Expert Power Solutions Ltd.
8 Berwick Ave
Brampton, ON
L6Z 2P6

Empire Power Inc.
344 Edgeley Blvd Unit 32
Concord ON
L4K 4B7

Thermography Report
248 Steelcase Rd. E., Markham

Inspection Date: February 10, 2026

Contact Person: Etta

Company:
Arbutus Real Estate
333 Denison St.
Markham, ON
L3R 2Z4

Level II Certified Thermographer: Cathy Piasentin
Valid Certification Number: 16807
Infrared Camera Used FLIR E76

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Thermography Report

How Infrared Thermography Works

Infrared cameras see the radiated heat of the equipment in real time, just as a video camera sees visible light. On white-black thermograms (heat images), white is hot and black is cold, unless otherwise indicated. When the thermograms are color, the colors in the
image match the color bar. Colors that appear near the top of the reference bar indicate high temperatures, colors that appear below the reference bar indicate low temperatures.

Repair Priority Classification

This Infrared Thermography Inspection report provides complete documentation of the thermal patterns detected in your equipment, structures or systems.
We use an objective evaluation to help you prioritize repairs to provide the maximum return for this Inspection and its Maintenance Program based on IR Thermography.
When anomalies are detected each Thermogram is assigned a Repair Priority Classification, which is based on temperature elevation values over a reference temperature, whether of a device operating in similar conditions or manufacturer data.
Overheating can cause premature and costly deterioration, unplanned failures in your equipment.
Connectors, conductors and overheated components will never improve, in fact, the temperature and the deterioration process will increase over time. No one can predict when a fault will occur.
As a result, we recommend that you use the Repair Priority Classification as a guide, but that you investigate and take appropriate corrective action as soon as possible.
For the inspected equipment, we have attached the thermogram and the corresponding visual image to document the conditions found during the inspection

Repair Priority Classification based on Temperature Delta's

Low - Less than 4.1C - Monitor next scan

Alert - 4.1C - 8.0C - Repair when time permits

Severe - 8.1C - 15.0C - Repair as soon as possible

Critical - Grater than 15.0C - Repair Immediately

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It is recommended that all equipment listed undergo preventative maintenance, including cleaning, testing, and exercising of mechanical and electrical components, to maintain performance and long-term reliability

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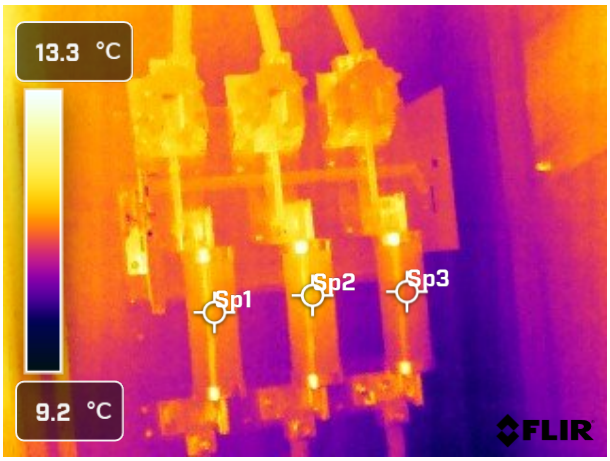

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:23:46 AM
File name	FLIR5383.jpg
Minimum temp.	9.9 °C
Maximum temp.	16.5 °C
Page number	4
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: warehouse - Main Distribution - Main Disconnect	
Equipment	*Federal Pioneer 600V 400A disconnect fused at 400A*
Minimum temp.	9.9 °C
Maximum temp.	16.5 °C
Measurements:	No hot spots detected
Visual Inspection Notes:	Visual examination of the disconnect revealed the presence of orange and white rust on the line and load lugs, as well as associated internal hardware, indicating ongoing or previous moisture ingress within the enclosure. Corrosion of current-carrying components can increase contact resistance, contribute to localized heating, and compromise the long-term reliability and safety of the equipment. Refer to the following images for supporting visual documentation.
Corrective Action:.	Clean and mechanically remove all corrosion from lugs and hardware where possible; replace any components exhibiting significant pitting, deterioration, or loss of material integrity. After corrective work, perform torque verification to manufacturer specifications and re-test contact resistance as required to confirm proper electrical continuity and safe operation.
Created	2026-02-10 10:23:46 AM

