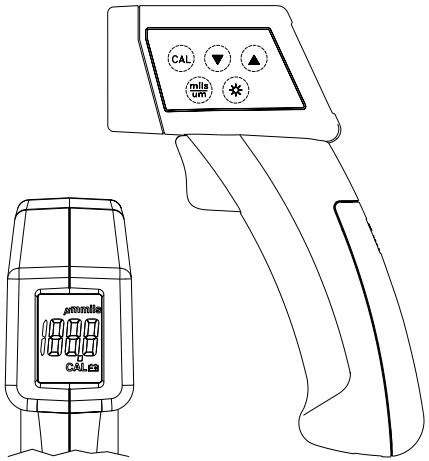
OPERATING INSTRUCTIONS

TECPEL TG 900 CE

COATING THICKNESS GAUGE



INTRODUCTION

This instrument is a portable easy to use 3½ digit, compact-sized digital coating thickness gauge sighting designed for simple one hand operation. Meter comes with Backlit LCD display, Auto-Hold function and auto power down (15 seconds approx.) after releasing trigger to extend battery life.

CAUTION

- Do not use the unit near any device which generates strong electromagnetic radiation or near a static electrical charge, as these may cause errors.
- Do not use the unit where it may be exposed to corrosive or explosive gases. The unit may be damaged, or explosion may occur.
- Do not keep or use this unit in an environment where it will be directly illuminated by sunshine, or where it condensation. If you do, it may be deformed, its insulation may be damaged, or it may no longer function according to specification.
- Do not place the meter on or around hot objects (70℃/158℉). It may cause damage to the case.
- If the meter is exposed to significant changes in ambient temperature (hot to cold or cold to hot). Allow 30 minutes for temperature stabilization, before taking measurement.
- If the meter continues use over one minute, the accuracy of the measurement of the higher thickness will become degraded. But the meter is still within its specified accuracy.
- Condensation may form on the sensor when going from a cold to hot environment-wait 10 minutes for condensation to dissipate before taking measurements.
- This unit is not constructed to be waterproof or dust proof, so do not use it in a very dusty environment or in one where it will get wet.
- Please make sure there is no air bubbles underneath.
- **One point calibration: must implement this procedure for each time**
- **Two point calibration: suggest implementing for frequent testing points to increase measuring accuracy.**
- **This meter can only measure ferrous material.**

SPECIFICATIONS

GENERAL

Display: 3½ digit liquid crystal display (LCD) wit maximum reading of 1999.
Low battery indication: The "[+-]" is displayed when the battery voltage drops below the operating level.
Measurement rate: 1 second, nominal.
Operating Environment: 32°F to 122°F (0℃ to 50℃) at < 75% R.H.
Storage Temperature: -4°F to 140°F (-20℃ to 60℃), 0 to 80% R.H. with battery removed from meter.
Auto power off: 15 seconds.
Standby consuming current: <6μA.
Battery: Standard 9V battery (NEDA 1604, IEC 6F22 006P).
Battery Life: 9 hours (continuity) typical (contain Backlit).
Dimensions: 148mm (H) x 105mm(W) x 42mm(D).
Weight: Approx. 157g (including battery).

ELECTRICAL

Thickness Range: 0 to 40.0mils (0 to 1000μm).
Display Resolution: 0.1mils/1μm.
Accuracy:
±4dgts on 0 to 7.8mils
±7dgts on 0 to 199μm
±(3%+4dgts) on 7.9mils to 40mils(200μm to 1000μm)
Temperature Coefficient: ±0.1% of reading, whichever is greater, change in accuracy per °F/°C change in ambient operating temperature above 82.4°F/28°C or below 64.4°F/18°C.
Response Time: 1 second.

OPERATING INSTRUCTIONS

Turn on and off power:

1. Pull the trigger to turn on power, LCD shows "run".
2. Auto Power off (APO) function: Leave the gauge without operation for 15 seconds, power turns off automatically.

Measuring:

1. Turn on the power.
2. Pull the trigger to the measuring the thickness of the foil.
3. Releasing trigger to stop measuring and automatically hold the display reading.
4. During the trigger being pulled, reading is refreshed every second.
5. During the trigger being pulled, APO is inactive.

CALIBRATION

Self-calibration

One point calibration: (4.0mils/102μm)

1. Select unit: (mils/μm)
2. Press "CAL" and "▼" about four seconds till display shows "CAL", "HOLD", "1 −1", and "1 −1" will flash.
3. Put 4.0mils (102μm) calibration sheet on the metal plate, and then put the sensor tip on calibration sheet holding the trigger to measure at the same time. And release it to hold readings, press "CAL" button the display will show "– – –" flashing three time and shows "1 – 2". And hold "CAL" for four seconds to exit calibration program.
4. One point calibration must use 4.0mils/102μm standard sheet to proceed.

Two point calibration:

1. Turn on the power.
2. Select unit (mils or μm).
3. Press and hold "CAL" key (for about 4 sec) until "2－1" flashes on the LCD and "CAL", "HOLD" indicated at middle-lower of LCD. These mean the gauge is in calibration mode. Press and hold "CAL" key for about 4 seconds. To exit the calibration mode.
4. Press the sensor onto the metal calibration plate, hold the trigger and wait unit there is a measured reading on the LCD, and adjust the reading to "00.0" (for mils, "000" for μm) with "▲" and "▼" keys. Then press "CAL" key, LCD shows "－－－" 3 times, and LCD shows "2－2". Press and hold "CAL" key for about 4 seconds. To abort the input data and exit the calibration mode.
5. Place the foil with known thickness on the metal calibration plate, press the sensor onto the foil, hold the trigger and wait unit there is a measured reading on the LCD, and adjust the reading to the thickness of the foil with "▲" and "▼" keys. Then press "CAL" key, LCD shows "－－－" 3 times, and LCD shows "2－3".
6. Remove the gauge from the foil and calibration plate.
7. Press and hold the "CAL" key for 4 seconds to exit the calibration mode, the power will go off and the calibration is completed.
8. If it exits the calibration mode, the procedure is not completed. The power does not go off, and the calibration data kept the previous calibration settings.

"☼" button

Use "☼" button to select turn on or off the Back-Light.

mils/μm button

1. Press "mils/μm" key to switch between mils and μm. (1 mils = 25.4 μm)
2. Selected unit is shown in LCD above the reading.

OPERATION

1. Pull the trigger to turn on the meter.
2. Press the sensor on the object.
3. Pull the trigger to the measuring the thickness, releasing trigger to stop measuring the thickness.

MAINTENANCE

Battery Replacement

1. Power is supplied by a 9 volt "transistor" battery (NEDA 1604, IEC 6F22).
2. Pull off battery cover "[≡]".
3. Remove the battery cover by gently sliding it onwards the bottom of the meter.
4. Remove and disconnect the old battery from the meter and replace with a new unit. Wind the excess lead length and put the top of battery beneath the battery chamber. Install the battery and put the battery cover.

Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.

Please Attention

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