CRYDOM

Control over power

Series H12C

50-90Amp • 480 Vac • AC Output

- **1200 Volt Blocking**
- **Panel Mount**
- **Up to 660 Vac**
- **Zero Voltage and Random Turn-On**
- **SCR Output**
- **Integrated Overvoltage Protection by Automatic Self Turn-On (Suffix P)**

High voltage relays use IC driven circuits for switching loads up to 660 VAC. All models come with 1200 Volts blocking and are available with either AC or DC input (coil) control. Types H12CA and H12CD are snubberless (reduced leakage current). Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	**DC CONTROL**	**H12CD4850**	**H12CD4890**
	AC CONTROL	**H12CA4850**	**H12CA4890**
OUTPUT SPECIFICATIONS ①			
Operating Voltage (47-63 Hz) [Vrms]		48-660	48-660
Max. Load Current ③ [Arms]		50	90
Min. Load Current, [mArms]		150	150
Transient Overvoltage [Vpk]		1200	1200
Max. Surge Current, (16.6ms) [Apk]		625	1200
Max. On-State Voltage Drop @ Rated Current [Vpk]		1.6	1.6
Thermal Resistance Junction to Case ($R_{\theta JC}$) [° C/W]		.63	.28
Maximum I^2t for Fusing, (8.3 msec.) [A^2sec]		1620	6000
Max. Off-State Leakage Current @ Rated Voltage [mArms]		1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/µsec]②		500	500
Max. Turn-On Time ④		1/2 Cycle (DC Control), 10.0 msec (AC Control)	
Max. Turn-Off Time		1/2 Cycle (DC Control), 40.0 msec (AC Control)	
Power Factor (Min.) with Max. Load		0.5	0.5

INPUT SPECIFICATIONS ①	**DC CONTROL** (H12CD PREFIX)	**AC CONTROL** (H12CA PREFIX)
Control Voltage Range	4-15 Vdc	90-140 Vrms
Max. Turn-On Voltage	4.0 Vdc	90 Vrms
Min. Turn-Off Voltage	1.0 Vdc	10.0 Vrms
Nominal Input Impedance	300 Ohms	8K Ohms
Typical Input Current	15 mA @ 5 Vdc	15 mA @ 120 Vrms

© 2002 CRYDOM CORP, Specifications subject to change without notice.

GENERAL NOTES

① All parameters at 25˚C unless otherwise specified.
② Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
③ Heat sinking required, for derating curves see page 2.
④ Turn-on time for DC control random turn-on versions is 0.02 msec.

For recommended applications and more information contact:
USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 **FAX** (619) 710-8540
Crydom Corp, 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154
Email: sales@crydom.com **WEB SITE:** http://www.crydom.com
UK: +44 (0)1202 365070 • **FAX** +44 (0)1202 365090 Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, **Email**: intsales@crydom.com.
GERMANY: +49 (0)180 3000 506

ISO 9001 CERTIFIED

Series H12C

50-90Amp • 480 Vac • AC Output

CRYDOM

Control over power

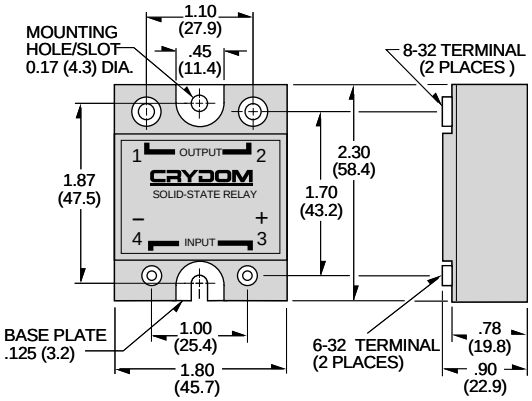
GENERAL SPECIFICATIONS

Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10^9 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)	3.0 oz. (86.5g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	Screws and Saddle Clamps Furnished, Unmounted

Crydom Heat Sinks offer excellent thermal management and are perfectly matched to the load current ratings of Crydom panel mount relays. Request Crydom's Heat Sink specification sheet for all the details.



