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## Latest release

Sub-major Group

# 38 Electrotechnology and Telecommunications Trades Workers

## OSCA - Occupation Standard Classification for Australia

Reference period: 2024, Version 1.0

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## 38 Electrotechnology and Telecommunications Trades Workers

Assemble, install, test and repair electrical appliances, networks and circuits, electronic systems and equipment, lifts, refrigeration and air conditioning equipment, electrical distribution networks, and telecommunications equipment.

### OSCA skill level

The occupations in this sub-major group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

Minor Group

## 381 Electrical Trades Workers

Assemble, install, test, commission, maintain and repair electrical systems, circuits, equipment, components and facilities, and install, join, maintain and repair electrical cables, and transmission and distribution systems.

Automotive Electricians are excluded from this minor group. Automotive Electricians are included in Occupation 351231 Automotive Electrician.

## OSCA skill level

The occupations in this minor group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

### Unit Group

## 3811 Electrical Distribution Trades Workers

Install, join, maintain and repair electrical cables, transmission and distribution systems for both overhead and underground lines.

## OSCA skill level

The occupations in this unit group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

### Occupation

## 381131 Electrical Distribution Trades Worker

Installs, joins, maintains and repairs electrical cables, transmission and distribution systems for both overhead and underground lines.

Registration or licensing may be required.

## Specialisations

- Electrical Linesworker (Distribution)
- Electrical Linesworker (Transmission)
- Railway Traction Line Worker
- Technical Cable Jointer

## Skill level: 3

## Main tasks

- Installs and maintains distribution overhead and underground conductors and cables, low voltage overhead services, poles, structures and hardware
- Installs cable joints in underground conduits and trenches

- Performs routine maintenance of overhead and underground power lines, cables and auxiliary equipment
- Identifies and diagnoses faults and solves problems in the distribution and underground networks
- Inspects and tests cables and cable joints to identify faults and determine repair or replacement needs
- Selects and prepares cables, connectors and other material for cable jointing
- Terminates cables by connecting them to electrical equipment and overhead lines
- May operate heavy plant equipment such as elevated work platforms and portable equipment such as hydraulic drills
- May undertake substation installation and maintenance, and specialised testing and revenue meter installation

**Unit Group**

## 3812 Electricians

Design, assemble, install, test, commission, diagnose, maintain and repair electrical networks, systems, circuits, equipment, components, appliances and facilities for industrial, commercial and domestic purposes, and service and repair lifts, escalators and related equipment.

Automotive Electricians are excluded from this unit group. Automotive Electricians are included in Occupation 351231 Automotive Electrician.

### OSCA skill level

The occupations in this unit group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

**Occupation**

## 381231 Electrician (General)

Selects, installs, tests, connects, commissions, repairs, maintains, modifies and diagnoses faults with electrical equipment, wiring and control systems in non-industrial settings. Registration or licensing is required.

Electrical Fitters, Industrial Electricians, hot water solar system installers and electrical trades assistants are excluded from this occupation. Electrical Fitters are included in

Occupation 381232 Electrical Fitter. Industrial Electricians are included in Occupation 381233 Industrial Electrician. Hot water solar system installers are included in Occupation 363131 Plumber (General). Electrical trades assistants are included in Occupation 899933 Electrical or Telecommunications Trades Assistant.

## Alternative titles

- Electrical Contractor
- Electrical Mechanic

## Specialisations

- Commercial Electrician
- Construction Electrician
- Fire Protection Electrician
- Renewable Energy Systems Installer (Solar Installer)

## Skill level: 3

## Main tasks

- Interprets and uses technical drawings, circuit wiring and mechanical diagrams, equipment and cable/connection schedules and manuals to undertake electrical wiring work
- Installs, repairs, maintains and tests electrical and electrotechnology systems and equipment, including wiring, switches, outlets, circuit breakers, transformers and lighting fixtures
- Measures and lays out electrical installation sequences
- Selects, cuts and connects wire and cables to circuit breakers, transformers or other electrical components in residential and commercial settings
- Connects electrical systems to power supply
- Tests continuity, resistance and compliance to standards of electrical circuits

Occupation

# 381232 Electrical Fitter

Fabricates, services and repairs electrical equipment, such as motors, transformers and switchboards. May work on rail signalling infrastructure.

Registration or licensing may be required.

## Specialisations

- Armature Winder

- Marine Electrician
- Railway Signal Electrician
- Switchboard Builder

### **Skill level: 3**

#### **Main tasks**

- Carries out electrical fitting and assembling works, including placing, aligning and adjusting for heavy current equipment and machines, or fabricates parts for such equipment
- Installs, modifies or repairs electrical machines and equipment, such as motor starters, motors, controllers, switchgear, switchboards, busbars, transformers, control panels and defence systems
- Interprets and uses electrical specifications, wiring and circuit diagrams, plant schematics, schedules and specifications to undertake electrical wiring work associated with assembling, maintaining, terminating or altering the wiring between electrical components within plant or machinery
- Inspects, tests, commissions, maintains and services electrical systems, machines, equipment and components
- Installs and maintains meters, instruments, relays and protection equipment
- Performs isolations - energy lock out/tag out procedures

#### **Occupation**

## **381233 Industrial Electrician**

Installs, services, maintains and repairs intricate and complex electrical and electronic circuitry in industrial settings, including oil or gas installations, mine sites and processing plants.

