



## Introducing SIP PC Board & Rail/Panel-Mount Solid State Relays

SSRA, SSRC, SSRF, SSRK and SSRM Series

 **Tyco Electronics**  
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# SIP PC Board & Rail/Panel Mount Solid State Relays

## KEY FEATURES

Quiet operation

Long service life

Optical coupling provides 2500 to 4000V isolation (model dependent)

Inverse parallel connected SCR output in all types

Low leakage current

Integral heatsinks on some models

Maximum ratings from 2A to 25A for SIP PC board relays

Maximum ratings from 10A to 65A for DIN rail/panel mount relays

## DESCRIPTION

Solid state relays in various SIP PC board packages or DIN-rail/panel mount packages

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Maximum current ratings from 2A to 25A for PC board models and from 10A to 65A for rail/panel mount types.

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## APPLICATIONS

Properly applied, these solid state relays deliver the long service life demanded by a variety of applications where loads are frequently cycled on and off.

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The control of heating elements, motors and lamps in industrial machinery and commercial equipment are typical applications.

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Theatrical lighting systems, traffic controls and institutional door controls also benefit from the switching characteristics of these solid state relays.

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Medical applications such as blood analysis equipment, portable vital signs monitors, lasers, scanners and baby warmers may also require switching characteristics such as those demonstrated by SIP PC board mount solid state relays.

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The quiet operation of these solid state relays makes them desirable in applications wherever audible noise must be kept to a minimum.

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Models are available in both zero voltage turn-on and random voltage turn-on versions, permitting users to select the relay with the preferred switching characteristics for a given application.

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## MECHANICAL

PC board models SSRA, SSRC and SSRF are in a SIP configuration with terminals on 0.1 in (2.54 mm) spacing.

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DIN rail / panel mount models SSRK and SSRM can either snap onto a 35mm DIN rail or they may be mounted directly to a panel with screws. Finger-safe (IP20) screw clamps are provided for load and control connections, and a #10 screw is provided for ground termination.

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## STANDARDS AND SPECS

SSRC series solid state relays are UL Recognized for the US and Canada, UL File E81606

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SSRA, SSRF and SSRM series solid state relays are UL Recognized for the US and Canada, UL File E29244

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SSRK series solid state relays are UL Recognized for the US, UL File E29244, and CSA Certified for Canada, CSA File LR246041.

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# SIP PC Board & Rail/Panel Mount Solid State Relays

## PRODUCT OVERVIEW



| Series                      | SSRA                                                                                                                                                                 | SSRC                                                                                                                                       | SSRF                                                                                                                                                                     | SSRK                                                                                                                                                                                                   | SSRM                                                                                                                                                                                                   |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mounting                    | PC Board                                                                                                                                                             | PC Board                                                                                                                                   | PC Board                                                                                                                                                                 | DIN Rail or Panel                                                                                                                                                                                      | DIN Rail or Panel                                                                                                                                                                                      |
| Features                    | <ul style="list-style-type: none"> <li>• Miniature size</li> <li>• 2A rating</li> <li>• 2500V isolation</li> <li>• Zero voltage or random voltage turn-on</li> </ul> | <ul style="list-style-type: none"> <li>• 5A rating</li> <li>• 4000V isolation</li> <li>• Zero voltage or random voltage turn-on</li> </ul> | <ul style="list-style-type: none"> <li>• Integral heatsink</li> <li>• 25A rating</li> <li>• 4000V isolation</li> <li>• Zero voltage or random voltage turn-on</li> </ul> | <ul style="list-style-type: none"> <li>• Integral heatsink</li> <li>• 10 - 30A rating</li> <li>• 4000V isolation</li> <li>• LED indicator</li> <li>• Finger-safe load and control terminals</li> </ul> | <ul style="list-style-type: none"> <li>• Integral heatsink</li> <li>• 45 - 65A rating</li> <li>• 4000V isolation</li> <li>• LED indicator</li> <li>• Finger-safe load and control terminals</li> </ul> |
| Approximate Size and Weight | .95" x .5" x .2"d<br>(24 x 13 x 5d)<br>.15 oz. (4.3g)                                                                                                                | 1.7" x 1" x .3"d<br>(43 x 25 x 8d)<br>.4 oz. (11g)                                                                                         | 1.7" x 1" x .9"d<br>(43 x 25 x 23d)<br>.85 oz. (25g)                                                                                                                     | .89" x 3.9" x 3.2"d<br>(22.5 x 99 x 81d)<br>9.9 oz. (284g)                                                                                                                                             | 1.75" x 4.3" x 3.0"d<br>(44.5 x 109 x 76d)<br>16.9 oz. (479g)                                                                                                                                          |
| Form                        | 1 Form A<br>(SPST-NO)                                                                                                                                                | 1 Form A<br>(SPST-NO)                                                                                                                      | 1 Form A<br>(SPST-NO)                                                                                                                                                    | 1 Form A<br>(SPST-NO)                                                                                                                                                                                  | 1 Form A<br>(SPST-NO)                                                                                                                                                                                  |
| Line Voltage                | 24 - 280VAC                                                                                                                                                          | 12 - 280VAC<br>48 - 660VAC                                                                                                                 | 12 - 280VAC<br>48 - 660VAC                                                                                                                                               | 48 - 660VAC                                                                                                                                                                                            | 48 - 660VAC                                                                                                                                                                                            |
| Current Rating              | 2A rms at 50°C<br>(convection cooling)                                                                                                                               | 5A rms at 30°C<br>(convection cooling)                                                                                                     | 25A rms at 85°C<br>(forced air cooling)                                                                                                                                  | 10, 20 or 30A rms at 25°C<br>(convection cooling)                                                                                                                                                      | 45, 55 or 65A rms at 25°C<br>(convection cooling)                                                                                                                                                      |
| Input Voltage               | 4 - 10VDC                                                                                                                                                            | 3 - 15VDC (4 - 15 for 480V models)                                                                                                         | 3 - 15VDC (4 - 15 for 480V models)                                                                                                                                       | 90 - 280VAC<br>4 - 32VDC                                                                                                                                                                               | 90 - 140VAC<br>4 - 32VDC                                                                                                                                                                               |
| Isolation                   | 2500V rms input-to-output-to-ground                                                                                                                                  | 4000V rms input-to-output-to-ground                                                                                                        | 4000V rms input-to-output-to-ground                                                                                                                                      | 4000V rms input-to-output-to-ground                                                                                                                                                                    | 4000V rms input-to-output-to-ground                                                                                                                                                                    |
| Repetitive Blocking Voltage | +/- 600Vpeak                                                                                                                                                         | +/- 600Vpeak<br>(+/- 1200Vpeak for 480V models)                                                                                            | +/- 600Vpeak<br>(+/- 1200Vpeak for 480V models)                                                                                                                          | +/- 1200Vpeak                                                                                                                                                                                          | +/- 1200Vpeak                                                                                                                                                                                          |
| Website Search Keyword      | SSRA                                                                                                                                                                 | SSRC                                                                                                                                       | SSRF                                                                                                                                                                     | SSRK                                                                                                                                                                                                   | SSRM                                                                                                                                                                                                   |
| Data Sheet Number           | 8-1773454-1                                                                                                                                                          | 8-1773454-2                                                                                                                                | 8-1773454-3                                                                                                                                                              | 8-1773454-4                                                                                                                                                                                            | 8-1773454-5                                                                                                                                                                                            |

Consult data sheets for detailed specifications. All part numbers in series described above are RoHS compliant.

## FOR MORE INFORMATION

### Technical Support

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
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