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# Series HPF

20, 30Amp • 120/240/480 Vac • AC Output

- DIN Rail Mount
- Integral Heat sink
- LED Status Indicator
- SCR Output
- Zero Voltage and Random Turn-On Switching
- Low Leakage

The Series HPF Solid State Relays utilize Crydom's proprietary thermal management technology providing a compact and efficient design. Built-in DIN Rail attachment, easy-to-use cage type terminals and integral heat sinking complete the package. This compact new design offers up to 30Arms in ambient temperatures of 25°C.

Manufactured in Crydom's ISO 9002 Certified facility for optimum product performance and reliability.

| MODEL NUMBERS   | HPF240D20 | HPF240D30 | HPF480D20           | HPF480D30           |
|---|-----------|-----------|---------------------|---------------------|
| <b>OUTPUT SPECIFICATIONS ①</b>  |           |           |                     |                     |
| Operating Voltage (47-63 Hz) [Vrms]                                   | 12-280    | 12-280    | 48-660 <sup>⑥</sup> | 48-660 <sup>⑥</sup> |
| Max. Load Current [Arms]  | 20        | 30        | 20                  | 30                  |
| Min. Load Current, [mArms]  | 150       | 150       | 150                 | 150                 |
| Transient Overvoltage [Vpk]   | 600       | 600       | 1200                | 1200                |
| Max. Surge Current, (16.6ms) [Apk]                                    | 250       | 625       | 250                 | 625                 |
| Max. On-State Voltage Drop @ Rated Current [Vpk]                      | 1.6       | 1.4       | 1.6                 | 1.4                 |
| Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [I <sup>2</sup> sec] | 260       | 1620      | 260                 | 1620                |
| Max. Off-State Leakage Current @ Rated Voltage [mArms] ②              | 0.1       | 0.1       | 0.1                 | 0.1                 |
| Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] ③                  | 500       | 500       | 500                 | 500                 |
| Max. Turn-On Time ④   | 1/2 Cycle | 1/2 Cycle | 1/2 Cycle           | 1/2 Cycle           |
| Max. Turn-Off Time  | 1/2 Cycle | 1/2 Cycle | 1/2 Cycle           | 1/2 Cycle           |
| Power Factor (Min.) with Max. Load                                    | 0.5       | 0.5       | 0.5                 | 0.5                 |

## INPUT SPECIFICATIONS ①

|                               | (HPF240Dxx) | DC CONTROL | (HPF480Dxx) |
|-------------------------------|-------------|------------|-------------|
| Control Voltage Range         | 4-32 Vdc    |            | 4.5-32 Vdc  |
| Max. Turn-On Voltage          | 5.0 Vdc     |            | 5.0 Vdc     |
| Min. Turn-Off Voltage         | 1.0 Vdc     |            | 1.0 Vdc     |
| Nominal Input Impedance       | See Note ⑤  |            | See Note ⑤  |
| Typical Input Current @ 5Vdc  | 5 mAdc      |            | 5 mAdc      |
| Typical Input Current @ 20Vdc | 20 mAdc     |            | 20 mAdc     |

## GENERAL NOTES

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- ① All parameters at 25°C unless otherwise specified.
- ② Off-State leakage for snubbered version (S suffix) is 10 mArms
- ③ Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- ④ Turn-on time for random turn-on version is 0.02 msec.
- ⑤ Input circuitry incorporates active current limiter.
- ⑥ Operating voltage range for snubbered version (S-suffix) is 48-530 Vrms.

