

POWER TYPE SOLID STATE RELAY ESR5 SERIES

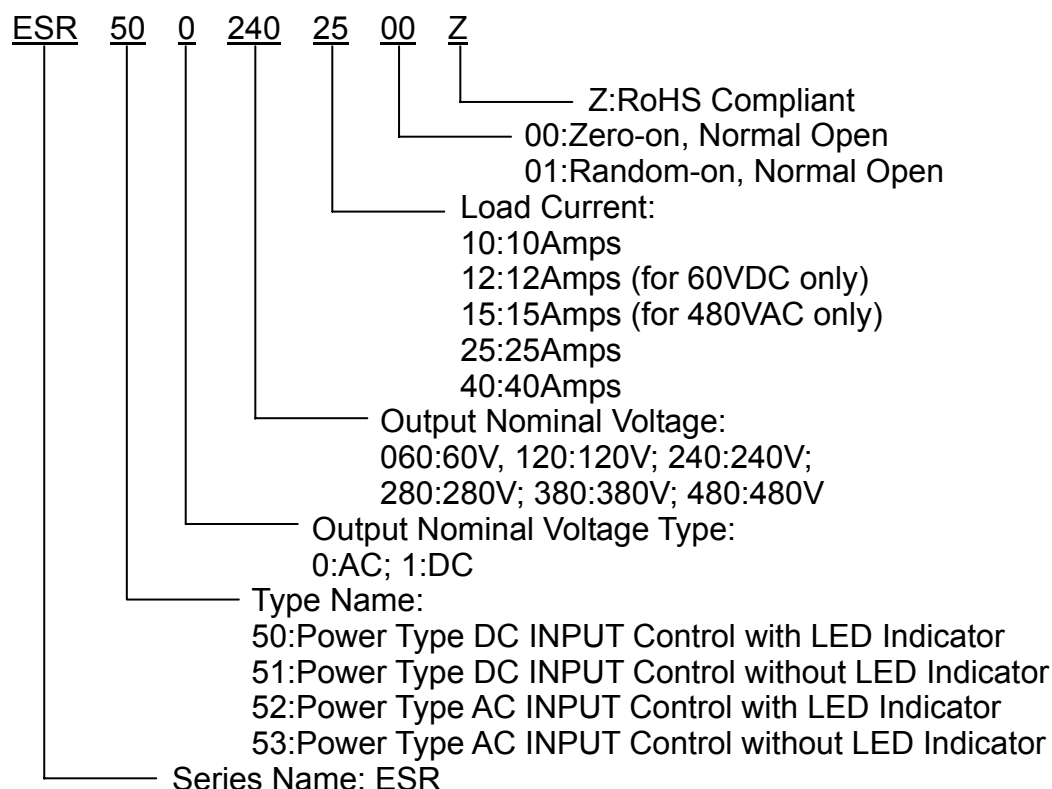
UL [®] **US** E155181(R)

■ FEATURES

- Optically Isolated.
- Input LED Indicator.
- High dv/dt and High Blocking Voltage.
- Low Input Power Consumption, TTL and CMOS Compatible.
- Zero Voltage Turn-on, Zero Current Turn-off (minizes EMI/RFI).
- High Surge Rating Allows Lamp and Motor Load Switching.
- Output Snubber Circuit Protection.



