



600V Blocking
Low Leakage
SCR Output
Zero and Random
Voltage Switching
LED Status Indicator
Panel Mount
Intergrated Removable
Fingerproof Cover
User Friendly, Universal
Connectors
EMC Compliant Design

Jonsson's JHD line of solid state relays offer an SCR AC switch output featuring low off-state leakage (1mA, snubberless), zero and random voltage switching and a broadened operating range (24-280Vac). This wide range permits optimum performance at both 120Vac and 240Vac line voltages.

OUTPUT SPECIFICATIONS ①	MODEL NUMBERS	JHD2410	JHD2425	JHD2450	JHD2490	JHD24125
	DC CONTROL					
Operating Voltage (47-63 Hz) [Vrms]		24-280	24-280	24-280	24-280	24-280
Load Current Range ③		0.15-10	0.15-25	0.15-50	0.25-90	0.25-125
Transient Overvoltage [Vpk]	[Arms]	600	600	600	600	600
Max. Surge Current, (16.6ms) [Apk]		400	600	850	1350	2000
Max. Surge Current (20ms) [Apk]		380	570	810	1290	1900
Max. On-State Voltage Drop @ Rated Current [Vpk]		1.3	1.3	1.3	1.3	1.25
Thermal Resistance Junction to Case (R _{θJC}) [°C/W]		0.35	0.35	0.2	0.14	0.13
Maximum I _{2t} for Fusing, (8.3 ms) [A 2s]		660	1500	3000	7560	16600
Maximum I _{2t} for Fusing, (10ms) [A 2s]		720	1620	3280	8320	18000
Max. Off-State Leakage Current @ Rated Voltage [mA] ⑥		1.0	1.0	1.0	1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/μs] ②		500	500	500	500	500
Max. Turn-On Time ④⑤		1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time ⑤		1/2 Cycle	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	0.5
INPUT SPECIFICATIONS①		DC Control				
Control Voltage Range		3-32 Vdc				
Max. Turn-On Voltage		3 Vdc				
Min. Turn-Off Voltage		1.0 Vdc				
Nominal Input Impedence		See note 7				
Typical Input Current		10 mA @ 12 Vdc				

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 random turn-on version is 0.02 msec.
- ⑤ Turn-on and turn-off time for AC input models is 50ms.
- ⑥ 10mA for models with snubber.
- ⑦ Input circuit incorporates active current limiter.

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	Screw Type, Finger Proof Output: 8-32, Combo Drive Input: 6-32, Combo Drive
Max. Torque	Output: 20 in lb (2.2Nm) Input: 10 in lb (1.1Nm)
Max. Wire Size	Output: 2 x AWG 8 (3.8mm) Input: 2 x AWG 12 (2.5mm)

Available Options

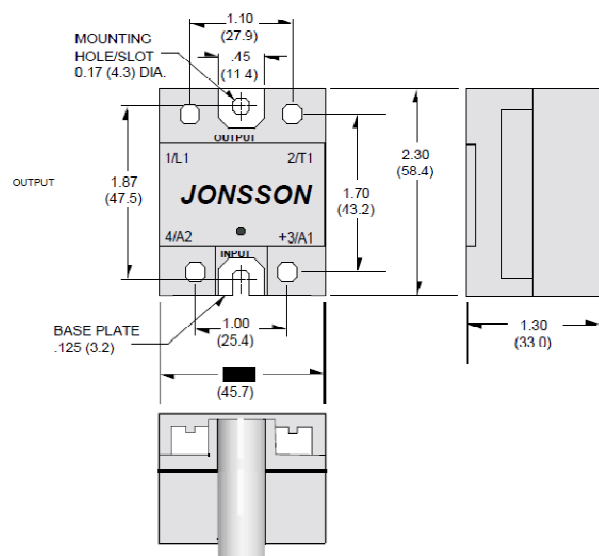
- 10** Random Turn-On.
Example: **JHD2425-10**
- E** 24 Vac Input (18-36 Vac)
Example: **JHD2425**
- P** Internal Overvoltage Protection.
Relay Will Self Trigger Between
450-600 Vpk. Not Suitable For Capacitive Loads.
Example: **JHD2425**
- S** Internal Snubber Example: **JHD2425**
- H** Heat Transfer Pad (Attached)
Example: **JHD2425**