Measurements

Sp1	11.5 °C
Sp2	11.6 °C
Sp3	11.2 °C

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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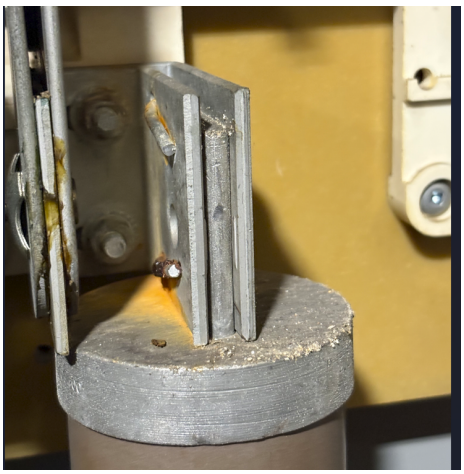
Main 400A disconnect line side



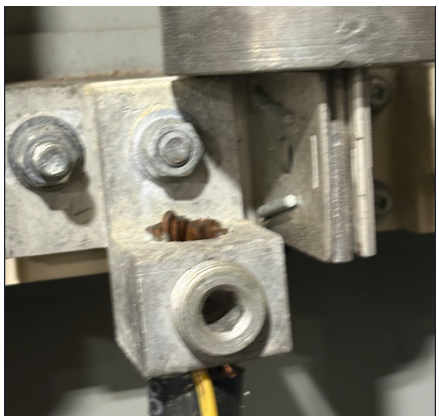
Phase A

Phase B

Phase C

Main 400A disconnect load side

Phase A



Phase B

Phase C

Visual examination of the disconnect revealed the presence of orange and white rust on the line and load lugs, as well as associated internal hardware, indicating ongoing or previous moisture ingress within the enclosure. Corrosion of current-carrying components can increase contact resistance, contribute to localized heating, and compromise the long-term reliability and safety of the equipment. Refer to the following images for supporting visual documentation.

Investigate and eliminate the source of moisture intrusion if any, ensure the enclosure is properly sealed, and verify environmental conditions are suitable for the equipment rating. Clean and mechanically remove all corrosion from lugs and hardware where possible; replace any components exhibiting significant pitting, deterioration, or loss of material integrity. After corrective work, perform torque verification to manufacturer specifications and re-test contact resistance as required to confirm proper electrical continuity and safe operation.

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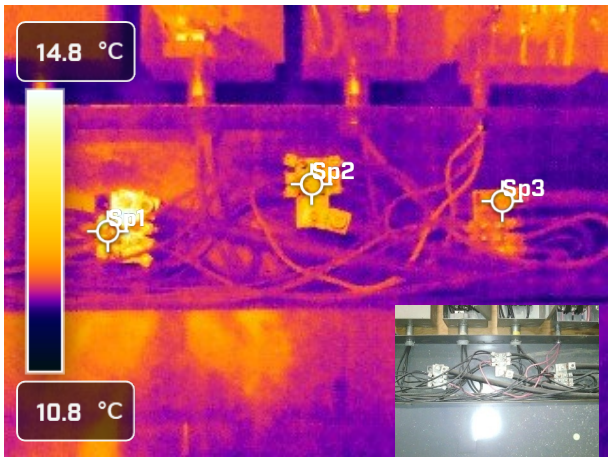

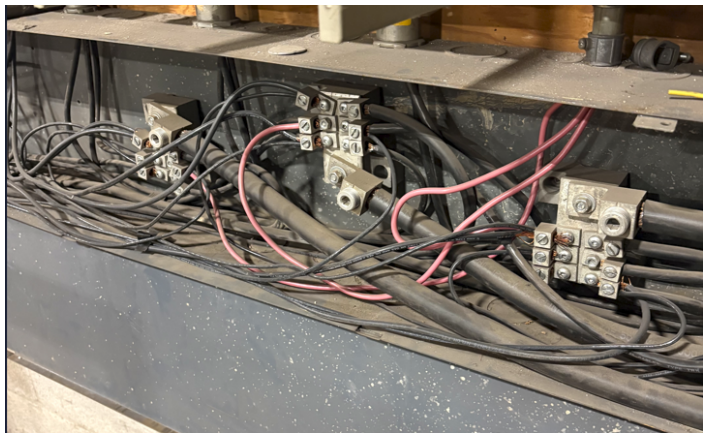

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:24:20 AM
File name	FLIR5384.jpg
Minimum temp.	11.4 °C
Maximum temp.	16.2 °C
Page number	6
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Splitter	
Equipment	*BEL 600V 400A splitter*
Minimum temp.	11.4 °C
Maximum temp.	16.2 °C
Measurements:	No hot spots detected

