

# 22S

3/06

## Vibration Switch Model 4121



### Typical applications

Detects vibration caused by failing bearings, broken blades, cracked, broken or bent shafts and protects:

- Motors
- Engines
- Pumps
- Compressors
- Fan drives
- Other industrial machinery

### Key benefits

- Simplified set up and maintenance
- Manual, electric or pneumatic reset
- Remote reset feature - can be used as a starting or time delay lockout for machinery which vibrates heavily during set up
- Easy to set trip point

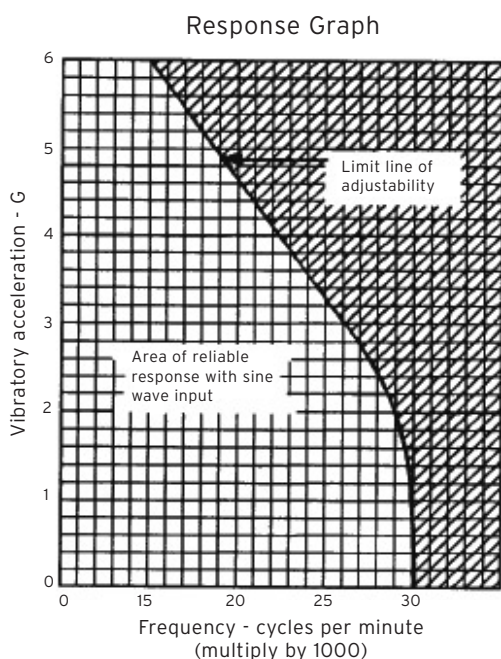
# Operation

The 4121 vibration switch makes use of a pivoted level assembly with a high strength, potted-type magnet near the end opposite the pivot. When the unit is reset, the magnet is thrust toward the steel armature embedded in the base and is held there by magnetic force plus the force of the loading spring until the inertia of the lever assembly upon increasing velocity or shock (acceleration) exceeds the holding force of the magnet and spring. When this occurs, the lever assembly snaps to the tripped position and remains there until intentionally reset. Tripping of the lever assembly moves the plunger of the snap switch and causes it to operate. Easy changes in adjustment are made by removing the cover and turning adjusting wheel which changes the spring bias.

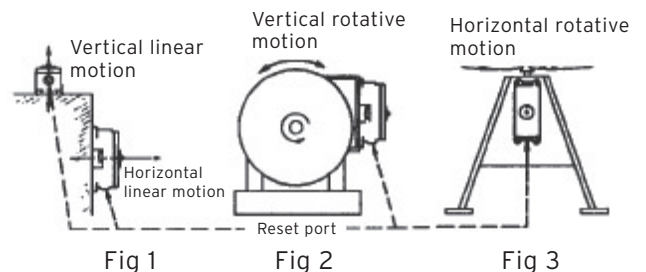
# Resetting

The 4121 vibration switch is reset manually by pressing firmly on the Reset button in the middle of the cover. It can be remotely set or 'locked out' by pressurising the pneumatic reset port with 30 to 250 psi or by energising the electrical reset coil if that option is supplied. Clean dry air or gas should be used in the pneumatic reset system. The electrical reset coil has an intermittent duty cycle of two minutes on and 18 minutes off.

