Data Sheet

Wire Crimp Pull Tester **Model WT-205M**

32-1278 REV 1225



MESUR Lite data acquisition software is included with the WT-205M

Measure wire crimp pull forces up to 200 lbF [1 kN] accurately and efficiently with the WT-205M motorized pull tester. Portable and customizable, the tester conforms to numerous UL, ISO, ASTM, SAE, MIL, and other requirements for destructive and non-destructive testing. Pull to break, pull to load, or maintain a load for a specified period of time (optional functions), as per the requirements of UL 486A/B. Programmable pass/fail limits with red and green indicators and audio alerts help identify non-conforming samples.

The tester's standard adjustable terminal fixture contains multiple slots for diameters up to AWG 3 (0.25 in [6.3 mm]), while the self-tightening wedge grip securely clamps the free end of the cable. To accommodate a wide range of materials, optional and interchangeable alternative grips are available. Samples can be sent to Mark-10 for evaluation and recommendation prior to purchase.

The WT-205M stores and calculates statistics for up to 2,000 readings, with available date and time stamps for each saved data point. Data can be transferred to a PC or other data collector via USB, RS-232, Mitutoyo (Digimatic), or analog outputs.

Upon sample break, the tester can auto-reverse, save and output the peak force, and auto-zero in preparation for the next test, increasing testing efficiency. The available Profiles function allows the user to create and save test setups for quick recall.

Use free MESUR® Lite data acquisition software to tabulate continuous or single point data. Data stored in the tester's memory can also be downloaded in bulk. One-click export to Excel allows for further data manipulation.

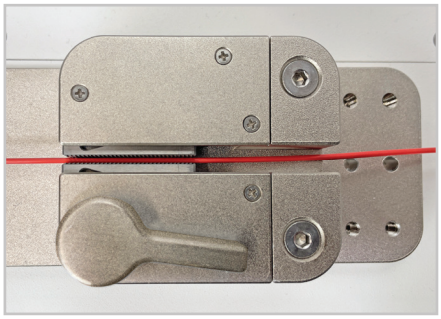
Features

- **Measures live and peak force values up to 200 lbF [1 kN]**
- **Selectable test speed, w/high speed approach and reverse**
- **Accommodates cables up to Ø0.25 in [6.3 mm]**
- **Selection of grips accommodate a wide range of materials**
- **Auto-reverse at sample break or load**
- **USB, RS-232, Mitutoyo (Digimatic), and analog outputs**
- **Automatic reverse / output / data storage / zeroing upon sample break helps automate testing processes**
- **2,000-point data memory with statistics, output, and date and time stamp (optional function)**
- **Password protection prevents unauthorized changes**
- **Pass / fail indicators, audio alerts, and outputs**
- **Save and recall up to 500 profiles for various test requirements (optional function)**
- **Pull to a specified load or maintain load for a specified period of time, as per UL 486A/B (optional functions)**
- **Date / time stamp for all saved data (optional function)**

Key Features



▲ The standard adjustable wire terminal fixture accommodates wire diameter sizes up to AWG 3 (0.25 in [6.3 mm]).



▲ The standard self-tightening wedge grip secures and pulls the loose end of the cable.



▲ Save and recall multiple profiles, for quick and accurate switchover to different test methods.

Controls & Indicators



Optional Functions

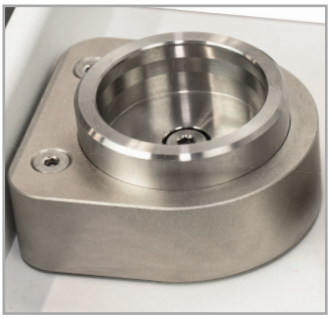
Any of these optional functions may be purchased at time of order or may be enabled in the field at a later date though a simple activation process. A complete options package is also available, including all of the listed features at a discounted price. The tester is shipped in Demo Mode, during which time all available functions are enabled for 160 hours of operation.

Feature	Part No.	Description
Profiles	WF010	Save and recall up to 500 sets of test parameters, including pass/fail limits, measurement unit, etc.
Pull to load	WF011	The tester will stop when the specified load has been reached.
Load holding	WF012	The tester will stop and maintain a specified load for a specified period of time.
Date and time stamp	WF013	A date and time stamp is applied to each saved data point.
Complete options package	WFCOMP-205M	Includes all functions listed above.

