ELION TECHNOLOGIES & CONSULTING PVT. LTD.

Infrared Testing Sample Report

Illustrative Electrical Thermography Report | Not Actual Client Data

Technical resource | Version 1.0 | November 2026

Web: https://elion.co.in/infrared-testing-services/

Technical notice: This document is a guidance/template resource. It is not a certificate of inspection, test result or statement of conformity.

1. Executive summary

This illustrative sample demonstrates how an infrared thermography testing report may communicate inspected assets, thermal observations, risk-based recommendations and corrective actions. All numerical findings below are hypothetical demonstration data, not measurements collected at a customer site.

2. Inspection identification

Field	Sample entry
Client / site	DEMONSTRATION SITE - not a real client
Report no.	SAMPLE-IR-001
Inspection date	Illustrative only - no inspection performed
Scope	Illustrative LT panels, MCC and cable terminations
Document status	SAMPLE REPORT / NOT VALID FOR COMPLIANCE
Operating state	Assumed for teaching illustration; actual work requires load record

3. Scope and limitations

Infrared testing of accessible equipment under representative load conditions is typically a non-contact condition assessment. Inspections may not identify concealed defects, defects without an observable thermal signature, or abnormalities masked by low load, enclosures, reflections or emissivity. A camera cannot see through an opaque electrical enclosure. Access to energised equipment requires a documented electrical safety assessment.

4. Inspection methodology

Review asset list and permits; verify camera status; record ambient conditions and available loading; obtain visible-light and radiometric thermal images where practicable; set emissivity and reflected temperature appropriately; compare similar components; investigate noteworthy differences; assess severity using consequences and loading; document recommendations. Follow-up testing is appropriate when thermal evidence alone is inconclusive.

5. Thermal findings register (illustrative only)

ID / Asset	Spot / baseline	Observation	Action
IR-01 / LT Panel A	82 C / 43 C	Localized apparent hotspot at cable lug; delta 39 C.	Prioritize safe isolation and connection inspection; verify loading; rescan after correction.
IR-02 / MCC-02	58 C / 49 C	Moderate unequal heating of comparable feeder terminals.	Compare phase currents, inspect contact condition and trend thermograms.
IR-03 / Transformer bay	46 C / 44 C	No significant difference evident in this hypothetical external-view example.	Continue routine condition-monitoring program.

6. Worked example: delta-temperature calculation

Illustrative observed temperature: 82 C; illustrative comparable reference: 43 C. Difference = 82 - 43 = 39 C. A temperature difference is not an automatic NFPA or ISO severity classification; evaluate equipment rating, load, measurement uncertainty, component type, ambient conditions and potential consequences.

7. Photographic and thermographic evidence

Required evidence field	Insert when using real site data
Visible photograph	[Insert client-approved photograph identifying equipment and inspection point]
Radiometric thermal image	[Insert original, calibrated camera thermogram with scale and spot markers]
Operating measurements	[Record phase currents, load percentage, ambient and emissivity settings where obtained]
Measurement notes	[Record distance, obstructions, reflections, access method, date and camera settings]

8. Recommended corrective-action summary

Ref	Priority (example)	Recommendation	Verification
IR-01	High (illustrative)	Arrange qualified electrical maintenance review with controlled isolation.	Document repair and post-repair thermogram.
IR-02	Medium (illustrative)	Evaluate load balance and condition of contact points.	Record electrical values and trend.
IR-03	Routine	Continue planned inspections.	Next risk-based inspection.

9. Reporting and acceptance notes

Real client deliverables should identify actual assets and conditions, use original thermal images, and be signed or reviewed according to Elion quality procedures. Findings are engineering observations and do not certify electrical safety. Corrective action must be planned by authorised personnel.

10. References

ISO 18434-1:2008 (Thermography - General procedures); ISO 18436-7 (thermography personnel qualification); applicable electrical safety practices and site maintenance procedures. Verify current applicable standard editions for each project.

11. Sample conclusion

The illustrative findings show how a thermal inspection report helps prioritise maintenance, but no actual installation was inspected for this document. Request an actual infrared testing engagement for site-specific measurements and recommendations.

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