

crydom

DIN Rail Mount
Datasheet

ED Series

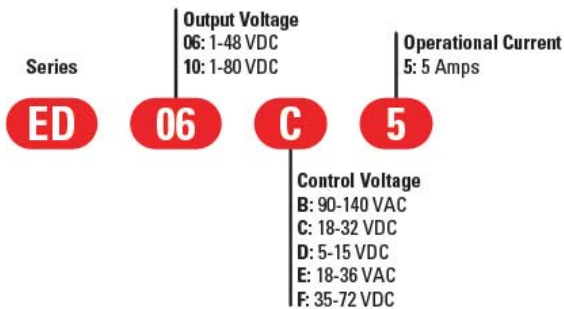


- DC output Solid State Relay in an Industry standard EMR plug in package
- Ratings of 5 Amps
- Load voltage range of 1-48 and 1-80 VDC
- Fits standard DIN rail & PCB mountable sockets
- LED input status indicator
- AC or DC control
- cUL Recognized, IEC Rated, CE & RoHS Compliant
- Motor Controller Rated

PRODUCT SELECTION

Description	5 A	5 A
5-15 VDC Control	ED06D5	ED10D5
18-32 VDC Control	ED06C5	ED10C5
48-72 VDC Control	ED06F5	ED10F5
18-36 VAC Control	ED06E5	ED10E5
90-140 VAC Control	ED06B5	ED10B5

AVAILABLE OPTIONS



OUTPUT SPECIFICATIONS AC Output (1)

Description	5 A	5 A
Operating Voltage [VDC] (2)	1-48	1-80
Maximum Load Current, UL 508 Resistive, [Adc]	5	5
Maximum Load Current, IEC 60947-4-1 DC-1, DC-3 [Adc, FLA]	5	5
Maximum Load Current UL 508 Motor Controller [FLA] (3)	2.0	2.0
Minimum Load Current [Adc]	0.1	0.1
Maximum Off-State Leakage Current @ Rated Voltage [μ A]	20	20
Maximum On-State Voltage Drop @ Rated Current and 40°C [Vdc]	0.3	0.3
Maximum Surge Current (10ms) [Adc]	60	60
Maximum PWM [Hz] (4)	500	500

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INPUT SPECIFICATIONS (1)

Description	EDxxD5	EDxxC5	EDxxF5	EDxxE5	EDxxB5
Control Voltage Range	5-15 VDC	18-32 VDC	48-72 VDC	18-36 VAC	90-140 VAC
Minimum Turn-On Voltage	5 VDC	18 VDC	48 VDC	18 VAC	90 VAC
Minimum Turn-Off Voltage	1.3 VDC	2 VDC	4 VDC	4 VAC	11 VAC
Maximum Reverse Voltage	3 VDC	3 VDC	3 VDC	N/A	N/A
Minimum Input Current [mA]	11	10.7	10.8	12	7.3
Maximum Input Current [mA]	42.8	19.7	16.3	25.3	10.9
Nominal Input Impedance [ohms]	350	1.6K	4.4K	1.5K	12.5K
Maximum Turn-On Time [msec]	0.6	0.6	0.6	0.6	0.6
Maximum Turn-Off Time [msec]	0.3	0.3	0.3	0.3	0.3

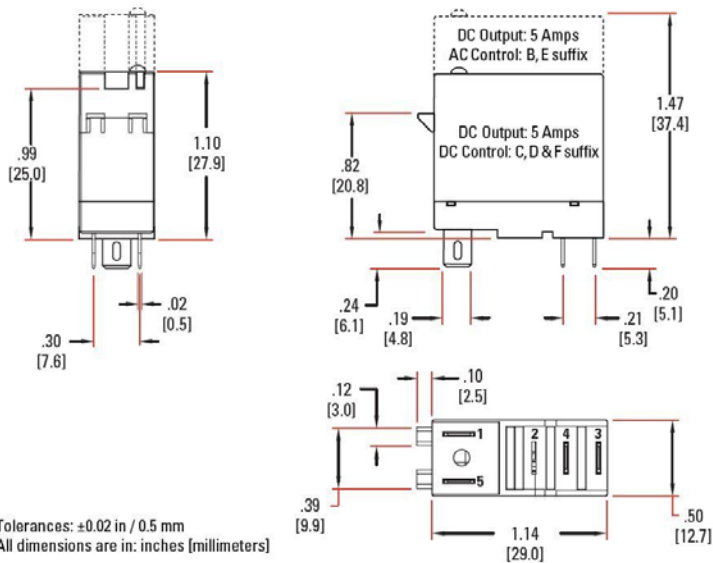
GENERAL SPECIFICATIONS (1)

Description	Parameters
Dielectric Strength, Input/Output (50/60Hz)	2500 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 ⁹ Ohms
Maximum Capacitance, Input/Output	10 pF
Ambient Operating Temperature Range	-30°C to 80°C
Ambient Storage Temperature Range	-40°C to 125°C
Weight (typical)	0.71 oz. (30 g)
Maximum Humidity	85% non-condensing
Housing Material	PBT 30% GF, UL94 V-0
Terminals Material	Copper w/Sulfamet Nickel finish

