

General Summary of Technology Circuits and Systems (TCS)

**Please refer to the detailed licensing and inspection chart for
Technology Circuits and Systems**

<http://www.dli.mn.gov/sites/default/files/pdf/LicAndInspChart.pdf>

Also refer to Minnesota Statutes 326B.31 to 326B.399 and Rules Chapters 3800 and 3801

<https://www.revisor.mn.gov/statutes/cite/326B>

<https://www.revisor.mn.gov/rules/3800/>

<https://www.revisor.mn.gov/rules/3801/>

Safety

- TCS systems generally produce limited electrical power (i.e. lower voltages and limited amperes)
- TCS systems generally are safe from fire initiation and electric shock hazards (i.e. limited energy)
- TCS systems include, but are not limited to systems for alarm, signaling, fire alarm, computer data, communications, audio signals, video signals, antennas and certain remote control applications
- Certain TCS systems are subject to additional safeguards to ensure mitigation of hazards related to fire initiation and electric shock – class 2, class 3, and class 4 systems.

Licensing and Registration

- The installation of TCS systems is required to be performed by licensed Technology System Contractors (TSC) (or licensed Electrical Contractors, who are authorized to install all types of electrical work)
- TSC contractors employ licensed power-limited technicians (PLT) and registered (unlicensed) technicians (RT)
- Technicians are only required to hold the PLT license for a limited number of categories of TCS work
- A PLT license is required for certain remote control circuits and where technicians are exposed to non-TCS circuits in enclosures and cabinets (e.g. higher voltage circuits in motor control equipment)
- A PLT license is also required where TCS systems are installed in hazardous locations (e.g. spray painting, fuel dispensing, aircraft hangers, refineries, grain processing and similar locations)
- The vast majority of TCS systems are not required to be installed by individuals holding the PLT license
- Most common TCS systems are typically installed by registered (unlicensed) technicians (RT)
- All unlicensed electrical workers are required to be registered with the department

Supervision

- For TCS systems that require a PLT license, RTs are required to be provided with direct supervision by a PLT
- Direct supervision means the PLT is physically present and supervising the RT the entire working day
- The vast majority of TCS work does not require a PLT license, thus no direct supervision of the RT is required (only general supervision is required, which does not require on-the-job supervision)

Inspections

- Inspections are required for class 4 systems, fire-alarm systems, remote control systems, where TCS systems comingle with non-TCS systems in enclosures and cabinets, critical care areas in medical facilities, and security systems in detention facilities (most TCS systems are not required to be inspected)

Inspection Fees

- The fee for TCS circuits of less than 50-volts is 75-cents for each system device or apparatus
- The fee for class 4 systems is 50-cents for each device, transmitter, and receiver

Occupancy Types

- Residential Dwellings: Common TCS systems can be installed by an RT and do not require an inspection
- Other Than Dwellings: Except for fire alarm systems, common TCS systems can be installed by an RT and do not require an inspection
- Detention Facilities: Except for fire alarm and security systems, common TCS systems can be installed by an RT and do not require an inspection
- Medical Critical Care Areas: Most TCS systems only require an RT, however most systems are required to be inspected
- Hazardous Locations: All TCS systems require a PLT license, an RT with direct supervision by a PLT, and inspections (licensing and inspection requirements are a critical priority in hazardous locations)

Additional Information

- The information in this bulletin is essentially equally applicable to both licensed Technology System Contractors who perform technology work for clients and customers in the marketplace, and employers who are registered with the department (i.e. registered employers)
- Registered employers are companies who employ licensed and registered technicians who perform technology work within the limits of facilities that are owned or leased by the registered employer (e.g. hospitals, colleges, school districts, manufacturers and other similar large facilities)
- Continuing Education: 16-hours for PLTs every two years, and only 2-hours for RTs every one year

Disclaimer

- This bulletin is only intended to provide a general overview of Technology Circuits and Systems
- The information contained in this general summary is superseded by the applicable Minnesota Statutes and Administrative Rules
- Please contact the Minnesota Department of Labor & Industry for more information: dli.electricity@state.mn.us