

Connectronics Corp.  
Quality Manual  
Revision: A

# *Connectronics Corporation*

## QUALITY MANUAL

## **Company Introduction**

Connectronics Corp. was established in Toledo, Ohio in 1988 as a designer and manufacturer of specialized connectors and interconnection systems. Our cable assemblies are used in applications that require high reliability, high voltage, high current, or for use in extreme environments.

Our cable assemblies are used in applications for the aerospace, avionics (civilian and defense), medical, nuclear, underwater/oil exploration and stage/entertainment industries.

## **Quality Policy:**

**Connectronics Corp.** strives to understand and satisfy customer needs and to continually improve the quality of products, services, and on-time delivery.

## **Scope of Application:**

**Connectronics Corp.**'s Quality Manual is written to meet ISO 9001:2000 quality management system requirements and applies to the plant located in Toledo, Ohio. There are no exclusions to the standard.

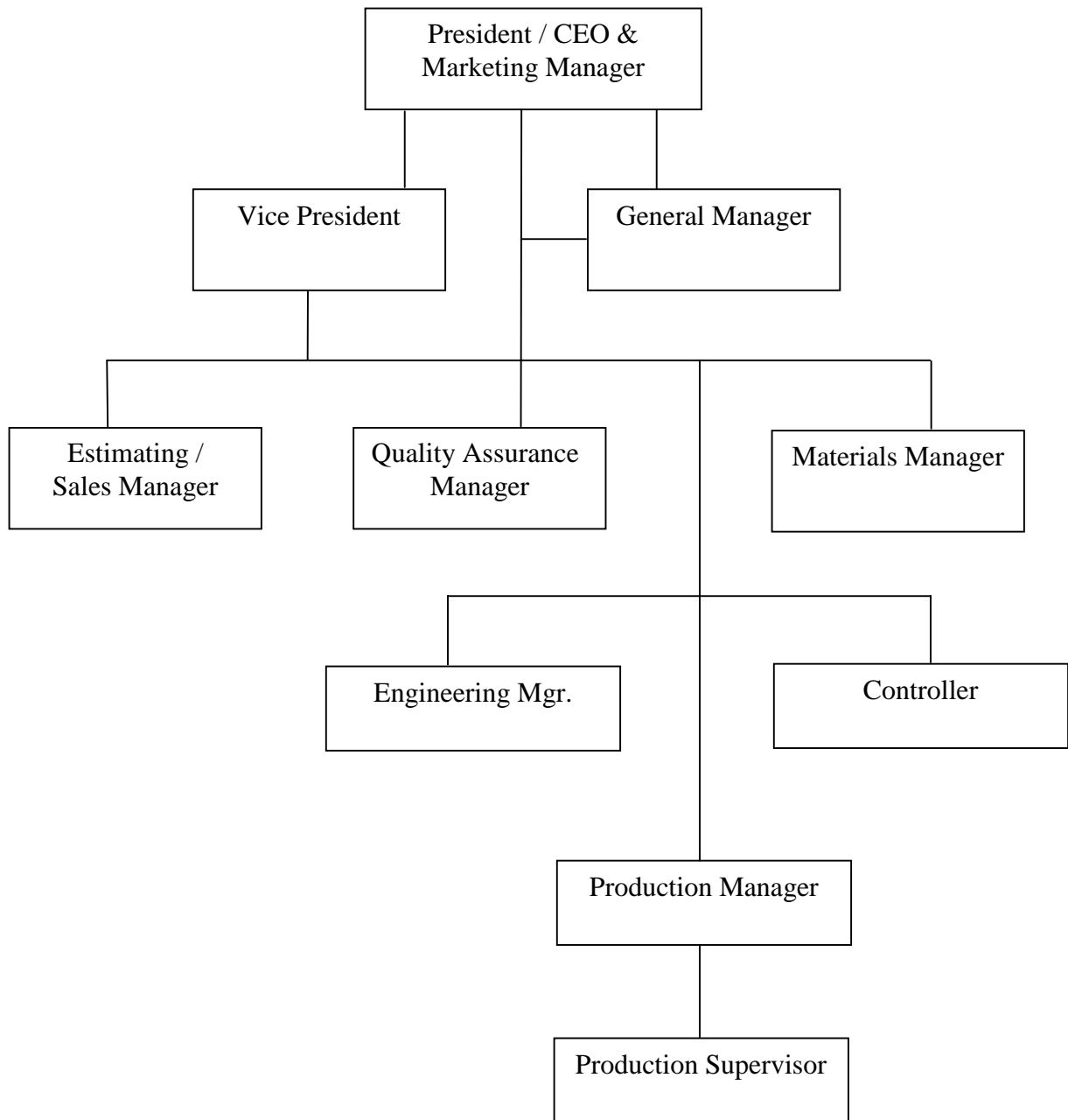
Documented procedures that are referenced in this Quality Manual may include customer requested AS9100:2004 requirements.