Registration or licensing is required.

#### **Specialisations**

- Industrial Maintenance Electrician
- Mining Electrician

### **Skill level: 3**

#### **Main tasks**

- Installs, connects and maintains electrical control systems in industrial facilities
- Diagnoses, fault finds and repairs industrial electrical systems

- Performs service and maintenance on electrical systems and equipment in industrial facilities for compliance with safety standards and regulations
- Interprets and uses technical drawings, circuit wiring and mechanical diagrams, equipment and cable/connection schedules and manuals to undertake electrical wiring work in industrial settings
- Collaborates with engineers and other professionals to plan and execute industrial electrical projects

**Occupation**

## 381234 Lift Mechanic

Designs, installs, maintains, services and repairs electric and hydraulic passenger and freight lifts, escalators, moving walkways, and other lift equipment.

Registration or licensing is required.

### Alternative titles

- Lift Electrician
- Lift Technician

### Skill level: 3

### Main tasks

- Installs and commissions new lift equipment, including cables, counterweights, pumps, motor foundations, and safety and control devices
- Tests and adjusts assemblies, including cables, wiring and electric controls, and adjusts safety devices such as brakes and speed governors
- Diagnoses and repairs faults in lift motors, brakes, switches and electrical and electronic control systems
- Performs routine maintenance and servicing of lifts and escalators
- Replaces worn or faulty parts in lift equipment
- Responds to emergency call-outs to repair lift equipment

**Minor Group**

## 382 Electronics and Telecommunications Trades Workers

Assemble, install, test and repair electronic systems and equipment, telecommunications networks, air conditioning, refrigeration, office and telecommunications equipment, and

transmit and receive radio messages.

### OSCA skill level

The occupations in this minor group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

#### Unit Group

## 3821 Air Conditioning and Refrigeration Technicians

Assemble, install, maintain and repair industrial, commercial and domestic air conditioning and refrigeration systems and equipment that can contain refrigerant gases and liquids. Mechanical Services Plumbers are excluded from this unit group. Mechanical Services Plumbers are included in Occupation 363933 Mechanical Services Plumber.

### OSCA skill level

The occupations in this unit group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

#### Occupation

## 382131 Air Conditioning and Refrigeration Technician

Assembles, installs, maintains and repairs industrial, commercial and domestic air conditioning and refrigeration systems and equipment that can contain refrigerant gases and liquids.

Registration or licensing is required.

Mechanical Services Plumbers are excluded from this occupation. Mechanical Services Plumbers are included in Occupation 363933 Mechanical Services Plumber.

### Alternative title

- Air Conditioning and Refrigeration Mechanic

## Skill level: 3

### Main tasks

- Installs air conditioning and refrigeration systems and equipment in industrial, commercial and domestic settings
- Assembles components and parts to construct air conditioning and refrigeration systems
- Repairs and maintains air conditioning and refrigeration components such as compressors, motors, condensers, evaporators and pumps
- Repairs and maintains air conditioning and refrigeration lines used for refrigerant, liquids and gases in the air conditioning, heating or cooling process
- Tests operational air conditioning and refrigeration systems to prevent breakdowns and ensure optimal performance
- Fills systems with gas or fluid to check for leaks, and removes gas and fluids with vacuum pumps
- Recovers and fills refrigerant in air conditioning and refrigeration systems

#### Unit Group

## 3822 Electronics Trades Workers

Maintain, adjust and repair electronic equipment such as office equipment, video and audio equipment, and electronic instruments and control systems, and transmit and receive radio messages.

### OSCA skill level

The occupations in this unit group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

#### Occupation

## 382231 Communications Operator

Transmits and receives radio messages by use of morse code, voice and radio teletype.

### Specialisations

- Communication Information Systems Sailor (Navy)
- Operator Specialist Communications (Army)
- Communications and Information Systems Controller (Air Force)

## Skill level: 3

### Main tasks

- Receives and transmits radio messages using morse code, voice and radio teletype
- Monitors and maintains radio equipment
- Follows established procedures and protocols for radio communication
- Maintains communication with other operators, and provides information and assistance to personnel to relay messages accurately and efficiently
- Maintains confidentiality and security of sensitive information transmitted over the radio, and keeps accurate records of all radio communications

#### Occupation

## 382232 Electronic Equipment Trades Worker

Installs, maintains and repairs electronic equipment and systems, such as audio and visual reproduction equipment, home entertainment systems, computers and electronic security systems.

