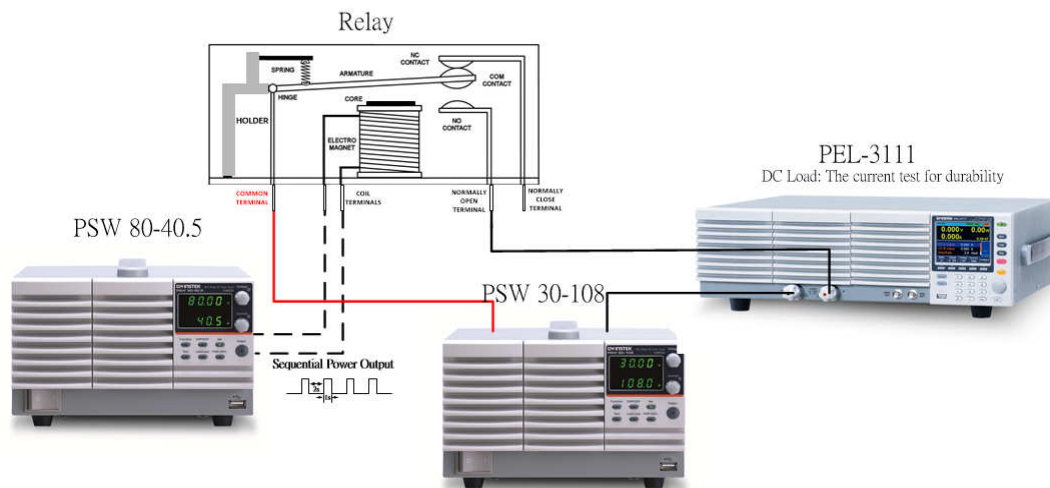


“Reliability Test for Relay using GW PSW power supply and PEL-3111 E. Load”

Dear Madam/Sir,

How do you conduct relay connection point (N.O. / N.C.) tests? How do you test the life cycle of relay's connection point (N.O. / N.C.)? How do you evaluate the connection resistance of connection point (N.O. / N.C.) after multiple tests? How do you evaluate the speed for operating connection point (N.O. / N.C.)?

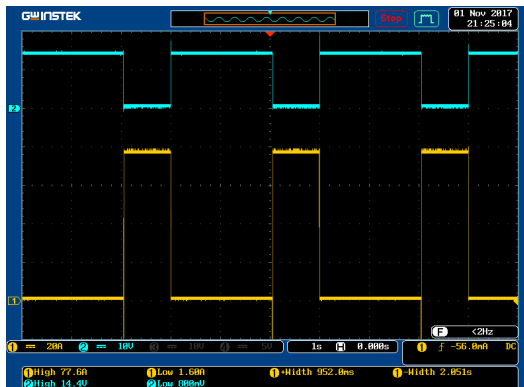
Relay, functioning to produce mechanical on-off movement by receiving electric signal to change electro magnet, is often applied to control other electronic device via receiving electronic signal. Voltage exerted on relay's coil allows current to pass through coil and magnetizes core. Armature is then be pulled by core due to electromagnetic force. Hence, a mechanical on-off movement is produced.



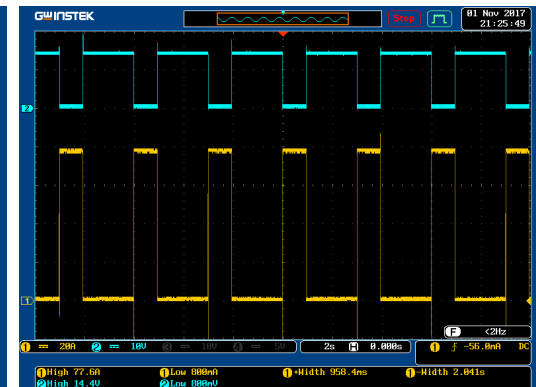
As shown on the top diagram, PSW 30-108, Relay and PEL-3111 are connected by series. PEL-3111 is set to 80A current sink. Each time, Relay's NO-COM is closed, NO-COM is tested for its current reliability. In the meantime, PSW 80-40.5 is utilized to output sequential power supply to produce control signal to control Relay's NO-COM.

One GW Instek PSW 80-40.5 can meet the actual measurement requirements via planning Relay's control signal. It not only controls signal's voltage, current, time and period, but also determines the number of operating cycle. There are totally 20,000 steps and each step can be set from 50ms to 20 days. The number of cycle can reach 1 billion or infinite by different specifications. Relay's control signal can only verify the mechanical characteristics of NO-COM and NC-COM. For further electric characteristic verification of NO-COM and NC-COM, PSW 30-108 and PEL-3111 must be concurrently utilized to produce C.C. output. Based upon Relay's specifications, the combined application of two instruments can conduct fast current switching test and provide large current verification, including current withstanding value and current withstanding time so as to ensure Relay's quality.

Waveforms measured



Ch1: current waveform



Ch2: voltage waveform for Relay 80A for 1s and 0A for 2s.

Note:

NO: The NO pin is open to com pin in general unless the power provides to the coil. So it calls Normally Open Terminal of Relay.

NC: The NC pin is short to com pin in general unless the power provides to the coil. So it calls Normally Closed Terminal of Relay.

NO-COM: Its a connection status between NO pin and COM pin. It is short when power provides the coil; otherwise, it keeps open.

Sincerely yours,

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