■ PART NUMBERING SYSTEM



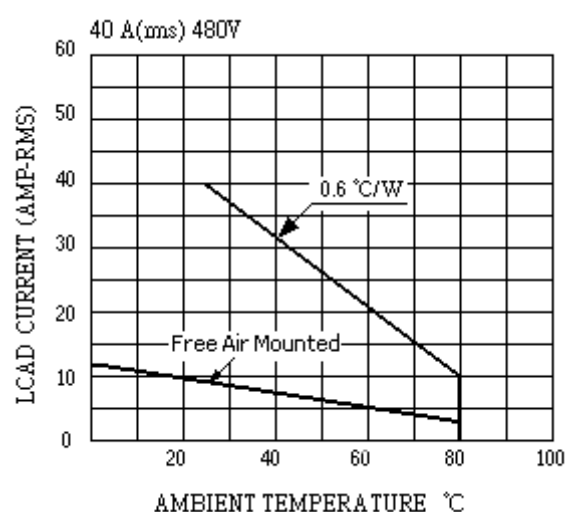
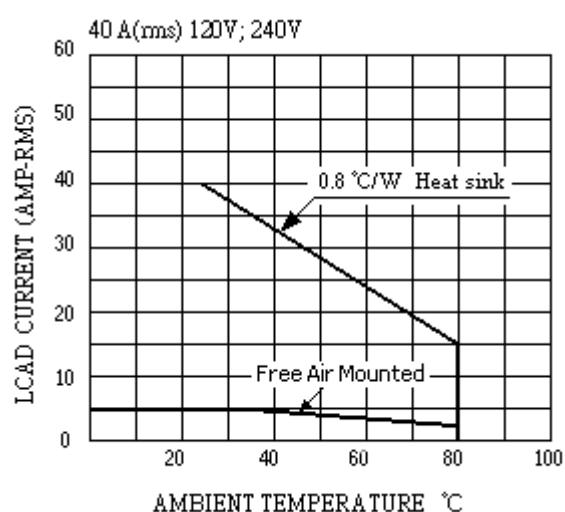
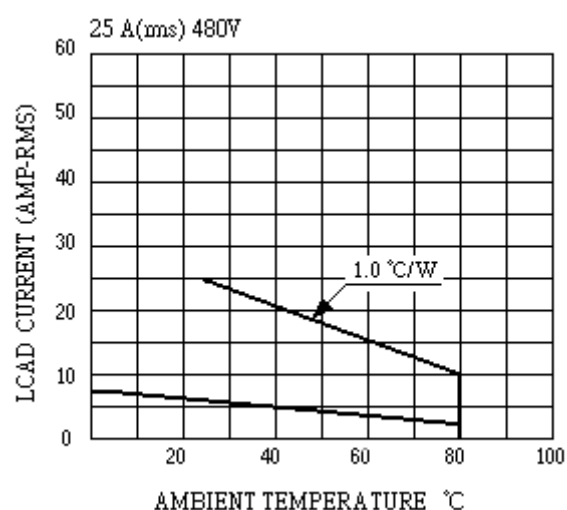
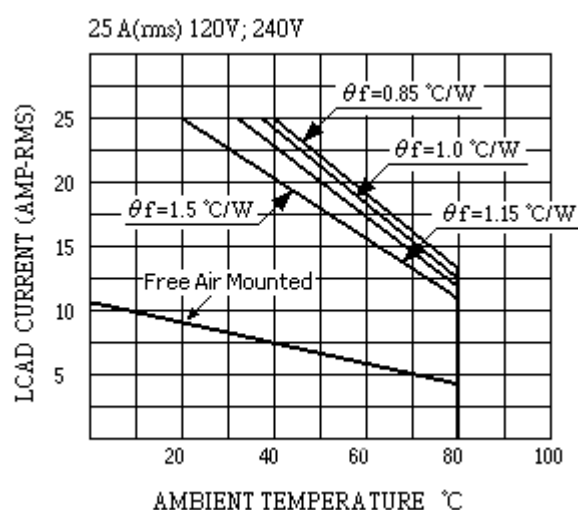
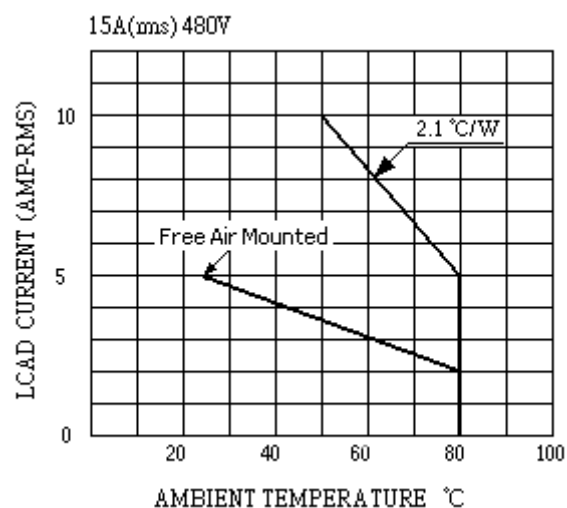
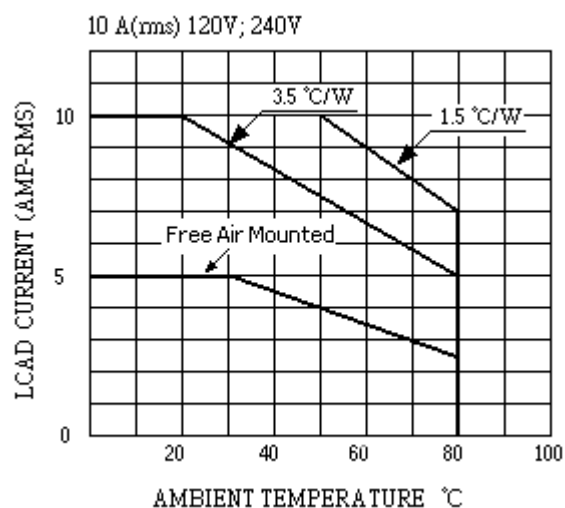
■ OPTIONS:

