

# RANDOM DC TO AC SOLID STATE RELAY - MODEL 901

**25AMP- MODEL 901 RDA 48 25 01 AL5**



Weight: 110gms SSR +  
20gms Din Rail = 130gms

Model 901 - 25Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-480VAC (47-63 Hz)  
PIV : 800Vpk  
I<sup>2</sup>T : 340A<sup>2</sup>S for 9.6mS  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 6kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 10AMP @40 °C  
Without Heat Sink + Din rail

**25AMP- MODEL 901 RDA 48 25 01 AL5 WITH "G-68" H.S.**



Model 901 - 25Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-480VAC (47-63 Hz)  
PIV : 800Vpk  
I<sup>2</sup>T : 340A<sup>2</sup>S for 9.6mS  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 6kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 16AMP @40 °C  
With Heat Sink G-68+Din

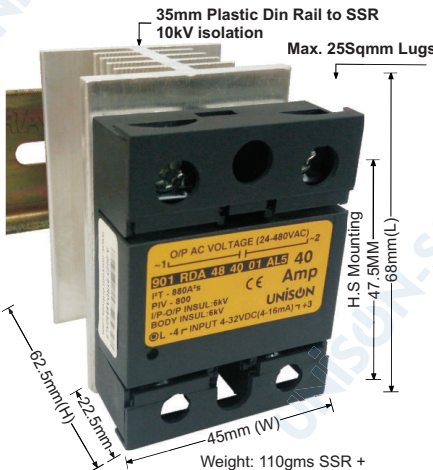
**40AMP- MODEL 901 RDA 48 40 01 AL5**



Weight: 110gms SSR +  
20gms Din Rail = 130gms

Model 901 - 40Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-480VAC (47-63 Hz)  
PIV : 800Vpk  
I<sup>2</sup>T : 880A<sup>2</sup>S for 9.6mS  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 6kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 12AMP @40 °C  
Without Heat Sink

**40AMP- MODEL 901 RDA 48 40 01 AL5 WITH "G-68" H.S.**



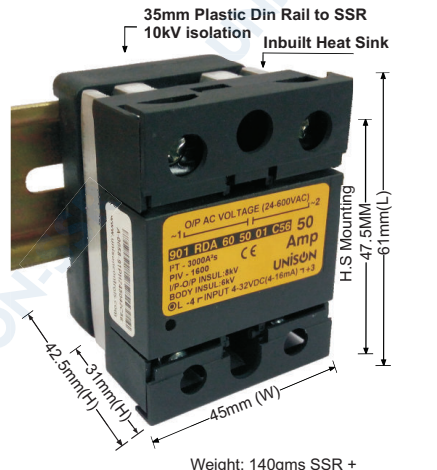
Model 901 - 40Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-480VAC (47-63 Hz)  
PIV : 800Vpk  
I<sup>2</sup>T : 880A<sup>2</sup>S for 9.6mS  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 6kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 18AMP @40 °C  
With Heat Sink G-68+Din

**50AMP- MODEL 901 RDA 60 50 01 AL5**



Model 901 - 50Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-600VAC (47-63 Hz)  
Short Circuit Protection by "B" Curve DP MCB  
15Amp Load Current/16Amp DP "B" Curve DP MCB  
PIV : 1600Vpk  
I<sup>2</sup>T : 3000A<sup>2</sup>S for 9.6mS  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 8kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 12AMP @40 °C  
Without Heat Sink  
Short Circuit Current Rating : 10KA for <3mS

**50AMP- MODEL 901 RDA 60 50 01 C56**



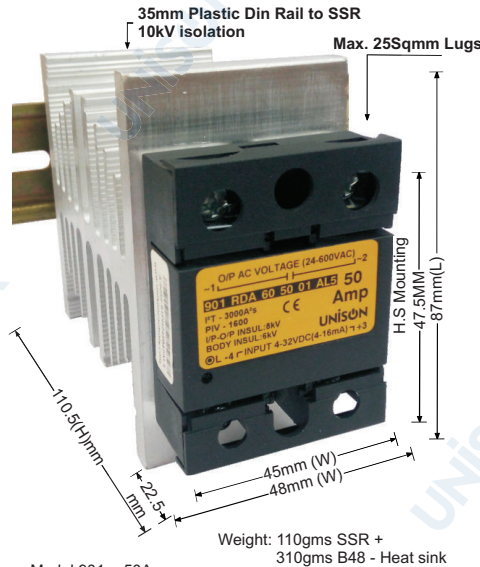
Model 901 - 50Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-600VAC (47-63 Hz)  
Short Circuit Protection by "B" Curve DP MCB  
15Amp Load Current/16Amp DP "B" Curve DP MCB  
PIV : 1600Vpk  
I<sup>2</sup>T : 3000A<sup>2</sup>S for 9.6mS  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 8kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 16AMP @40 °C  
With Inbuilt Heat Sink C-56+Din  
Short Circuit Current Rating : 10KA for <3mS