Measurements

Sp1	12.3 °C
Sp2	12.6 °C
Sp3	12.3 °C

Visual Inspection Notes:	During the inspection, dust and debris were found inside the splitter. This accumulation can negatively impact the performance and safety of the equipment by: Reducing insulation properties, increasing the risk of arcing. Obstructing mechanical components, causing improper operation. Accelerating wear and potential overheating.
Corrective Action:	Perform a thorough cleaning of the splitter to remove all dust and debris. inspect the disconnect's components for signs of damage, wear, or overheating
Created	2026-02-10 10:24:20 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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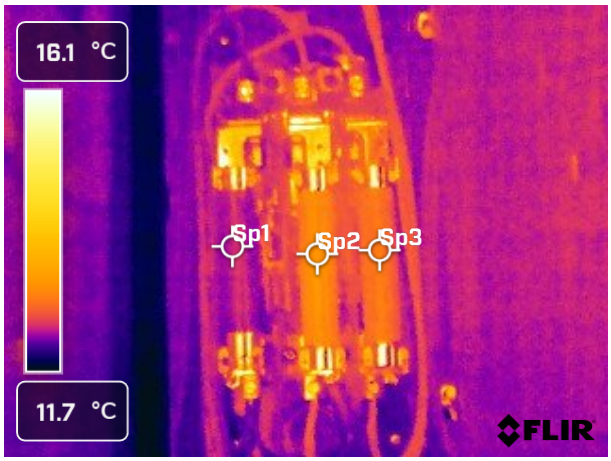

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:25:00 AM
File name	FLIR5385.jpg
Minimum temp.	11.7 °C
Maximum temp.	38.7 °C
Page number	7
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Computer Disconnect	
Equipment	*Sylvania 600V 60A disconnect fused at 60A*
Minimum temp.	11.7 °C
Maximum temp.	38.7 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 12.4 °C **Sp2** 13.1 °C **Sp3** 12.9 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 10:25:00 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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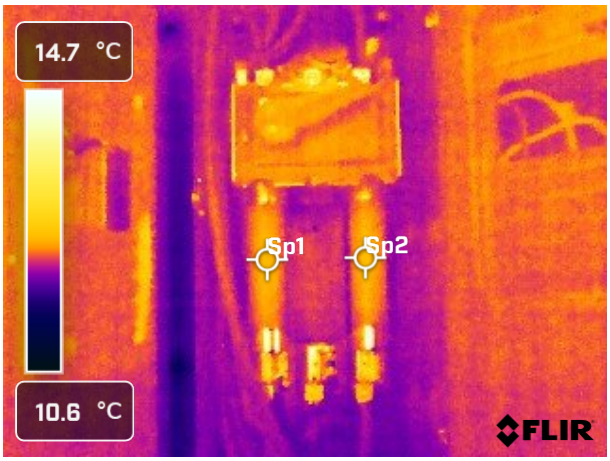

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:25:23 AM
File name	FLIR5386.jpg
Minimum temp.	11.4 °C
Maximum temp.	16.6 °C
Page number	8
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Trans LP H	
Equipment	*Federal Pioneer 600V 100A single phase disconnect fused at 80A*
Minimum temp.	11.4 °C
Maximum temp.	16.6 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 12.5 °C **Sp2** 12.6 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 10:25:23 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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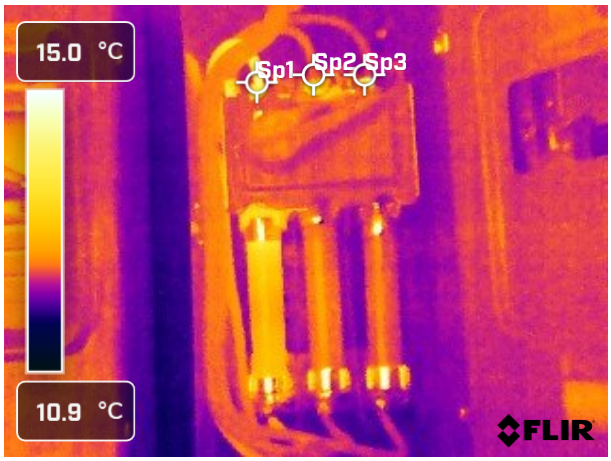