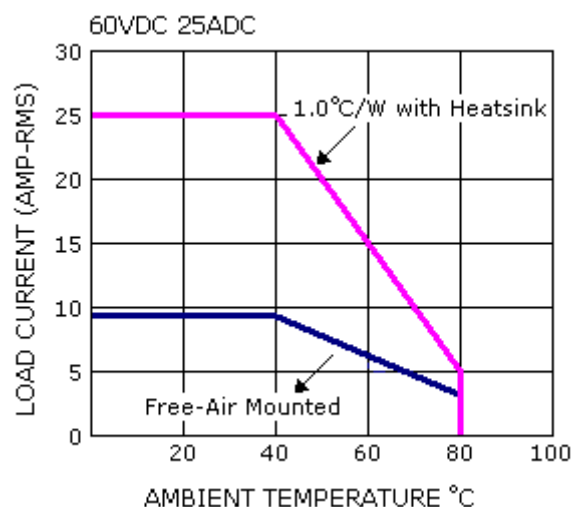
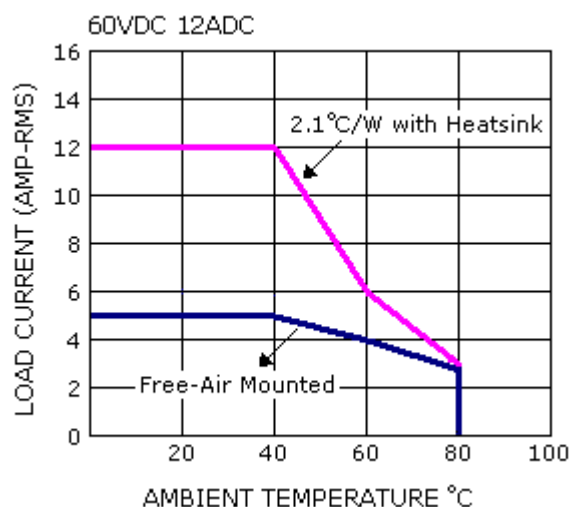
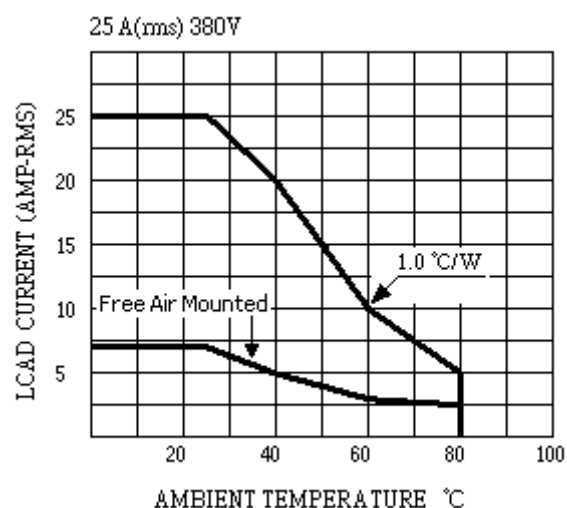
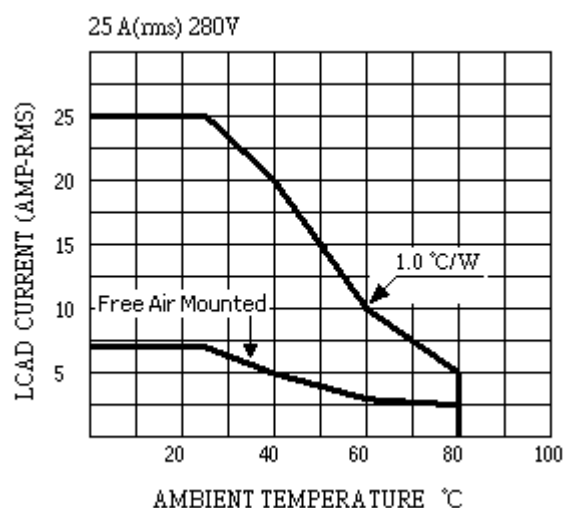
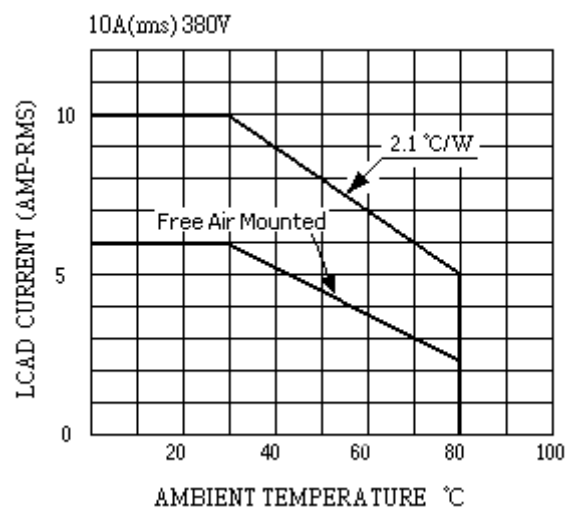
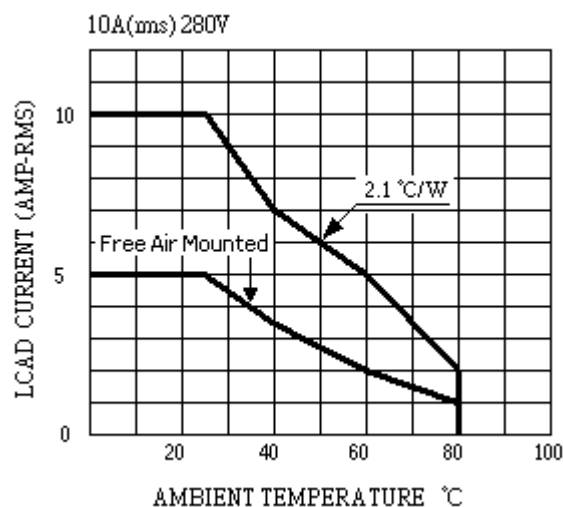
Protective cover available
P/N: 436-41100