# Performance



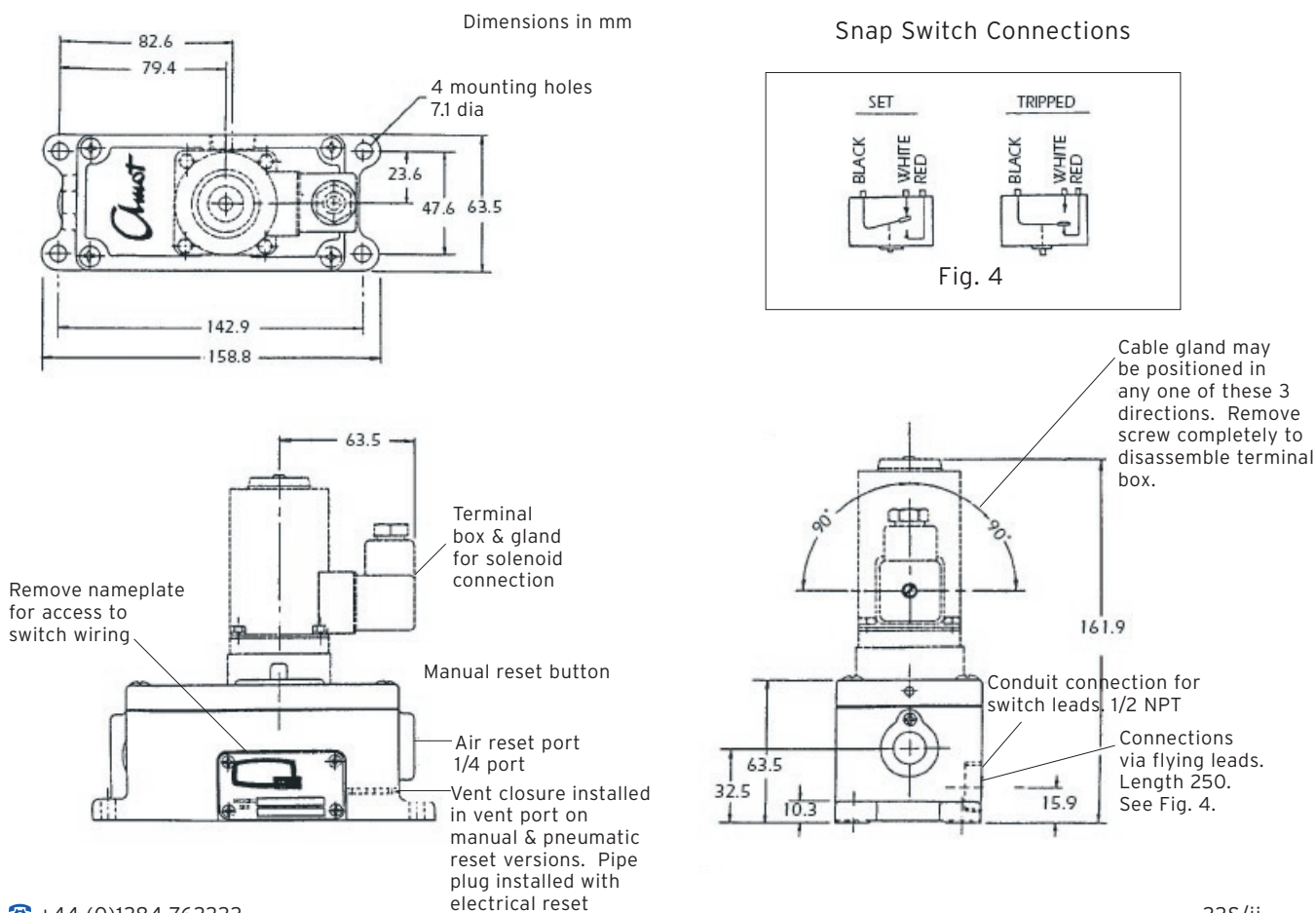
# Mounting



# Specification

<b>Housing and cover:</b>	Precision black anodised cast aluminium		
<b>Internal parts:</b>	Aluminium and plated steel		
<b>Standard seals:</b>	Viton		
<b>Maximum operating temperature:</b>	93 °C	200 °F	
<b>Pneumatic reset pressure:</b>	207 - 1724 kPa	30 - 250 psi	
<b>Reset coil power (intermittent duty):</b>	52.8 Watts		
<b>Vibration sensing range:</b>	Mounted on horizontal surface	6G	
	Mounted on vertical surface	5G	
<b>Switch ratings:</b>	125/250 VAC	1/4 hp	
	125/250 VAC	10 amp	
	28 VDC	3 amp (inductive)	
	28 VDC	35 amp (resistive)	
	28 VDC	24 amp max. in rush	
<b>Net weight:</b>	without reset coil	1.25 kg	2.75 lbs
	with reset coil	1.6 kg	3.5 lbs

# Dimensions



# Specification check list

Use the tables below to select the unique specification of your 4121 vibration switch.

Please select one characteristic from each section. Each characteristic is associated with a code that you will need to state when ordering.

Type	Code	✓
Vibration switch	4121A	✓

Threads and finish	Code	✓
1/4 NPT Gulfproofed (standard)	1	

Type of reset**	Code	✓
Manual & pneumatic reset only	0	
Electrical: 24 Volt DC	1	
Electrical: 48 Volt DC	2	
Electrical: 110/115 Volt DC	3	
Electrical: 250 Volt DC	4*	
Electrical: 220 Volt DC	5*	

Seal material	Code	✓
Viton	B	
None (Elec. reset versions only)	C	

Special requirements	Code	✓
No special requirements	AA	
Consult AMOT for any special requirements Notes:		

\* Available from AMOT UK only.

\*\* Electrical reset options are in place of manual and pneumatic reset features.

The complete model number for a standard unit with NPT threads, standard Gulfproofed finish, manual & pneumatic reset only, and Viton seals is 4121A10B.

Once you have made your selection, or if you need advice, please call us on:

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