



Low Voltage Directive 2006/95/EC

The Low Voltage Directive covers all products using electric voltages between 50 to 1000 Vac and 75 to 1000 Vdc. The Directive requires protection from electrical shocks and high surface temperatures. Fluid power products fall under the scope of this Directive. Surface temperatures on solenoids may reach levels causing skin damage and protection may be required. The Directive requires "redundant protection" against electrical shocks; single insulation is not acceptable by itself. A protective ground is most commonly used. Products using voltages in the specified range must have a third lead and/or connector that provides a direct path to ground. Sun solenoid coils rated for operation at or above the Directive low limit incorporate a protective third terminal directly connected to the metallic body of the coil for external grounding purposes via the ISO/DIN 43650 electrical plug interface.

Further, EN 60204-1:2006 Section 6.4.1. PELV [Protective Extra-Low Voltage] stipulates electrical devices rated below voltages of 25 Vac and 60 Vdc must also comply with the requirements of a protective bonding circuit when the equipment is normally used in dry areas and when large area contact with live parts and the human body is not expected. Nominal voltage shall not exceed 6 Vac or 15 Vdc in all other cases.

Sun coil models utilizing an ISO/DIN 43650 electrical plug with grounding third lead comply with 2006/95/EC and EN 60204-1:2006 and are as follows:

- 12 Vdc: 770-212
- 14 Vdc: 770-214
- 24 Vdc: 770-224
- 28 Vdc: 770-228
- 36 Vdc: 770-236
- 48 Vdc: 770-248
- 24 Vac: 770-297
- 115 Vac: 770-211
- 230 Vac: 770-223
- 127 Vdc: 770-299
- 220 Vdc: 770-298