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

EMC Compatibility

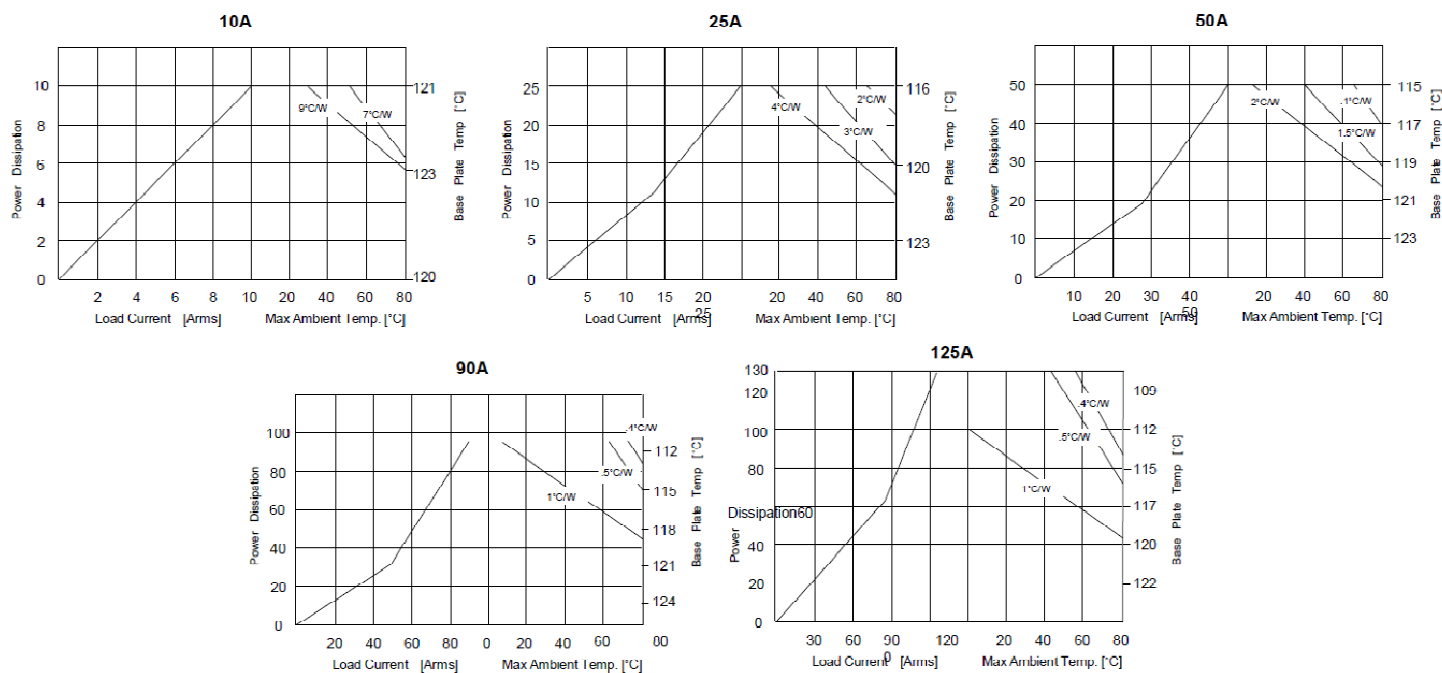
Input: EN61000-4-2,	Level	3	ESD
EN61000-4-4,	Level	3	Burst
Output: EN61000-4-2,	Level	3	ESD
	Level	4	ESD (with P option)
EN61000-4-4,	Level	3	Burst
	Level	4	Burst (with P option)
EN61000-4-5,	Level	4	Surge

MECHANICAL OUTLINE



All dimensions are in inches (millimeters)

CURRENT DERATING CURVES





600V Blocking
Low Leakage
SCR Output
Zero and Random
Voltage Switching
LED Status Indicator
Panel Mount
Intergrated Removable
Fingerproof Cover
User Friendly, Universal
Connectors
EMC Compliant Design

Jonsson's JHA line of solid state relays offer an SCR AC switch output featuring low off-state leakage (1mA, snubberless), zero and random voltage switching and a broadened operating range (24-280Vac). This wide range permits optimum performance at both 120Vac and 240Vac line voltages.