## Authorization and Approval

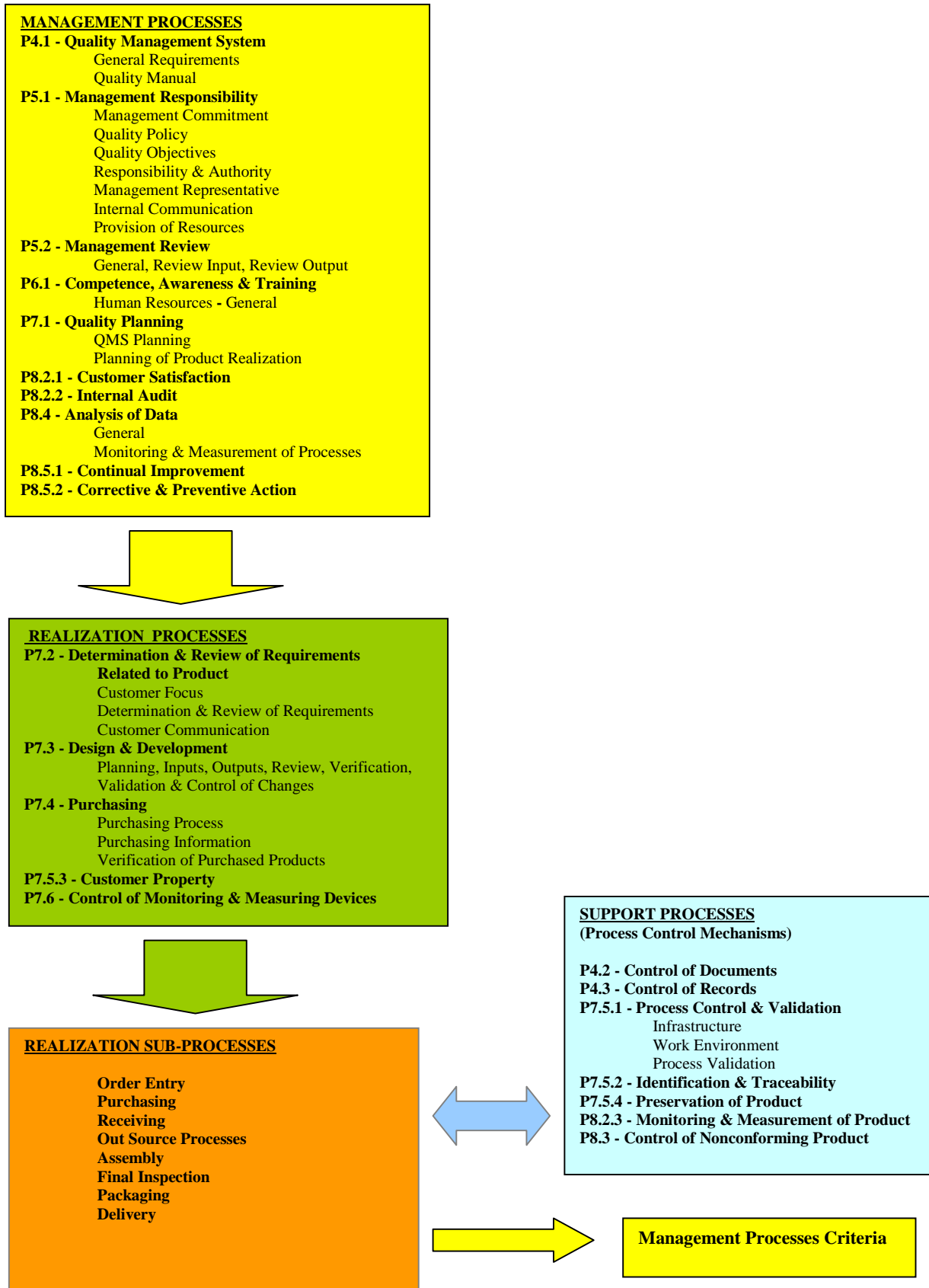
This Quality Manual is authorized and approved as **Connectronics Corp.** policies on this date by:

