

MINI TYPE SOLID STATE RELAY ESR4 SERIES

cULus E155181(R)

FEATURES

- Optically isolated.
- Ultra slim and light weight, SIL terminals type for high density mounting.
 - Size: 5 (W)×20 (L)×17 (H) mm
 - Weight: approximately 3.0g
- Low on-state resistance.
- Low input power consumption.
- TTL and CMOS compatible.
- MOSFET output thyristor (DC output only).



APPLICATIONS

- Temperature control system
- Industrial automatic control
- Lighting system
- Office appliances
- Factory appliances

PART NUMBER SYSTEM

AC OUTPUT (Red)

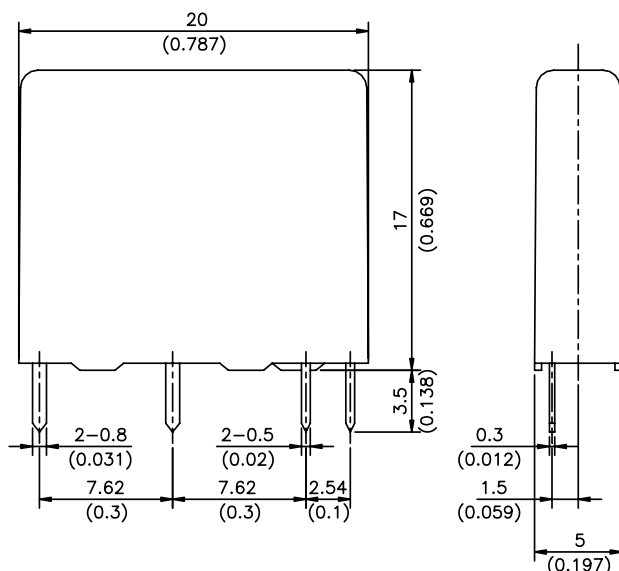
ESR4 D05 A10 0 01 Z
 — Series Name: ESR4:Mini SSR
 — Input Control Voltage:
 D05: DC 5V
 D12: DC12V
 D24: DC24V
 — Output Load Current:
 A10: AC 1.0 A
 — 0: Normal
 01: Random-on
 — Special number:
 00: Zero-on
 01: Random-on
 — Z: RoHS Compliant

DC OUTPUT (Gray)

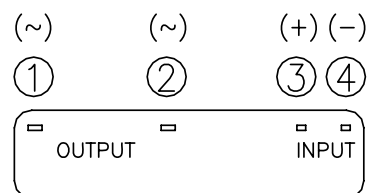
ESR4 D05 D40 0 00 Z
 — Series Name: ESR4:Mini SSR
 — Input Control Voltage:
 D05: DC 5V
 D12: DC12V
 D24: DC24V
 — Output Load Current:
 D40: DC 4.0A
 — 0: DC P-Output (+,-)
 1: DC N-Output (-,+)
 — Function Code:
 00: Normal
 01: Random-on
 — Special number:
 00: Zero-on
 01: Random-on
 — Z: RoHS Compliant

■ DIMENSIONS UNIT:mm(inch)

