



Procedures provided in this document are not intended to supercede local standards or codes. Reference the Telecommunications Industries Association and Electronic Industries Alliance publication "Commercial Building, Telecommunications Cabling Standard, General Requirements" (document number TIA/EIA-568-B.1-2001) to ensure proper installation of system wiring.

To install a data line cable **6**, connect the input RJ-45 connector **7** to the signal source and then to the upper connector on the module. Connect a data line cable **8** from the lower connector on the module to the equipment to be protected. Note: To accomodate 24 modules, the four-wide center blank panel **9** must be removed.



In applications where the network data transmission rate is high, insertion loss introduced by in-line devices becomes a significant consideration where cable lengths are particularly long. At the 100 Mbp/s data transmission rate, there is a small insertion loss introduced by the PNETR5. Use Table 1 to approximate the insertion loss based on cable length effectively introduced by the PNETR5 by installed cable Category level or type. The ISO/IEC 8802-3 standard specifies a maximum UTP cable length of 100 meters per segment at 10/100 Mbp/s. For Thinnnet, the maximum cable length is 185 meters (607 feet).

EIA/TIA 568 Category or Cable Type	Frequency (MHz)	Attenuation (db/100m)	Equivalent Cable Length (m)
3	10	9.8	1.0 (3.3 ft)
	16	13.1	1.10 (3.5 ft)
4	10	7.2	1.4 (4.5 ft)
	16	8.9	1.6 (5.2 ft)
5	10	6.6	1.5 (4.9 ft)
	16	8.2	1.7 (5.6 ft)
5	100	22	12.5 (41 ft)

Item	Specification
Lines Protected	Pins 1-8 on RJ-45 connector
Mode of Protection	Between send/receive pairs and any signal line to ground
Peak Voltage	± 2,000 Volts, 1.2/50 μs test waveform
Peak Current	100A (max with 10X 1000 μs waveform)
Operating Current	150 mA Maximum
Breakover (turn on) Voltage	Metallic (line-to-line): 60VDC Nominal
Response Time	<1 ns
Regulatory Approval/Classification	UL 497A recognized, FCC

Item	Specification
Lines Protected	Pins 3&4 and 5&6 on RJ-45 connector; accepts RJ-45 & RJ-11 plugs
Mode of Protection	Metallic (Tip - Ring) and longitudinal (Tip + Ring - Ground)
Peak Voltage	± 2,000 Volts, 1.2/50 μs test waveform
Peak Current	150 Amps, 8/ 20 μs test waveform
Breakover (turn on) Voltage	270 V peak nominal between tip and ring
Overload Protection	Solid-state self-resetting fuse
Response Time	<1 ns
Agency Approvals	UL 497A recognized

Item	Specification
Lines Protected	Pins 1-8 on RJ-45 connector
Mode of Protection	Between send/receive pairs and any signal line to ground.
Peak Voltage	± 2,000 Volts, 1.2/ 50 μs test waveform
Peak Current	150 Amps, 8/ 20 μs test waveform
Breakover (turn on) Voltage	60 V peak nominal between send/ receive pairs
Isolation	Compliant with the applicable safety isolation requirements of standards IEEE 802.3 or IEEE 802.5
Response Time	<1ns
Agency Approvals	UL 497B recognized

Item	Specification
Lines Protected	Pins 1-8 on RJ-45 connector
Mode of Protection	Between send/receive pairs and any signal line to ground
Peak Voltage	$\pm 2,000$ Volts, 1.2/50 μ s test waveform
Peak Current	150 Amps, 8/ 20 μ s test waveform
Breakover (turn on) Voltage	19 V nominal between send/receive pairs
Response Time	<1 ns

From time to time, the telephone company may make changes in its facilities, equipment, or operations which could affect the operation of connected equipment. If this occurs, the telephone company is required to provide you with advance notice so you can make the modifications necessary to maintain uninterrupted service. This product is not serviceable by the user.