<u>Name:</u>	<u>Position:</u>	<u>Date</u>
(Signature on file) _____ Signature	President	2-13-06 _____
(Signature on file) _____ Signature	Vice President	2-13-06 _____
(Signature on file) _____ Signature	General Manager	2-13-06 _____
(Signature on file) _____ Signature	Quality Assurance Manager	2-13-06 _____

ORGANIZATIONAL CHART



## QMS - Interaction Between the Processes





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**Title of Policy: Quality Management System**  
**Document: Q4.0**

**I. Reference Documents:**

- P4.1 - Quality Management System
- P4.2 - Control of Documents
- P4.3 - Control of Records
- P7.1 - Quality Planning

**II. Policy:**

**4.1- General requirements**

**Connectronics Corp.** will establish, document, implement and maintain a quality management system and continually improve its effectiveness in accordance with the requirements of this International Standard. **Connectronics Corp.** will:

- a) identify the processes needed for the quality management system and their application throughout **Connectronics Corp.**
- b) determine the sequence and interaction of these processes
- c) determine criteria and methods needed to ensure that both the operation and control of these processes are effective
- d) ensure the availability of resources and information necessary to support the operation and monitoring of these processes
- e) monitor, measure and analyze these processes
- f) implement actions necessary to achieve planned results and continual improvement of these processes

These processes will be managed by **Connectronics Corp.** in accordance with the requirements of this International standard.

Where **Connectronics Corp.** chooses to outsource any process that affects product conformity with requirements, **Connectronics Corp.** will ensure control over such processes. Control of such outsourced processes will be identified within the quality management system.

**4.2 - Documentation Requirements**

**4.2.1 - General**

The quality management system documentation will include:

- a) documented statements of a quality policy and quality objectives
- b) a quality manual
- c) documented procedures required by this International standard
- d) documents needed by **Connectronics Corp.** to ensure the effective planning, operation and control of its processes, and
- e) records required by this International standard.

#### **4.2.2 - Quality Manual**

**Connectronics Corp.** will establish and maintain a quality manual that includes:

- a) the scope of the quality management system, including details of and justification for any exclusions
- b) the documented procedures established for the quality management system, or reference to them, and
- c) a description of the interaction between the processes of the quality management system.

#### **4.2.3 Control of Documents**

Documents required by the quality management system will be controlled. Records are a special type of document and will be controlled according to the requirements given in the control of records.

A documented procedure will be established to define the controls needed:

- a) to approve documents for adequacy prior to issue;
- b) to review and update as necessary and re-approve documents;
- c) to ensure that changes and the current revision status of documents are identified;
- d) to ensure that relevant versions of applicable documents are available at points of use;
- e) to ensure that documents remain legible and readily identifiable;
- f) to ensure that documents of external origin are identified and their distribution controlled;
- g) to prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

#### **4.2.4 - Control of Records**

Records will be established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system.

Records will remain legible, readily identifiable and retrievable.

A documented procedure will be established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records.

**Title of Policy: Management Responsibility**  
**Document: Q5.0**

**I Reference Documents:**

- P4.3 - Control of Records
- P5.1 - Management Responsibility
- P5.2 - Management Review
- P7.1 - Quality Planning
- P8.2.1 - Customer Satisfaction

**II. Policy:**

**5.1 - Management Commitment**

**Connectronics Corp.** will provide evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness by

- a) communicating to **Connectronics Corp.** the importance of meeting customer as well as statutory and regulatory requirements;
- b) establishing the quality policy;
- c) ensuring that quality objectives are established;
- d) conducting management reviews;
- e) ensuring the availability of resources.

**5.2 - Customer Focus**

Top management will ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction.

**5.3 - Quality Policy**

**Connectronics Corp.** top management will ensure that the quality policy

- a) is appropriate to the purpose of the organization;
- b) includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system;
- c) provides a framework for establishing and reviewing quality objectives;
- d) is communicated and understood within the organization, and
- e) is reviewed for continuing suitability.

