# PT-100A
# WIRE CRIMP PULL TESTER

DANIELS MANUFACTURING CORPORATION
DATASHEET

1. SAFETY

The Alphatron PT-100A Wire Crimp Pull Tester is a force measurement device. Operators should wear safety glasses for eye protection because foreign objects can be thrown from the piece under test.

To prevent fire and shock hazard, do not expose this equipment to moisture. Always unplug the AC line cord prior to servicing.

Do not exceed the rated force capacity (150 lb., 68 kg.) of the PT-100A. The unit may be damaged, and the operator or others in the immediate vicinity injured under extreme force conditions.

2. SETUP

The Alphatron PT-100A is shipped from the DMC factory assembled, calibrated, and tested. For best results, users should familiarize themselves with the setup and operation of the unit before placing it in service.

To operate, set the PT-100A on a flat, level surface in an upright position. To prevent damage to the force sensing device, handle the unit by the main support post and base only. Three mounting holes in the base are provided to permanently bolt it in position, if desired.

Set the meter alongside the base. Be careful to avoid strain on the cord between the meter and the load cell. The meter has folding legs to permit the operator to adjust the viewing angle.

3. OPERATION

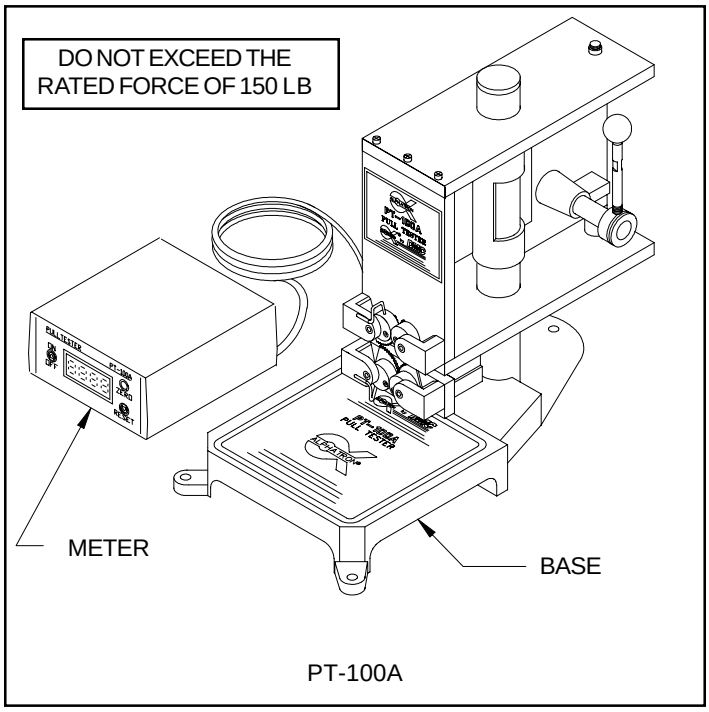
With the switch on the front of the meter turned off, plug the PT-100A into a 115VAC or appropriate outlet. Turn it on and the display will light up to indicate that the unit is operational. Allow 5 minutes warm-up prior to operating the unit. Zero the display by alternately turning the zero knob and momentarily pressing the reset toggle. The display should read 00.0. It is important to push the reset toggle before taking the next reading.

Turn the lever to open the lower grips and insert one end of the test specimen between the knurled cams. Release the lever while holding the test specimen in place to assure it is properly positioned. Turn the lever to open the upper grips, insert the test specimen between the knurled cams, and release the lever.

Pull the operating lever downward in a slow and consistent motion. The indicator will begin to display the amount of force exerted on the specimen. As the force is increased, the display will continue to update the reading until the force is no longer increasing. (Usually this is the point at which the crimp is pulled loose, or the wire breaks.)

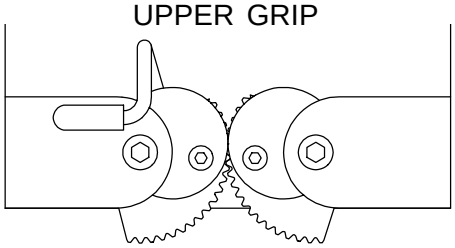
Upon completion of the test, release the wire and press the reset button on the display prior to the next test.

Best results are obtained with the PT-100A using a slow, consistent motion when pulling the lever. A quick, or hesitant motion can cause the wire to slip within the self tightening cams.

