


R Series Force and
Torque Sensors and
Adapters



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MARK-10

MARK-10 R Series Force and Torque Sensors and Adapters



Force & Torque Sensors & Sensor Adapters

Series R01 / R02 / R03 / R04 / R05 / R06 / R07 / R50 / R51 / R52 / R55 / FS05 / FS06 sensors

Models PTA and PTAF adapters

Thank you!

Thank you for purchasing a Mark-10 Plug & Test® sensor or sensor adapter. With proper usage, we are confident that you will get many years of great service with this product. Mark-10 sensors are ruggedly built for laboratory and industrial environments. Please read through this quick start guide and the complete user's guide before use.

IMPORTANT SAFETY CONSIDERATIONS

Force and torque sensors are sensitive instruments that must be treated with care. Please review the yellow safety information card included in the box, as well as the safety information provided in the user's guide prior to operating the sensor.

SENSOR – INDICATOR SETUP

- Plug & Test® sensors are designed to inter-face with Mark-10 indicator models M3I, M5I, and M7I. All configuration and calibration data is saved within the sensor's connector, shown at left.
- Insert the connector into the corresponding slot in the indicator. When fully inserted, the connector will lock into place with a "click".
- To release the connector, press both buttons on either side of the indicator housing. Pull the connector completely out of the indicator by gripping the curved aluminum section. DO NOT pull on the cable or strain relief.

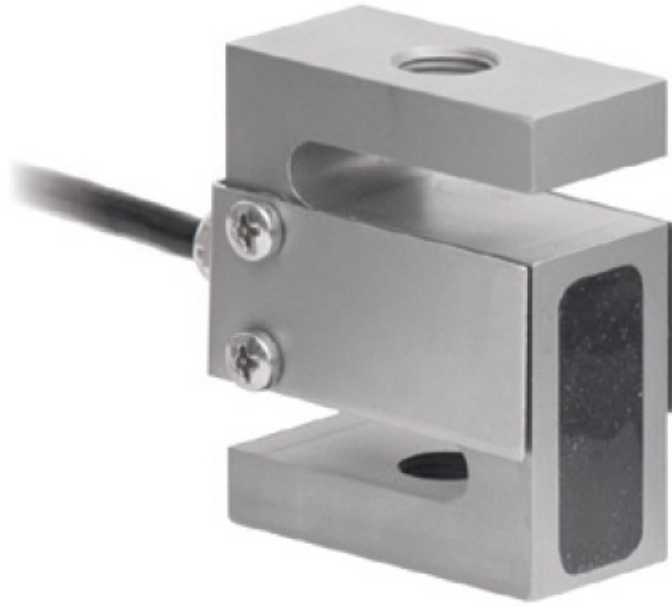


FORCE SENSORS

Series R01 / R07 / FS06 Force Sensors

Rugged S-beam sensor series for measuring tensile and compressive loads up to 10,000 lbF [50 kN].

- Series R01 is designed for general use.
- Series R07 is designed for high-capacity Series F test frames, such as model F1505.
- Series FS06 is designed for low-capacity Series F test frames, such as model F305.



Apply axial load to the threaded surfaces on each side.

Series R02 Force Sensors

Button type sensors for compressive loads of up to 10,000 lbf [50 kN] in applications with limited space. Apply axial load to the center of the load button.



Series R03 Force Sensors

For tensile and compressive loads, with capacities up to 100 lbf [1 to 500 N]. Apply axial load to the protruding shaft with threaded hole.



Series R04 Force Sensors

Compact sensors for tensile and compressive loads in applications with limited space. Capacities up to 100 lbF [500 N]. Apply axial load to the surfaces with threaded holes.



Series R05 Force Sensors

For tension and compression testing. Useful in ergonomics testing, workplace safety testing, and general lifting or push/pull requirements up to 500 lbF [2,500 N]. Apply axial load to the surface with threaded hole.



Series R06 Wire Crimp Pull Sensors

Hand-operated, ratcheting mechanism for wire crimp pull-off force measurement. Designed for field use in

applications up to 200 lbF [1,000 N]. The integrated turret grip contains slots of multiple dimensions to accommodate various wire diameters. Refer to the user's guide for instructions.