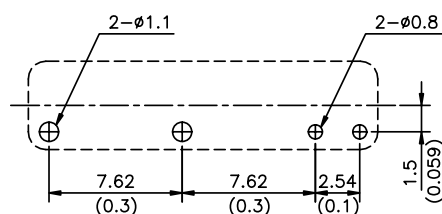
AC OUTPUT



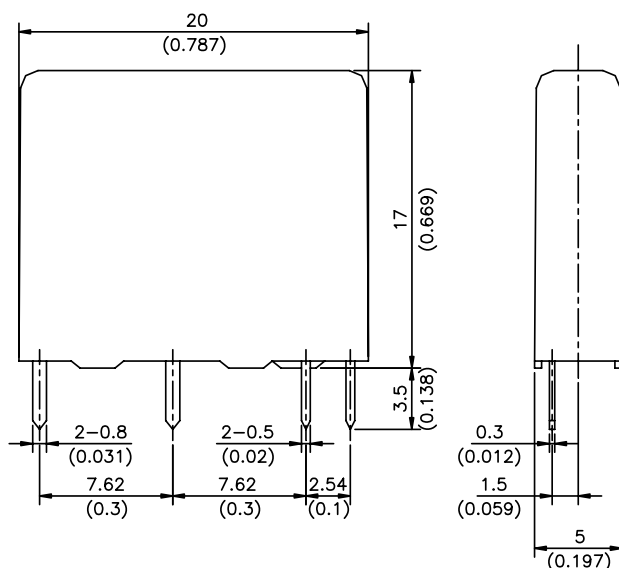
Bottom View



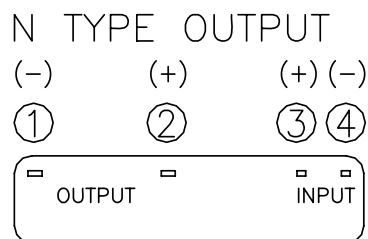
P.C.B. Layout



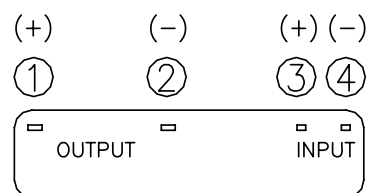
DC OUTPUT



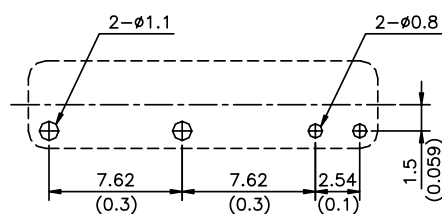
Bottom View



P TYPE OUTPUT



P.C.B. Layout



■ SPECIFICATIONS

◆ AC OUTPUT

Type	ESR4		
	D05A10001	D12A10001	D24A10001
Description			
■ Input Circuit			
Nominal Voltage	5VDC	12VDC	24VDC
Control Voltage Range	3~10VDC	7~20VDC	18~32VDC
Control Current	12mA	10mA	7.7mA
Min. Turn-off Voltage	1VDC	1VDC	1VDC
Input Impedance	320Ω	1070Ω	3000Ω
■ Output Circuit			
Max. Load Current	1.0A		
Min. Load Current	50mA		
Nominal load Voltage	240VAC		
Load Voltage Range	24~265VAC		
Non-Repetitive Max. Voltage	600V		
Non-Repetitive Max. Peak Current	50A		
Max. Off-state Leakage Current	2.0mA		
Max. On-state Voltage Drop	1.5V		
■ General Characteristics			
Zero-on or Random-on	R		
Max. Turn -on Time	1ms		
Max. Turn-off Time	1/2 cycle + 1ms		
Insulation Resistance	1000MΩ, DC 500V (for Input-Output)		
Dielectric Strength (Between Input & Output)	2.5K Vrms, 60sec (for Input-Output)		
Operating Temperature Range	-30°C to +85°C		
Storage Temperature Range	-40°C to +100°C		

■ SPECIFICATIONS

◆ DC OUTPUT

Description	Type	ESR4		
		D05D40*00	D12D40*00	D24D40*00
■ Input Circuit				
Nominal Voltage		5VDC	12VDC	24VDC
Control Voltage Range		3~10VDC	7~20VDC	18~32VDC
Control Current		12mA	10mA	7.7mA
Min. Turn-off Voltage		1VDC	1VDC	1VDC
Input Impedance		320Ω	1070Ω	3000Ω
■ Output Circuit				
Max. Load Current		4A		
Min. Load Current		1mA		
Nominal Load Voltage		24VDC		
Load Voltage Range		0-30VDC		
Max. Peak Current		7A (10ms)		
Max. Off-state Leakage Current		<1mA		
Max. On-state Voltage Drop(2A)		0.24V		
■ General Characteristics				
Max. Turn -on Time		2ms		
Max. Turn-off Time		0.1ms		
Operating Switching Frequency		10Hz		
Maximum Soldering Heat		260°C (10sec)		
Insulation Resistance		1000MΩ, DC 500V (for Input-Output)		
Dielectric Strength (Between Input & Output)		2.5K Vrms, 60sec (for Input-Output)		
Operating Temperature Range		-20°C to +80°C		
Storage Temperature Range		-25°C to +80°C		