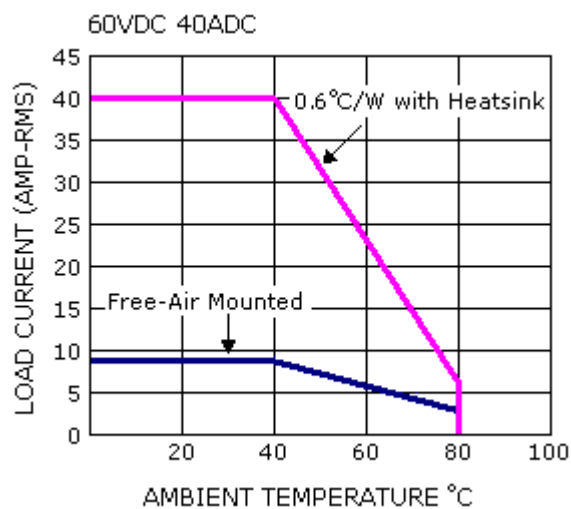




TEMPERAURE DERATING CHART

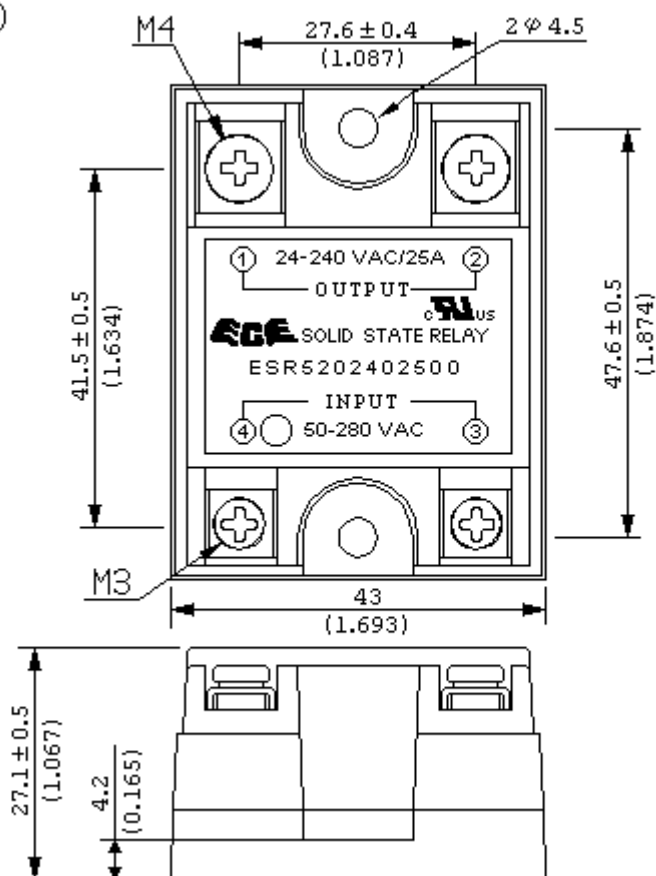
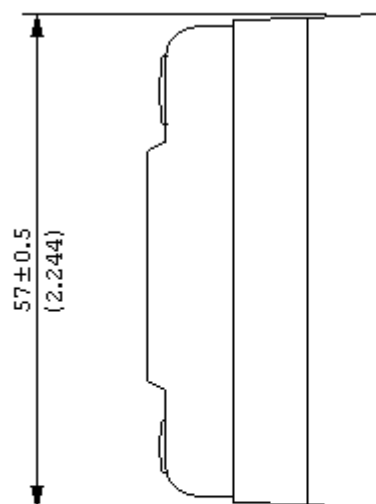




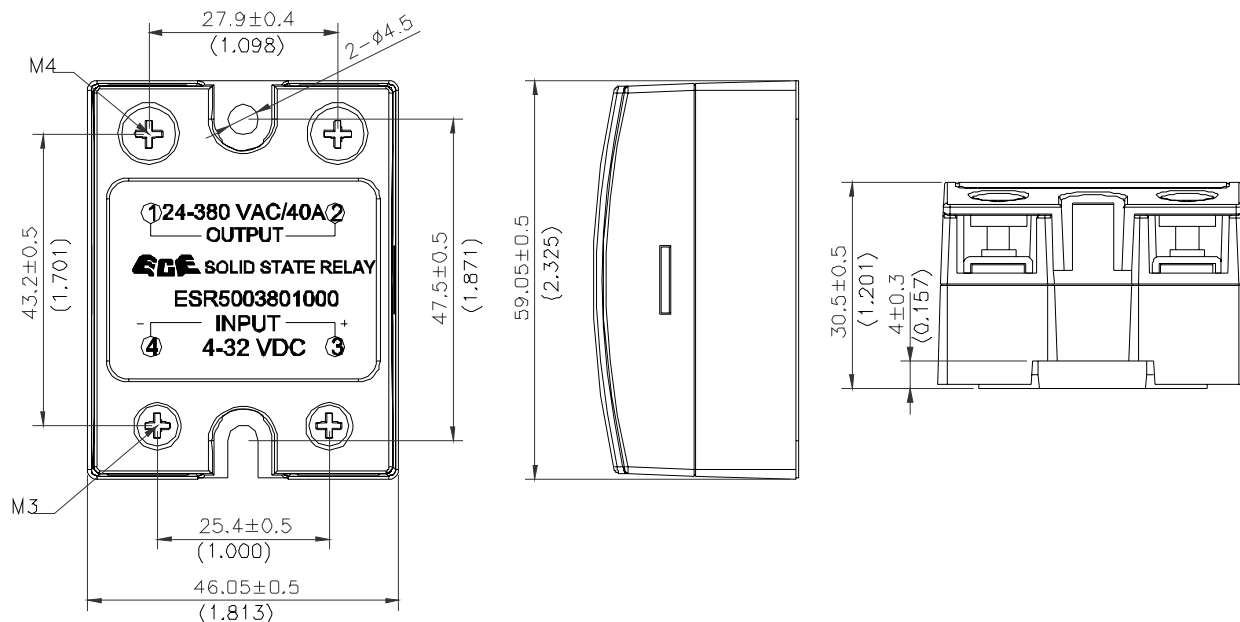


DIMENSIONS

DIMENSIONS UNIT:mm(inch)
ESR5 SERIES



DIMENSIONS UNIT:mm(inch)
ESR5 SERIES (FOR 280V/380V)



■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 10A(rms) 120V;240V

DESCRIPTION	TYPES	ESR500				ESR510			
		1201000	2401000	1201001	2401001	1201000	2401000	1201001	2401001
■ INPUT CIRCUIT									
LED Indicate	YES				NO				
Control Voltage Range	4-32 VDC				3-32 VDC				
Control Current	15mA Max.				16mA Max.				
Min. Turn-off Voltage	1.5 VDC				1 VDC				
Input Impedance	2.0KΩ Min.				2.0KΩ Min.				
■ OUTPUT CIRCUIT									
Max. Load Current	10A (rms)				10A (rms)				
Nominal load Voltage (VAC)	120	240	120	240	120	240	120	240	
Load Voltage Range (VAC)	24-140	24-280	24-140	24-280	24-140	24-280	24-140	24-280	
Non-Repetitive Max. Peak Voltage (VAC)	400	600	400	600	400	600	400	600	
Non-Repetitive Max. Peak Current	125A				125A				
Max. Off-state Leakage Current	10mA				10mA				
Max. On-state Voltage Drop	1.6V				1.6V				
Min. Load Current	50mA				50mA				
Max. Off-state Slew Rated (dv/dt)	250V/μs				250V/μs				
Operating Frequency Range	47Hz ~ 63Hz				47Hz ~ 63Hz				
■ GENERAL CHARACTERISTICS									
Zero-on or Random-on	Z		R		Z		R		
Max. Turn -on Time (60Hz)	8.3ms		100μs		8.3ms		100μs		
Max. Turn-off Time (60Hz)	8.3ms								
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)								
Dielectric Strength	3.5K VAC (Between Input & Output)								
Capacitance	15pF Max. (Between Input & Output)								
Operating Temperature	-20℃ ~ +80℃								
Storage Temperature	-40℃ ~ +100℃								
Heat Sink	3.5℃/W (Max. Load Current)								

