SystempaK (Analog Type)
Monitor Switch Module
Model J-SMS 60

Introduction
The Monitor Switch Module (J-SMS60) provides an alarm contact output when an input signal exceeds the internal pre-set value by comparing the input with the pre-set value. Connection to the Azbil Corporation's Process Controller is made through the 50P connector of the SystempaK File for A-MC. A 1 to 5V DC input can connect to the Analog Input Module (for HAM). Complete isolation is employed between the power, input, and output circuits.

Specification
- **Type:** One PV, two alarm outputs
- **Input signal:** 1 to 5V DC or 4 to 20 mA DC
- **Input impedance:** 250 Ω (current), 1 MΩ (voltage input)
- **Edge connector output:** 1 to 5V DC (Not isolated from input. Used for a signal to A-MC through the A-MC I/O cable.)
- **Output signal:** Dry contact SPST
- **Output contact capacity:** 30V DC, 1A (resistive load) 100V AC, 0.3A (resistive load)
- **Number of alarm points:** Two points
- **Alarm action:** Two-point alarm; Normally de-energized, or energized Hi of Lo, Hi and Hi, or Lo and Lo alarm
- **Relay coil:** Setting of energized or de-energized during alarm off times (by setting jumper)
- **Relay contact:** Setting of a-contact or b-contact (by setting jumper)
- **Alarm setting range:** 0 to 100%FS
- **Dead band:** 0.25%FS or less
- **Setting accuracy:** ±0.25%FS
- **Insulation resistance:** 500V DC, 100 MΩ min
  
  (Mutual between input - output - GND - power terminal)
- **Withstand voltage:** 1000V AC, 1 minute
  
  (Mutual between input - output - GND - power terminal)
- **Power supply:** 24V DC ±10%
- **Current consumption:** 80 mA max. (at 24V) (two-point alarm)
- **Ambient temperature:** Normal operating condition: 5 to 45°C Operation limit: -5 to 55°C
- **Ambient humidity:** 0 to 90%RH
- **Mounting:** File
- **Front mask color:** Black
- **Weight:** 250 g
- **Operating influence:**
  
  - Supply voltage effect: ±0.1%FS/24V DC ±10%
  - Temperature effect: ±0.25%FS/10°C

Theory of Operation
An input provides a high common noise rejection by the high impedance amplifier in the Input Buffer circuit, and the Filter circuit removes any AC noise, resulting in stable 1 to 5V DC signal. The Comparison Amplifier compares an input signal with the pre-set signal (1 to 5V DC) to actuate the relay. The Hysteresis circuit prevents chattering when restoring the Comparison Amplifier after its operation.
Model Number Table

<table>
<thead>
<tr>
<th>Basic Model Number</th>
<th>Selections</th>
<th>Additions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J-SMS60</td>
<td>X</td>
<td></td>
<td>Monitor Switch Module (Analog Type)</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td>No varnish coated</td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td></td>
<td>Input signal: 1 to 5V DC</td>
</tr>
<tr>
<td></td>
<td>-2</td>
<td></td>
<td>Input signal: 4 to 20 mA DC</td>
</tr>
<tr>
<td></td>
<td>-0</td>
<td></td>
<td>Without test report</td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td></td>
<td>With test report</td>
</tr>
</tbody>
</table>

Example: J-SMS60X-1X-0

Note) When ordering, specify the following alarm output type and Hi or Lo alarm setting value (%)

<table>
<thead>
<tr>
<th>Output type</th>
<th>Relay coil (During alarm off times)</th>
<th>Output contact (During alarm off times)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>De-energized Open (a-contact)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>De-energized Closed (b-contact)</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Energized Closed (a-contact)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Energized Open (b-contact)</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions and Wirings

- Terminal screws: M3.5
- Use the pressured terminals with insulation sheath.

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2nd edition: Jan. 2013
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