



**SUPPLIER**  
QUALITY MANUAL



# TT Electronics

## Supplier Quality Manual

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## Change History

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B	Sharon Schreiner	6-Mar-2019	DCO Update 16949 reference, requirements for product safety and record retention
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## 1. Purpose

As a supplier to Precision Incorporated you are key contributors to end product conformity, safety and ultimately the success of Precision Incorporated and its customers. The purpose of this manual is to provide guidelines and expectations for Suppliers of Precision Incorporated regarding product and/or service quality, delivery, methods of communication, change control, ethical behavior and expectations to resolve quality/service issues.

As part of Precision's Supplier Selection & Control Procedures, we have assigned group codes to our suppliers based on the items or services being supplied. The group code assigned to your company can be found in the "Instructions to Supplier" section of the Precision Inc. Purchase Order.

Group	Item or Service provided
A	Completed, custom build to print transformers, inductors, chokes or other assemblies
B	Partial, custom build to print transformers, inductors, chokes or other assemblies
C	Custom, build to print raw materials supported by Precision or Precision customer print
CA	Custom, build to print raw materials supported by Precision or Precision customer print to be used in Aerospace applications
CD	Custom, build to print raw materials supported by Precision or Precision customer prints, where Precisions customer is defining the supply chain.
CM	Custom, build to print raw materials supported by Precision or Precision

	customer print to be used in Medical applications
D	Distributors - stocks components by various manufacturers and/or provides value added services
E	Catalog – finished product, raw materials or supplies offered via a catalog or webpage
F	Calibration & Test Labs
G	PO Services
J	Small Job Shop

## 2. Definitions/Abbreviations

CAPA – Corrective and Preventive Action.

Can – indicates a possibility or a capacity

Certificate of Compliance – a document signed by authorized company representative attesting that products have been manufactured in accordance to the specification, including any reference documents and associated Quality System requirements

Counterfeit material – any component, part and/or material that is made in imitation of the original device, forged, or copied or contains in whole or in part any component, part or material that is made in imitation of the original device, forged, or copied.

Group Code – A code assigned by Precision to the supplier based on the items/services offered by a supplier.

Lot Traceability – System for identifying and tracking a batch of raw materials through all steps in the manufacturing process and identifying the final product.

May – indicates a permission

NCMR – Non-Conforming Material Report

Non-Conforming Material – any product that does not meet Precision Incorporated, end customer prints, supplier requirements, reference specifications or PO requirements.

OTD – On-Time Delivery.

Quality Records – Quality system information such as inspection data, laboratory test data, and gauge/test equipment calibration records that are documented to verify the operation of the quality system.

Shall – indicates a requirement

Should – indicates a recommendation

Supplier – a company providing products or services to Precision Incorporated.

### **3.0 Order of Precedence**

When noted on the Precision PO, Precision's end customer flow down requirements or the requirements stated on the PO will take precedence over the requirements of the Supplier Quality Manual.

## **4. Supplier Requirements**

### **4.1 Compliance with Laws / Business Ethics**

Applies to all supplier group codes

Suppliers shall comply with all applicable laws and regulations for the locations where the products and or services are built, distributed and/or provided.

Supplier should also have policies in place to address business ethics/code of conduct addressing items such as anti-corruption & bribery, anti-discrimination, child & forced labor, human rights and human trafficking and health & environmental safety.

### **4.2 Quality Systems:**

Groups A & B - Supplier shall maintain a quality system certified to the current revision of an international standard such as ISO9001, ISO13485, AS9100 or TS16949.

Groups C, CA, CD, CM, D & E – It is preferred that supplier maintains a quality system certified to an international standard such as ISO9001, ISO13485, AS9100 or IATF16949. Supplier should provide current Quality Systems Certification when available.

Non-certified suppliers will be evaluated through the use of a supplier survey. Need for updated surveys will be evaluated based on business levels with supplier. Corrective actions may be required for suppliers not meeting minimum requirements.

Group F – Calibrations labs shall maintain a quality system certified to ISO17025

### **4.3 On-Time Delivery**

Applies to all supplier Group Codes. Specific Precision report card information by group code defined below.

Supplier shall have goals which target 100% OTD to its suppliers.

Precision will supply OTD report cards to suppliers based on assigned group codes and/or activity with a supplier within the calendar year.

Group A and B - Suppliers will receive report cards on a quarterly basis.

Group C, CA, CD, CM, D & E suppliers will receive report cards annually based on minimum PO receipts during the calendar year.

### **4.4 Supplier Quality**

Applies to all Group Codes. Specific Precision report card information by group code defined below.

Supplier shall have goals that target shipment of zero defects.

Precision will supply Quality Rejects report cards to suppliers based on assigned group codes, level of rejects identified and/or based on activity with a supplier within the calendar year.

Group A and B – Suppliers not meeting Precision defined metrics will receive report cards quarterly.

Group C, CA, CD, CM, D & E – Suppliers not meeting Precision defined metrics will receive report cards annually based on minimum PO receipts during the calendar year.

## 4.5 Change control/notification

Group A, B, C, CA, CD, CM - Supplier shall notify Precision Incorporated purchasing, prior to implementation, of any planned changes that affect the ability of purchased product to meet the Precision purchase order requirements, including but not limited to:

- A. Design or manufacturing changes
- B. Composition/material used or performance of the item being purchased
- C. Change in inspection requirements or methods
- D. Facility changes, including movement of equipment not normally intended for regular movement.
- E. Change in the supply chain
- F. Product obsolescence

Groups D and E – Supplier shall notify Precision Incorporated purchasing, prior to implementation, of any planned design or manufacturing changes affecting fit, form or function.

