

EL Series

AC & DC Output SSRs

This installation sheet includes detailed mounting and wiring instructions which apply for most EL series SSRs. Be sure to visit the product series' datasheet available at the Crydom website to complement this information. If you have questions or need additional information please contact Crydom Tech Support.

Please read all mounting instructions before using your AC or DC Output Panel Mount Solid State Relay (SSR).

MOUNTING INSTRUCTIONS

Choose one of the two mounting options and follow the instructions.

■ Mounting on Heat Sink

- ◆ Select adequate heat sink (see thermal derating curves in product series' datasheet).
- ◆ Be sure that thermal pad is pre-installed before installing over the heat sink.
- ◆ EL series SSR mounting slots have a diameter of 0.16 in (4.0 mm). Two screws are needed (not included) to mount the EL onto heat sink (See **fig. 1**). Recommended screw size is 8-32 (UNC standard) or M4 (metric).
- ◆ Before applying full torque tighten down both screws until they contact the baseplate. Then, tighten them to 9.0-10.0 in-lb (1.0-1.13 Nm).
- ◆ For optimal thermal performance heat sink fins should be oriented vertically to promote natural convection airflow.

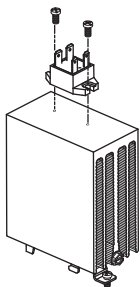


fig. 1 EL Series SSR mounted on heat sink

■ Mounting on Panel

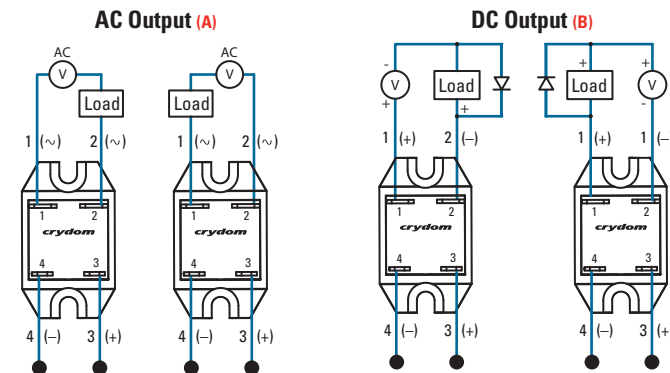
- ◆ Locate the panel section on which the EL will be mounted. Panel mount surface must provide adequate heat sinking capability, uncoated, clean, flat (0.004 in/in recommended) and preferably aluminum.
- ◆ Be sure that thermal pad is pre-installed before installing over the panel.
- ◆ EL series SSR mounting slots have a diameter of 0.2 in (5.0 mm). Two screws are needed (not included) to mount the EL onto panel. Choose screw length considering the mounting surface hole depth and that the SSR flange thickness is 0.125 in (3.2 mm).
- ◆ Before applying full torque tighten down both screws until they contact the baseplate. Then, tighten them to 10 in-lb (1.13 Nm).

PART NUMBER NOMENCLATURE

Series	Rated Load Current	Control Voltage	Oversvoltage Protection
	5: 5 Amps 10: 10 Amps 20: 20 Amps } AC Output Only 30: 30 Amps	05: 4-8 VDC 12: 10-14 VDC 24: 21-27 VDC	Blank: Not included P: Included (30 Amps, Zero Voltage models only)
EL	240A	30	R
	Output Voltage 240A: 24-280 VAC 100D: 3-100 VDC		05
			N
			P
	Switching Type Blank: Zero Voltage Turn-On R: Instantaneous Turn-On (AC Output only)	Termination Blank: Standard Quick Connect N: 90° bent Quick Connect (30 Amps AC Output and 10 Amps DC Output only)	

- Required for valid part number
- For options only and not required for valid part number

WIRING DIAGRAMS



■ Terminals

Quick Connect type. Input: 3/16" x 0.032". Output: 1/4" x 0.032".

