

CT-5A Tesla meter

WORKING PRINCIPLE



XIAMEN YUXIANG MAGNETIC MATERIAL IND CO., LTD.
Mar. 2005

CAUTION

Hall sensor is very fragile; in order to make difference of good quality from bad, do not tear off the seal of the sensor before you start to use it. You may take following steps to check in advance:

1. Joint plug of Hall sensor with apparatus.
2. Switch on the power supply, then step on adjusting and zeroing, generally you could adjust to “zero” line, it is testified that the sensor is in good condition. If the needle could not be adjusted to zero line or out of order, our factory is responsible of repairing. While for the sensor is device easy to break off, so we could not take responsibility if it is broken when the seal is torn open. However, we still repair the whole apparatus for you.
3. Tearing the seal and unscrewing metal cap, then you may operate it. Please be noticed that you should pull out the cap with direct orientation when you unscrew and do not try to do in deviation, avoiding the cap touching the head of sensor and break it.
4. In addition, during the process of usage, please pay special attention to the head of sensor, avoiding any pressing, crushing, twisting, bending and clashing, etc. in order to avoid the apparatus being destroyed and could be used, it is best to name specified personnel to use it.

1.Summary

CT5A Hall effect tesla is a kind of magnetoelectricity multi-range tesla that composes with integrated calculating amplifier. It uses Hall effect theory and high gain, low deviation. It can once test AC magnetic flux density fast and exactly, so can be used as a convenient and time-saved necessary apparatus for magnetic testing personnel.

2. Characteristics of apparatus

1. The probe of the apparatus can be replaced and the apparatus is composed with host part and probe (that is Hall sensor). The chip in probe is a gallium arsenide Hall magnet-sensitive device that characterizes as low deviation, high linearity, and sizing 1*1. Besides this, the capability of circuit of host part is very stable. All this successfully settled the problem that the old CT5 tesla had. Old CT5 only have one probe and its probe cannot be replaced.
2. This apparatus displays with magnetoelectricity pointer and its dial has clear reflecting mirror, magnetic field 0~2.5T all using one scale, users could check the value of magnetic field in the testing in a short while.
3. In addition, different magnetic wares have different sensitivity, so on the dial there has one standard reading constant line (T) and the users could adjust according to the probe the factory originally provided. By this way, you can precisely test out the value of magnetic field you needed.
4. This apparatus can test transverse magnetic field with clearance >1.2mm. If it equips CT5A-2 Hall sensor, it can test axial magnetic field of trachea with diameter> ϕ 7mm.
5. The apparatus CT5A has 18 months' limit of guaranteeing usage. All damages which not caused by incorrect using, we all could repair, replace or hand back.

3.Technical specifications

- (1) Measuring range (mT):0~10~50~100~250~1000~2500mT
 - (2) Polarity of Magnetic field: N and S
 - (3)Accuracy: +/-2.5% for the 50、100、250、1000; +/-5% for 0-10 (calculate by percentage) ; Currently it is calibrated by 1000point for 2500 scope.
 - (4)Operating temperature:+5℃ ~ +40℃
 - (5)Overall dimension of Hall sensor:3.2x1.1x35mm
 - (6)Using position: Horizontal position
 - (7)Power supply: 220V+/-10%
- Overall dimension of tesla meter: 210x160x100mm

4. structure of apparatus

main parts of apparatus include: Hall sensor, compensating circuit, regulated power supply, IC

