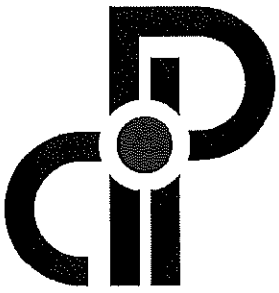

Power Innovation
Stromversorgungstechnik GmbH

QUALITY MANUAL

Version 4.1/December 2022. Printed copies are not subject to revision service.

About Power Innovation

Innovative developments in the fields of UPS technology and power electronics provided the basis for the foundation of the company Power Innovation Stromversorgungstechnik GmbH in Bremen in 1987. Already in 1988, the first integrated online UPS units were produced in series in our company.

At present, the company has approximately 100 employees at its office in Achim.

Using state of the art technology, we plan, develop, produce and distribute innovative power supplies. Our standard products as well as our customer-specific developments are used in the fields of telecommunication, railway, industry and EDP systems.

As an established supplier, we also place our products in the sectors of safety technology, power plants and e-mobility.

Quality management, including this manual, depends on proposals and remarks for continuous improvement, but also on suggestions concerning mistakes and ambiguities. Information referring to this is expressively requested.

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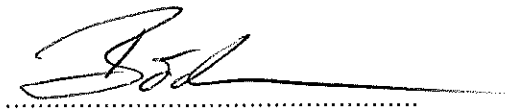
Management commitment

This quality manual formulates the general principles of the system based on DIN EN ISO 9001. It is mandatory for the management as well as for all employees and processes of the company.

The executive management undertakes to provide all necessary resources for the implementation of the quality management system. Simultaneously, all employees are committed to carry out their functions in accordance with the defined processes, process instructions and further applicable documents. Motivation and training of the employees shall ensure that the quality policy is understood and lived on all levels of the company.



Bernhard Böden
(Director)

Contents

1 Structure and amendment of the quality manual

1.1 Structure of the quality manual

The quality manual (QMH) describes the implemented quality management system and defines the quality-relevant processes.

It describes the implementation of the ISO EN 9001 norm by the quality management system and the relevant processes. These processes are divided into managing processes, core processes and supporting processes and explained subsequently. In the appendix, there is a list of the corresponding process instructions concretizing these processes.

1.2 Amendment and distribution of the quality manual

The original document approved by the executive management is archived by the quality management representative (QMR), who is also responsible for writing and updating the quality manual.

The quality manual's latest revision is accessible as a pdf-file in the intranet for all employees and it is regularly updated.

Print versions and copies of the quality manual as well as of process descriptions and work and process instructions may only be issued by the QMR or by the executive management. They monitor the validity of the issued versions. In case of updates, the affected departments will be informed.

The revision history is stored electronically in a separate document.

2 Quality management system

2.1 Quality policy

Any company activity focuses on the management's commitment to guarantee process and product quality and continuous improvement.

The main criterion for quality policy and quality assurance is the customer's satisfaction – and the principal means to achieve this aim are excellent process and product quality.

All employees take part in the realization of quality policy which represents a personal responsibility to fulfill this criterion.

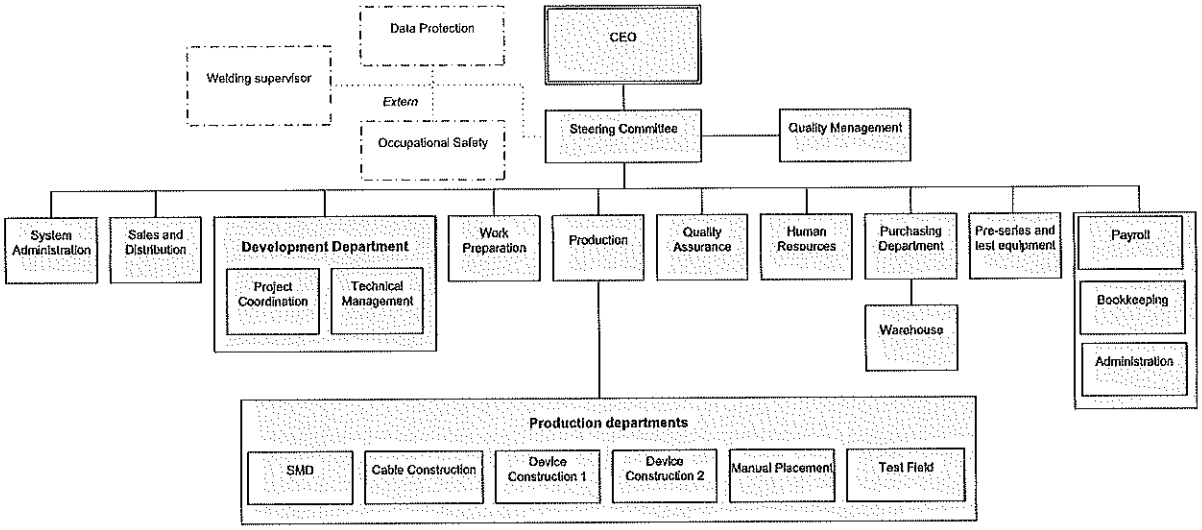
2.2 Quality management representative (QMR)