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 25A(rms) 120V;240V

DESCRIPTION	TYPES	ESR500				ESR510			
		1202500	2402500	1202501	2402501	1202500	2402500	1202501	2402501
■ INPUT CIRCUIT									
LED Indicate	YES				NO				
Control Voltage Range	4-32 VDC				3-32 VDC				
Control Current	15mA Max.				16mA Max.				
Min. Turn-off Voltage	1.5 VDC				1 VDC				
Input Impedance	2.0KΩ Min.				2.0KΩ Min.				
■ OUTPUT CIRCUIT									
Max. Load Current	25A (rms)				25A (rms)				
Nominal load Voltage (VAC)	120	240	120	240	120	240	120	240	
Load Voltage Range (VAC)	24-140	24-280	24-140	24-280	24-140	24-280	24-140	24-280	
Non-Repetitive Max. Peak Voltage (VAC)	400	600	400	600	400	600	400	600	
Non-Repetitive Max. Peak Current	260A				260A				
Max. Off-state Leakage Current	10mA				10mA				
Max. On-state Voltage Drop	1.6V				1.6V				
Min. Load Current	100mA				100mA				
Max. Off-state Slew Rated (dv/dt)	250V/μs				250V/μs				
Operating Frequency Range	47Hz ~ 63Hz				47Hz ~ 63Hz				
■ GENERAL CHARACTERISTICS									
Zero-on or Random-on	Z		R		Z		R		
Max. Turn -on Time (60Hz)	8.3ms		100μs		8.3ms		100μs		
Max. Turn-off Time (60Hz)	8.3ms								
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)								
Dielectric Strength	3.5K VAC (Between Input & Output)								
Capacitance	15pF Max. (Between Input & Output)								
Operating Temperature	-20℃ ~ +80℃								
Storage Temperature	-40℃ ~ +100℃								
Heat Sink	1.5℃/W (Max. Load Current)								

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 40A(rms) 120V;240V

DESCRIPTION	TYPES	ESR500				ESR510			
		1204000	2404000	1204001	2404001	1204000	2404000	1204001	2404001
■ INPUT CIRCUIT									
LED Indicate	YES				NO				
Control Voltage Range	4-32 VDC				3-32 VDC				
Control Current	15mA Max.				16mA Max.				
Min. Turn-off Voltage	1.5 VDC				1 VDC				
Input Impedance	2.0KΩ Min.				2.0KΩ Min.				
■ OUTPUT CIRCUIT									
Max. Load Current	40A (rms)				40A (rms)				
Nominal load Voltage (VAC)	120	240	120	240	120	240	120	240	
Load Voltage Range (VAC)	24-140	24-280	24-140	24-280	24-140	24-280	24-140	24-280	
Non-Repetitive Max. Peak Voltage (VAC)	400	600	400	600	400	600	400	600	
Non-Repetitive Max. Peak Current	315A				315A				
Max. Off-state Leakage Current	10mA				10mA				
Max. On-state Voltage Drop	1.8V				1.8V				
Min. Load Current	100mA				100mA				
Max. Off-state Slew Rated (dv/dt)	250V/μs				250V/μs				
Operating Frequency Range	47Hz ~ 63Hz				47Hz ~ 63Hz				
■ GENERAL CHARACTERISTICS									
Zero-on or Random-on	Z		R		Z		R		
Max. Turn -on Time (60Hz)	8.3ms		100μs		8.3ms		100μs		
Max. Turn-off Time (60Hz)	8.3ms								
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)								
Dielectric Strength	3.5K VAC (Between Input & Output)								
Capacitance	15pF Max. (Between Input & Output)								
Operating Temperature	-20℃ ~ +75℃								
Storage Temperature	-40℃ ~ +100℃								
Heat Sink	0.8℃/W (Max. Load Current)								

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 10A(rms) 280V;380V

TYPES DESCRIPTION	ESR500	ESR510	ESR500	ESR510
	2801000	2801000	3801000	3801000
■ INPUT CIRCUIT				
LED Indicate	YES	NO	YES	NO
Control Voltage Range	4-32 VDC	3-32 VDC	4-32 VDC	3-32 VDC
Control Current	16mA Max.	16mA Max.	16mA Max.	16mA Max.
Min. Turn-off Voltage	1.5 VDC	1 VDC	1.5 VDC	1 VDC
■ OUTPUT CIRCUIT				
Max. Load Current	10A		10A	
Nominal load Voltage (VAC)	280		380	
Load Voltage Range (VAC)	24-280		24-380	
Non-Repetitive Max. Peak Voltage	600V		800V	
Non-Repetitive Max. Peak Current	160A rms.		200A rms.	
Max. Off-state Leakage Current	3mA		3mA	
Max. On-state Voltage Drop	1.6Vrms Max.		1.6Vrms Max.	
Min. Load Current	100mA		100mA	
Max. Off-state Slew Rated (dv/dt)	400V/μs		700V/μs	
Operating Frequency Range	47Hz ~ 63Hz		47Hz ~ 63Hz	
■ GENERAL CHARACTERISTICS				
Zero-on or Random-on	Z			
Max. Turn -on Time (60Hz)	8.3ms			
Max. Turn-off Time (60Hz)	8.3ms			
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output)			
Dielectric Strength	3.5K VAC (Between Input & Output)			
Capacitance	10pF Max. (Between Input & Output)			
Operating Temperature	-20℃ ~ +80℃			
Storage Temperature	-40℃ ~ +100℃			
Heat Sink	2.1℃/W (Max. Load Current)			
Weight	95g			