### Specialisations

- Audiovisual Technician
- Fire Alarm Technician
- Home Theatre Technician
- Security Technician
- Video Technician

## Skill level: 3

### Main tasks

- Installs, calibrates and adjusts electronic equipment and systems to meet required standards
- Tests and troubleshoots electronic equipment and systems to identify and resolve faults
- Repairs and replaces faulty components and parts in electronic equipment and systems
- Maintains and services electronic equipment and systems to ensure optimal performance

#### Occupation

## 382233 Electronic Instrument Technician

Installs, modifies, maintains, calibrates, adjusts and repairs electronic instruments and control systems, including those which use a combination of electrical, electronic, mechanical, hydraulic and pneumatic principles.

Registration or licensing may be required.

## Specialisations

- Electronic Technician (Navy)
- Communications Electronic Technician (Air Force)

## Skill level: 3

## Main tasks

- Installs and commissions complex electronic instruments and control systems for monitoring, controlling and automating processes
- Modifies and upgrades existing electronic instruments and control systems
- Performs routine maintenance and inspections, including diagnosing, troubleshooting faults, calibrating and testing
- Repairs and replaces faulty components in electronic instruments and control systems

### Occupation

## 382234 Office Equipment Technician

Installs, maintains and repairs electronic office or business equipment, such as multifunction devices, printers and photocopiers.

## Specialisations

- Photocopier Technician
- Printer Technician

## Skill level: 3

## Main tasks

- Examines and tests electronic office equipment such as multifunction devices, printers and photocopiers, to diagnose and troubleshoot issues
- Installs new equipment and performs routine maintenance to ensure optimal performance
- Repairs electronic office equipment by replacing faulty, worn or defective components and wiring
- Provides technical support, training and assistance to users of electronic office equipment

- Keeps records of maintenance and repair activities for electronic office equipment
- Orders and maintains inventory of spare parts and supplies for electronic office equipment

**Unit Group**

## 3823 Telecommunications Trades Workers

Install, maintain and repair data transmission equipment, aerial lines, conduits, cables, radio antennae and telecommunications equipment and appliances.

**OSCA skill level**

The occupations in this unit group have a skill level corresponding to the qualifications and experience below.

- Skill Level 3: AQF Certificate III including at least two years of on-the-job training, AQF Certificate IV, or at least three years of relevant experience

**Occupation**

### 382331 Cabler (Data and Telecommunications)

Installs internal telecommunications and data cabling, equipment and peripherals for computer networks, telephony, cable television and monitored security and fire alarms. Registration or licensing is required.

**Skill level: 3****Main tasks**

- Installs and connects cables to distribution frames, cabinets and other telecommunications equipment
- Identifies, locates and rectifies faults in data and telecommunications cable installations
- Sets up and configures data communication systems, local area networks and wireless communication networks

**Occupation**

### 382332 Telecommunications Cable Technician

Joins, terminates and repairs copper and fibre optic telecommunications cables installed in underground pipes, trenches and overhead systems.

### Specialisations

- Fibre Optic Cable Hauler
- Fibre Optic Cable Splicer
- Fibre Optics Technician

### Skill level: 3

### Main tasks

- Inspects and tests telecommunications cables to identify faults and determine repair requirements
- Locates and excavates cable faults using appropriate tools and equipment
- Joins and terminates copper and fibre optic cables using appropriate connectors and splicing techniques
- Installs and repairs underground pipes and trenches to accommodate telecommunications cables
- Installs and repairs overhead systems for telecommunications cables
- Tests and measures cable performance using specialised equipment

### Occupation

## 382333 Telecommunications Linesworker

Installs, maintains and repairs external telecommunication equipment such as aerial lines, conduits and underground cables, radio and mobile phone antennae, and limited items of terminal equipment.

### Specialisation

- Operator Bearer Systems (Army)

### Skill level: 3

### Main tasks

- Installs and maintains external telecommunication equipment such as aerial lines, conduits and underground cables
- Repairs and replaces damaged or faulty telecommunication equipment
- Installs and maintains radio and mobile phone antennae
- Tests and troubleshoots telecommunication equipment to identify and resolve issues
- Performs routine maintenance on telecommunication equipment

- Works at heights on a range of telecommunications structures, such as poles, towers and masts

**Occupation**

## 382334 Telecommunications Technician

Installs, maintains and repairs telecommunications equipment and appliances such as telephones, mobile telephones, switchboards and data transmission equipment, in homes, businesses, telephone exchanges and other network sites.

**Alternative title**

- Communications Technician

**Specialisation**

- Technician Telecommunication Systems (Army)

**Skill level: 3****Main tasks**

- Installs telecommunications equipment and appliances in homes, businesses, telephone exchanges and other network sites
- Diagnoses and locates equipment faults, and adjusts, replaces or repairs telecommunications equipment
- Performs routine inspections and preventative maintenance on telecommunications equipment and appliances
- Configures and programs telecommunications equipment and appliances according to specifications
- Provides technical support and assistance to customers and end-users of telecommunications equipment and appliances