Screw Torque Requirements:
*6-32 Screws - 10 in. lbs.,
8-32 and 10-32 Screws - 20in. lbs.
(Screws dry without grease.)

Fastons:
Double pair* (50A model only).
Caution: User must connect to both pairs

Available Options

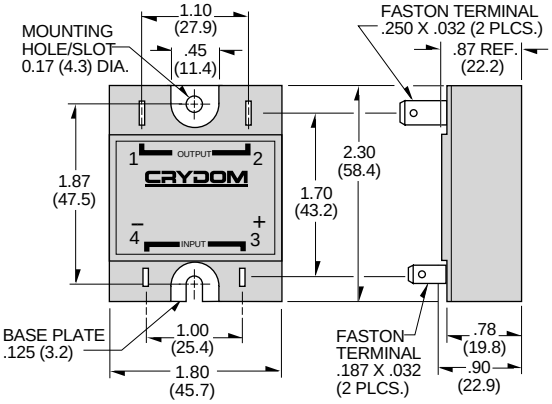
F Faston Terminals.
(50 Amp Models Only)
Example: **H12CD4850F**

G Input Status LED.
Agencies Approval Pending
Example: **H12CD4850G**
Note: Control Voltage Range 5.5-15Vdc for DC Control Models.

P Internal Overvoltage Protection.
Relay Will Self Trigger Between 900-1200Vpk. Not Suitable For Capacitive Loads.
Agencies Approval Pending
Example: **H12CD4850P**

-10 Random Turn-On.
Example: **H12CD4850-10**

Ordering System: Combination of the suffixes should be made in the following order: **FPG-10**.
Example: **H12CD4850FPG-10**



All dimensions are in inches (millimeters)

© 2002 CRYDOM CORP, Specifications subject to change without notice.

APPROVALS

UL	E116949
CSA	LR81689
VDE	10143 UG

CE

For recommended applications and more information contact:
USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 **FAX** (619) 710-8540
Crydom Corp, 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154
Email: sales@crydom.com **WEB SITE:** http://www.crydom.com
UK: +44 (0)1202 365070 • **FAX** +44 (0)1202 365090 Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, **Email**: intsales@crydom.com.
GERMANY: +49 (0)180 3000 506

ISO 9001 CERTIFIED

Series H12C

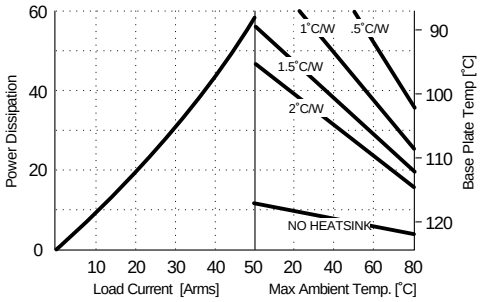
50-90Amp • 480 Vac • AC Output

CRYDOM

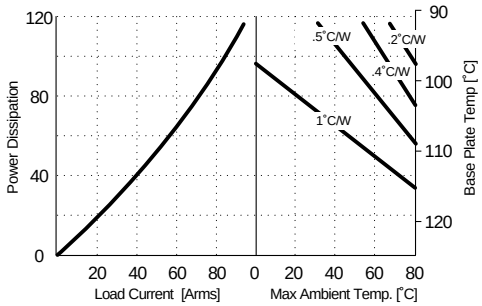
Control over power

CURRENT DERATING CURVES

50A



90A



© 2002 CRYDOM CORP, Specifications subject to change without notice.

For recommended applications and more information contact:
USA: Sales Support (877) 502-5500 **Tech Support** (877) 702-7700 **FAX** (619) 710-8540
Crydom Corp, 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154
Email: sales@crydom.com **WEB SITE:** http://www.crydom.com
UK: +44 (0)1202 365070 • **FAX** +44 (0)1202 365090 Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, **Email**: intsales@crydom.com.
GERMANY: +49 (0)180 3000 506

ISO 9001 CERTIFIED