The management assigns the accomplishment of quality policy to the quality management representative. This includes authoring the process instructions and the organization and execution of employee trainings on the quality system as well as the implementation of preventive and control actions.

The quality management representative gives regular reports to the executive management about the quality management's development.

2.3 Company organization

The chart below shows the company's organizational structure. It is laid out as a flat hierarchy, which enables the employees to communicate directly with the management and to take part in the continuous improvement of the work processes.

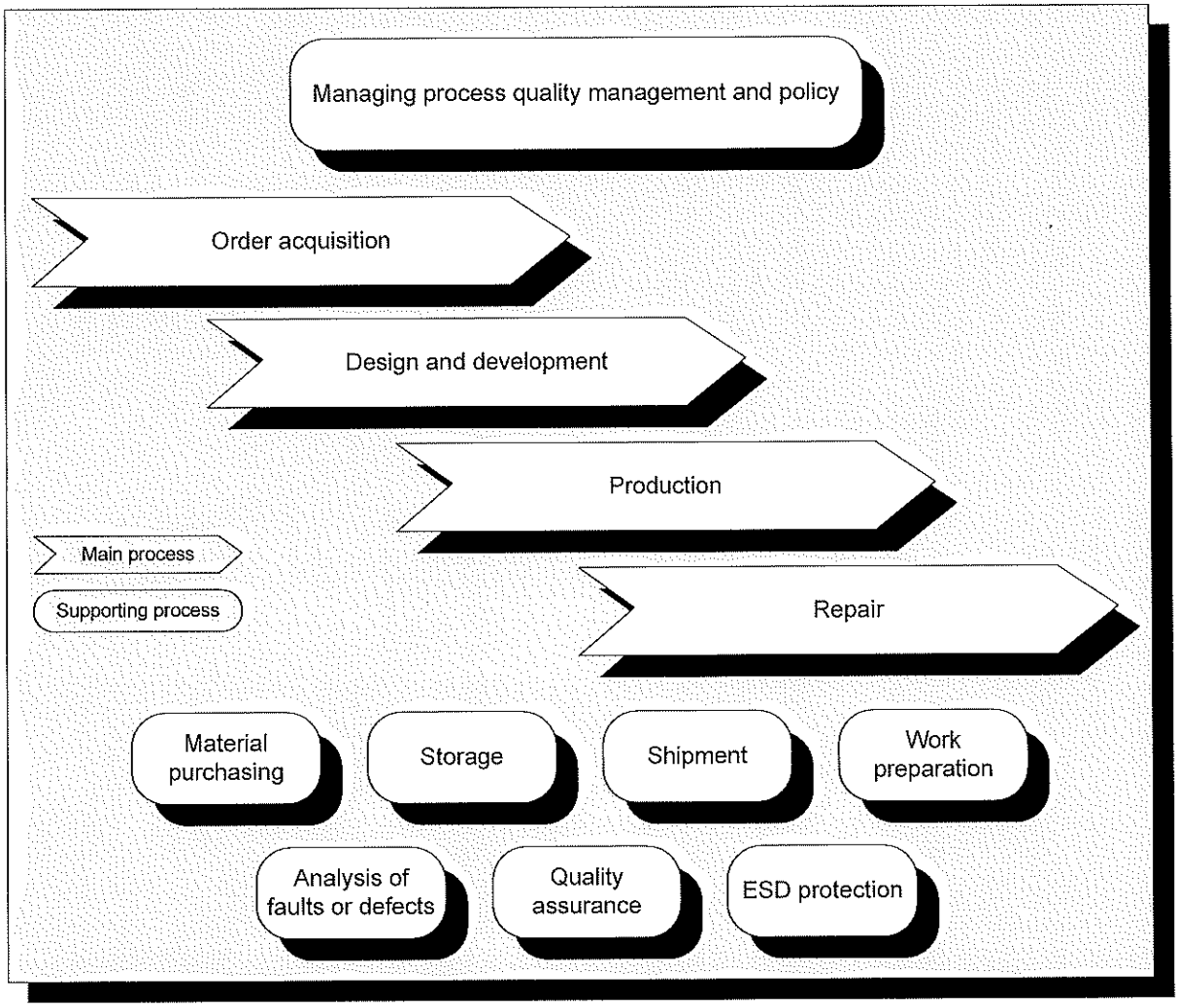


2.4 Core processes of the quality management system

Different from the organizational structure shown above, the company's structure is process-oriented for the quality management system.