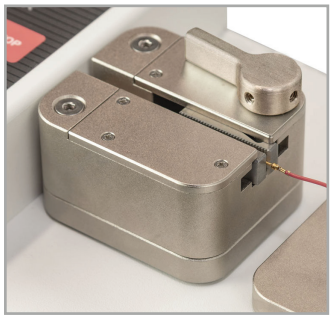
Optional Accessories



AC1135
Ring terminal fixture
Secures ring terminations. Pin diameter sizes from 1/8 to 3/8 in [3.2 to 9.5 mm]. Replaces the standard turret fixture.



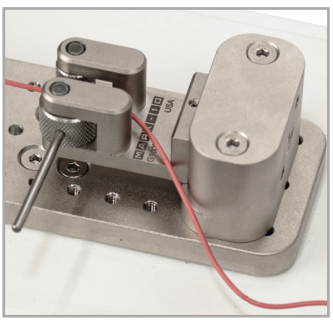
AC1136
Machinable blank terminal fixture
For unique sample shapes and sizes. Replaces the standard turret fixture.



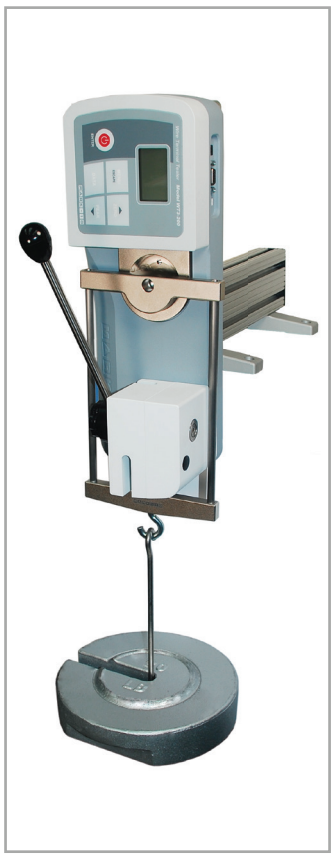
AC1132
Wedge grip assembly
Self-tightening jaws effectively secure the sample. This type of grip is standard on the actuator end, but may also replace the standard turret fixture.



AC1134
Bollard grip assembly
Secures the free end of the sample via a bollard and vise. Based on the model G1102 grip.



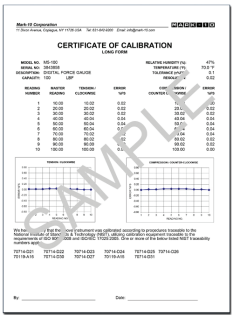
AC1133
Dual roller grip assembly
Cam-action knurled rollers secure the free end of the wire. Replaces the standard wedge grip. Based on the model G1002 grip.



AC1049
Calibration fixture
Complete set of brackets and hardware for calibration of WT-205 or WT-205M. Also compatible with legacy models WT3-201, WT3-201M, and WT3-200. Weights not available from Mark-10.



AC1137-2
Carrying case
Provides a cushioned storage space for the tester and accessories.

