

## ABSTRACT

Tensile strength gauges back muscles are one tool used to measure the tensile strength of back muscles. Where the patient / user of this tool which is undergoing post-injury, back muscles, such as bruises, sprains, cramps. So by using this tool patients can find out how the value of tensile strength of back muscles.

This tool is generally serve as a tool to measure the tensile strength on the back muscles of patients after the occurrence of injury or muscle disorders. This tool is originally in the show use the display as prameter KG needle him. In this instrument in the show through Digital.

This tool can be operated properly. And the measurement results displayed digitally. And in the show with 7's to facilitate the reading of measurements for the patient or operator.

This tool uses linear potentiometer sensor, which produces the value of the potentiometer resistance is more linear, in comparison with ordinary potensio, this linear potentiometer as a sensor for the parameter weight (kg), with a tolerance value of  $\pm 0.4$  and% error of 0.5. So it can be concluded the potentiometer is sufficient to meet the standard linear in resistance value.

**Keywords: KG, Digital, Pull, ADC 7107**