Model SW6040

The SW6040 switch is a versatile excessive vibration protection instrument. In the standard configuration, SW6040 is an economical single setpoint vibration switch in an industrial grade housing.

Fully configured, the model SW6040 provides for local machine control, real time remote operator interface via 4-20 mA and an external BNC for easy analyst access to the buffered dynamic vibration signal. Optional CE mark modification to meet electromagnetic compatibility requirements.

Typical Installations

Applications
- Centrifugal Pumps
- Reciprocating Compressors
- Centrifuges
- Cooling Towers
- Industrial Fans
- Electric Motors
- Natural Gas/Diesel Engines

View with external options

Note: If you require an external seismic sensor for frequency response, size or temperature considerations, see SM Series models.

Specifications

Sensor:
Internal piezoelectric accelerometer.

Signal Conditioner:
Amplifier/integrator to obtain velocity or displacement response.

Monitor Triac Outputs:
- Incl. when "A" = 1 or 2
- 140 VAC max. (280 VAC on 230 VAC powered units), 5A, optically isolated.

Maximum Vibration Input:
0 to 490 m/sec (50 g), peak;
0 to 100 mm/sec (4 in./sec), peak

Frequency Response:
2 Hz to 1000 Hz (acceleration response)

Adjustable Time Delay:
- Factory set @ 3 seconds.
- Adjustable from 2-15 seconds.

Temperature Limits:
-30° to +60°C (-20° to +140°F)

Output Sensitivity vs Temperature
<.05%/°C (calibrated @ 25°C)

Cross Axis Response:
Less than 10%

Input Power (Nominal):
- For 115 VAC, 100 to 130, 50/60 Hz
- For 230 VAC, 200 to 260, 50/60 Hz
- For 24 VDC, 22 to 28

Galvanic Isolation:
Power from circuit.

Field Wiring:
- Max. wire gauge: 12 AWG.
- Wire clamp type screw terminals.
- To 300 Vrms isolation circuit.

Housing:
- Cast aluminum.
- Weatherproof.

Environmental Rating:
NEMA 4X, IP 65

Optional Certifications:
See How To Order "D"

Optional Analog Switch Output:
- Incl. when "A" = 3 or 4
- Rating: 250 VAC or VDC, 170 mA
- N.C. (fail-safe) is standard, N.O. field selectable

Optional 4-20 mA Source Output:
- Proportional between 4-20 mA with 20 mA set to 160% of shutdown setpoint.
- Zero and Span calibrated ±10%.
- Non-linearity < 2%.
- 450 ohms max. load.

How To Order...

MODEL    A  B  C  D  E  F
SW6040 - - - 1 0 1 1 - 0 0 0

A Limits & Display
1 = one limit, triac
2 = two limits, triacs
3 = one limit, analog switch
4 = two limits, analog switch

Application Note: Use triacs in motor starter circuits. Analog switch(es) recommended for PLC, AC or DC inputs.

B Adjustable Shutdown Setpoint

Velocity Response
0 1 = 0.1 - 1.5 ips, pk`
0 2 = 0.2 - 3.0 ips, pk`
0 3 = 3 - 40 mm/s, pk`
0 4 = 6 - 80 mm/s, pk`

Displacement Response
5 1 = 1 - 15 mils, pk-pk
Optional Buffered, Dynamic Signal Output:
- Sensitivity: 100 mV/g ±2% @ 25°C.
- Access: Via BNC connector
- Frequency Response:
  Acceleration: 2 to 1000 Hz.
  Non-linearity: < 1% of full scale (F.S.)

*For true RMS velocity calibration add 30 to dash number, e.g. -01 becomes -31.

C  Input Power
1 = 115 VAC, single phase, 50/60 Hz
2 = 230 VAC, single phase, 50/60 Hz
3 = 22 - 28 VDC

D  Certifications & External Options
0 = None
1 = CE mark
2 = External BNC connector for analysis
3 = External reset button
4 = CSA, Class I, (C & D), Div. 2 hazardous areas
5 = Options 0, 1 & 2
6 = Options 0, 1 & 3
7 = Options 0, 2 & 3
8 = Options 0, 1, 2 & 3

E  4-20 mA Output
0 = None
1 = Proportional 4-20 mA;
  where 20 mA=160% of shutdown setpoint

F  Conduit Entry
0 = 3/4" NPT
1 = M20 x 1.5

Accessory

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Name</th>
<th>Used With</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9070-001</td>
<td>Remote Indicator</td>
<td>Any SW6040 with 4-20mA (*E=1)</td>
<td>Analog panel meter calibrated from 0 to 160% of danger setpoint. Panel cutout dim: 30.5 (1.20) w x 63.5 (2.50) h</td>
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</tbody>
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Once you have chosen your model and accessories you may proceed.