**5.4 Planning**

**5.4.1 - Quality Objectives**

**Connectronics Corp.** top management will ensure that quality objectives, including those needed to meet requirements for product are established at relevant functions and levels within **Connectronics Corp.** The quality objectives will be measurable and consistent with the quality policy.

#### **5.4.2 - Quality management system planning**

Top management will ensure that

- a) the planning of the quality management system is carried out in order to meet the general requirements as well as the quality objectives, and
- b) the integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

### **5.5 Responsibility, Authority and Communication**

#### **5.5.1 - Responsibility and Authority**

Top management will ensure that responsibilities and authorities are defined and communicated within **Connectronics Corp.**

#### **5.5.2 - Management Representative**

Top management will appoint a member of management who, irrespective of other responsibilities, will have responsibility and authority that includes:

- a) ensuring the processes needed for the quality management system are established, implemented, and maintained,
- b) reporting to top management on the performance of the quality management system and any need for improvement, and
- c) ensuring the promotion of awareness of customer requirements throughout **Connectronics Corp.**

#### **5.5.3 - Internal Communication**

Top management will ensure that appropriate communication processes are established within **Connectronics Corp.** and that communication takes place regarding the effectiveness of the quality management system.

### **5.6 - Management Review**

#### **5.6.1 - General**

Top management will review **Connectronics Corp.** quality management system, at planned intervals, to ensure its continuing suitability, adequacy, and effectiveness. This review will include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.

Records from management reviews will be maintained.

#### **5.6.2 - Review Input**

The input to management reviews will include information on

- a) results of audits
- b) customer feedback
- c) process performance and product conformity
- d) status of preventive and corrective actions
- e) follow-up actions from previous management reviews
- f) changes that could affect the quality management system
- g) recommendations for improvement.

### **5.6.3 - Review Output**

The output from the management review will include any decisions and actions related to

- a) improvement of the effectiveness of the quality management system and its processes,
- b) improvement of product related to customer requirements, and
- c) resource needs.

**Title of Policy: Resource Management**  
**Document: Q6.0**

**I. Reference Documents**

- P4.3 - Control of Records
- P5.1 - Management Responsibility
- P6.1 - Competence, Awareness and Training
- P7.5.1 - Process Control and Validation

**II. Policy:**

**6.1 - Provision of resources**

**Connectronics Corp.** will determine and provide the resources needed

- a) to implement and maintain the quality management system and continually improve its effectiveness, and
- b) to enhance customer satisfaction by meeting customer requirements.

**6.2 - Human Resources**

**6.2.1 - General**

Personnel performing work affecting product quality will be competent on the basis of appropriate education, training, skills and experience.

**6.2.2 - Competence, awareness and training**

**Connectronics Corp.** will:

- a) determine the necessary competence for personnel performing work affecting product quality,
- b) provide training or take other actions to satisfy these needs,
- c) evaluate the effectiveness of the actions taken,
- d) ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives, and
- e) maintain appropriate records of education, training, skills and experience.

**6.3 - Infrastructure**

**Connectronics Corp.** will determine, provide and maintain the infrastructure needed to achieve conformity to product requirements. Infrastructure includes, as applicable:

- a) buildings, workspace and associated utilities,
- b) process equipment (both hardware & software), and
- c) supporting services (such as transport or communication).

**6.4 - Work Environment**

**Connectronics Corp.** will determine and manage the work environment needed to achieve conformity to product requirements.

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**Title of Policy: Product Realization**

**Document: Q7.0**

**I. Reference Documents:**

P4.3 - Control of Records

P7.1 - Quality Planning

P7.2 - Determination and Review of Requirements

P7.3 - Design & Development

P7.4 - Purchasing

P7.5.1 - Process Control and Validation

P7.5.2 - Identification and Traceability

P7.5.3 - Customer Property

P7.5.4 - Preservation of Product

P7.6 - Control of Monitoring and Measuring Devices

**II. Policy:**

**7.1 - Planning of product realization**

**Connectronics Corp.** will plan and develop the processes needed for product realization. Planning of product realization will be consistent with the requirements of the other processes of the quality management system.

In planning product realization, **Connectronics Corp.** will determine the following, as appropriate:

- a) quality objectives and requirements for the product;
- b) the need to establish processes, documents, and provide resources specific to the product;
- c) required verification, validation, monitoring, inspection and test activities specific to the product and the criteria for product acceptance;
- d) records needed to provide evidence that all realization processes and resulting product meet requirements.