MODEL NUMBERS						
AC CONTROL		JHA2410	JHA2425	JHA2450	JHA2490	JHA24125
OUTPUT SPECIFICATIONS ①						
Operating Voltage (47-63 Hz) [Vrms]		24-280	24-280	24-280	24-280	24-280
Load Current Range ③		0.15-10	0.15-25	0.15-50	0.25-90	0.25-125
Transient Overvoltage [Vpk] [Arms]		600	600	600	600	600
Max. Surge Current, (16.6ms) [Apk]		400	600	850	1350	2000
Max. Surge Current (20ms) [Apk]		380	570	810	1290	1900
Max. On-State Voltage Drop @ Rated Current [Vpk]		1.3	1.3	1.3	1.3	1.25
Thermal Resistance Junction to Case (R _{θJC}) [°C/W]		0.35	0.35	0.2	0.14	0.13
Maximum I _{2 t} for Fusing, (8.3 ms) [A 2s]		660	1500	3000	7560	16600
Maximum I _{2 t} for Fusing, (10ms) [A 2s]		720	1620	3280	8320	18000
Max. Off-State Leakage Current @ Rated Voltage [mA] ⑥		1.0	1.0	1.0	1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/μs] ②		500	500	500	500	500
Max. Turn-On Time ④⑤		1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time ⑤		1/2 Cycle	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	0.5
INPUT SPECIFICATIONS ①		AC Control 24 Vac nominal E - suffix		AC Control 120/240Vac nominal Std. (no suffix)		
Control Voltage Range		18-36 Vrms		90-280 Vrms		
Max. Turn-On Voltage		18 Vrms		90 Vrms		
Min. Turn-Off Voltage		2 Vrms		10 Vrms		
Nominal Input Impedence		1 k ohm		21.5 k ohms		
Typical Input Current		24mA@24Vrms		6 mA @ 120 Vrms		

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 random turn-on version is 0.02 msec.
- ⑤ Turn-on and turn-off time for AC input models is 50ms.
- ⑥ 10mA for models with snubber.
- ⑦ Input circuit incorporates active current limiter.

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	Screw Type, Finger Proof Output: 8-32, Combo Drive Input: 6-32, Combo Drive
Max. Torque	Output: 20 in lb (2.2Nm) Input: 10 in lb (1.1Nm)
Max. Wire Size	Output: 2 x AWG 8 (3.8mm) Input: 2 x AWG 12 (2.5mm)

Available Options

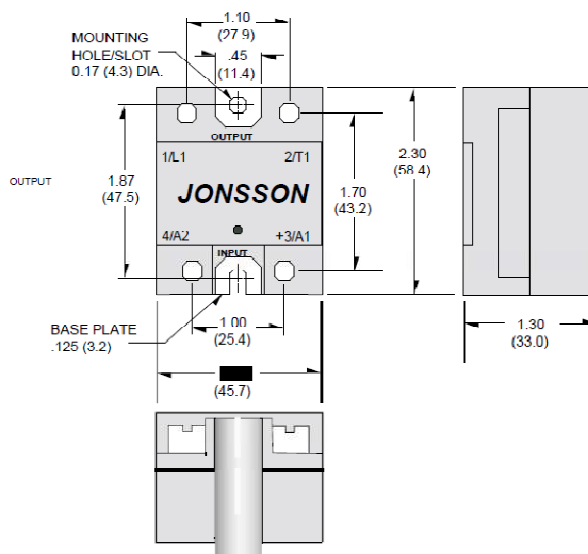
- 10** Random Turn-On.
Example: **JHA2425-10**
- E** 24 Vac Input (18-36 Vac)
Example: **JHA2425**
- P** Internal Overvoltage Protection.
Relay Will Self Trigger Between 450-600 Vpk. Not Suitable For Capacitive Loads.
Example: **JHA2425**
- S** Internal Snubber Example: **JHA2425**
- H** Heat Transfer Pad (Attached)
Example: **JHA2425**

