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Find the *Schneider Electric / MagneCraft 861SSR210-DC-1* at our website: *Click HERE*

Description

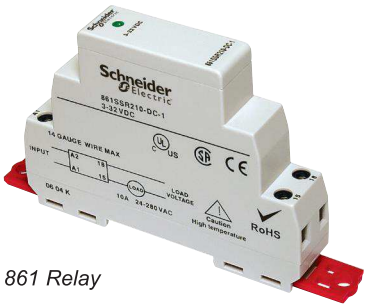
Legacy Solid-State Relays

861

SPST-NO, 8–15 A
SPST-NC, 10 A

Description

The 861 is the first complete solid-state relay without any moving parts, all in a slim 17.5 mm design.



861 Relay

Feature	Benefit
Solid-state circuitry	Involves no moving parts, which extends product life, increases reliability, and enables silent operation
Optically coupled circuit	Provides isolation between input and output circuits
Internal snubber	Helps protect the relay's internal circuit from high voltage transients
Internal heat sink	Provides factory-tested thermal management
Finger protected terminals (per IP20)	Help prevent an operator from touching live circuits
DIN and panel mounting	Mounts directly onto a DIN rail or panel, and provides flexibility to accommodate last-minute design changes

Switching Type	Switching Device (1)	Input Voltage Range	Output Voltage Range	Contact Configuration	Rated Output Current (A)	Standard Part Number
DC Switching	MOSFET	3.5–32 Vdc	3–50 Vdc	SPST-NO	15	861SSR115-DD
			3–150 Vdc	SPST-NO	8	861SSR208-DD
AC Random	Triac	3–32 Vdc	24–280 Vac	SPST-NO	8	861SSRA208-DC-2
			24–280 Vac	SPST-NC	8	861SSRA208-DC-4
			48–480 Vac	SPST-NO	8	861SSRA408-DC-2
		90–280 Vac	24–280 Vac	SPST-NO	8	861SSRA208-AC-2
			48–480 Vac	SPST-NO	8	861SSRA408-AC-2
	SCR	3–32 Vdc	24–280 Vac	SPST-NO	10	861SSR210-DC-2
			24–280 Vac	SPST-NC	10	861SSR210-DC-4
			48–480 Vac	SPST-NO	10	861SSR410-DC-2
			48–480 Vac	SPST-NO	10	861SSR610-DC-2
		90–280 Vac	24–280 Vac	SPST-NO	10	861SSR210-AC-2
			48–480 Vac	SPST-NO	10	861SSR410-AC-2
			48–600 Vac	SPST-NO	10	861SSR610-AC-2
AC Zero Cross	Triac	3–32 Vdc	24–280 Vac	SPST-NO	8	861SSRA208-DC-1
			48–480 Vac	SPST-NO	8	861SSRA408-DC-1
		90–280 Vac	24–280 Vac	SPST-NO	8	861SSRA208-AC-1
			48–480 Vac	SPST-NO	8	861SSRA408-AC-1
	SCR	3–32 Vdc	24–280 Vac	SPST-NO	10	861SSR210-DC-1
			48–480 Vac	SPST-NO	10	861SSR410-DC-1
			48–600 Vac	SPST-NO	10	861SSR610-DC-1
		90–280 Vac	24–280 Vac	SPST-NO	10	861SSR210-AC-1
			48–480 Vac	SPST-NO	10	861SSR410-AC-1
			48–600 Vac	SPST-NO	10	861SSR610-AC-1

Part Number Explanation

861 **SSR** **2** **10** - **AC** - **1**

Series:
861

Output Type:
SSR = SCR
SSR = MOSFET (DD only)
SSRA = TRIAC

Output Voltage:
1 = 3–50 Vdc
2 = 24–280 Vac
2 = 3–150 Vdc (DD Only)
4 = 48–480 Vac
6 = 48–600 Vac