The output of this planning will be in a form suitable for **Connectronics Corp.** method of operations.

**7.2 - Customer-related Processes**

**7.2.1 - Determination of requirements related to the product**

**Connectronics Corp.** will determine:

- a) requirements specified by the customer, including the requirements for delivery and post-delivery activities,
- b) requirements not stated by the customer but necessary for specified or intended use, where known,
- c) statutory and regulatory requirements related to the product, and
- d) any additional requirements determined by **Connectronics Corp.**

### **7.2.2 - Review of requirements related to the product**

**Connectronics Corp.** will review the requirements related to the product. This review will be conducted prior to **Connectronics Corp.** commitment to supply product to the customer (e.g. submission of tenders, acceptance of contracts or orders, acceptance of changes to contracts or orders) and will ensure that:

- a) product requirements are defined;
- b) contract or order requirements differing from those previously expressed are resolved, and
- c) **Connectronics Corp.** has the ability to meet the defined requirements.

Records of the results of the review and actions arising from the review will be maintained.

Where the customer provides no documented statement of requirement, the customer requirements will be confirmed by **Connectronics Corp.** before acceptance.

Where product requirements are changed, **Connectronics Corp.** will ensure that relevant documents are amended and that relevant personnel are made aware of the changed requirements.

### **7.2.3 - Customer Communication**

**Connectronics Corp.** will determine and implement effective arrangements for communicating with customers in relation to:

- a) product information;
- b) enquiries, contracts or order handling, including amendments, and
- c) customer feedback, including customer complaints.

## **7.3 - Design and Development**

### **7.3.1 - Design and development planning**

**Connectronics Corp.** will plan and control the design and development of product.

During the design and development planning, **Connectronics Corp.** will determine:

- a) the design and development stages;
- b) the review, verification and validation that are appropriate to each design and development stage, and
- c) the responsibilities and authorities for design and development.

**Connectronics Corp.** will manage the interfaces between different groups involved in design and development to ensure effective communication and clear assignment of responsibility. Planning output will be updated, as appropriate, as the design and development progresses.

### **7.3.2 - Design and development inputs**

Inputs relating to product requirements will be determined and records maintained. These inputs will include:

- a) functional and performance requirements;
- b) applicable statutory and regulatory requirements;
- c) where applicable, information derived from previous similar designs, and
- d) other requirements essential for design and development.

These inputs will be reviewed for adequacy. Requirements will be complete, unambiguous and not in conflict with each other.

### **7.3.3 - Design and development outputs**

The outputs of design and development will be provided in a form that enables verification against the design and development input and will be approved prior to release.

Design and development outputs will:

- a) meet the input requirements for design and development;
- b) provide appropriate information for purchasing, production, and for service provision;
- c) contain or reference product acceptance criteria, and
- d) specify the characteristics of the product that are essential for its safe and proper use.

### **7.3.4 - Design and development review**

At suitable stages, systematic reviews of design and development will be performed in accordance with planned arrangements to:

- a) evaluate the ability of the results of design and development to meet requirements, and
- b) to identify any problems and propose necessary actions.

Participants in such reviews will include representatives of functions concerned with the design and development stage(s) being reviewed. Records of the results of the reviews and any necessary actions will be maintained.

### **7.3.5 - Design and development verification**

Verification will be performed in accordance with planned arrangements to ensure that the design and development outputs have met the design and development input requirements. Records of the results of the verification and any necessary actions will be maintained.

### **7.3.6 - Design and development validation**

Design and development validation will be performed in accordance with planned arrangements to ensure that the resulting product is capable of meeting the requirements for the specified application or intended use, where known. Wherever practicable, validation will be completed prior to the delivery or implementation of the product. Records of the results of validation and any necessary actions will be maintained.

### **7.3.7 - Control of design and development changes**

Design and development changes will be identified and records maintained.

The changes will be reviewed, verified and validated, as appropriate, and approved before implementation. The review of design and development changes will include evaluation of the effect of the changes on constituent parts and product already delivered. Records of the results of the review of changes and any necessary actions will be maintained.

