

**Interpretation Number:** 1-07/05  
**Topic:** DTE Power via MDI Isolation  
**Relevant Clause:** 33.4.1  
**Classification:** Question 1: Unambiguous  
Questions 2, 3 & 4: Not requests for interpretation

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### **Interpretation Request**

I have some problems to understand the meaning of clause 33.4.1 (Isolation) of IEEE802.3af-2003.

Example:

There is a six port switch including a PSE to provide power via MDI and an inband management (IP) for configurations and status informations. The entire device has only one connector for external power supply (48Vdc) and six twisted pair ports for the ethernet.

Q1:

Where is the isolation required?

Q2:

Must the CPU and the switch inside the device isolated from the PSE controller?

Q3:

What is the meaning of "PI device circuits"? Does it means only the 48V power supply, the PSE controller and the FET's?

Q4:

How do I isolate the PI leads from the PI device circuits like the PSE controller? The PI leads are directly connected to the FET and the PSE controller.

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### **Interpretation for IEEE Std 802.3af-2003**

Question 1

The standard states in the first paragraph of subclause 33.4.1 'Isolation' that 'The PSE shall provide electrical isolation between the PI device circuits, including frame ground (if any), and all PI leads.'

Questions 2, 3 & 4

These items of the request are being returned to you because they do not constitute a request for interpretation but rather a request for consultation advice. Generally, an interpretation request is submitted when the wording of a specific Clause or portion of the standard is ambiguous or incomplete. The request should state the two or more possible interpretations or the lack of completeness of the text.

The definition of PI devices circuits is ambiguous and a corrigendum project, P802.3-2005/Cor 1, has been requested to address this area of the IEEE Std 802.3 standard (please see URL - <http://www.ieee802.org/3/at/isol/index.html>).