Output Current:
08 = 8 A
10 = 10 A
15 = 15 A

Input Voltage:
AC = 90–280 Vac
DC = 3–32 Vdc
DD = 3.5–32 Vdc

Contact Configuration & Switching Type:
1 = SPST-NO, AC Zero Cross
2 = SPST-NO, AC Random
4 = SPST-NC, AC Random
Null = SPST-NO, DC Switching

Legacy Solid-State Relays

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SPST-NO, 8–15 A

SPST-NC, 10 A

Specifications (UL 508)

Part Number	861SSR•••-DD	861SSRA•••-DC-•	861SSR•••-DC-•	861SSRA•••-AC-•	861SSR•••-AC-•
Input Characteristics					
Input Voltage Range	3.5–32 Vdc	3–32 Vdc		90–280 Vac	
Must Release Voltage	1 Vdc			10 Vac	
Nominal Input Impedance	Current regulator			16–25 kW	
Typical Input Current at 5 Vdc	12mA		16 mA; 12 mA (861SSR210-DC-4)	12mA	
Reverse Polarity Protection	Yes			N/A	
Output Characteristics					
Switching Device	MOSFET	Triac	SCR	Triac	SCR
Switching Type	DC Switching	AC Zero Cross; AC Random			
Contact Configuration	SPST-NO	SPST-NO; SPST-NC			
Output Voltage Range	3–50 Vdc; 3–150 Vdc	24–280 Vac; 48–480 Vac; 48–600 Vac			
Maximum Rate of Rise, Off-State Voltage (dv/dt)	N/A	250 V/us	500 V/us; 350 V/us (861SSR410, 861SSR610-DC-1); 200 V/us (861SSR210-DC-4, 861SSR610-DC-2)	250 V/us	500 V/us; 350 V/us (861SSR410); 250 V/us (861SSR610)
Current Ratings	Load rating: 8 A rms, 15 A rms	Load rating: 8 A (rms) Incandescent lamp rating: 5 A (rms) Motor load rating: 3 A (rms)	Load rating: 10 A (rms) Incandescent lamp rating: 8 A (rms) Motor load rating: 4.5 A (rms)	Load rating: 8 A (rms) Incandescent lamp rating: 5 A (rms) Motor load rating: 3 A (rms)	Load rating: 10 A (rms) Incandescent lamp rating: 8 A (rms) Motor load rating: 4.5 A (rms)
Minimum Load Current–Maintain On	20mA	150mA	50 mA	150mA	50 mA
Non-Repetitive Surge Current (1 cycle)	861SSR115-DD: 35 A; 861SSR208-DD: 50 A	200 A	500 A	200 A	500 A
Maximum RMS Overload Current (1 s)	861SSR115-DD: 17 A; 861SSR208-DD: 24 A	24 A			
Maximum Off-State Leakage Current	0.25 mA	10 mA (rms)			
Typical On-State Voltage Drop	N/A	1.25 Vac (rms)			
Maximum On-State Voltage Drop	0.5 Vdc	1.6 Vac (rms)			
Maximum On-State Resistance	40 mW	N/A			
Maximum Turn-On Time	5 ms	8.3 ms			
Maximum Turn-Off Time	5 ms	8.3 ms			
Maximum I^2T for Fusing	N/A	250 A^2sec	1250 A^2sec (861SSR210); 850 A^2sec (861SSR410); 600 A^2sec (861SSR610)	250 A^2sec	1250 A^2sec (861SSR210); 850 A^2sec (861SSR410); 600 A^2sec (861SSR610)
General Characteristics					
Electrical Life	N/A for solid-state relays				
Thermal Resistance (Junction-Case)	861SSR115-DD: 0.5 °C/W; 861SSR208-DD: 1.4 °C/W	2.00 °C/W	0.66 °C/W	2.00 °C/W	0.66 °C/W
Internal Heat Sink	4.0 °C/W				
Dielectric Strength (Input–Output)	2500 V (rms)	4000 V (rms)			
Dielectric Strength (Terminals–Chassis)	2500 V (rms)				
Operating Temperature Range	−30 to +80 °C (derating applies)				
Storage Temperature Range	−40 to +100 °C				
Weight	127.1 g (4.1 oz)				
Input Indication	Green LED				
Terminal Wire Capacity (Input and Output)	14 AWG (2.5 mm^2) maximum				
Terminal Screw Torque	7.1 lb-in (0.8 N•m) maximum				
Safety Cover	IP20				
Agency Approvals	CULus (File: E258297 CCN: NRNT, NRNT7), cURus (File: E258297 CCN: NRNT2, NRNT8), CSA (File: 40787 Class: 3211 04); CE; RoHS				

