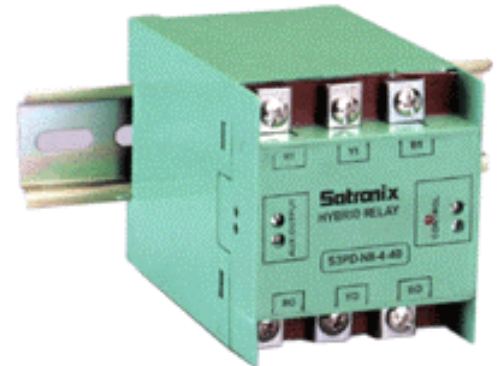


DIN Rail Mount Non-Heat Three Phase Solid State Relay
 I/P: 0-24VDC or 0 – 120 VAC or 0-240 VAC
 O/P: 440VAC(rms), 16, 25 and 40 Amps
 Part Number: S3PD-NH-...



Main Features

- Combined advantages of Solid state relay and Electromechanical Relay
- No heatsink required.
- Normally open type.
- LED indication.
- Minimum audible noise
- Zero cross-over switching
- Lifetime > 5 million operations at full load
- Galvanic separation between control buffer and power circuits (4000 volts)
- Rated operational voltage up to 600 VAC rms
- Optically isolated
- Rated operational current: 16, 25 and 40Amps
- Available upto 90 Amps
- Ideal replacement for Mercury Relays (MDRs) or contactors



Description

S3PD-NH-... is a Non-Heat 3-phase Solid State Relay. It helps to clip inrush currents generated due to transients that are a result of high power load switching. It is also called **hybrid relay**. A hybrid SSR is built using advantages of electromechanical relay and Solid state relay while avoiding their limitations. The SSR switching (ON and OFF) occurs at zero cross over. There is virtually no contact arcing hence no wear and tear issues. Mechanical contact carries load current hence power dissipation is low. After a minimum delay of 30 ms the load will be switched off. The power outputs will be off max 100ms after the input control voltage has been removed.

Type Selection Guide

Input Control Voltage	Max Input Current	Rated Operational Voltage	Relay Type (Model Number)		
24 VDC	400mA	440 VAC rms	S3PD-NH24-4-16	S3PD-NH24-4-25	S3PD-NH24-4-40
120 VAC	400mA	440 VAC rms	S3PA-NH120-4-16	S3PA-NH120-4-25	S3PA-NH120-4-40
240 VAC	400mA	440 VAC rms	S3PA-NH240-4-16	S3PA-NH240-4-25	S3PA-NH240-4-40

***Higher Rating Models available on request**

Output Specifications

Type	S3PD-NH24-4-16 S3PA-NH120-4-16 S3PA-NH240-4-16	S3PD-NH24-4-25 S3PA-NH120-4-25 S3PA-NH240-4-25	S3PD-NH24-4-40 S3PA-NH120-4-40 S3PA-NH240-4-40
Current range with proper heatsink	16 A	25 A	40 A
Surge Current (I) non-repetitive t = 20msecs.	200 A	230 A	350 A
Non rep Peak voltage	600 – 1200Vp		
Load Voltage Range	24 – 280 VAC rms		48 – 600 VAC rms
Over Voltage Rating (PIV) Transient Peak	1200 VAC		
Max Off-state leakage current per channel @ voltage	0.05 mA @ 240 VAC		0.06 mA @480 VAC
Turn-on (max.)	10 ms	10 ms	10 ms
Turn-off (max.)	10 ms	10 ms	10 ms
Power contact	3 NO, 16 A/phase	3 NO, 25 A/phase	3 NO, 40 A/phase
Auxilliary contact	1 NO (24 VDC/200 mA)	1 NO (24 VDC/200 mA)	1 NO (24 VDC/200 mA)
Dv/Dt @ Voltage (out)	500 V/ μ s	500 V/ μ s	500 V/ μ s
I ² T Fusing (8.3 ms.)	130 A ² S	310 A ² S	450 A ² S

General Specifications

Type	S3PD-NH24-4-16/25/40	S3PA-NH120-4-16/25/40	S3PA-NH240-4-16/25/40
Frequency Range	47 – 70 Hz		
Dielectric Strength (Input to Output to Base)	4000 VAC		
Weight	Approximate 60 gms		
Storage Temp.	– 40 °C to 100 °C		
Junction Temp.	100 °C		
Operating Temp.	-20°C to 70°C		
Control i/p status	Green LED cont on		
Power factor	> 0.90		
Operating life	4 million cycles		
RoHS compliance	Yes		
CE marking	Yes		
Max No of operations per min	30		

