatures and improving reliability.
- 7) Overall circuit performance is improved, in particular for DC output models where full optical isolation is utilized, improving switching speeds, increasing PWM frequency range and lowering switching losses and component temperatures.
- 8) Specifications/data sheets will be updated to include all new and improved parameters.
- 9) Generation 4 products will be identified as such on shipping boxes to help assist with distributor inventory control. Crydom will not mix Gen 3 and Gen 4 product of the same model number in shipment.

**Effectivity Date:**

January 15, 2015 for AC Output Models, February 1, 2015 for DC Output Models

**Last Time Buy Date for “Generation 3” Designs:**

June 30 for AC Output Models, July 31 for DC Output Models

**Stock Returns:**

Standard annual stock rotation and warranty provisions per contract apply. There is no need to return any Generation 3 stock.