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:25:38 AM
File name	FLIR5387.jpg
Minimum temp.	11.6 °C
Maximum temp.	17.7 °C
Page number	9
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Trans LP A

Equipment	*Federal Pioneer 600V 60A disconnect fused at 60A*
Minimum temp.	11.6 °C
Maximum temp.	17.7 °C
Measurements:	Load measurements Phase A 7A Phase B 5A Phase C 5A

Measurements

Dt1	
Sp1-Sp3	2.0 °C
Sp1	14.4 °C
Sp2	12.4 °C
Sp3	12.4 °C

Visual Inspection Notes:	Thermographic analysis indicates that although the temperature differential is currently within low severity criteria, Phase A shows a localized heating pattern on the line side of the disconnect consistent with a connection deficiency rather than a load imbalance condition (refer to close-up thermogram on the following page). The measured load is minimal at 7A on a 60A rated disconnect, confirming that the elevated temperature is not load-related. Under increased loading conditions, this connection issue could result in significantly higher temperatures and potentially reach a critical state.
Corrective Action:	De-energize the disconnect and inspect the Phase A line-side termination for loose connections, improper torque, corrosion, or conductor damage. Clean all contact surfaces, re-terminate and torque to manufacturer specifications, and replace any damaged lugs or hardware as required. After repairs, perform load testing and contact resistance testing to confirm proper connection integrity.
Created	2026-02-10 10:25:38 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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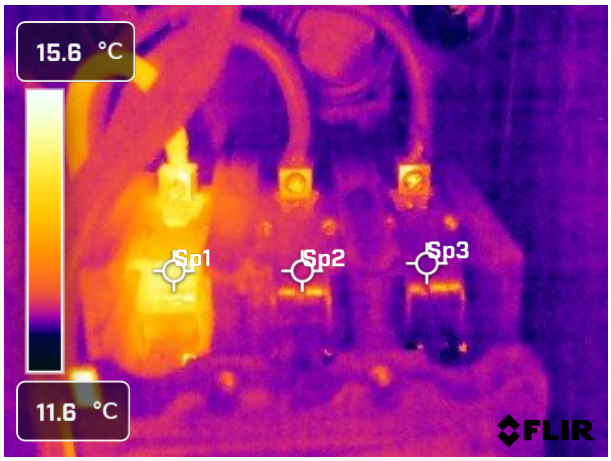

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:27:54 AM
File name	FLIR5390.jpg
Minimum temp.	11.2 °C
Maximum temp.	17.3 °C
Page number	10
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Trans LP A Line Side close up picture

Equipment	*Federal Pioneer 600V 60A disconnect fused at 60A*
Minimum temp.	11.2 °C
Maximum temp.	17.3 °C
Measurements:	**Measurements**