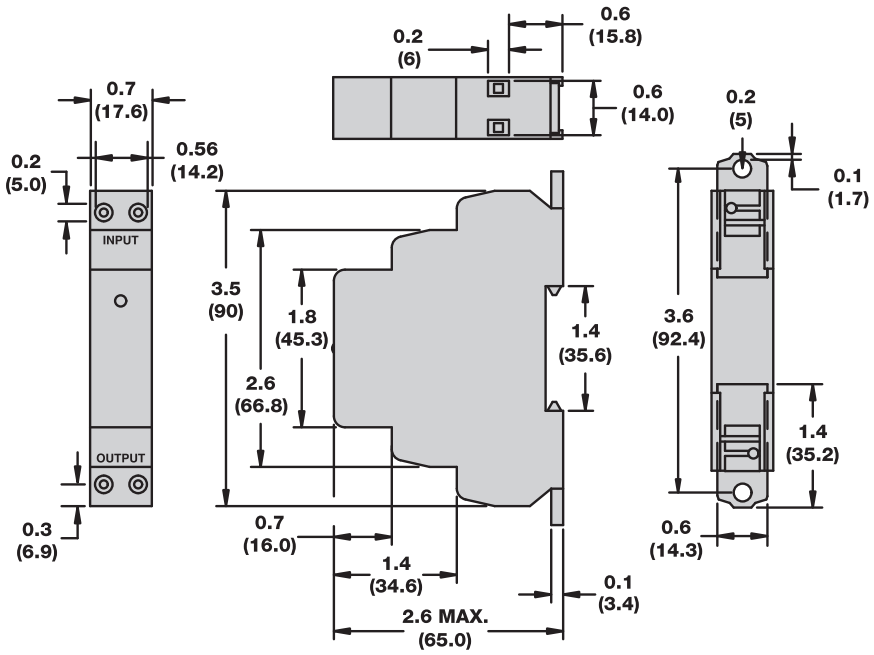
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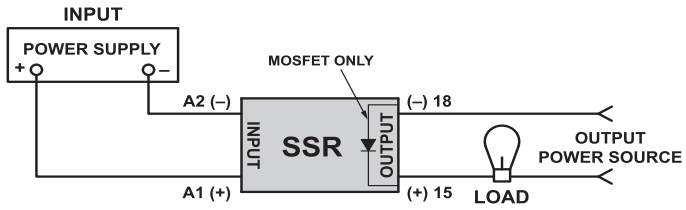
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SPST-NC, 10 A

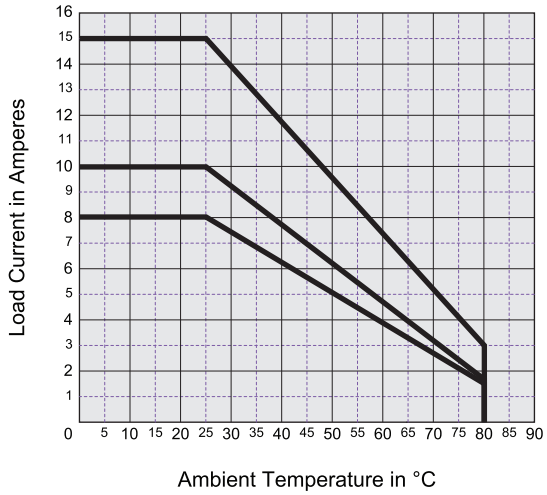
Dimensions: in. (mm)



Wiring Diagram



Derating Curves



Note: A minimum spacing of 17.5 mm (0.7 in.) is required between adjacent 861 relays in order to acheive the maximum ratings.

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