Product Brief
February 2001

HC/HW020-Series Power Modules; dc-dc Converters: 18—36 Vdc or 36—75 Vdc Input, 1.2—3.3 Vdc Output; 4 A—6 A

Applications

- Distributed power architectures
- Communications equipment
- Computer equipment

Options

- Negative remote on/off logic
- Low profile (8.5 mm (0.33 in.)) with derated output power
- Through hole interconnect pins

Features

- Small size: 47.24 mm x 29.46 mm x 10 mm (1.86 in. x 1.16 in. x 0.4 in.)
- Open-frame construction
- Surface-mount interconnect pins
- High density
- High efficiency: >88% typical
- MTBF: >5,000,000 hours
- Wide operating ambient temperature: –40 °C to 85 °C
- Output voltage set-point adjustment (trim): 90% to 110% of $V_{O, nom}$
- Output overvoltage, overcurrent, and overtemperature protection
- Positive remote on/off logic (primary-side referenced)
- Manufacturing facilities registered against the *ISO** 9000 series standards
- Meets the voltage isolation requirements for ETSI 300-321-2 and complies with and is Licensed for Basic Insulation rating per EN60950 (-B version only)
- *UL*† 60950 Recognized, *CSA*‡ C22.2 No. 60950-00 Certified, and *VDE* § 0805 (*IEC*** 60950, 4th Edition) Licensed
- CE mark meets 73/23/EEC and 93/68/EEC directives†† (HW020 modules only)

* *ISO* is a registered trademark of the International Organization for Standardization.
† *UL* is a registered trademark of Underwriters Laboratories, Inc.
‡ *CSA* is a registered trademark of Canadian Standards Association.
§ *VDE* is a trademark of Verband Deutscher Elektrotechniker e.V.
** *IEC* is a trademark of International Elecktrotechniker Commission.
†† This product is intended for integration into end-use equipment. All the required procedures for CE marking of end-use equipment should be followed. (The CE mark is placed on selected products.)

Description

The HC/HW020-Series Power Modules are open-frame dc-dc converters that operate over an extended input voltage range of 18 Vdc to 36 Vdc or 36 Vdc to 75 Vdc and provide a precisely regulated dc output of 1.2 V to 3.3 V. The output is fully isolated from the input, allowing versatile polarity configurations and grounding connections. These modules have a maximum output current of 6 A.

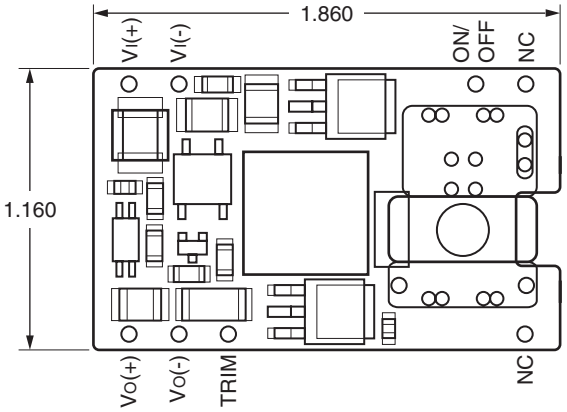
The HC/HW020-Series Power Modules adapt open-construction packaging methods in a small size while maintaining the industry trend of high power density.

Outline Diagram

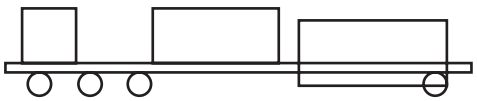
Dimensions are in inches.

Tolerances: x.x mm ± 0.5 mm (x.xx in. ± 0.02 in.)
x.xx mm ± 0.25 mm (x.xxx in. ± 0.010 in.)

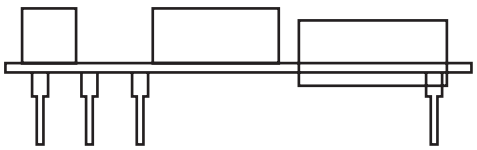
Top View



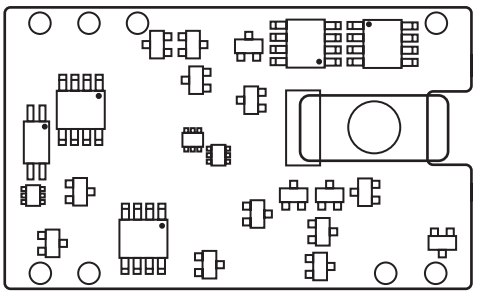
Side View with Ball-grid Array



Side View with Optional Through Hole Interconnect Pins



Bottom View



1-1055

Ordering Information

Please contact your Tyco Electronics' Account Manager or Field Application Engineer for pricing and availability.

Table 1. Device Codes

Input Voltage	Output Voltage	Output Power	Output Current	Device Code	Comcode
48 Vdc	5.0 Vdc	20 W	4 A	HW020A	TBD
48 Vdc	3.3 Vdc	20 W	6 A	HW020F	TBD
48 Vdc	2.5 Vdc	15 W	6 A	HW020G	TBD
48 Vdc	1.8 Vdc	10.8 W	6 A	HW020Y	TBD
48 Vdc	1.5 Vdc	9 W	6 A	HW020M	TBD
48 Vdc	1.2 Vdc	7.2 W	6 A	HW020S1R2	TBD
24 Vdc	5.0 Vdc	20 W	4 A	HC020A	TBD
24 Vdc	3.3 Vdc	20 W	6 A	HC020F	TBD
24 Vdc	2.5 Vdc	15 W	6 A	HC020G	TBD
24 Vdc	1.8 Vdc	10.8 W	6 A	HC020Y	TBD
24 Vdc	1.5 Vdc	9 W	6 A	HC020M	TBD
24 Vdc	1.2 Vdc	7.2 W	6 A	HC020S1R2	TBD

Optional features can be ordered using the suffixes shown in Table 2. The suffixes follow the last letter of the device code and are placed in descending order. For example, the device code for a HC020F module with the following option is shown below:

Negative remote on/off logic HC020F1

Table 2. Device Options

Option	Suffix
Negative remote on/off logic	1
Approved for Basic Insulation	-B

Tyco Electronics Power Systems, Inc.
3000 Skyline Drive, Mesquite, TX 75149, USA
+1-800-526-7819 FAX: +1-888-315-5182
(Outside U.S.A.: **+1-972-284-2626**, FAX: +1-972-284-2900)
http://power.tycoelectronics.com

February 2001
PB01-040EPS

Printed on
Recycled Paper