## **7.4 - Purchasing**

### **7.4.1 - Purchasing Process**

**Connectronics Corp.** will ensure that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product will be dependent upon the effect of the purchased product on subsequent product realization or the final product.

**Connectronics Corp.** will:

- a) evaluate and select suppliers based on their ability to supply product in accordance with our requirements.
- b) criteria for selection, evaluation, and re-evaluation will be established.
- c) records of the results of evaluations and any necessary actions arising from the evaluation will be maintained.

### **7.4.2 - Purchasing Information**

Purchasing information will describe the product to be purchased, including where appropriate:

- a) requirements for approval of product, procedures, processes and equipment,
- b) requirements for qualification of personnel, and
- c) quality management system requirements.

**Connectronics Corp.** will ensure the adequacy of specified purchase requirements prior to their communication to the supplier.

### **7.4.3 - Verification of purchased product**

**Connectronics Corp.** will establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.

Where **Connectronics Corp.** or its customer intends to perform verification at the supplier's premises, we will state the intended verification arrangements and method of product release in the purchasing information.

## **7.5 - Production and Service Provision**

### **7.5.1- Control of Production and Service Provision**

**Connectronics Corp.** will plan and carry out production and service provision under controlled conditions. Controlled conditions will include, as applicable the:

- a) availability of information that describes the characteristics of the product,
- b) availability of work instructions, as necessary,
- c) use of suitable equipment,
- d) availability and use of monitoring and measuring devices,
- e) implementation of monitoring and measurement, and
- f) implementation of release, delivery, and post-delivery activities.

### **7.5.2 -Validation of processes for production and service provisions**

**Connectronics Corp.** will validate any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement. This includes any processes where deficiencies become apparent only after the product is in use or the service has been delivered.

Validation will demonstrate the ability of these processes to achieve planned results.

**Connectronics Corp.** will establish arrangements for these processes including, as applicable:

- a) defined criteria for review and approval of processes,
- b) approval of equipment and qualification of personnel,
- c) use of specific methods and procedures,
- d) requirements for records, and
- e) re-validation.

### **7.5.3 - Identification and Traceability**

Where appropriate, **Connectronics Corp.** will identify the product by suitable means throughout product realization. **Connectronics Corp.** will identify the product status with respect to monitoring and measurement requirements.

Where traceability is a requirement, **Connectronics Corp.** will control and record the unique identification of the product.

### **7.5.4 - Customer Property**

**Connectronics Corp.** will exercise care with customer property while it is under our control or being used by **Connectronics Corp.**

**Connectronics Corp.** will identify, verify, protect and safeguard customer property provided for use or incorporation into the product. If any customer property is lost, damaged or otherwise found to be unsuitable for use, this will be reported to the customer and records maintained.

### **7.5.5 - Preservation of Product**

**Connectronics Corp.** will preserve the conformity of product during internal processing and delivery to the intended destination. This preservation will include identification, handling, packaging, storage, and protection. Preservation will also apply to the constituent parts of a product.

### **7.6 - Control of Monitoring and Measuring Devices**

**Connectronics Corp.** will determine the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements.

**Connectronics Corp.** will establish processes to ensure the monitoring and measurement can be carried out and are carried out in a manner that is consistent with the monitoring and measurement requirements.

Where necessary to ensure valid results, measuring equipment will be:

- a) calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification will be recorded;
- b) adjusted or re-adjusted as necessary;
- c) identified to enable the calibration status to be determined;
- d) safeguarded from adjustments that would invalidate the measurement results;
- e) protected from damage and deterioration during handling, maintenance, and storage.

In addition, **Connectronics Corp.** will assess and record the validity of the previous measuring results when the equipment is found not to conform to requirements.

**Connectronics Corp.** will take appropriate action on the equipment and any product affected. Records of the results of calibration and verification will be maintained.

When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application will be confirmed. This will be undertaken prior to initial use and reconfirmed as necessary.

**Title of Policy: Measurement, Analysis and Improvement**  
**Document: Q8.0**

**I. Reference Documents:**

- P4.3 - Control of Records
- P8.2.1 - Customer Satisfaction
- P8.2.2 - Internal Audit
- P8.2.3 - Monitoring and Measurement of Product
- P8.3 - Control of Nonconforming Product
- P8.4 - Analysis of Data
- P8.5.1 - Continual Improvement
- P8.5.2 - Corrective and Preventive Action

**II. Policy:**

**8.1 - General**

**Connectronics Corp.** will plan and implement the monitoring, measurement, analysis and improvement processes needed to:

- a) demonstrate conformity of the product,
- b) ensure conformity of the quality management system, and
- c) continually improve the effectiveness of the quality management system.