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

EMC Compatibility

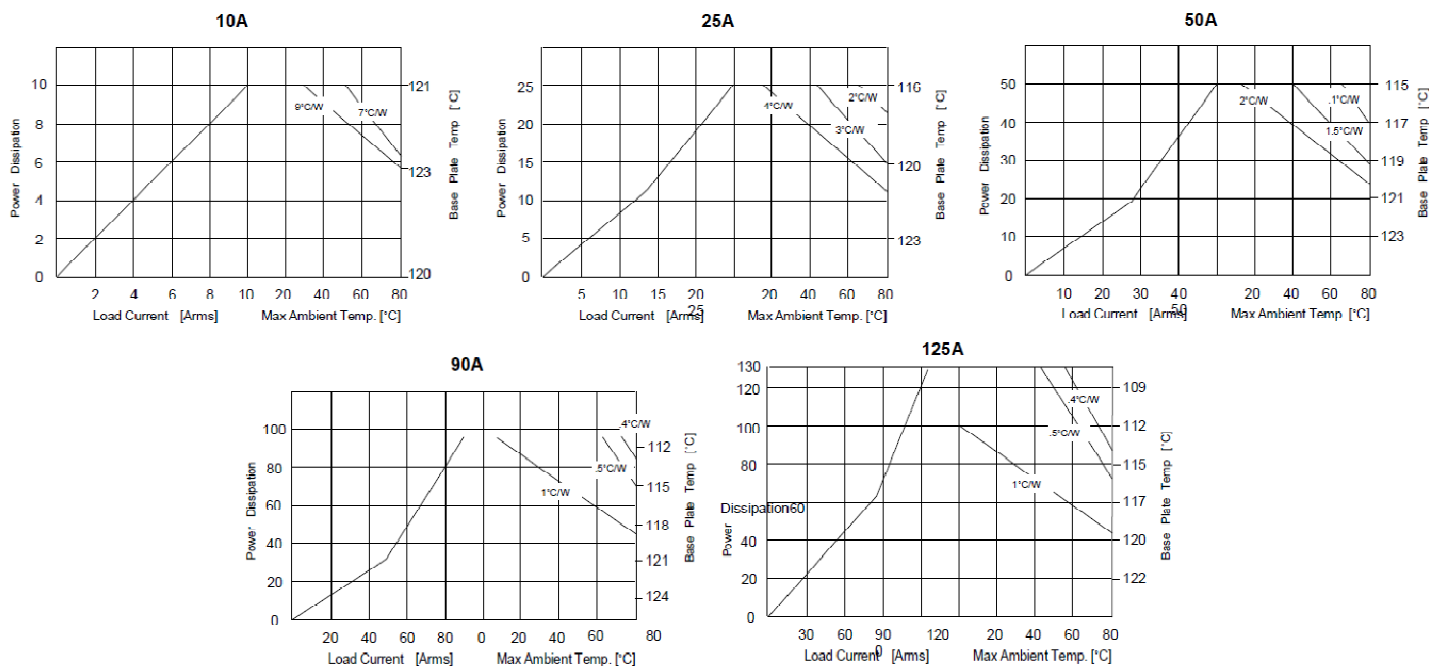
Input: EN61000-4-2,	Level	3	ESD
EN61000-4-4,	Level	3	Burst
Output: EN61000-4-2,	Level	3	ESD
	Level	4	ESD (with P option)
EN61000-4-4,	Level	3	Burst
	Level	4	Burst (with P option)
EN61000-4-5,	Level	4	Surge

MECHANICAL OUTLINE



All dimensions are in inches (millimeters)

CURRENT DERATING CURVES





600V Blocking
Low Leakage
SCR Output
Zero and Random
Voltage Switching
LED Status Indicator
Panel Mount
Intergrated Removable
Fingerproof Cover
User Friendly, Universal
Connectors
EMC Compliant Design

Jonsson's JHD line of solid state relays offer an SCR AC switch output featuring low off-state leakage (1mA, snubberless), zero and random voltage switching and a broadened operating range (80-530Vac). This wide range permits optimum performance at both 80Vac and 530Vac line voltages.