# RANDOM DC TO AC SOLID STATE RELAY - MODEL 901

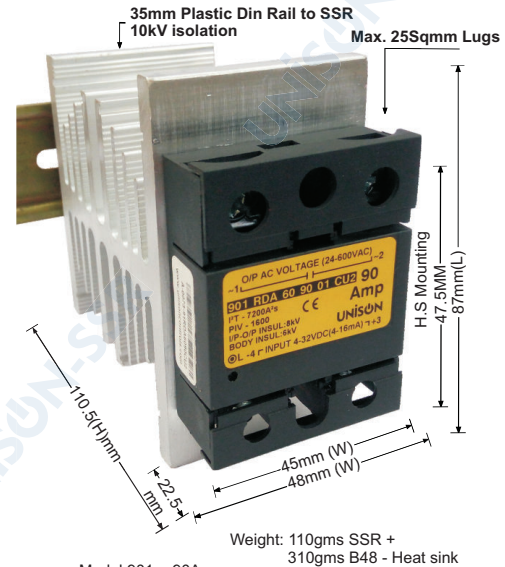
## 50AMP- MODEL 901 RDA 60 50 01 AL5 WITH "G-68" H.S.



## 50AMP- MODEL 901 RDA 60 50 01 AL5 WITH "B-48" H.S.



## 90AMP- MODEL 901 RDA 60 90 01 CU2 WITH "B-48" H.S.

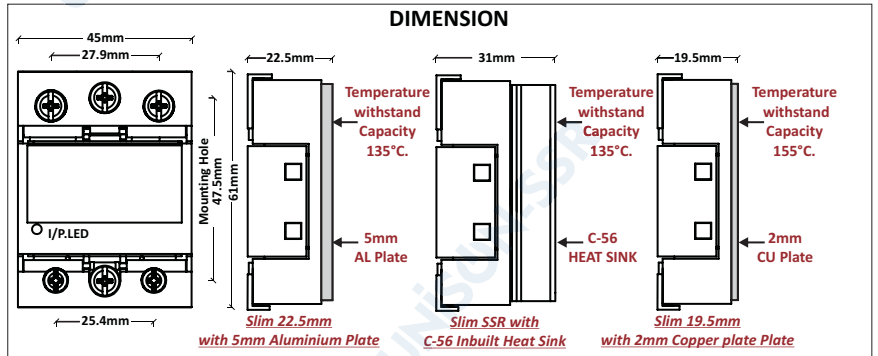
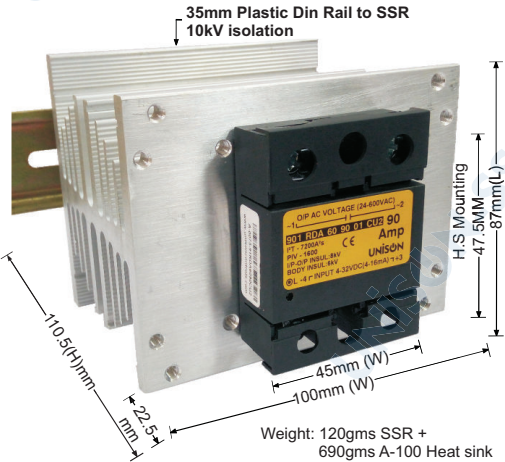


Model 901 - 50Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-600VAC (47-63 Hz)  
Short Circuit Protection by "B" Curve DP MCB  
15Amp Load Current/16Amp DP "B" Curve DP MCB  
PIV : 1600Vpk  
I<sub>T</sub> : 3000A<sup>2</sup>S for 9.6ms  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 8kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 26AMP @40 °C  
With Heat Sink G-68+Din  
Short Circuit Current Rating : 10KA for <3mS

Model 901 - 50Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-600VAC (47-63 Hz)  
Short Circuit Protection by "B" Curve DP MCB  
15Amp Load Current/16Amp DP "B" Curve DP MCB  
PIV : 1600Vpk  
I<sub>T</sub> : 3000A<sup>2</sup>S for 9.6ms  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 8kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 32AMP @40 °C  
With Heat Sink B-48+Din  
Short Circuit Current Rating : 10KA for <3mS

Model 901 - 90Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-600VAC (47-63 Hz)  
Short Circuit Protection by "B" Curve DP MCB  
63Amp Load Current/63Amp DP "B" Curve DP MCB  
PIV : 1600Vpk  
I<sub>T</sub> : 7200A<sup>2</sup>S for 9.6ms  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 8kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 65AMP @40 °C  
With Heat Sink B-48+Din  
Short Circuit Current Rating : 10KA for <3mS