This will include determination of applicable methods, including statistical techniques, and the extent of their use.

**8.2 - Monitoring and Measurement**

**8.2.1 - Customer Satisfaction.**

As one of the measurements of the performance of the quality management system, **Connectronics Corp.** will monitor information relating to customer perception as to whether the **Connectronics Corp.** has met customer requirements. The methods for obtaining and using this information will be determined.

**8.2.2 - Internal Audit**

**Connectronics Corp.** will conduct internal audits at planned intervals to determine whether the quality management system:

- a) conforms to the planned arrangements to the requirements of this International standard and to the quality management system requirements established by **Connectronics Corp.**, and
- b) is effectively implemented and maintained.

The audit program will be planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods will be defined. Selection of auditors and conduct of audits will ensure objectivity and impartiality of the audit process. Auditors will not audit their own work.

The responsibilities and requirements for planning and conducting audits, and for reporting results and maintaining records will be defined in a documented procedure.

The management responsible for the area being audited will ensure that actions are taken without undue delay to eliminate detected nonconformities and their causes.

Follow-up activities will include the verification of the actions taken and the reporting of verification results.

### **8.2.3 - Monitoring and Measurement of Processes**

**Connectronics Corp.** will apply suitable methods for monitoring and, where applicable, measurement of the quality management system processes. These methods will demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action will be taken, as appropriate, to ensure conformity of the product.

### **8.2.4 - Monitoring and Measurement of Product**

**Connectronics Corp.** will monitor and measure the characteristics of the product to verify that product requirements have been met. This will be carried out at appropriate stages of the product realization process in accordance with the planned arrangements.

Evidence of conformity with the acceptance criteria will be maintained. Records will indicate the person(s) authorizing release of product.

Product release and service delivery will not proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and, where applicable, by the customer.

## **8.3 - Control of Nonconforming Product**

**Connectronics Corp.** will ensure that product which does not conform to product requirements is identified and controlled to prevent unintended use or delivery. The controls and related responsibilities and authorities for dealing with nonconforming product will be defined in a documented procedure.

**Connectronics Corp.** will deal with nonconforming product by one or more of the following ways:

- a. by taking action to eliminate the detected nonconformity;
- b. by authorizing its use, release or acceptance under concession by a relevant authority and, where applicable, by the customer;
- c. by taking action to preclude its original intended use or application;

Records of the nature of non-conformities and any subsequent actions taken, including concessions obtained, will be maintained. When nonconforming product is corrected it will be subject to re-verification to demonstrate conformity to the requirements.

When nonconforming product is detected after delivery or use has started, **Connectronics Corp.** will take action appropriate to the effects, or potential effects, of the nonconformity.

#### **8.4 - Analysis of Data**

**Connectronics Corp.** will determine, collect and analyze appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of the quality management system can be made. This will include data generated as a result of monitoring and measurement and from other relevant sources.

The analysis of data will provide information relating to:

- a) customer satisfaction,
- b) conformity of product requirements,
- c) characteristics and trends of processes and products including opportunities for preventive action, and
- d) suppliers.

#### **8.5 - Improvement**

##### **8.5.1 - Continual Improvement**

**Connectronics Corp.** will continually improve the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

##### **8.5.2 - Corrective action**

**Connectronics Corp.** will take action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective actions will be appropriate to the effects of the nonconformities encountered.

A documented procedure will be established to define requirements for:

- a) reviewing nonconformities (including customer complaints),
- b) determining the causes of nonconformities,
- c) evaluating the need for action to ensure that nonconformities do not recur,
- d) determining and implementing action needed,
- e) records of the results of action taken, and
- f) reviewing corrective action taken.

##### **8.5.3 - Preventive action**

**Connectronics Corp.** will determine action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions will be appropriate to the effects of the potential problems.

A documented procedure will be established to define requirements for:

- a) determining potential nonconformities and their causes,
- b) evaluating the need for action to prevent occurrence of nonconformities,
- c) determining and implementing action needed,
- d) records of results of action taken, and
- e) reviewing preventive action taken.