Model Number
685BXXXXXXX

ELECTRONIC VIBRATION SWITCH SPECIFICATIONS

Revision: J
ECN #: 53981

DYNAMIC PERFORMANCE	**ENGLISH**	**SI**	
Frequency Response (±3dB)	120 - 60000 cpm	2 - 1000 Hz	**1**
Alarm Setpoint	10 to100% of Vibration Range	10 to100% of Vibration Range	
Alert Setpoint	10 to100% of Alarm Setpoint	10 to100% of Alarm Setpoint	
Alert/Alarm Time Delay	0 - 45 sec	0 - 45 sec	
Turn on Time Delay	20 sec	20 sec	**2**
ELECTRICAL			
Power Supply Current	<150 mA	<150 mA	
Sensor Type	Piezoelectric Sensing Element	Piezoelectric Sensing Element	
Output (Current)	4 to 20 mA	4 to 20 mA	**5**
Raw Vibration Output (±20%)	100 mV/g	10.2 mV/(m/s^2)	
Calibration Input	4 to 20 mA	4 to 20 mA	**3**
ENVIRONMENTAL			
Operating Temperature Range	-22 to +158°F	-30 to +70°C	
Storage Temperature Range	-40 to +257°F	-40 to +125°C	
Relative Humidity	NEMA 4X	IP66	
MECHANICAL			
Case Dimension W x H x D:	3.5 in x 2.8 in x 3.5 in	90 mm x 70 mm x 90 mm	
Weight	1.85 lb	839 gm	
Material	Aluminum Alloy	Aluminum Alloy	
Input/Output Electrical Connectors	Screw Terminals	Screw Terminals	
Screw Terminal Wire Size	24 – 14 AWG	0.2 – 2.5 mm^2	
Cover Screw Torque (Maximum)	4.1 lb-ft	5.7 N-m	
Mounting Hole Size (max. diameter)	0.21 in	5.4 mm	
Mounting Screw Torque	2-5 lb-ft	3-7 N-m	
INDICATOR/CONTROLS			
Power LED	Green	Green	
Alarm LED	Red	Red	
Alert LED	Yellow	Yellow	
Setpoint Adjustment	Single Turn Potentiometer	Single Turn Potentiometer	
Time Delay Adjustment	Single Turn Potentiometer	Single Turn Potentiometer	
Reset Function	Momentary Pushbutton Switch	Momentary Pushbutton Switch	
Self Test Function	Momentary Pushbutton Switch	Momentary Pushbutton Switch	
Alarm/Alert Function Select	Latch or Continuous	Latch or Continuous	
Switch Mechanism Function Select	NO/NC	NO/NC	**4**

CE [6]

All specifications are at room temperature unless otherwise specified.

OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

Accelerometer Configuration: 685B**X**000000
- ☐ 0 Internal
- ☐ 1 External ICP Accelerometer (100 mV/g)
- ☐ 2 External ICP Accelerometer (100 mV/g) Low Freq. (1-1000 Hz)

Vibration Range: 685B0**X**00000
- ☐ 0 0 to 1.5 in/s pk (0 to 38.1 mm/s pk)
- ☐ 1 0 to 5 g's pk (0 to 49 m/s^2 pk)
- ☐ 2 0 to 15 mils pk to pk (0 to 381 μm pk to pk)
- ☐ 3 0 to 50 mils pk to pk (0 to 1.27 mm pk to pk)
- ☐ 4 0 to 3.0 in/s pk (0 to 76.2 mm/s pk)

Input Power: 685B00**X**0000
- ☐ 0 85-245 Vac 50/60 Hz
- ☐ 1 24 Vdc +/-10%

Alert and Alarm Switch Mechanism: 685B000**X**000
- ☐ 0 Triac 5A, 245 Vac, 1000 Vac Isolation
- ☐ 1 Relay 10A, 245 Vac/30 Vdc, Form C (SPDT), 1000 Vac Isolation

Enclosure: 685B0000**XX**0
- ☐ A1 Internal and Remote Reset
- ☐ A2 External Pushbutton Reset
- ☐ A3 Buffered Acceleration Signal though External BNC (100 mV/g)
- ☐ A4 Same as A1 plus A2 and A3

Interface: 685B000000**X**
- ☐ 0 Dual Cord Grips: Wire Comp. Dia. 0.2 in to 0.35 in(5 to 9 mm)
- ☐ 1 Dual ½ in NPT Conduit Hubs
- ☐ 2 Single Cord Grip: Wire Comp. Dia. 0.39 in to 0.55 in(10 to 14 mm)
- ☐ 3 Single ½ in NPT Conduit Hub
- ☐ 4 Dual Opening, ½ in NPT Ports
- ☐ 5 Single Cord Grip (Left) / Single Conduit Hub (Right)
- ☐ 6 Single Conduit Hub (Left) / Single Cord Grip (Right)

Mounting: 685B0000**X**00
- ☐ D Optional Model 080A209 Mounting Plate/Adapter

NOTES:

1) To obtain 60000 cpm (1000 Hz) frequency response, grease must be applied to all mechnical couplings. Otherwise, frequency response is limited to approximately 30000 cpm (500 Hz.)
2) Factory Set.
3) Active only during calibration mode.
4) Reset can also be engaged via external connection to common.
5) Current will fluctuate at frequencies below 300 cpm (5 Hz)
6) See PCB Declaration of Conformance PS051 for details.

Form DD030 Rev.F 2/23/99

Drawn: NAD	Engineer: NF	Sales: JL	Approved: NF	Spec Number:
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IMI SENSORS
A PCB PIEZOTRONICS DIV.

3425 Walden Avenue, Depew, NY 14043 800-959-4464 Fax (716) 684-3823 E-Mail: imisales@pcb.com