

EZDK (e-PS)

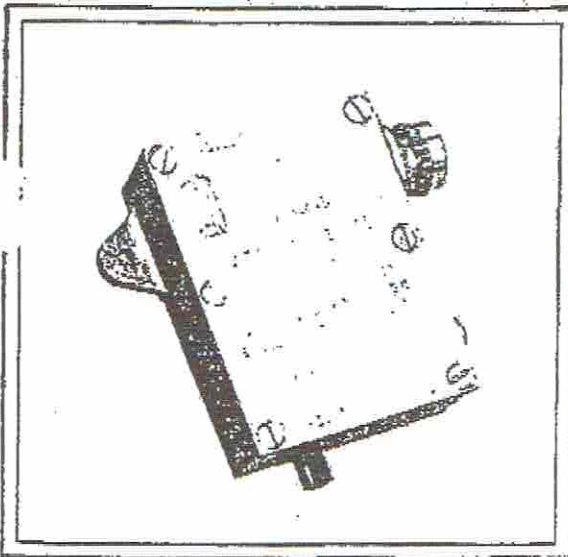
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 FIRST INERTIA SWITCH LTD. A MEMBER OF FIRST TECHNOLOGY PLC	PRODUCT INFORMATION PRODUCT INFORMATION PRODUCT INFORMATION PRODUCT INFORMATION PRODUCT INFORMATION	VIBRATION LIMIT SWITCHES Non-Hazardous Areas
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PROTECTION OF PLANT AND MACHINERY IN THE EVENT OF EXCESSIVE VIBRATION. TYPE 3171

SER: 103



FEATURES

- Ease of installation on new or existing plant and machinery.
- Robust for industrial environments.
- S.P.C.O. or D.P. microswitch output.
- Sensitive in horizontal and vertical planes.
- Manual or electric reset.
- Electrical connections through sealed cable gland.
- No maintenance after installation.
- Models for operation in hazardous areas, see appropriate data sheet.

GENERAL DESCRIPTION

The 3171 is a low cost vibration sensitive switch for protection of rotating plant and reciprocating machinery. It is adjustable to operate above the normal running levels of vibration, activating alarm signals or machinery shut-down circuits.

The 3171 vibration switch, with its low frequency vibration response, makes it ideal for detection of mass unbalance on most machinery. It is inherently insensitive to high frequency components and those caused by external knocks, etc. Responsive to vibrations in any direction (dominantly in a horizontal plane) installation problems are minimised.

Vibration switches operate by balancing the force of attraction of a permanent magnet against the force generated on a seismic mass (metal sphere) when subjected to an applied acceleration. The switch is mounted in a vertical plane with the ball restrained in a conical seat. When the ball is subjected to acceleration produced by vibration of the machine, it eventually breaks free from the magnetic restraint, falls under the action of gravity and operates a microswitch. The microswitch mechanism includes a magnetic latch to ensure positive and continuous operation even if the ball returns to its seat.

The 3171 vibration switch is reset by returning the ball to the control of the permanent magnet at the same time unlatching the microswitch mechanism either manually or electrically. The operate point of the vibration switch is controlled by the distance between the ball and magnet; this is adjustable by rotating the set screw on top of the switch.



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