Series R08 Force Sensors

Universal sensors for tension and compression applications up to 10,000 lbF (50 kN). Threaded rods on each end allow for a variety of mounting configurations. Apply axial load to the threaded rods.



Series FS05 Force Sensors

Tension and compression sensors designed for models F105, F305, F505, and F505H test frames. Capacities up to 500 lbF [2,500 N]. May be adapted to high-capacity test frames with adapter part no. AC1083. Apply axial load to the threaded load cell shaft.



TORQUE SENSORS

Series R50 Torque Sensors

Bi-directional torque sensors for general applications. Can be used as a handheld device or mounted to a torque test stand. Capacities available up to 100 lbf_{in} [1,150 Ncm]. Apply axial torque to the center of the chuck.



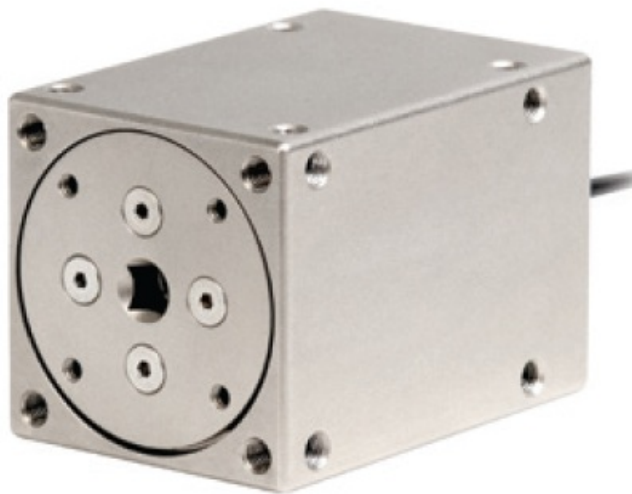
Series R51 Torque Sensors

Bi-directional torque sensors for general applications, with three available interchangeable chucks and a bit holder. Can be used as a handheld device or mounted to a torque test stand. Capacities available up to 100 lbf_{in} [1,150 Ncm]. Apply axial torque to the center of the chuck or bit holder.



Series R52 Torque Sensors

Bi-directional torque sensors for calibrating torque tools and other applications. Fixtures may be mounted to the loading surface utilizing the provided threaded holes. Capacities available up to 100 lbFin [1,150 Ncm]. Apply axial torque to the square drive.



Series R55 Torque Sensors

Bi-directional torque sensors for calibrating torque tools and other inline applications. Capacities available up to 5,000 lbFin [550 Nm]. Apply axial torque to the male square drive.



MODELS PTA & PTAF SENSOR ADAPTERS

- These adapters connect third-party strain gage-based load cells, force sensors, and torque sensors to Mark-10 indicators and Series F test frames.
- To configure the sensor, follow the instructions in the user's guide. Once connected and configured via Plug & Test® software, the sensor will be recognized by a Mark-10 indicator or Series F test frame.

PC requirements

Plug & Test® software is compatible with PCs running Microsoft Windows 7 or later, with minimum monitor resolution of 1108 x 758. A USB or RS-232C serial port is required. If USB communication is required, install the Mark-10 USB driver. Follow the Resources link below to download the software and USB driver.

< Model PTA adapts a sensor to a Mark-10 indicator



< Model PTAF adapts a sensor to a Mark-10 Series F test frame



USER'S GUIDES LINKS

Sensors

mark-10.com/manualplug&test



PTA / PTAF Adapter mark-10.com/manualpta-ptaf



Download user's guides, data sheets, software, solid models, and more.
mark-10.com/resources



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Frequently Asked Questions

Q: Where can I find user's guides and additional resources for the product?

A: You can download user's guides, data sheets, software, solid models, and more from mark-10.com/resources.

Documents / Resources

	MARK-10 R Series Force and Torque Sensors and Adapters [pdf] User Guide PTA, PTAF, R Series Force and Torque Sensors and Adapters, R Series, Force and Torque Sensors and Adapters, Torque Sensors and Adapters, Sensors and Adapters, Adapters, Sensors
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References

- [M Mark-10 Force and Torque Measurement](#)
- [User Manual](#)

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