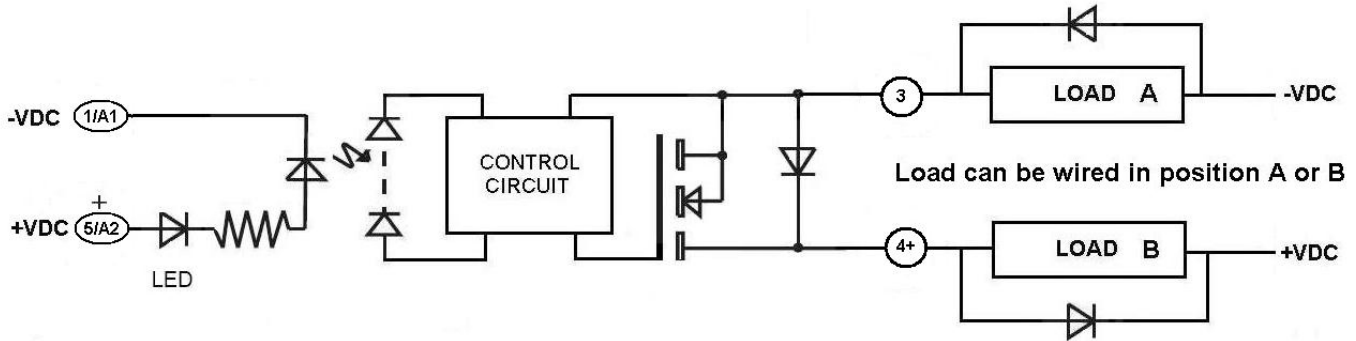
GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Maximum Rated voltage for ED06xx is 60 VDC and 100 VDC for ED10xx
- 3) Maximum Motor Controller current is 1.5 FLA for EDxxB5 and EDxxE5
- 4) PWM does not apply to EDxxB5 and EDxxE5

MECHANICAL SPECIFICATIONS

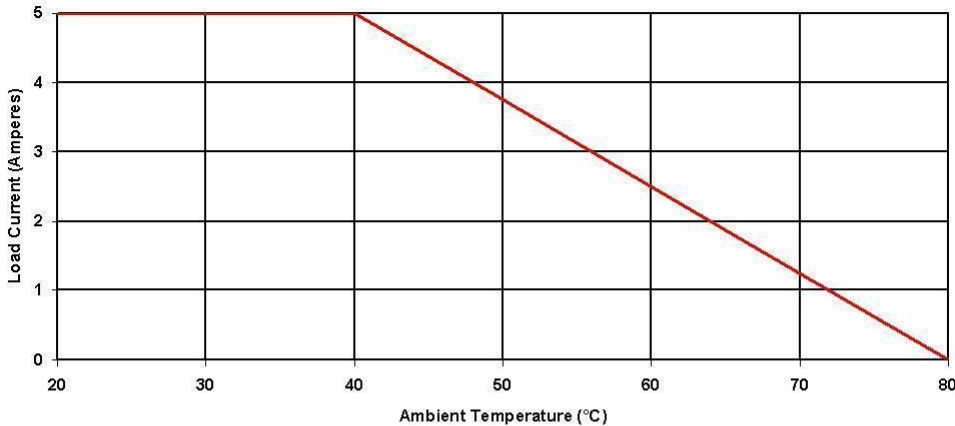


WIRING DIAGRAM



THERMAL DERATE INFORMATION

DERATING CURVE: EDxxx5



Above curve is based on a minimum spacing between parts of 16mm. Maximum current @ 0mm spacing is 3A.
Derating Value: ED06x5, ED10x5 = 0.125A per mm

Derating based on Relay air gap:
Example: 10mm spacing with a ED06D5 SSR

1. Subtract spacing from the minimum required spacing of the part (16mm) to get the correction value.
 $16 - 10 = 6$
2. Multiply air gap derating value found above with correction value.
 $0.125 \times 6 = 0.75A$

Now using this final number we can figure out what the maximum current the relay can carry with 10mm spacing @ 60°C Ambient.

3. Using the Ambient Derating Curve above find the current for the 5A model @ 60°C. In this case that value is 2.5A.
4. Subtract the value above (0.75A) from 2.5A.
 $2.5 - 0.75 = 1.75A$

The maximum current you can switch with the ED06D5 with a 10mm air gap between relays @ 60°C ambient is 1.75A

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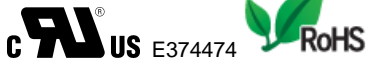
AGENCY APPROVALS

Designed in accordance with the requirements of IEC 62314

IEC 61000-4-2 : Electrostatic Discharge Level 1 – Criteria A

IEC 61000-4-4 : Electrically Fast Transients Level 2 – Criteria B

IEC 61000-4-5 : Electrical Surges Level 3 – Criteria B



Rev 111011

ACCESSORIES

ED Series Accessories

DRSED



DIN Rail Mountable Socket

Part no.: DRSED

Fingersafe IP10 DIN rail mountable socket to mount ED series relays onto standard 35 mm DIN rail. Rated at 250 V AC/DC, 12 Amps. The DRSED includes M3 Combo screws.

PCBSED



PC Board Mountable Socket

Part no.: PCBSED

PC Board mountable socket for ED series relays. Rated at 250 V AC/DC, 12 Amps. Suggested Pin-out hole diameter: 1.0 mm