PAT Testing an Elevation 1+

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These notes are intended to give experienced personnel additional information regarding PAT testing of Elevation 1+ controllers. They are not intended to form a complete guide to PAT testing of the equipment – consult your PAT tester instruction manual for further information.

Before testing

Make sure that the Elevation 1+ is disconnected from the supply and all other equipment (hoists, control systems etc.). Only qualified personnel should PAT test equipment – PAT testing can be hazardous and can result in equipment damage if not carried out correctly. The Elevation 1+ is a class 1 appliance.

Earth Bond Continuity Test

Do not apply the wander lead to any pins of the multipin hoist connector except pin 1 (earth), or to any part of the XLR control or data connectors.

A 25A earth bond continuity test may be carried out to any part of the case, and to the mains link out connector ("Ceeform") earth. The earth connections to

to any other pins on the multipin connector.

Recommended test points:

- Earth bolt above mains link out connector (main case)
- Mains link out connector earth pin (output connector)
- Strap handle fixing screw (upper case)
- Multipin connector chassis or pin 1 (hoist connection) – 100mA ONLY

Insulation Resistance Test

When the Elevation 1+ is powered down the mains contactor disconnects the variable speed drive and EMC filter from the system – this means that leakage through the EMC filter will not cause erroneous measurements, but also that the insulation test does not include all internal mains voltage wiring. It is recommended that a visual inspection of the internal wiring from the contactor to the drive, and from the drive to the hoist connector is carried out occasionally – this inspection interval will be determined by the environment in which the Elevation 1+ is operated. It is possible to manually override the contactor to extend the test to include all internal wiring, however high leakage between phase conductors and earth through the integral EMC filter will result in misleading test results. Contact Kinesys for further information if required.

Disconnect all cables and external equipment, and switch on both the control and drive circuit breakers before commencing the test. A 500V test voltage may be used provided the mains contactor is not bypassed.

Operation and Earth Leakage Testing

Connect a hoist to the Elevation 1+, and enable the unit by connecting an e-stop cheater plug, µTransform or Array PD-ES. Select manual operation mode by simultaneously pressing the MENU and ENTER buttons.

The integral EMC filter in the Elevation 1+ will cause an earth leakage current of approximately 40mA between phases and earth. Due to the high-frequency switching supply within the variable speed drive erroneous earth leakage current measurements may result with some PAT testing equipment.

Flash Testing

Flash testing may cause permanent damage to the Elevation 1+ and is not recommended. Contact Kinesys for further information if a flash test is required.