## 4.6 Non-Conforming Material

Applies to all group codes.

Suppliers shall have procedures for the control, identification, segregation, disposition and recall of non-conforming material. In the event of an escape, supplier shall promptly notify Precision Incorporated purchasing as part of their containment actions. Acceptance of any non-conforming material must be obtained in writing from Precision Incorporated.

## 4.7 Corrective Action

Applies to all group codes.

In the event of a product non-conformance, Precision may issue/request corrective actions to address the escape. Supplier may respond using the Precision issued CAPA form or use their own form, however supplier's forms must include sections to address:

- 1) Containment actions
- 2) Root cause
- 3) Action plan to correct the non-conformance
- 4) Completed actions correcting the non-conformance



Additionally, corrective actions may be issued based on overall supplier as it relates to Product Quality, OTD issues, audit findings or other Quality System deficiencies.

## **4.8 Training & Competency**

Applies to all group codes

Suppliers should have training and competency programs to assure personnel within the company receive adequate training based on their defined roles and responsibilities and the products and/or services being provided to Precision Incorporated. Training should include employee understanding of their impact to product conformity and safety.

Any additional/specific training and competency requirements will be flowed down through specific PO and or print requirements to allow supplier to review prior to Purchase Order confirmation.

## **4.9 Product Identification & Traceability**

Group A, B, C, CA, CD, CM

Preferred for all other group codes

Supplier shall ensure that products can be identified during all stages of handling and can be identified/traced by a lot or batch. Requirements for serialization will be flowed down through specific PO and or print requirements to allow supplier to review prior to Purchase Order confirmation.

Multiple lot or batches should be segregated and clearly identified

## **4.10 Counterfeit Components**

Applies to all group codes.

Supplier shall warrant that all products are free from any counterfeit material. Any product containing counterfeit material shall be deemed as non-conforming.

In the event that Supplier suspects an escape of counterfeit components, Supplier shall promptly notify Precision Incorporated purchasing and immediately act to diagnose, contain and correct the issues leading to counterfeit materials being introduced into the supply chain.

## 4.11 Validation/Verification Activities

Applies to groups A, B, C, CA, CD, CM

When required, Precision Incorporated will flow down any required validation and or verification activities including the request to provide samples, first article information or other data for design approval, inspection, verification or investigation and auditing.

Supplier should advise Precision wither prior to, or as part of purchase order confirmation if there is any additional costs for the information being requested.

Precision Incorporated will provide feedback to the supplier via a formalized sample evaluation or other qualification documents.

## 4.12 Purchase Orders

Applies to all group codes

Supplier shall confirm purchase orders within 48 hours.

Supplier's confirmation of the Precision Incorporated purchase order constitutes an agreement to meet delivery and product requirements including reference to applicable drawing and specification revisions referenced on the Precision purchase order. Any exceptions to the submitted PO shall be clearly stated within Suppliers confirmation.

## 4.13 Packing Lists and Invoices

Applies to all group codes

Precision Incorporated part number and purchase order number shall appear on all packing lists and invoices.

Items which are being dropped shipped must include PI Customer PO number on all packing lists and invoices. This information is provided in the comments section of the Precision Purchase Order.

## 4.14 Certificate of Compliance

Applies to all group codes

All shipments shall include Certificate of Compliance for each part number provided. If multiple lots are supplied within the shipment, Certificate of Compliance must be supplied for each lot submitted.

Unless otherwise requested, Cert of Compliance should include statement of RoHS compliance.

## 4.15 Sub-tier suppliers

Applies to Group CA, CD, CM

If required, supplier must use external suppliers as defined by Precision Incorporated and or Precision Incorporated customers (including special process providers).

Applies to all group codes

Suppliers must apply appropriate controls to their direct and indirect sub-tier suppliers to ensure requirements of Precision Purchase Order, Prints, Drawings and other documents applicable to the request are met.

## 4.16 Record retention

Applies to all group codes A, B, C, CA, CD, CM

Before destroying any quality records related to any products supplied to Precision Incorporated, Supplier shall provide written notice to Precision Incorporated and provide Precision Incorporated the option to have all such records transferred to Precision Incorporated.

All other group codes

Suppliers should maintain quality records for a minimum period of 5 years from production date or based on Precision customer flow down or those defined on the Precision Purchase Order.

#### **4.17 Conflict Minerals**

Applies to all group codes

All materials supplied to Precision Incorporated shall be DRC conflict free. Supplier shall comply with all reporting requirements regarding conflict mineral tracking, reporting, disclosure and other due diligence and related matters.

#### **4.18 Audits**

Applies to all group codes

Supplier shall permit, upon Precision Incorporated request, reasonable access to Precision Incorporated, its customers and regulatory authorities to inspect, review and audit Supplier sites, Quality Systems, finish products (intended for Precision Incorporated) and applicable processes and records related to the work performed for Precision Incorporated. Precision Incorporated shall provide prior notice to the Supplier and obtain agreement as to the date(s), duration and scope of the audit.

#### **4.19 Confidential/Proprietary/Intellectual Property**

Applies to all group codes.

Suppliers shall properly handle sensitive information, including confidential, proprietary, and personal information. Information should not be used for any purpose other than the business purpose for which it was provided. Suppliers shall also respect and comply with all the laws governing intellectual property rights, including intellectual property designated as a trade secret, as confidential, or that is subject to patents, copyrights, or trademarks restrictions.