1. The total allowable cable length used to connect up to 10 NSC devices to each NSC module is 7,350 meters (24,000 feet).
2. Each cable (or wiring) used to connect is required to have a capacity of at least 0.25 kV at 1000 hours.
3. The total cable capacitance, combining all of the cables used to connect, the intrinsically safe devices to each NSC module must not exceed 0.5.
4. Each cable must not exceed a resistance of 0.25 mm² at 40 mm².
5. The L/P ratio of the cable must not exceed 0.05 mm².
6. For each NSC module installed, the maximum number of NSC devices connected to the associated apparatus is 64. A minimum of two TP-120 CONDOR can be connected to a single TP-120 NSC module (USA). Where each connected TP-120 NSC module is the same.
7. A minimum of two TP-120 CONDOR may be connected to the NSC module and a minimum of three TP-120 CONDOR may be connected to the NSC module.
8. Non-hazardous associated apparatus is as shown and must not be supplied from an MCB, timer, relay, or similar component of potential with respect to earth in excess of 250V RMS or 250V DC.
9. Ground the earth conservator to the power distribution panel with a 4 mm² (1/4 in. or larger) conductor. Grounding must comply with NEC 60079-10 clause titled "Electrical and Intrinsically Safe Equipment".
10. The cable or wiring used to connect must be installed in a weatherproof junction box. Each intrinsically safe device must have a weatherproof junction box located in the area where the equipment is exposed to the environment.
11. A fire-and-fume must be performed to determine if the installation location is susceptible to flammable or other safety. If necessary, for protection against flammable and other electrical safety, the installation location must comply with IEC 60079-10 and IEC 60079-26 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
12. It is the responsibility of the installer to determine compliance of the non-hazardous apparatus. Non-hazardous apparatus used with the system must conform to the following requirements:
   - a) Construed of passive components only, for example, switches, junction boxes, and relays.
   - b) Construed without any sources of stored energy such as batteries, capacitors, and inductors.
   - c) Construed without sources of energy that produce more than 150 and 250 mV or sources that contain a level of increasing the voltage.
   - d) Construed with a metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - e) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - f) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - g) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - h) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - i) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - j) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - k) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
   - l) Construed with no terminal enclosures or metallic enclosure, the entire apparatus shall be capable of containing the test voltage to earth in accordance with IEC 60079-10 clause titled "Electrical Strength Requirement" and no terminal must contain more than the 50 μA (5 kA). The terminal enclosure must comply with IEC 60079-10 clause titled "Intrinsically Safe Equipment of Non-Hazardous Areas".
13. Special caution is necessary for the wiring. The design on the wiring diagram is the responsibility of the installer. IEC 60079-15 clause "Intrinsically Safe Equipment of Non-Hazardous Areas" must be taken into account.
14. An electrician is required to connect. The wiring should be installed in an indoor area. Additional TP-120 CONDOR or other associated apparatus, cannot be connected to the same intrinsically safe apparatus.
15. This system describes the intrinsically safe equipment and associated apparatus that together form an intrinsically safe system.
16. TLS-XB CONDOR must be installed in an indoor, non-hazardous area in accordance with the descriptive system document and the installation instructions. Only one TLS-XB CONDOR can be connected to any single intrinsically safe apparatus as described on the document. One of this document, multiple sources of power, additional TLS-XB CONDOR or other associated apparatus, cannot be connected to the same intrinsically safe apparatus.
17. Refer to the device certification for applicable standards and limits.
18. The NSC module must be a suitable process connection in accordance with IEC 60079-26.
19. The NSC module must be a suitable process connection in accordance with IEC 60079-26.
SYSTEM DIAGRAM

**TLS-450**
- 4 slots per box
- Maximum of 3 expansion boxes per TLS-450 system
- Cable (48):
  - VRUS, POWER, GROUND, and RESET
  - Cable length 45 meters or 150 feet maximum for all 3 boxes together

SEE NOTE B EARTH GROUND

**TLS-XB**
- 4 slots per box
- Maximum of 2 expansion boxes per 8601/TLS4 system
- Cable (48):
  - VRUS, POWER, GROUND, and RESET
  - Cable length 45 meters or 150 feet maximum for all 2 boxes together

SEE NOTE B EARTH GROUND