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 25A(rms) 280V;380V

TYPES DESCRIPTION	ESR500	ESR510	ESR500	ESR510
	2802500	2802500	3802500	3802500
■ INPUT CIRCUIT				
LED Indicate	YES	NO	YES	NO
Control Voltage Range	4-32 VDC	3-32 VDC	4-32 VDC	3-32 VDC
Control Current	16mA Max.	16mA Max.	16mA Max.	16mA Max.
Min. Turn-off Voltage	1.5 VDC	1 VDC	1.5 VDC	1 VDC
■ OUTPUT CIRCUIT				
Max. Load Current	25A		25A	
Nominal load Voltage (VAC)	280		380	
Load Voltage Range (VAC)	24-280		24-380	
Non-Repetitive Max. Peak Voltage	600V		800V	
Non-Repetitive Max. Peak Current	250A rms.		250A rms.	
Max. Off-state Leakage Current	3mA		3mA	
Max. On-state Voltage Drop	1.8Vrms Max.		1.8Vrms Max.	
Min. Load Current	100mA		100mA	
Max. Off-state Slew Rated (dv/dt)	400V/μs		500V/μs	
Operating Frequency Range	47Hz ~ 63Hz		47Hz ~ 63Hz	
■ GENERAL CHARACTERISTICS				
Zero-on or Random-on	Z			
Max. Turn -on Time (60Hz)	8.3ms			
Max. Turn-off Time (60Hz)	8.3ms			
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output)			
Dielectric Strength	3.5K VAC (Between Input & Output)			
Capacitance	10pF Max. (Between Input & Output)			
Operating Temperature	-20℃ ~ +80℃			
Storage Temperature	-40℃ ~ +100℃			
Heat Sink	1.0℃/W (Max. Load Current)			
Weight	95g			

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 15A(rms) 480V

DESCRIPTION \ TYPES	ESR500	ESR510
	4801500	4801500
■ INPUT CIRCUIT		
LED Indicate	YES	NO
Control Voltage Range	4-32 VDC	4-32 VDC
Control Current	120mA Max.	120mA Max.
Min. Turn-off Voltage	1.5 VDC	1.5 VDC
Input Impedance	270Ω Min.	270Ω Min.
■ OUTPUT CIRCUIT		
Max. Load Current	15A (rms)	15A (rms)
Nominal load Voltage (VAC)	440	440
Load Voltage Range (VAC)	48-480	48-480
Non-Repetitive Max. Peak Voltage (VAC)	800	800
Non-Repetitive Max. Peak Current	200A	200A
Max. Off-state Leakage Current	2mA	2mA
Max. On-state Voltage Drop	1.6V	1.6V
Min. Load Current	70mA	70mA
Max. Off-state Slew Rate (dv/dt)	700V/μs	700V/μs
Operating Frequency Range	47Hz ~ 63Hz	47Hz ~ 63Hz
■ GENERAL CHARACTERISTICS		
Zero-on or Random-on	Z	
Max. Turn -on Time (60Hz)	8.3ms	
Max. Turn-off Time (60Hz)	8.3ms	
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)	
Dielectric Strength	3.5K VAC (Between Input & Output)	
Capacitance	15pF Max. (Between Input & Output)	
Operating Temperature	-20°C ~ +75°C	
Storage Temperature	-40°C ~ +100°C	
Heat Sink	2.1°C/W (Max. Load Current)	

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 25A(rms) 480V

DESCRIPTION \ TYPES	ESR500	ESR510
	4802500	4802500
■ INPUT CIRCUIT		
LED Indicate	YES	NO
Control Voltage Range	4-32 VDC	4-32 VDC
Control Current	120mA Max.	120mA Max.
Min. Turn-off Voltage	1.5 VDC	1.5 VDC
Input Impedance	270Ω Min.	270Ω Min.
■ OUTPUT CIRCUIT		
Max. Load Current	25A (rms)	25A (rms)
Nominal load Voltage (VAC)	440	440
Load Voltage Range (VAC)	48-480	48-480
Non-Repetitive Max. Peak Voltage (VAC)	800	800
Non-Repetitive Max. Peak Current	250A	250A
Max. Off-state Leakage Current	2mA	2mA
Max. On-state Voltage Drop	1.6V	1.6V
Min. Load Current	120mA	120mA
Max. Off-state Slew Rate (dv/dt)	700V/μs	700V/μs
Operating Frequency Range	47Hz ~ 63Hz	47Hz ~ 63Hz
■ GENERAL CHARACTERISTICS		
Zero-on or Random-on	Z	
Max. Turn -on Time (60Hz)	8.3ms	
Max. Turn-off Time (60Hz)	8.3ms	
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)	
Dielectric Strength	3.5K VAC (Between Input & Output)	
Capacitance	15pF Max. (Between Input & Output)	
Operating Temperature	-20°C ~ +75°C	
Storage Temperature	-40°C ~ +100°C	
Heat Sink	1.0°C/W (Max. Load Current)	