MODEL NUMBERS		JHD4812	JHD4825	JHD4850	JHD4875	JHD4890
DC CONTROL						
OUTPUT SPECIFICATIONS ①						
Operating Voltage (47-63 Hz) [Vrms]		80-530	80-530	80-530	80-530	80-530
Load Current Range ③		0.15-12	0.15-25	0.15-50	0.25-75	0.25-90
Transient Overvoltage [Vpk]		800	800	800	800	800
Max. Surge Current, (16.6ms) [Apk]		400	600	850	1350	2000
Max. Surge Current (20ms) [Apk]		380	570	810	1290	1900
Max. On-State Voltage Drop @ Rated Current [Vpk]		1.7	1.7	1.7	1.7	1.7
Thermal Resistance Junction to Case (R _{θJC}) [°C/W]		0.35	0.35	0.2	0.14	0.13
Maximum I _{2 t} for Fusing, (8.3 ms) [A 2s]		660	1500	3000	7560	16600
Maximum I _{2 t} for Fusing, (10ms) [A 2s]		720	1620	3280	8320	18000
Max. Off-State Leakage Current @ Rated Voltage [mA] ⑥		10	10	10	10	10
Min. Off-State dv/dt @ Max. Rated Voltage [V/μs] ②		500	500	500	500	500
Max. Turn-On Time ④⑤		1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time ⑤		1/2 Cycle	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	0.5
INPUT SPECIFICATIONS ①		DC Control				
Control Voltage Range		3-32 Vdc				
Max. Turn-On Voltage		3 Vdc				
Min. Turn-Off Voltage		1.0 Vdc				
Nominal Input Impedence		See note 7				
Typical Input Current		10 mA @ 12 Vdc				

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 random turn-on version is 0.02 msec.
- ⑤ Turn-on and turn-off time for AC input models is 50ms.
- ⑥ 10mA for models with snubber.
- ⑦ Input circuit incorporates active current limiter.

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	Screw Type, Finger Proof Output: 8-32, Combo Drive Input: 6-32, Combo Drive
Max. Torque	Output: 20 in lb (2.2Nm) Input: 10 in lb (1.1Nm)
Max. Wire Size	Output: 2 x AWG 8 (3.8mm) Input: 2 x AWG 12 (2.5mm)

Available Options

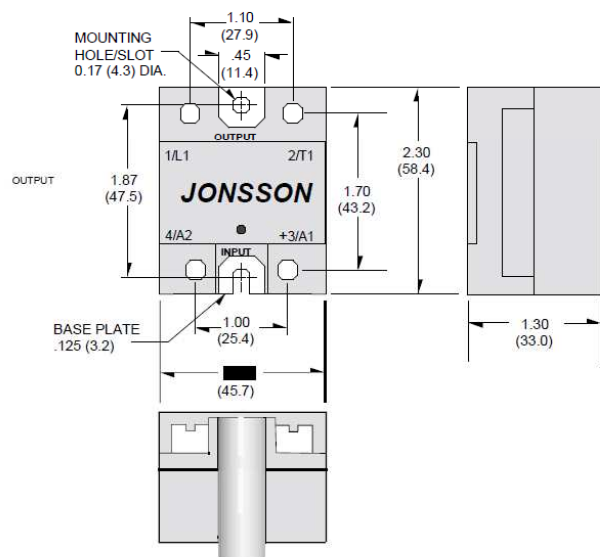
- 10** Random Turn-On.
Example: **JHD2425-10**
- E** 24 Vac Input (18-36 Vac)
Example: **JHD2425**
- P** Internal Overvoltage Protection.
Relay Will Self Trigger Between
450-600 Vpk. Not Suitable For Capacitive Loads.
Example: **JHD2425**
- S** Internal Snubber Example: **JHD2425**
- H** Heat Transfer Pad (Attached)
Example: **JHD2425**

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

EMC Compatibility

Input: EN61000-4-2,	Level	3	ESD
EN61000-4-4,	Level	3	Burst
Output: EN61000-4-2,	Level	3	ESD
	Level	4	ESD (with P option)
EN61000-4-4,	Level	3	Burst
	Level	4	Burst (with P option)
EN61000-4-5,	Level	4	Surge

MECHANICAL OUTLINE



All dimensions are in inches (millimeters)



**600V Blocking
Low Leakage
SCR Output
Zero and Random
Voltage Switching
LED Status Indicator
Panel Mount
Intergrated Removable
Fingerproof Cover
User Friendly, Universal
Connectors
EMC Compliant Design**

Jonsson's JHA line of solid state relays offer an SCR AC switch output featuring low off-state leakage (1mA, snubberless), zero and random voltage switching and a broadened operating range (80-530Vac). This wide range permits optimum performance at both 80Vac and 530Vac line voltages.