## 90AMP- MODEL 901 RDA 60 90 01 CU2 WITH "A-100" H.S.



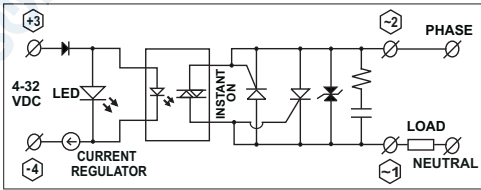
Model 901 - 90Amp  
Instant ON Switching SSR -Random Type  
Input : 4-32VDC/4-16mA  
Input LED Indication : **Green**  
Output : 24-600VAC (47-63 Hz)  
Short Circuit Protection by "B" Curve DP MCB  
63Amp Load Current/63Amp DP "B" Curve DP MCB  
PIV : 1600Vpk  
I<sub>T</sub> : 7200A<sup>2</sup>S for 9.6ms  
Body isolation : 6kV for 1min  
I/P. to O/P. isolation : 8kV for 1min  
Inbuilt surge voltage protection of 2700Vrms  
Load Current : 65AMP @40 °C  
With Heat Sink A-100+Din  
Short Circuit Current Rating : 10KA for <3mS

Approved By  
CE  
EN-60947-5-1

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RoHS  
COMPLIANT

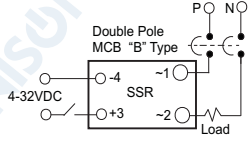
# RANDOM DC TO AC SOLID STATE RELAY - MODEL 901

## BLOCK DIAGRAM RDA - RANDOM ON DC TO AC



- ⇒ INBUILT Snubber for protect the Harmonic & Power Factor.
- ⇒ INBUILT TVS protect Surge Voltage.

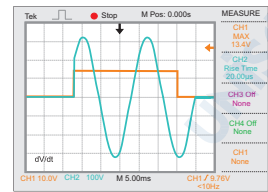
## CONNECTION DIAGRAM RDA



### SSR Connection Diagram Resistive Load

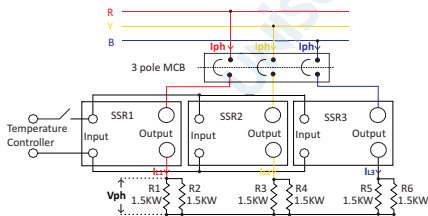
External MCB, Protects SSR During the Short Circuit and Over Load for AC-53a current duty.

## Random ON Waveform



## INSTANT ON TYPE SSR Connection Diagram

### Circuit diagram 901 model - INSTANT ON type Star Connection without neutral



#### 9KW 3PHASE STAR WITH OUT NEUTRAL

$$W = \sqrt{3} \times V_L \times I_L \times \cos\phi$$

$$9000W = 1.73 \times 415V_{rms} \times I_L \times 0.99$$

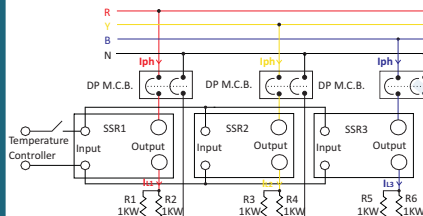
$$I_{L1} = \frac{9000}{1.73 \times 415 \times 0.99} = 12.66 \text{ Amp Per Phase Current}$$

$$I_{L2} = \frac{9000}{1.73 \times 415 \times 0.99} = 12.66 \text{ Amp Per Phase Current}$$

$$I_{L3} = \frac{9000}{1.73 \times 415 \times 0.99} = 12.66 \text{ Amp Per Phase Current}$$

$$I_{ph} = I_{L1} = I_{L2} = I_{L3} = 12.66 \text{ Amp}$$

### Circuit diagram 901 model - INSTANT ON type Star Connection with neutral



#### 6KW 3PHASE STAR WITH NEUTRAL

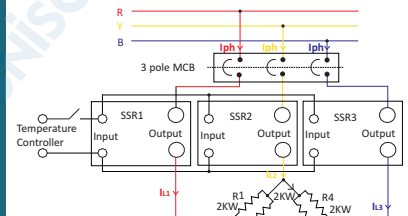
$$\text{Current} = \frac{2000}{230} = 8.69 \text{ Amp}$$

$$I_{L1} = 8.69 \text{ Amp (R) Phase Current}$$

$$I_{L2} = 8.69 \text{ Amp (Y) Phase Current}$$

$$I_{L3} = 8.69 \text{ Amp (B) Phase Current}$$

### Circuit diagram 901 model - INSTANT ON type Closed Delta Connection



#### 12KW 3Phase Closed Delta

$$W = \sqrt{3} \times V_L \times I_L \times \cos\phi$$

$$12000W = 1.73 \times 415V_{rms} \times I_L \times 0.99$$

$$I_{L1} = \frac{12000}{1.73 \times 415 \times 0.99} = 16.88 \text{ Amp Per Phase Current}$$

$$I_{L2} = \frac{12000}{1.73 \times 415} = 16.88 \text{ Amp Per Phase Current}$$

$$I_{L3} = \frac{12000}{1.73 \times 415 \times 0.99} = 16.88 \text{ Amp Per Phase Current}$$

$$I_{ph} = \frac{16.88}{1.73} = 9.75 \text{ Amp}$$