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Installation of Electric Fence Controllers

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1 Purpose and scope

1.1 This Engineering Practice is intended as a guide to manufacturers and suppliers preparing installation instructions for fence controllers and to engineers providing suitable instructions to users. It is not intended to cover every possible situation but presents major considerations.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ASAE S500, *Test Procedure for Measuring the Output Characteristics of an Electric Fence Controller*

3 Installation

3.1 When the fence controller is mounted inside a suitable building, it shall be mounted within 0.3 m (1 ft) from the point where the hot lead wire exits the building (Figure 1). Install a 1.3 mm (0.05 in.) minimum wall PVC, polyethylene, or porcelain tube around this wire or use a wire with 20,000 V insulation. The tube shall be sloped downward for drainage as it passes outward through the outside wall. Fence and ground leads shall be separated physically by at least 5 cm (2 in.). Electrical conductors and connectors shall be of similar materials to minimize the long-term effects of galvanic and atmospheric corrosion, and electrical connections shall be made with sufficient compressive force to effect a gas-tight connection.

3.2 If the controller is to be installed outside and if the listing or approval limits it to inside installation, it shall be protected by a weatherproof enclosure and installed similarly to that shown in Figure 2.

3.3 To minimize lightning damage and fire, the charged fence wire shall be suspended from poles or posts. Do not suspend the charged fence wire from buildings.

3.4 For maximum shock and most effective fencing, the charged fence wire(s) shall be supported by high-quality, weather resistant insulators having a creepage distance of at least 30 mm (1.2 in.). At points where the fence wire must be spliced, connections shall be made very tight to provide a hot shock along the fence and to help avoid radio and television interference. Galvanized fence wires should be connected by crimping the wires together using galvanized connectors, or these wires may be joined using a taught figure-eight knot.

3.5 Charged fence wires shall be kept clear of grass, weeds, and trees to provide maximum shock and most effective fencing.