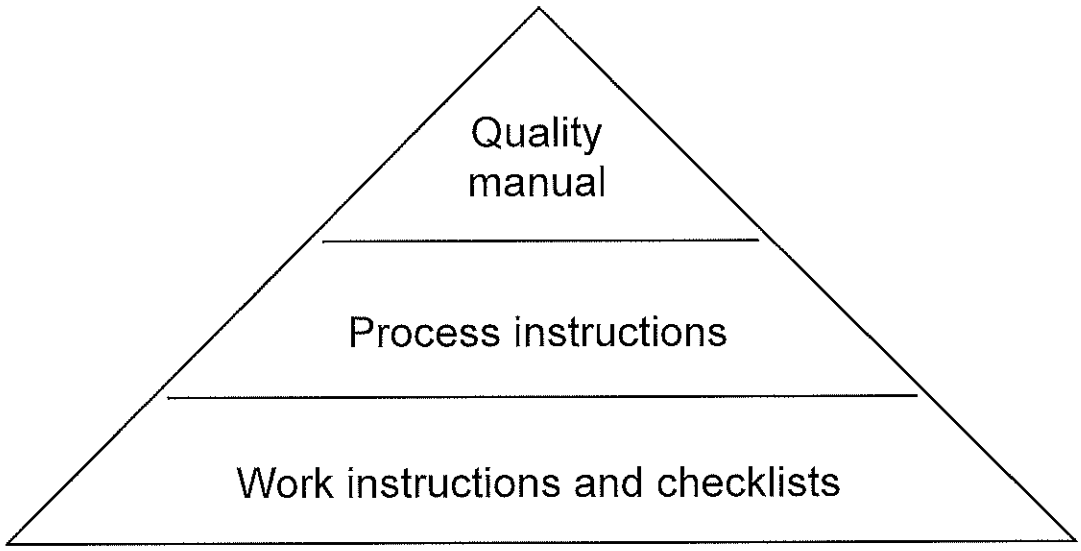
The company's processes are classified into three categories: The managing processes, which control process development and continuous improvement, the core processes, which are directly involved in the services for our customers, and the supporting processes, which have an indirect impact on the company's added value.

The process flow chart below shows the quality-relevant processes of the company. The process objectives and contents are described in the following chapters.



2.5 Quality management system documentation

The documentation of the quality management system is structured as follows:



The quality manual describes general aims and structures of the quality management, they are concretized by the subordinated process instructions. On the third level, special requisitions or work steps are specified by work instructions and check lists as well as possible test instructions, standard forms or other documents.

3 Managing process quality management and policy

The managing process quality management and policy is devided into four sections, which form a PDCA cycle for continuous improvement of the process quality.

- Definition of quality policy and drafting of quality objectives
- Development and documentation of the quality processes
- Quality process control
- Inspection and update of the quality objectives

The main tool for the continuous review of the process and system is the internal audit. The review is based in particular on the analysis of the repair data base, the customer survey and the supplier rating. The management review brings the conclusions together and defines the quality objectives and measurements for the respective upcoming business year.

4 Core processes

Four core processes are directly customer oriented: order acquisition, design and development, production and repair.

4.1 Order acquisition

The order acquisition consists of four sub-processes.

RFQ processing
Incoming requests should be checked by the sales department and answered in written form within a short period of time. Depending on the request, the sales department coordinates the integration of other departments, such as the design and development, the steering committee, the production planning and the material purchasing. The standardized RFQ processing guarantees clearly defined customer specifications.

Commercial offer
The sales department is responsible for commercial offers, based on the RFQ processing. The objective is to create the optimum offer for the customer within the time given.

Order processing
Incoming orders are checked for correctness and completeness of the data in the order processing. After consultation of the production planning, the customer gets a confirmation of the order and of the expected delivery date.

Production planning and control
The production planning creates internal production orders for the production department and determines the delivery dates in consultation with the order processing and the material purchasing. Within this schedule, the production management arranges the production order and the personnel allocation.

4.2 Design and development

By this process internal and external design and development orders are managed. Project coordination and technical management are responsible for the process control. The process starts with the project initialization and ends with the technical release for production of the finished product. The design and development process is divided into hardware development, software development, prototype construction and sample production.

