



Application Note

0017

Title : Testing to IEC 61010 (Standard for Laboratory and Test & Measurement Equipment) using the Rigel 288

The Rigel 288 is fitted with a dual body model for testing to IEC 60601 and AAMI. A dedicated IEC 61010 body model is not present however, tests can be done to check the safety of the equipment by using the pass / fail limits from IEC 61010 whilst measuring through the IEC 60601 body model. The main difference between the IEC 60601 and 61010 body models is the resistance of $1K\Omega$ (60601) compared to the $2K\Omega$ (61010), whilst the effects of the frequency response should not provide any significant differences in measurements.

IEC 61010 states that leakage measurements are only required if the measured touch voltage is $>33V$ ($>55V$ SFC). The Rigel 288 will always perform a leakage measurement despite the touch voltage however, leakage is the ultimate pass or fail thus this approach is fail safe. Due to the $1K\Omega$ body model, we can conclude that the μA reading is equal to the mV touch voltage value. This is a way to display touch voltage. E.g. touch current of $100\mu A = 100\mu V$ touch voltage.

Regarding the limits of IEC 61010, you can program a test using the 61010 limits for enclosure leakage ($500\mu A$ normal, $3500\mu A$ SFC). This is the only leakage test you do.

End.