

ISO 11801 Class E_A Standard

The draft requirements for ISO (The International Organization for Standardization) Class E_A are more demanding compared to TIA/EIA Augmented Cat 6 draft requirements. Anixter's lab tests to the more stringent ISO draft standards.

ISO Compared to TIA		
Characteristics 500MHz (dB)	ISO Class E _A	TIA Augmented Cat 6 Draft
PSNEXT Loss	24.8dB	23.2dB
NEXT Loss	27.9dB	26.1dB
PSANEXT Loss	49.5dB	49.5dB
Return Loss	8.0dB	6.0dB
Insertion Loss	49.3dB	49.3dB
Referred to by IEEE	Yes	No

TIA Category 6 versus Augmented Category 6 versus ISO Class E _A				
	TIA Category 5e UTP	TIA Category 6 UTP	TIA Augmented Category 6 UTP	ISO Class E _A
Recognized by IEEE 802.3an	No	Yes	Yes	Yes
55 Meter Distance Support	No	Yes	Yes	Yes
100 Meter Distance Support	No	No	Yes	Yes
Extrapolated Test Limits for NEXT and PSNEXT to 500MHz	No	No	No	Yes

This table summarizes the various UTP cabling options and their respective 10 Gigabit performance attributes as defined by the latest draft standards. Category 5e is not recognized as a viable cabling media to support 10 Gigabit transmission regardless of its installed cabling distance. Category 6 cabling will only support 10 Gigabit at a maximum installed distance of 55 meters. Today, the only options for operating 10 Gigabit at 100 meters are the TIA Augmented Category 6 and ISO Class E_A standards. ISO's Class E_A system has superior return loss, NEXT and PSNEXT performance values when compared with the current TIA Augmented Category 6 draft proposals.

The Anixter European Standards Reference Guide

The Anixter European Standards Reference Guide is an invaluable industry tool to help you stay informed of recent developments in standards for structured cabling systems. The guide includes an up-to-date summary of the ANSI/TIA/EIA, ISO, CENELEC and IEEE standards featuring European standards ISO 11801, ISO 18010, EN50173, EN50174, EN50310.

To order a copy, go to www.anixter.com/literature.

IEEE's 802.3af Power over Ethernet (PoE) Standard

The IEEE's 802.3af specification calls for power source equipment (PSE), which operates at 48 volts of direct current. This guarantees 12.95 watts of power over unshielded twisted-pair cable to data terminal equipment (DTE) 100 meters away (the maximum distance supported by Ethernet). That's enough power to support IP phones, WLAN access points and many other DTE devices. Two PSE types are supported including Ethernet switches equipped with a power supply module called end-span devices and a special patch panel called a midspan device, that sits between a legacy switch and powered equipment, injecting power to each connection.