Isolated ground receptacles

The efficient and economical way to protect sensitive electronics

Operational degradation, disruption and damage from electronic noise in a conventionally grounded circuit can happen to any piece of equipment with a microprocessor; Arrow Hart’s isolated ground receptacles eliminate this to improve equipment performance.

Receptacle differences

**Conventional receptacle**
A conventional receptacle is grounded to the building grounding system at the receptacle. When mounted in the box, the receptacle’s grounding contacts are connected to the box, fittings, conduit and all other building ground system components which can act as a large antenna for EMI and RFI (electronic) noise.

**How an isolated ground device is different**
Isolated ground devices easily protect sensitive electronics or equipment from damage without the expense of using power conditioners. Grounding contacts are bonded directly to the service entrance grounding system. In the illustration the insulating barrier (A) isolates the grounding contacts (B) from the mounting strap (C). The insulated grounding conductor (D) is bonded to the service entrance grounding system, resulting in the protection of equipment that draws power from the isolated ground device.

For protection against both voltage spikes and electronic noise, choose an isolated ground surge protection receptacle.

**2014 NEC® section 250.146 Connecting Receptacle Grounding Terminal to Box**

(D) Isolated Ground Receptacles

Where installed for the reduction of electrical noise (electromagnetic interference) on the grounding circuit, a receptacle in which the grounding terminal is purposely insulated from the receptacle mounting means may be permitted. The receptacle grounding terminal shall be connected to an insulated equipment grounding conductor run with the circuit conductors. This equipment grounding conductor shall be permitted to pass through one or more panel boards without a connection to the panel board grounding terminal bar as permitted in 408.40, Exception, so as to terminate within the same building or structure directly at an equipment grounding conductor terminal of the applicable derived system or service. Where installed in accordance with the provisions of this section, this equipment grounding conductor shall also be permitted to pass through boxes, wireways, or other enclosures without being connected to such enclosures.

**2014 NEC® section 406.3 Receptacle Rating and Type**

(D) Isolated Ground Receptacles

Receptacles incorporating an isolated grounding conductor connection intended for the reduction of electrical noise (electromagnetic interference) as permitted in 250.146(D) shall be identified by an orange triangle on the face of the receptacle.