

Examination Procedure Rubrik / Title Contact resistance measurement	Beteckning / Document KBE EP-137
	Utgåva / Issue 1 (E)
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	Ersätter / Supersedes KSU-KBE EP-137 (E)

1 Scope

This Examination Procedure is normally applicable as routine inspection to electrical circuits with contacts and connections.

2 Objective

To verify the conductivity of electrical contacts and connections.

3 Method

The resistance is to be measured at the external terminals of the equipment. The resistance of internal circuits and connections will thus be included.

The measurement is to be performed using an instrument or test circuit that limits the test voltage to 100 mV. The current during the test must not exceed 1 A. Measurements is to be made using four-wire connections for voltage and current to the circuit under test (internal voltmeter connection). The measurement method must be able to detect resistances less than 10% of the requirement.

4 Acceptance Criteria

The measured resistance must meet the requirements set out in the Technical Specification or other applicable document. If no requirements are specified, the resistance must not exceed 100 mohm.

5 Documentation

Inspection performed is to be documented in a inspection certificate, record or technical report as required in the Inspection Plan. Several examinations within one and the same Inspection Plan may be reported in the same document.

Examinations carried out as routine (100%) inspection are to be reported to the Purchaser as original documents.

The document must as a minimum include the following:

- Items examined

Product, designation, quantity, serial numbers and reference to the Purchasers order.

- Identity / Traceability

The identity of the objects under examination in comparison with type tested items and in comparison with relevant specifications must be specified, unless the identity is certified in a separate document (as per KBE EP-180).

- Examination procedure

It must be clearly stated if the inspection has been performed according to this Examination Procedure or to any other procedure agreed upon.

- Measurement equipment

Type of equipment, accuracy, identification, etc, and current calibration data for the equipment used where performance is significant to the results.

- Results

It must be evident that the items have fulfilled stated requirements and acceptance criteria. Measured and recorded values that are to be documented as per the procedure as well as any deviations from requirements in applicable specifications or test procedures must be reported.

- Approval

Date of inspection and name of responsible inspector are to be included. The document must be reviewed and approved in accordance with the Manufacturers or the laboratory's internal QA/QC routines.