Dt1	
Sp1-Sp3	2.5 °C
Sp1	14.8 °C
Sp2	12.5 °C
Sp3	12.3 °C

Visual Inspection Notes:	Thermographic analysis indicates that although the temperature differential is currently within low severity criteria, Phase A shows a localized heating pattern on the line side of the disconnect consistent with a connection deficiency rather than a load imbalance condition.
Corrective Action:	De-energize the disconnect and inspect the Phase A line-side termination for loose connections, improper torque, corrosion, or conductor damage. Clean all contact surfaces, re-terminate and torque to manufacturer specifications, and replace any damaged lugs or hardware as required. After repairs, perform load testing and contact resistance testing to confirm proper connection integrity.
Created	2026-02-10 10:27:54 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:25:50 AM
File name	FLIR5388.jpg
Minimum temp.	11.7 °C
Maximum temp.	23.1 °C
Page number	11
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Overhead Door Operator	
Equipment	*Federal Pioneer 600V 100A disconnect fused at 100A*
Minimum temp.	11.7 °C
Maximum temp.	23.1 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 12.4 °C **Sp2** 12.5 °C **Sp3** 12.5 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 10:25:50 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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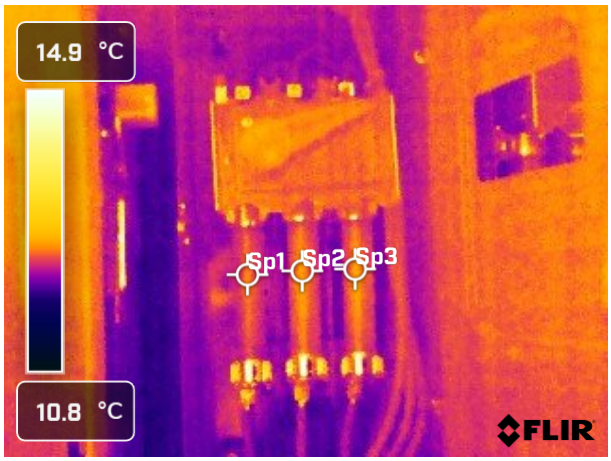

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:26:43 AM
File name	FLIR5389.jpg
Minimum temp.	11.8 °C
Maximum temp.	16.8 °C
Page number	12
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Trans LP B	
Equipment	*Federal Pioneer 600V 60A disconnect fused at 60A*
Minimum temp.	11.8 °C
Maximum temp.	16.8 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 12.6 °C **Sp2** 12.7 °C **Sp3** 12.8 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 10:26:43 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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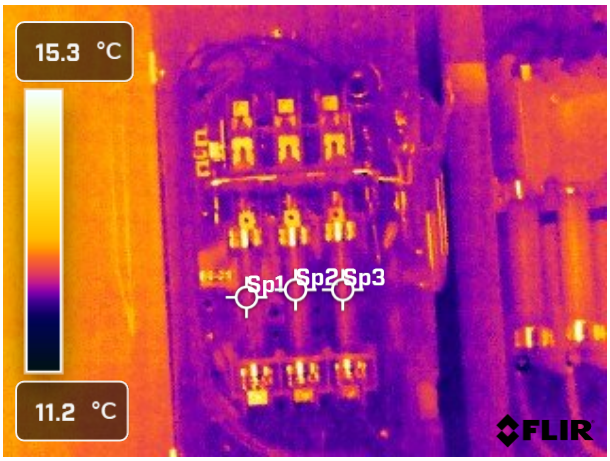

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:35:57 AM
File name	FLIR5391.jpg
Minimum temp.	11.4 °C
Maximum temp.	17.6 °C
Page number	13
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Ground Fault Disconnect	
Equipment	*Siemens 600V 30A disconnect fused at 5A*
Minimum temp.	11.4 °C
Maximum temp.	17.6 °C
Measurements:	No hot spots detected
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 10:35:57 AM

Measurements

Sp1	12.5 °C
Sp2	12.6 °C
Sp3	12.7 °C

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
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Location: Warehouse - Main Distribution - Ground Fault Protection Indicator

During inspection, the ground fault protection indicator was found to be malfunctioning. The indicator light bulbs were removed and tested separately and were confirmed to be in proper working condition.

Cause

Since the bulbs are functional, the malfunction is likely due to an internal failure within the ground fault protection system or an actual ground fault, which may include:
Faulty indicator circuit wiring
Defective relay or ground fault module
Loss of control voltage to the indicator circuit
Internal component failure due to age, wear, or previous fault conditions

A non-operational indicator can prevent proper visual confirmation of ground fault status and may delay identification of actual system faults.

Corrective Action

It is recommended to:
Perform diagnostic testing of the ground fault protection relay/module and associated control wiring.
Verify presence and stability of control voltage supplying the indicator circuit.
Repair or replace the defective ground fault protection components as required.
Function test the complete ground fault protection system to confirm proper operation and indication after repairs.

Proper operation of the ground fault indication system is required to ensure safe monitoring and compliance with electrical safety standards.