■ Transient Protection

Transients are common on AC power lines, and in extreme cases, may pose a risk for the proper operation and reliability of the SSR and its load.

The load which the SSR controls may also generate transients itself. Therefore, inclusion of transient protection for the SSR is highly recommended.

Internal transient protection is standard in certain Crydom SSR models, and optionally available in others. The user may also install transient protection external to the SSR for additional protection.

An inductive load will produce harmful transient voltage when it is turned off. The more perfect the switch, the larger the transient voltages. The MOSFET output is so nearly ideal switch that the transient voltages produced by seemingly "non-inductive" loads can cause damage if not suppressed. Diodes should be fast recovery type with PIV rated greater than supply voltage. (B)

■ Important Considerations

Be sure to use input and output voltages within operating ranges. LED indicates only input status. It does not represent output status.

- (A) Load can be wired to either terminal 1 or terminal 2. Proper polarity must be observed for the DC control power supply with terminal 3 being positive with respect to terminal 4.
- (B) Inductive loads should be diode suppressed to prevent damage to the relay.

⚠ DANGER / DANGER / GEFARH / PELIGRO / PERICOLO / 危險

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH • Turn off power supply before working on this equipment. Failure to follow these instructions will result in death or serious injury.	RISQUE D'ELECTROCUTION, D'EXPLOSION OU D'ARC ELECTRIQUE • Coupez l'alimentation avant de travailler sur cet appareil. Le non-respect de ces instructions provoquera la mort ou des blessures graves.	STROMSCHLAG-, EXPLOSIONS- ODER LICHTBOGENGEFAHR • Vor dem Arbeiten an dem Gerät dessen Stromversorgung abschalten. Die Nichtbeachtung dieser Anweisungen führt zu Tod oder schwerer Körperverletzung.
RIESGO DE ELECTROCUCIÓN, EXPLOSIÓN O ARCO ELÉCTRICO Desconecte toda alimentación antes de realizar el servicio. Si no se siguen estas instrucciones provocará lesiones graves o incluso la muerte.	RISCHIO DI SCOSSA ELETTRICA, DI ESPLOSIONE O DI OFTALMIA DA FLASH • Scollegare l'apparecchio dalla presa di corrente prima di qualsiasi intervento. Il mancato rispetto di queste istruzioni provocherà morte o gravi infortuni.	存在电击、爆炸或电弧闪烁危险 • 在操作此设备之前请先关闭电源。 若不遵守这些说明，可能会导致严重的人身伤害甚至死亡。

⚠ WARNING / AVERTISSEMENT / WARNUNG / ADVERTENCIA / AVVERTENZA / 警告

RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE • The product's side panels may be hot, allow the product to cool before touching. • Follow proper mounting instructions including torque values. • Do not allow liquids or foreign objects to enter this product. Failure to follow these instructions can result in serious injury, or equipment damage.	RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER • Les panneaux latéraux du produit peuvent être chauds. Laissez le produit refroidir avant de le toucher. • Respecter les consignes de montage, et notamment les couples de serrage. • Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit. Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.	GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG • Die Seitenwände können heiß sein. Lassen Sie das Produkt abkühlen, bevor Sie es berühren. • Beachten Sie die Montageanweisungen. • Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein. Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.
RIESGO DE DAÑOS MATERIALES Y DE SOBRECIENTAMIENTO DE LA UNIDAD • Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo. • Respetar las instrucciones de montaje, y en particular los pares de apretado. • No dejar que penetren líquidos o cuerpos extraños en el producto. Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.	RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO • I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo. • Seguire le istruzioni di montaggio corrette. • Non far entrare liquidi o oggetti estranei in questo apparecchio. La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.	材料损坏和高温外壳的危险性 • 产品的一侧面板可能很热，在其冷却前请不要触碰。 • 遵照正确的安装说明，包括扭矩值。 • 请勿让液体及其他异物进入本产品。 如不能正确执行这些操作说明，极有可能造成严重人身伤害或者设备的损坏。