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 40A(rms) 480V

DESCRIPTION \ TYPES	ESR500	ESR510
	4804000	4804000
■ INPUT CIRCUIT		
LED Indicate	YES	NO
Control Voltage Range	4-32 VDC	4-32 VDC
Control Current	120mA Max.	120mA Max.
Min. Turn-off Voltage	1.5 VDC	1.5 VDC
Input Impedance	270Ω Min.	270Ω Min.
■ OUTPUT CIRCUIT		
Max. Load Current	40A (rms)	40A (rms)
Nominal load Voltage (VAC)	440	440
Load Voltage Range (VAC)	48-480	48-480
Non-Repetitive Max. Peak Voltage (VAC)	800	800
Non-Repetitive Max. Peak Current	400A	400A
Max. Off-state Leakage Current	2mA	2mA
Max. On-state Voltage Drop	1.8V	1.8V
Min. Load Current	120mA	120mA
Max. Off-state Slew Rate (dv/dt)	900V/μs	900V/μs
Operating Frequency Range	47Hz ~ 63Hz	47Hz ~ 63Hz
■ GENERAL CHARACTERISTICS		
Zero-on or Random-on	Z	
Max. Turn -on Time (60Hz)	8.3ms	
Max. Turn-off Time (60Hz)	8.3ms	
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)	
Dielectric Strength	3.5K VAC (Between Input & Output)	
Capacitance	15pF Max. (Between Input & Output)	
Operating Temperature	-20°C ~ +75°C	
Storage Temperature	-40°C ~ +100°C	
Heat Sink	0.6°C/W (Max. Load Current)	

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 12A, 60VDC

DESCRIPTION	TYPES	ESR501	ESR511
		0601201	0601201
■ INPUT CIRCUIT			
LED Indicate		YES	NO
Control Voltage Range		4-32 VDC	3-32 VDC
Control Current		16mA Max.	16mA Max.
Release Voltage		1 VDC	1 VDC
■ OUTPUT CIRCUIT			
Load Voltage		60 VDC	60 VDC
Operating Range		0-60 VDC	0-60 VDC
Nominal Current		12 ADC	12 ADC
Non Repetitive Overload Current (300us)		260A	260A
On state Voltage Drop		0.19V Max.	0.19V Max.
On-state Resistance		16mΩ Max.	16mΩ Max.
Off state Leakage Current		<1mA	<1mA
Min. Load Current		100mA	100mA
Turn On Time (at Nominal Voltage)		1ms	1ms
Turn Off Time (at Nominal Voltage)		1ms	1ms
Operating Switching Frequency		10Hz	10Hz
■ GENERAL CHARACTERISTICS			
Insulation Resistance		DC 500V 1000MΩ (Between Input & Output)	
Dielectric Strength		2000Vrms, 1 minute, output-case 3000Vrms, 1 minute (Between Input & Output)	
Capacitance		15pF Max. (Between Input & Output)	
Operating Temperature Range		-20°C ~ +80°C	
Storage Temperature Range		-40°C ~ +100°C	
Heat Sink		2.1°C/W (Max. Load current)	
Weight		95g	

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 25A, 60VDC

DESCRIPTION \ TYPES	ESR501	ESR511
	0602501	0602501
■ INPUT CIRCUIT		
LED Indicate	YES	NO
Control Voltage Range	4-32 VDC	3-32 VDC
Control Current	16mA Max.	16mA Max.
Release Voltage	1 VDC	1 VDC
■ OUTPUT CIRCUIT		
Load Voltage	60 VDC	60 VDC
Operating Range	0-60 VDC	0-60 VDC
Nominal Current	25 ADC	25 ADC
Non Repetitive Overload Current (300us)	344A	344A
On state Voltage Drop	0.38V Max.	0.38V Max.
On-state Resistance	16mΩ Max.	16mΩ Max.
Off state Leakage Current	<1mA	<1mA
Min. Load Current	100mA	100mA
Turn On Time (at Nominal Voltage)	1ms	1ms
Turn Off Time (at Nominal Voltage)	1ms	1ms
Operating Switching Frequency	10Hz	10Hz
■ GENERAL CHARACTERISTICS		
Insulation Resistance	DC 500V 1000MΩ (Between Input & Output)	
Dielectric Strength	2000Vrms, 1 minute, output-case 3000Vrms, 1 minute (Between Input & Output)	
Capacitance	15pF Max. (Between Input & Output)	
Operating Temperature Range	-20°C ~ +80°C	
Storage Temperature Range	-40°C ~ +100°C	
Heat Sink	1.0°C/W (Max. Load current)	
Weight	95g	

■ SPECIFICATIONS (DC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 40A, 60VDC

DESCRIPTION \ TYPES	ESR501	ESR511
	0604001	0604001
■ INPUT CIRCUIT		
LED Indicate	YES	NO
Control Voltage Range	4-32 VDC	3-32 VDC
Control Current	16mA Max.	16mA Max.
Release Voltage	1 VDC	1 VDC
■ OUTPUT CIRCUIT		
Load Voltage	60 VDC	60 VDC
Operating Range	0-60 VDC	0-60 VDC
Nominal Current	40 ADC	40 ADC
Non Repetitive Overload Current (300us)	344A	344A
On state Voltage Drop	0.834V Max.	0.834V Max.
On-state Resistance	20mΩ Max.	20mΩ Max.
Off state Leakage Current	<1mA	<1mA
Min. Load Current	100mA	100mA
Turn On Time (at Nominal Voltage)	1ms	1ms
Turn Off Time (at Nominal Voltage)	1ms	1ms
Operating Switching Frequency	10Hz	10Hz
■ GENERAL CHARACTERISTICS		
Insulation Resistance	DC 500V 1000MΩ (Between Input & Output)	
Dielectric Strength	2000Vrms, 1 minute, output-case 3000Vrms, 1 minute (Between Input & Output)	
Capacitance	15pF Max. (Between Input & Output)	
Operating Temperature Range	-20°C ~ +80°C	
Storage Temperature Range	-40°C ~ +100°C	
Heat Sink	0.6°C/W (Max. Load current)	
Weight	95g	