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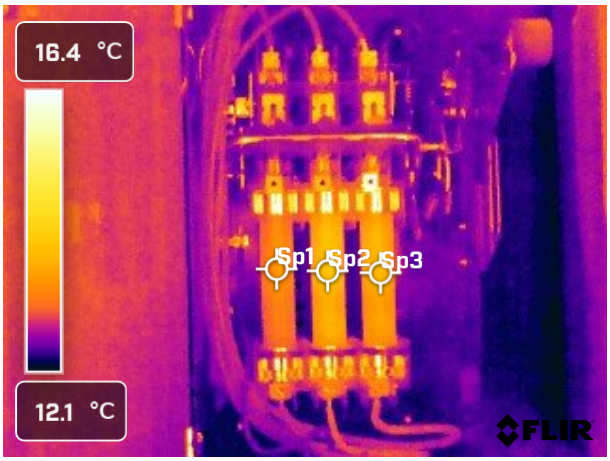

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:36:21 AM
File name	FLIR5392.jpg
Minimum temp.	12.1 °C
Maximum temp.	20.9 °C
Page number	15
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Panel M	
Equipment	*Siemens 600V 60A disconnect fused at 40A*
Minimum temp.	12.1 °C
Maximum temp.	20.9 °C
Measurements:	No hot spots detected
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 10:36:21 AM

Measurements

Sp1	13.6 °C
Sp2	14.1 °C
Sp3	13.9 °C

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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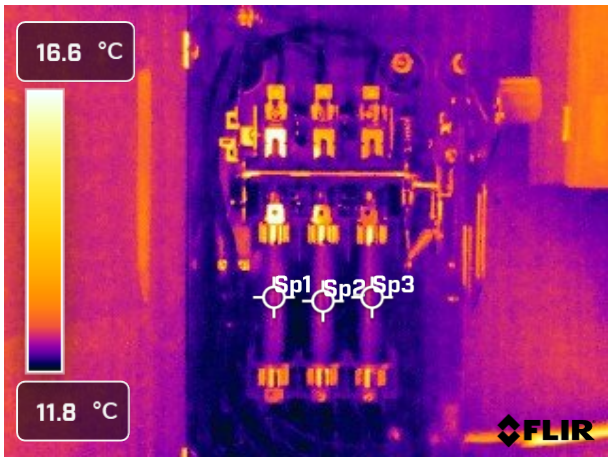
344 Edgeley Blvd Unit 32
Concord ON
L4K 4B7



Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:37:01 AM
File name	FLIR5393.jpg
Minimum temp.	11.7 °C
Maximum temp.	20.5 °C
Page number	16
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - RTU A/C	
Equipment	*Siemens 600V 30A disconnect fused at 15A*
Minimum temp.	11.7 °C
Maximum temp.	20.5 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 12.3 °C **Sp2** 12.1 °C **Sp3** 12.2 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 10:37:01 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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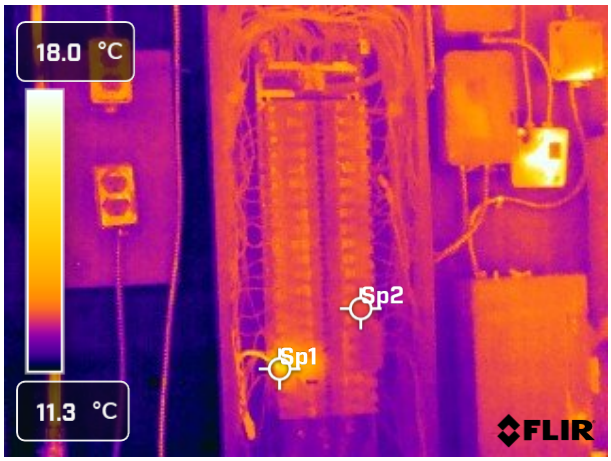

