

Section	Comment
716.1 and title of 716	<p>The title of 716 is Power over Ethernet. The third paragraph was requested in previous editions because the title was “ELV DC power distribution over information and communications technology (ICT) cable infrastructure”. With the old title, this third paragraph was necessary. With the new title, this sentence is redundant. Either change back to the old title or delete the third paragraph.</p>
716.419.3.3	<p>The text states “shall not be used...in Part 701, 702, 703, 706, 710”</p> <ul style="list-style-type: none"> 701 – containing bath or shower 702 – pools 703 – sauna heaters 706 – locations with restricted movement 710 – medical <p>710 Medical scope states “facilities, such as, hospitals, private clinics, medical and dental practices, healthcare centres and dedicated medical rooms”. Hospitals rely on the network. Predominantly, these networks include wireless access that serves the employees, patients, and visitors. The preferred method to power an Access Point (AP) is via PoE. You are writing a regulation preventing this installation. This will require hospitals disable PoE on all their switches and run an outlet to every Access Point location, and potentially replace their APs as often the only method offered to power an AP is PoE (no local DC power jack). This is millions of dollars (pounds?) per facility. And that’s just the AP. The phone systems are often IP based and power from PoE, providing an added benefit of centralizing the backup power for the phone system in case of a blackout. Additionally, running a phone from PoE eliminates the ring voltage of a legacy telephone system (typically 75 VAC, intermittent such that a victim could let go if were getting shocked). There are other healthcare centric products that run from PoE, for example nurse call systems. Lastly, PoE lighting is gaining traction for the simplicity of install and the advanced features that come with a power+data connection in one cable.</p> <p>IEEE compliant PoE has the benefit of being “cold power”. If a device is not connected to the port, the energy available at the port is severely restricted (for both voltage and current). The “PoE power voltage” (something like 52 VDC) isn’t present until a Powered Device (PD) has been discovered. This can’t happen</p>

	<p>unless the cable is connected at both ends, meaning no exposed conductors. If we are trying to protect against shock due to the possibility of contact to open wounds, this protection has been engineered into the IEEE compliant PoE system. Perhaps this section be modified to exempt IEEE compliant PoE. Non-compliant PoE is often “always on power” and therefore doesn’t enjoy the added protection of IEEE compliant PoE.</p> <p>Further, 4-pair premises cabling is agnostic to whether it carries power. It is commonplace for a switch to be upgraded from a non-PoE capable switch to one that can provide PoE. This cannot be controlled by the cabling or via the typical inspection process.</p>
716.414.1.1 Note 1	<p>This note points out that there is a difference in 62368 and the 60364 series. As all PoE systems we are aware of are checked against 62368 for compliance, the additional requirements set forth in this document means that no PoE systems will comply, effectively outlawing PoE installations. This is harsh for a technology that has over two decades of installation experience with zero records of loss.</p>
716.414.3(d)	<p>“the voltage at the output terminals is immediately reduced” – what is the definition of immediately? It implies zero time, but we know that’s impossible. Is immediate something like a femtosecond? Or 100 milliseconds? Or 5 seconds? This requirement must include a timing requirement to be effectively enforced.</p>
716.521.101	<p>This section only mentions 4-pair cabling but the title of 716 is Power over Ethernet. Single Pair Ethernet (SPE) exists along with Single-Pair PoE (SPoE) and it does not use this cabling or connectors. Suggest that SPoE should be a separate section as the cables, connectors, and currents are different than 4P PoE.</p>
716.523.1.101	<p>Text calls out BS EN 50173-1 and PD CLC/TR 50174-99-1:2015. Do we have a free way to review the requirements in these external documents directly within this document? The external documents normatively referenced are over £600 extra.</p>
716.523.2.101	<p>This current limit excludes SPoE, which can deliver 1.579 A per conductor at this present time (with new development on going). Making SPoE its own section means this comment can be ignored.</p>

716.526.101	This text calls out 11801-1. The newest version is adding new cable classes for Single Pair Ethernet and allowing more than 750 mA per conductor. This sentence is correct only with respect to 4-pair channels composed of category components, which again means this comment can be ignored if a dedicated SPoE section is created.