For recommended applications and more information contact:

USA: (800) 8 CRYDOM • (800) 827-9366 • (619) 715-7200 • fax (619) 715-7280  
9525 Chesapeake Drive, San Diego, CA 92123 • e-mail: sales@crydom.com

WEB SITE: <http://www.crydom.com> FASTFAX Product Information: (888) 267-9191

UK: (44)1202 812300 • fax (44)1202 812340

85, Condor Close, Woolsbridge Industrial Estate, Three-Legged Cross, Wimborne, Dorset, England BH21 6SU

GERMANY: (49)871 935405 • fax (49)871 935407, Aussere Parkstr.5, D-84032 Altdorf, Germany





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20, 30Amp • 120/240/480 Vac • AC Output

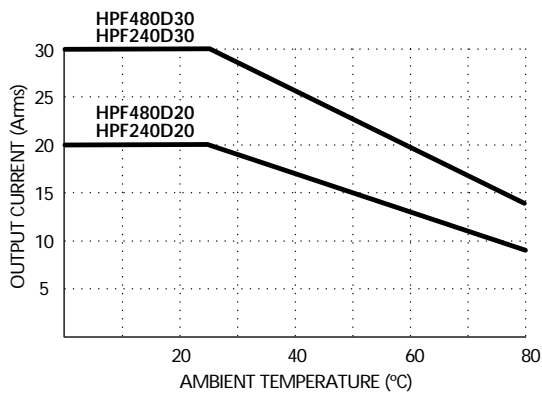
## GENERAL SPECIFICATIONS

|   |                     |
|---|---------------------|
| Dielectric Strength 50/60Hz Input/Output/Base | 4000 Vrms           |
| Insulation Resistance (Min.) @ 500 Vdc        | 10 <sup>9</sup> Ohm |
| Max. Capacitance Input/Output                 | 8 pF                |
| Ambient Operating Temperature Range           | -40 to 80°C         |
| Ambient Storage Temperature Range             | -40 to 125°C        |

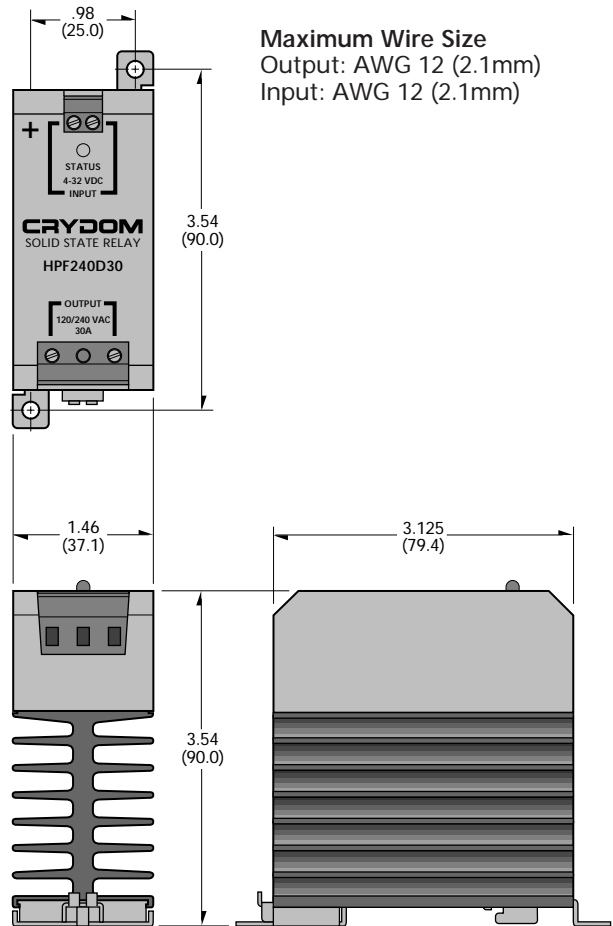
## MECHANICAL SPECIFICATIONS

|                    |                            |
|--------------------|----------------------------|
| Weight: (typical)  | 9.2 oz. (260g)             |
| Encapsulation:     | Thermally Conductive Epoxy |
| Terminals:         | Cage Type,                 |
| Maximum Wire Size: | AWG 8 (3.3mm)              |

### CURRENT DERATING CURVES



HPF Max. Output Current vs. Temp.



All dimensions are in inches (millimeters)

### AVAILABLE OPTIONS

- R** Random Turn-On  
Example: **HPF480D30R**
- S** Internal Snubber  
Example: **HPF240D20RS**

### APPROVALS

PENDING

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