Dimensions

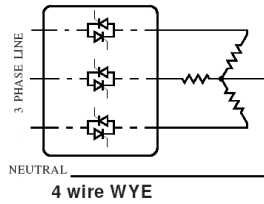
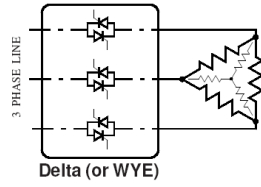
Dimensions in mm (compact).

Width –68.5mm

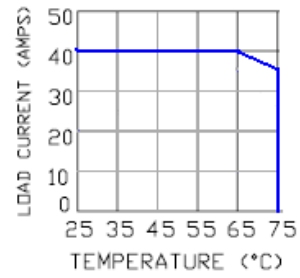
Height – 75mm

Depth –100.6mm

Connection diagram



Derating curve

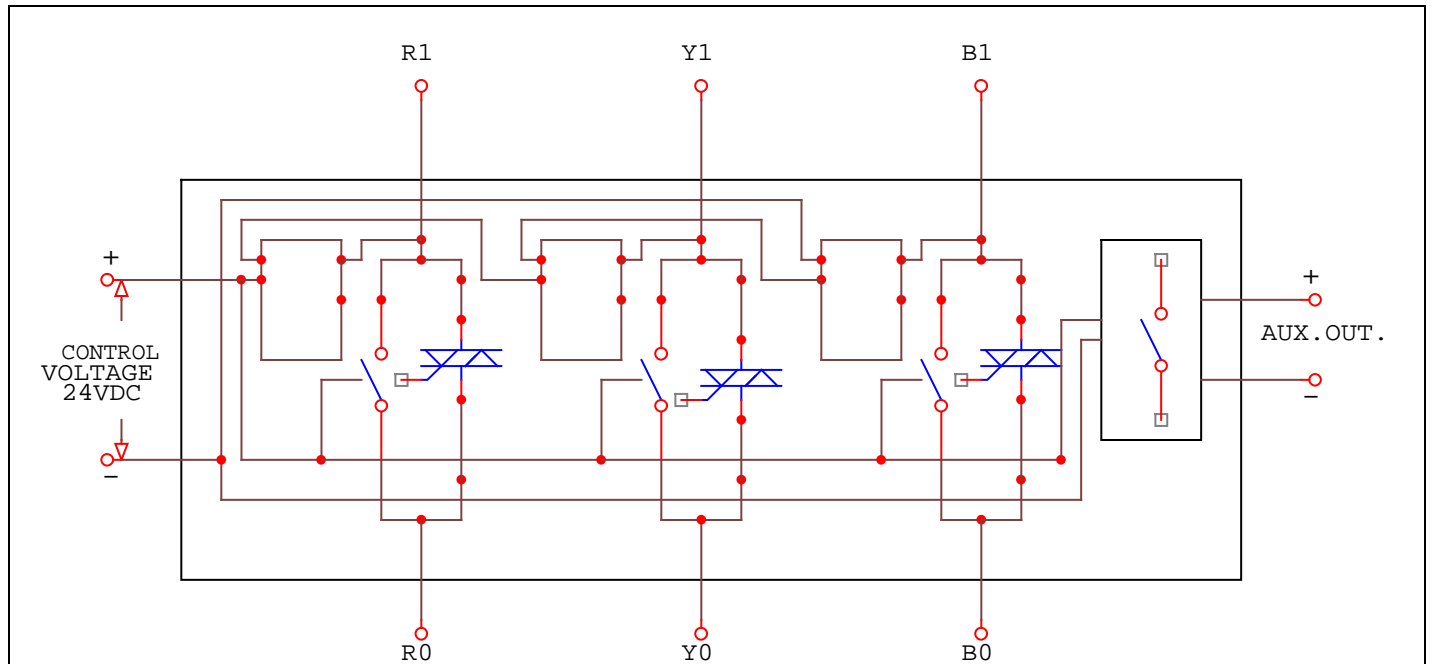


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Dimensions

Mechanical Specifications			
Dimensions in mm (compact).	Width –68.5mm	Height – 75mm	Depth –100.6mm

Functional Block Diagram



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