MODEL NUMBERS		JHA4812	JHA4825	JHA4850	JHA4875	JHA4890
AC CONTROL						
OUTPUT SPECIFICATIONS ①						
Operating Voltage (47-63 Hz) [Vrms]		80-530	80-530	80-530	80-530	80-530
Load Current Range ③		0.15-12	0.15-25	0.15-50	0.25-75	0.25-90
Transient Overvoltage [Vpk]		800	800	800	800	800
Max. Surge Current, (16.6ms) [Apk]		400	600	850	1350	2000
Max. Surge Current (20ms) [Apk]		380	570	810	1290	1900
Max. On-State Voltage Drop @ Rated Current [Vpk]		1.7	1.7	1.7	1.7	1.7
Thermal Resistance Junction to Case (R _{θJC}) [°C/W]		0.35	0.35	0.2	0.14	0.13
Maximum I ² t for Fusing, (8.3 ms) [A 2s]		660	1500	3000	7560	16600
Maximum I ² t for Fusing, (10ms) [A 2s]		720	1620	3280	8320	18000
Max. Off-State Leakage Current @ Rated Voltage [mA] ⑥		10	10	10	10	10
Min. Off-State dv/dt @ Max. Rated Voltage [V/μs] ②		500	500	500	500	500
Max. Turn-On Time ④⑤		1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time ⑤		1/2 Cycle	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	0.5
INPUT SPECIFICATIONS ①		AC Control				
Control Voltage Range		90-280 Vac				
Max. Turn-On Voltage		90 Vac				
Min. Turn-Off Voltage		10 Vdc				
Nominal Input Impedence		See note 7				
Typical Input Current		2.0 mA @ 120 Vac /4.mA@240Vac				

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 random turn-on version is 0.02 msec.
- ⑤ Turn-on and turn-off time for AC input models is 50ms.
- ⑥ 10mA for models with snubber.
- ⑦ Input circuit incorporates active current limiter.

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	Screw Type, Finger Proof Output: 8-32, Combo Drive Input: 6-32, Combo Drive
Max. Torque	Output: 20 in lb (2.2Nm) Input: 10 in lb (1.1Nm)
Max. Wire Size	Output: 2 x AWG 8 (3.8mm) Input: 2 x AWG 12 (2.5mm)

Available Options

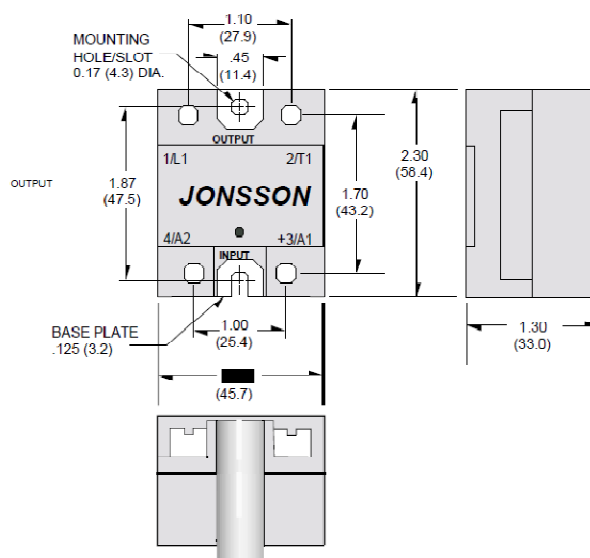
- 10 Random Turn-On.
Example: **JHD2425-10**
- E 24 Vac Input (18-36 Vac)
Example: **JHD2425**
- P Internal Overvoltage Protection.
Relay Will Self Trigger Between
450-600 Vpk. Not Suitable For Capacitive Loads.
Example: **JHD2425**
- S Internal Snubber Example: **JHD2425**
- H Heat Transfer Pad (Attached)
Example: **JHD2425**

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

EMC Compatibility

Input: EN61000-4-2,	Level	3	ESD
EN61000-4-4,	Level	3	Burst
Output: EN61000-4-2,	Level	3	ESD
	Level	4	ESD (with P option)
EN61000-4-4,	Level	3	Burst
	Level	4	Burst (with P option)
EN61000-4-5,	Level	4	Surge

MECHANICAL OUTLINE



All dimensions are in inches (millimeters)