

## ELECTRICAL/ELECTRONICS SPECIALIST

### KIND OF WORK

Skilled, licensed electrical and electronics work.

### NATURE AND PURPOSE

Under general supervision, an employee in this class repairs, maintains and installs a wide variety of electronic and electrical equipment; ensures proper operation of all fire alarms and audio systems; ensures proper operation of the building operations and security systems so that an effective and trouble-free operation may be maintained; works with outside contractors, other state departments, and the Building Construction Division in regard to the central automation system; and maintains inventory of supplies. An employee in this class carries the responsibility of off-duty hour call-back if emergency conditions occur with the automation system or related auxiliary equipment. Performs related work as required.

This classification differs from the Electrician classification in that it is broader in scope. Electricians install, alter, maintain and repair electrical wiring, apparatus, and equipment. Electrical/electronics specialists must have a journey electrician's license in order to install alarm and security devices, but must also have knowledge of computer systems, programmable logic controllers (PLC) and other related electronic equipment.

EXAMPLES OF WORK (A position may not include all the work examples given, nor does the list include all that may be assigned.)

Repairs and services a wide variety of electrical/electronic equipment to maintain environmental control, security and fire protection by performing regularly scheduled testing of smoke detectors, heat detectors, pull stations, annunciators, and central automation tie-in on all fire alarm systems; troubleshooting and solving problems related to equipment failure of fire alarm systems not under warranty; verifying proper operation of all audible alarms, public address systems and central paging ability from the central console; making complete inspection and check-out of all fire alarm systems every six months; making additions to systems as required; and assisting the Division of Building Construction and outside contractors in final check-out of new systems.

Ensures operation of automated data systems to maintain effective system operations by inspecting daily printouts and troubleshooting problems occurring after hours; maintaining an inventory of parts usually required for replacement of defective materials; making all changes, deletions and additions of electrical/electronic equipment connected to the central automation system as requested by state agencies; writing and maintaining an electronic program for all security devices connected to the system so that maximum protection of state buildings and equipment is achieved.

Responds to system failures to restore them by troubleshooting any hardware failure in the Building Automation Systems; troubleshooting hardware failures in the event of a system failure; initiating properly the database and operating system after a system failure in the Building Automation Systems; and performing regular file saves of data files.

KNOWLEDGE, SKILLS AND ABILITIES REQUIRED

Knowledge of:

Electrical tools and equipment, safety standards and procedures sufficient to perform electrical work efficiently and safely.

Electrical, Fire, and Building Codes sufficient to ensure that work and materials comply with codes and to select supplies, materials, and work methods that are suitable and efficient for changing, deleting, and adding electrical/electronic equipment.

Diagnostic and repair procedures sufficient to repair and maintain a variety of electrical and electronic equipment.

Electronic equipment such as smoke detectors, heat detectors, pull stations, annunciators, and central automation of fire alarm systems sufficient to troubleshoot and solve problems related to equipment failure and verify proper operation.

Skill in:

Installing electrical and electronic equipment and wiring sufficient to make additions and deletions safely and within code restrictions.

Selecting proper controls and hardware sufficient to plan and complete electrical/electronic projects and to identify, classify and maintain stock records.

Ability to:

Communicate effectively with various types of people sufficient to work closely with trades employees and outside vendors.

Problem-solve sufficient to diagnose and repair problems quickly and efficiently.

Read and interpret architectural, mechanical, and electrical blueprints sufficient to install and locate electrical and electronic equipment accurately.

LEGAL AND LICENSURE REQUIREMENTS

Registration with the Minnesota State Board of Electricity as a Journey Electrician.

Est.: 9/91  
Rev.:

T.C.:  
Former Title(s):