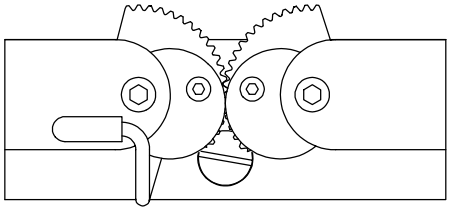



PT-100A

UPPER GRIP



LOWER GRIP



ALPHATRON by DMC

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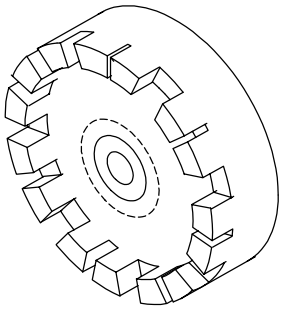
4. CHANGING GRIPS

CAUTION: The PT-100A utilizes a precision load cell for its force measurement. Care must be exercised when changing grips not to create excessive force on the load cell sensor.

To change or replace the terminal grip complete the following steps in sequence.

1. To provide more room to work raise the rack and pinion lever arm assembly as high as possible. Loosen the larger black knob on the left hand side of the assembly, raise the assembly and retighten the knob.
2. Using a large flat-blade screwdriver loosen and remove the lower grip mounting screw and the lower grip.
3. When replacing the standard self-tightening cam-type lower grip, apply a small drop of "LOCTITE Removable Threadlocker 242" to the mounting screw. Snug the screw firmly but do not overtighten. Let the threadlocker cure prior to use of the PT-100A Pull Tester.
4. When installing the optional lower terminal grip (P/N 15-3087) apply a small drop of "LOCTITE Removable Threadlocker 242" to the mounting screw. Tighten the mounting screw until the lower terminal grip rotates with resistance but is not loose or does not need to be forced to turn. Allow the threadlocker to cure prior to use of the PT-100A pull tester.
5. Lower the rack and pinion lever arm assembly to its operating level and tighten knob to secure.

OPTIONAL TERMINAL SLOTTED GRIP



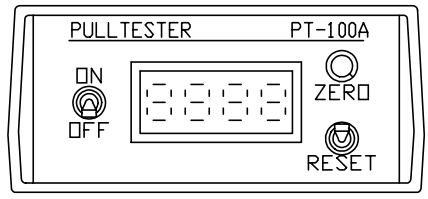
5. FUNCTIONAL CHECK

The PT-100A Wire Crimp Pull Tester is factory calibrated with equipment traceable to U.S. National Institute of Standards and Technology (NIST). It is recommended practice to recalibrate the unit at intervals not to exceed one year in duration.

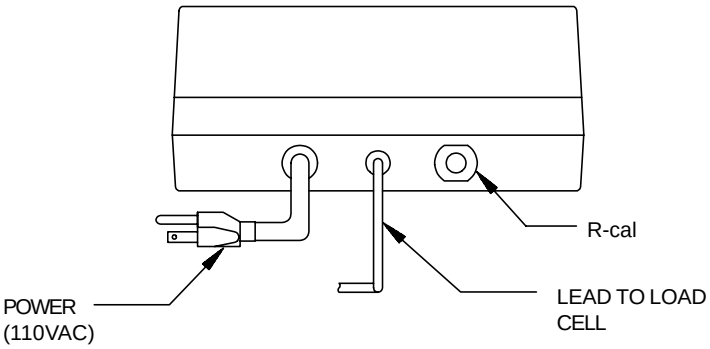
The functional check is executed using the R-cal switch built into the unit. The R-cal switch is located on the rear of the unit, and its R-cal value is on the sticker applied to the bottom of the unit.

A functional check can be performed at any time:

1. Allow PT-100A to warm up for 5 minutes.
2. Depress the reset toggle momentarily.
3. Zero the display by alternately turning the zero knob and momentarily pressing the reset toggle until the display reads 0.00.
4. Press the R-cal button on the back of the unit. Press the reset toggle to zero the display. Repeat this process several times to assure a repeatable value. The display value (R-cal # X .005 = tolerance
   R-cal # plus & minus tolerance = range)
   should be within .5% of the value recorded on the bottom of the unit.
   EXAMPLE: R-cal = 135.0
   135.0 X .005 = 0.7
   134.3 to 140.7 = range
5. If any of the procedures in steps 2-4 do not produce the expected result, the unit should be returned to DMC for repair and calibration.




FRONT VIEW




REAR VIEW

6. SERVICE

Repair and calibration service for the PT-100A Wire Crimp Pull Tester are available from Daniels Manufacturing Corporation. Spare parts also are available.

Should it be necessary to return the unit for service, please ship to the address on this datasheet, freight prepaid. Enclose a letter, or purchase order with company name, address, phone number, the individual to contacted and the reason for return.