Hardware and software development
The development includes the project initialization, the feasibility study, the basic device construction and the prototype development. If required, the hardware development will initialize a software development.

Prototype Contruction
The goal of prototype construction is a working device fulfilling all demands of the requirement specification which can be built by sample production.

Sample production
The sample production and testing follow subsequent to hard- and software development. A small batch series is produced in the production department. This includes the draw-up of the final manufacturing instructions.

Technical release for production

With completion of sample production and all required device tests, the technical clearance for series production is granted.

4.3 Production

The production process controls the organization and handling of production orders for external customers, internal orders for the development or sales department and orders for sample production. Apart from general requirements concerning production organization, the process defines the sub-processes

- SMD placement
- Cable construction
- Manual placement (THT)
- Component preparation
- Riveting
- Coating and glueing
- Device construction
- Test field

For each work step an extensive traceability and production control is ensured.

4.4 Repair

The processing of conversion and repair orders has three sub-processes:

- the receipt and registration of repair orders in the inventory management department
- the order processing in the sales department
- the repair and electrical and functional testing in the test field

The incoming goods inspection follows the process for incoming materials but requires the generation of a repair order in the production planning system. This order is processed in the sales department and released for repair.

5 Supporting processes

The main processes are supported by seven additional processes.

5.1 Material purchasing

The material purchasing department buys the components and services as needed. Based on the delivery faults documented, the material purchasing department carries out an annual rating of materials and suppliers. The material purchasing department administrates the material database.

5.2 Storage

The process of storage contains the following sub-processes: inspection of incoming material, execution of stock movements including transfer to stock, stock withdrawal of materials and devices, picking material for production orders and return of residual material to stock.

5.3 Shipment

The shipment process is subdivided into the shipment organization by the internal sales service and into packing and commissioning of the deliveries by the storage department. The objective of shipment is a reliable, safe and fast delivery of products, goods for resale and repaired devices to the customers.

5.4 Work preparation

The work preparation administrates the article master in the production planning system and supports the design and development department in the draw-up of technical documentation. Furthermore, the work preparation creates technical documentation for the production process.

5.5 Analysis of faults or defects

This is the central process for the analysis and correction of faults or defects including organizational and cross-process deficiencies. It is managed by the project coordination.

5.6 Quality assurance

Quality assurance controls product quality by independent monitoring of stock-receipt, production process and shipping and intends to provide a long-term improvement in product quality.

5.7 ESD protection

The ESD protection process defines a control program to fulfill the requirements according to DIN EN 61340-5-1.

6 Basic quality management principles

There are some general principles in the quality management system which are defined and implemented within the process and work instructions concerned.

6.1 Management and control of documents

Because of the different requirements of each process the handling and specification of documents and records is defined within corresponding process and work instructions. Especially the identification and distribution of customer documents is explicitly defined there in each individual case.

6.2 Management of test tools and maintenance

For the management of test tools and for maintenance, regular procedures necessary for these purposes and employees responsible for their execution are specified.
A company-wide maintenance plan, listing all the test tools and equipment with its calibration/maintenance cycle, is the main tool for implementation.

6.3 Corrective and preventive actions

The corrective and preventive actions are realized by tools which enable the employees to describe technical as well as organizational defects in order to initiate their correction. Apart from the supplier rating, the analysis of repair data base and the customer survey, which are embedded in the main processes, this includes the process of analysis of faults or defects.

7 Appendix

7.1 List of quality-relevant processes

Since the process instructions are not translated into English, the register refers to the German documentation.

01_Führungsprozess_Qualitätsmanagement_und_politik

02_Kernprozess_Auftragsgewinnung
03_Kernprozess_Entwicklung
04_Kernprozess_Produktion
05_Kernprozess_Reparatur

06_Hilfsprozess_Einkauf
07_Hilfsprozess_Lagerung
08_Hilfsprozess_Versand
09_Hilfsprozess_Arbeitsvorbereitung
10_Hilfsprozess_Mängelbearbeitung_und_Sperrungen
11_Hilfsprozess_Qualitätssicherung
12_Hilfsprozess_ESD_Schutzmaßnahmen

7.2 List of abbreviations

DIN	German Institute for Standardization (**D**eutsches **I**nstitut für **N**ormung)
EDP	electronic data processing
EN	European Norm
ESD	electrostatic discharge
ISO	International Organization for Standardization
QM	quality management
QMB	quality management representative (**Q**ualitäts**m**anagement**b**eauftragter)
QMH	quality manual (**Q**ualitäts**m**anagement**h**andbuch)
PDCA	Plan – Do – Check – Act (phases of Deming Cycle)
RFQ	request for quotation
SMD	surface-mounted devices
THT	through hole technology