■ SPECIFICATIONS (AC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 10A(rms) 120V; 240V

DESCRIPTION	TYPES	ESR520		ESR530	
		1201000	2401000	1201000	2401000
■ INPUT CIRCUIT					
LED Indicate	YES			NO	
Control Voltage Range	50-280 VAC			50-280 VAC	
Control Current	15mA Max.			15mA Max.	
Min. Turn-off Voltage	40 VAC			35 VAC	
Input Impedance	106KΩ Min.			106KΩ Min.	
■ OUTPUT CIRCUIT					
Max. Load Current	10A (rms)			10A (rms)	
Nominal load Voltage (VAC)	120	240	120	240	
Load Voltage Range (VAC)	24-140	24-280	24-140	24-280	
Non-Repetitive Max. Peak Voltage (VAC)	400	600	400	600	
Non-Repetitive Max. Peak Current	125A			125A	
Max. Off-state Leakage Current	10mA			10mA	
Max. On-state Voltage Drop	1.6V			1.6V	
Min. Load Current	50mA			50mA	
Max. Off-state Slew Rated (dv/dt)	250V/μs			250V/μs	
Operating Frequency Range	47Hz ~ 63Hz			47Hz ~ 63Hz	
■ GENERAL CHARACTERISTICS					
Zero-on or Random-on	Z				
Max. Turn -on Time (60Hz)	10ms				
Max. Turn-off Time (60Hz)	20ms				
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)				
Dielectric Strength	3.5K VAC (Between Input & Output)				
Capacitance	15pF Max. (Between Input & Output)				
Operating Temperature	-20℃ ~ +80℃				
Storage Temperature	-40℃ ~ +100℃				
Heat Sink	3.5℃/W (Max. Load Current)				

■ SPECIFICATIONS (AC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 25A(rms) 120V; 240V

DESCRIPTION \ TYPES	ESR520		ESR530	
	1202500	2402500	1202500	2402500
■ INPUT CIRCUIT				
LED Indicate	YES		NO	
Control Voltage Range	50-280 VAC		50-280 VAC	
Control Current	15mA Max.		15mA Max.	
Min. Turn-off Voltage	40 VAC		35 VAC	
Input Impedance	106KΩ Min.		106KΩ Min.	
■ OUTPUT CIRCUIT				
Max. Load Current	25A (rms)		25A (rms)	
Nominal load Voltage (VAC)	120	240	120	240
Load Voltage Range (VAC)	24-140	24-280	24-140	24-280
Non-Repetitive Max. Peak Voltage (VAC)	400	600	400	600
Non-Repetitive Max. Peak Current	260A		260A	
Max. Off-state Leakage Current	10mA		10mA	
Max. On-state Voltage Drop	1.8V		1.8V	
Min. Load Current	100mA		100mA	
Max. Off-state Slew Rated (dv/dt)	250 V/μs		250 V/μs	
Operating Frequency Range	47Hz ~ 63Hz		47Hz ~ 63Hz	
■ GENERAL CHARACTERISTICS				
Zero-on or Random-on	Z			
Max. Turn -on Time (60Hz)	10ms			
Max. Turn-off Time (60Hz)	20ms			
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)			
Dielectric Strength	3.5K VAC (Between Input & Output)			
Capacitance	15pF Max. (Between Input & Output)			
Operating Temperature	-20℃ ~ +80℃			
Storage Temperature	-40℃ ~ +100℃			
Heat Sink	1.5℃/W (Max. Load Current)			

■ SPECIFICATIONS (AC INPUT CONTROL)

◆ MAX. LOAD CURRENT: 40A(rms) 120V; 240V

DESCRIPTION \ TYPES	ESR520		ESR530	
	1204000	2404000	1204000	2404000
■ INPUT CIRCUIT				
LED Indicate	YES		NO	
Control Voltage Range	50-280 VAC		50-280 VAC	
Control Current	15mA Max.		15mA Max.	
Min. Turn-off Voltage	40 VAC		35 VAC	
Input Impedance	106KΩ Min.		106KΩ Min.	
■ OUTPUT CIRCUIT				
Max. Load Current	40A (rms)		40A (rms)	
Nominal load Voltage (VAC)	120	240	120	240
Load Voltage Range (VAC)	24-140	24-280	24-140	24-280
Non-Repetitive Max. Peak Voltage (VAC)	400	600	400	600
Non-Repetitive Max. Peak Current	315A		315A	
Max. Off-state Leakage Current	10mA		10mA	
Max. On-state Voltage Drop	1.8V		1.8V	
Min. Load Current	100mA		100mA	
Max. Off-state Slew Rated (dv/dt)	250 V/μs		250 V/μs	
Operating Frequency Range	47Hz ~ 63Hz		47Hz ~ 63Hz	
■ GENERAL CHARACTERISTICS				
Zero-on or Random-on	Z			
Max. Turn -on Time (60Hz)	10ms			
Max. Turn-off Time (60Hz)	20ms			
Insulation Resistance	DC 500V 10 ⁹ Ω Min. (Between Input & Output, Input / Output & Case)			
Dielectric Strength	3.5K VAC (Between Input & Output)			
Capacitance	15pF Max. (Between Input & Output)			
Operating Temperature	-20℃ ~ +75℃			
Storage Temperature	-40℃ ~ +100℃			
Heat Sink	0.8℃/W (Max. Load Current)			