RG..M: Solid state relays with integrated monitoring

Switches
Fault handling is a recurring headache for machine builders due to the time consumed to identify the fault and the negative effect it leaves on productivity. Having machine components that are able to indicate where the fault is happening and distinguish between certain failures means less maintenance costs and minimised machine downtime.

With the RG..M series, Carlo Gavazzi has enhanced the versatility of its successful RG range of solid state relays to include monitoring functions on top of the switching capabilities in a slim 17.8mm footprint. Detection of system faults (mains loss, load loss, SSR open and short circuit), SSR internal error and supply out of range are visualised on the front façade of the SSR via LEDs and can also be monitored remotely via a transistor output integrated in the SSR.

Main features
- Monitoring for system fault (mains loss, load loss, SSR open and short circuit), SSR internal error and supply out of range
- 1-phase zero cross AC switching
- Ratings for RGC..M: up to 660 VAC, 65 AAC
- Ratings for RGS..M: up to 660 VAC, 90 AAC
- 17.8 mm platform, up to 70 mm for RGC > 30 AAC
- DC control voltage range: 4 - 32 VDC
- 24 VDC supply voltage
- Up to 18000 A²s for Type B Miniature Circuit Breaker protection
- 100 kArms short circuit current rating acc. to UL508

Benefits
- Cost savings with timely failure detection:
  - Increased production throughput
  - Fast reaction to failures
  - Machine uptime
  - Reliability through integrated over voltage protection
  - Fast installation
  - Spring plugs for auxiliary terminals
  - Easy troubleshooting
  - Various faults distinguished via a flashing LED
  - Panel space savings
  - Switching and monitoring in a 17.8mm platform
Main features

**Alarm output**
Changes state in case of an alarm condition

- Mains loss
- Load loss
- SSR malfunction

**Overvoltage protection**
Integrated varistor

**High fault level SCCR**
100kArms

**Heatsink**
RGC..M with heatsink
RGS..M without heatsink

**Status LEDs**
- CNTRL for Control ON indication
- ALARM for fault presence indication

**Control and supply terminal**
For switching and powering the SSR

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### Selection guide

**RGC..M (with integrated heatsink)**

<table>
<thead>
<tr>
<th>Rated voltage</th>
<th>20 AAC (525 A^2s)</th>
<th>25 AAC (1800 A^2s)</th>
<th>30 AAC (1800 A^2s)</th>
<th>30 AAC (6600 A^2s)</th>
<th>43 AAC (18000 A^2s)</th>
<th>65 AAC (18000 A^2s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>RGC1A23D15KEM</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>35 mm</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>RGC1A23D31KEM</td>
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<tr>
<td>600 VAC</td>
<td>RGC1A60D15KEM</td>
<td>RGC1A60D25KEM</td>
<td>RGC1A60D30KEM</td>
<td>RGC1A60D31KEM</td>
<td>-</td>
<td>RGC1A60D42GEM</td>
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<td>35 mm</td>
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<td></td>
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<td>RGC1A60D62GEM</td>
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</table>

**RGS..M (without heatsink)**

<table>
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<tr>
<th>Rated voltage</th>
<th>25 AAC (525 A^2s)</th>
<th>50 AAC (1800 A^2s)</th>
<th>90 AAC (18000 A^2s)</th>
<th>-</th>
<th>-</th>
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</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>RGS1A23D25KEM</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>600 VAC</td>
<td>RGS1A60D25KEM</td>
<td>RGS1A60D50KEM</td>
<td>RGS1A60D92KEM</td>
<td>RGS1A60D92GEM</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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KEM = screws for power terminals | GEM = box clamps for power terminals
Further details are available on online datasheets at www.gavazziautomation.com