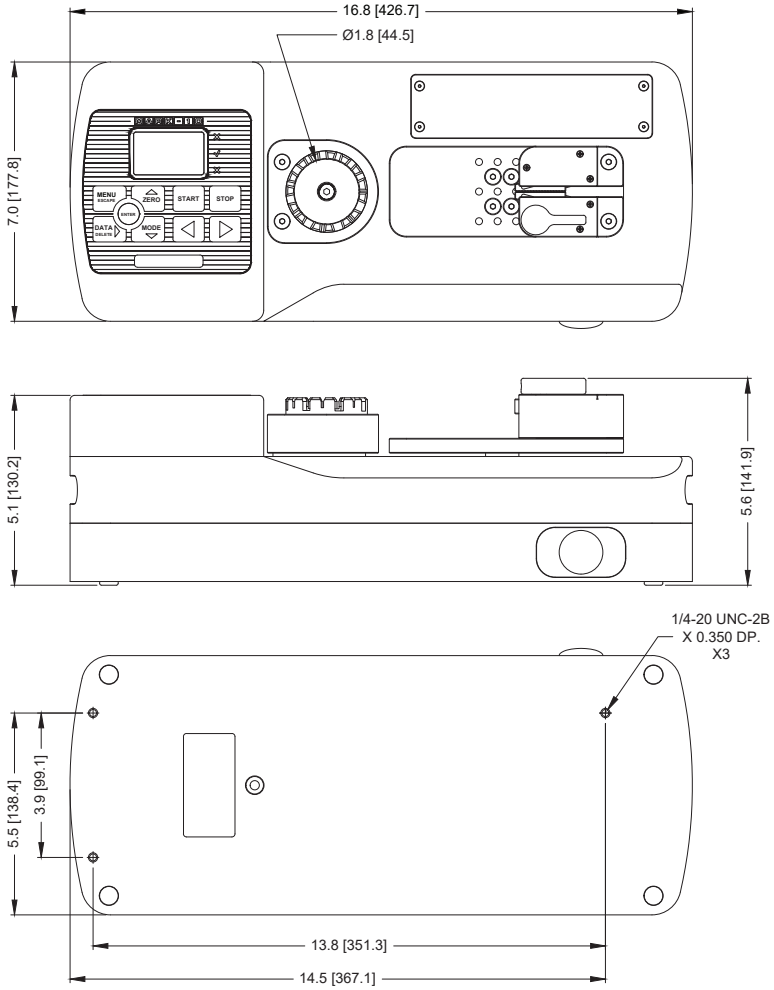

CERTIFICATE OF CALIBRATION
LONG FORM
SAMPLE

CERT
Calibration certificate w/data
Includes 10 data points (short form certificate without data is included).

Specifications

Force capacity:	200 x 0.1 lbF | 3200 x 2 ozF | 100 x 0.05 kgF | 1,000 x 0.5 N | 1 x 0.0005 kN
Accuracy:	±0.2% of full scale
Wire diameter range:	AWG30 - AWG 3 [0.01 - 0.25 in (0.3 - 6.3 mm)]
Minimum sample length:	2.1 in (53.3 mm), excluding termination
Maximum elongation:	2.3 in (58.4 mm)
Speed range:	**Approach/Preload speed (until the sample preload):** 12.0 - 20.0 in/min [300 - 500 mm/min] **Test / Pull Speed (between the preload and end of travel):** 0.4 - 12.0 in/min [10 - 300 mm/min] **Return Speed:** 12.0 - 45.0 in/min [300 - 1,125 mm/min]
Speed accuracy:	±0.2%, virtually no variation with load
Force sampling rate:	7,000 Hz
Outputs:	**USB / RS-232:** Configurable up to 115,200 baud. **Mitutoyo:** Serial BCD suitable for all Mitutoyo SPC-compatible devices. **Analog:** ±1 VDC at capacity, ±0.25% of full scale. **General purpose:** Three open drain outputs, one input. **Set points:** Three open drain lines, 40 VDC max., 100 mA DC max.
Overload protection:	Motor stops at 120% of force capacity (display shows "OVER" at 110% and above)
Weight:	28 lb [12.7kg]
Environmental requirements:	40 - 100°F, max. 96% humidity, non-condensating
Warranty:	3 years (see individual statement for further details)

Dimensions in [mm]



In The Box

The tester is shipped as shown at right and includes the following accessories:

(1) Turret-style terminal fixture (installed)

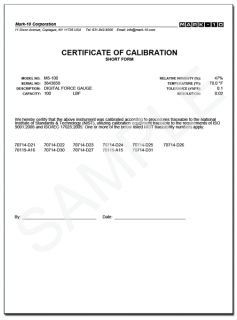
(1) Wedge grip assembly (installed)

(1) USB cable

(1) 110V US power cord

(1) Certificate of calibration without data (data is optional)





CERTIFICATE OF CALIBRATION

SHORT FORM

Ordering Information

Model	Description
WT-205M	Motorized wire crimp pull tester
Optional Functions	
WF010	Profiles
WF011	Pull to load limit
WF012	Load holding
WF013	Date and time stamp
WFCOMP-205M	Complete options package for WT-205M
Additional Items to Consider	
AC1135	Ring terminal fixture
AC1136	Machinable blank terminal fixture
AC1132	Wedge grip assembly
AC1134	Bollard grip assembly
AC1133	Dual roller grip assembly
AC1137-2	Carrying case
AC1049	Calibration kit
CERT	Certificate of calibration with data

Alternative Power Cables

The WT-205M contains a universal power supply (80 - 240V) and power cable with US prong style. Select alternative power cords from the table below.

Model	Description
AC1139	Power cable, EUR
AC1140	Power cable, UK
AC1141	Power cable, AUS