

Glossary

Ampere Turn (AT)

The product of the number of turns of wire in an electromagnetic coil winding and the current in amperes passing through the winding. This is a direct measure of a reed contact's sensitivity.

Bounce

Intermittent opening of closed contacts or closing of open contacts, usually implying the motion resulting from contact impact.

Bounce Time (in milliseconds)

Time taken for bounce.

Breakdown Voltage

The voltage which may be applied between insulated parts of a reed contact without damaging, arcing, causing breakdown or excessive leakage.

Carry Current (in Amps)

The maximum current that can be applied to an already closed contact.

Chatter

The undesired intermittent closure of open contacts or opening of closed contacts. It may occur either when the reed contact is operated or released or when subjected to external shock or vibration.

Close differential

A differential of minimum 70%

Coil

An assembly consisting of one or more windings on a bobbin. Used to measure AT of a reed contact.

Contact

The current-carrying parts of reed contacts that engage or disengage to open or close electrical circuits.

Contact Gap

The distance between mating reed contacts when the contacts are open.

Contact Rating (in Watts)

The maximum power, a reed contact can switch.

Contact Resistance (CR)

The electrical resistance in milli-ohms of closed contacts.

Curie temperature

Temperature at which a magnet is totally demagnetised.

Differential

The difference between operate AT and release AT. This is also expressed in % as (OAT-RAT)/OAT %.

Drop Out (DO)

See Release AT.

Dwell (for Form C and D type contacts)

For form C contacts, it is the difference, in AT, between the closing of the NO contact and the opening of the NC contact, and form D contacts, is the difference, in AT, between the opening of the NC contact and the closing of the NO contact.

Dynamic Contact Resistance (DCR)

The electrical resistance of closed contacts under load, when the contact is in continuous operation.

Form A

A normally open type of reed contact.

Form B

A normally closed type of reed contact.

Form C

A change-over type of reed contact where break happens before make.

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Form D

A change-over type of reed contact where make happens before break.

Form E

A latching, or bi-stable type of contact, which stays in the last energized state, without the need for maintaining the field.

Homogenous Materials

A homogeneous material is defined as either a raw material or a material applied during the construction of the product. For example, in reed blades plated with both Gold and a Ruthenium layer, the base metal (Nickel Iron alloy) and both layers are considered homogeneous materials and therefore must be considered separately.

Hysteresis

See differential

Insulation Resistance

The electrical resistance measured between insulated terminals.

Operate AT (OAT)

The measured value, in AT, at which a reed contact closes. This is valid for the closing operation of form A, B, and E type reed contacts and the change over operation from the normally closed contact to the normally open contact for form C and D type reed contacts.

Operating Temperature

The temperature range within which a reed contact will meet all specified operating parameters.

Operate Time

The time interval after actuation of a reed contact to the closing of the reed contact. Where not otherwise stated, the functioning time of the reed contact in question is taken as its initial functioning time, not including contact bounce.

Over-drive (in AT)

The percentage of AT given above OAT, before measurement of CR.

Pull In (PI)

See Operate AT.

Reed Switch

A reed switch is a passive device consisting of two reed contacts sealed inside a glass tube, which operates when brought near a magnetic field.

Reed Sensor

A reed sensor is a package built using a reed switch with additional functionality like ability to withstand higher shock, easier mounting, additional intelligent circuitry, etc.

Re-closure (RC)

The closure which occurs after further energization of an already energized normally closed reed contact in open condition. This is applicable to form B type reed contacts and to the un-latching operation of form E types.

Release AT (RAT)

The measured value, in AT, at which a reed contact opens. This is valid for the opening of form A, B, and E type reed contacts and the change over from the closed normally open contact to the open normally closed contact for form C and D type contacts.

Release Time

The time interval, from coil de-energization to the opening of the reed contact. Where not otherwise stated, the functioning time of the reed contact in question is taken as its initial functioning time, not including contact bounce.

Remanance

Residual induction in magnet material after being magnetized to saturation.

Resonance Frequency (in Hz)

The maximum operating frequency that a reed contact can withstand, after which it chatters, or starts sympathetic vibration.

Saturation

Magnetic saturation exists when an increase of magnetization applied to a reed contact does not increase the magnetic flux through.

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Static Contact Resistance (CR)

The electrical resistance of closed reed contacts, as measured terminal to terminal, at their associated terminals.

Switching Frequency (in Hz)

The maximum frequency at which a reed contact can operate.

Switching Voltage (in Volts)

The maximum voltage a reed contact can switch.

Switching Current (in Amps)

The maximum current a reed contact can switch.

Thermal EMF

The EMF generated by a reed contact when the reed contact unit is subjected to a temperature differential. Thermal EMF of most reed switches is in the region of 40 micro-volts / °C.

Variable Contact Resistance (VCR)

The difference in lowest and highest static CR readings out of a set of test cycles.

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