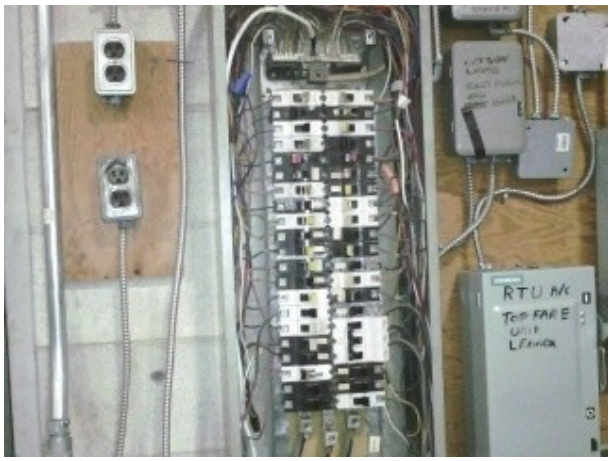

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:41:19 AM
File name	FLIR5394.jpg
Minimum temp.	11.0 °C
Maximum temp.	23.5 °C
Page number	17
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - LTG Panel B	
Equipment	*Federal Pioneer 120/208V 225A breaker panel*
Minimum temp.	11.0 °C
Maximum temp.	23.5 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 14.7 °C **Sp2** 12.6 °C
Visual Inspection Notes:	CCT # 2, 10 ,20 - 20A breakers are double tapped. Standard single-pole breakers are designed to handle only one circuit. Connecting two circuits to a standard breaker, known as "double tapping," is typically not code-compliant unless the breaker is specifically rated for it.
Corrective Action:	Assign each circuit its own breaker in accordance with the Canadian Electrical Code. If there is no remaining breaker space available in the existing panel, a sub-panel should be installed to provide proper overcurrent protection for all circuits.
Created	2026-02-10 10:41:19 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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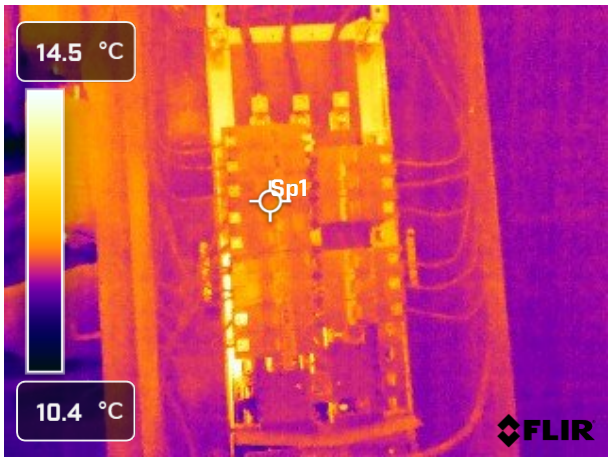

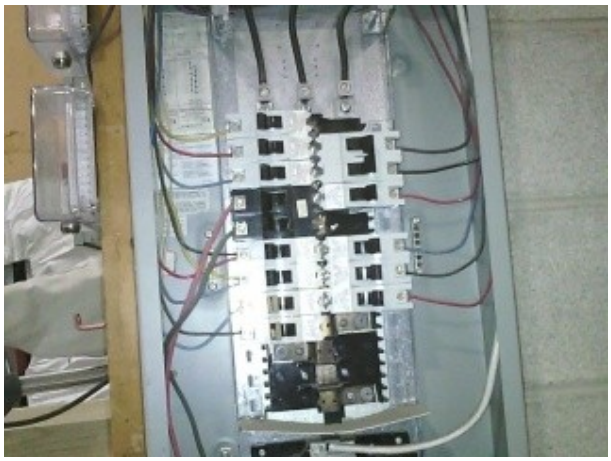

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 10:45:33 AM
File name	FLIR5396.jpg
Minimum temp.	8.8 °C
Maximum temp.	17.3 °C
Page number	18
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Panel no ID	
Equipment	*Federal Pioneer 120/208V 100A breaker panel*
Minimum temp.	8.8 °C
Maximum temp.	17.3 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 12.2 °C
Visual Inspection Notes:	CCT #11, 13 - 15A breakers - double tapped. Standard single-pole breakers are designed to handle only one circuit. Connecting two circuits to a standard breaker, known as "double tapping," is typically not code-compliant unless the breaker is specifically rated for it. The panel in question is currently not labeled or identified, which presents a safety and operational concern.
Corrective Action:	Assign each circuit its own breaker in accordance with the Canadian Electrical Code. If there is no remaining breaker space available in the existing panel, a sub-panel should be installed to provide proper overcurrent protection for all circuits. The panel should be clearly labeled in accordance with CEC Rule 2, which requires proper identification of electrical devices for safe operation and maintenance.
Created	2026-02-10 10:45:33 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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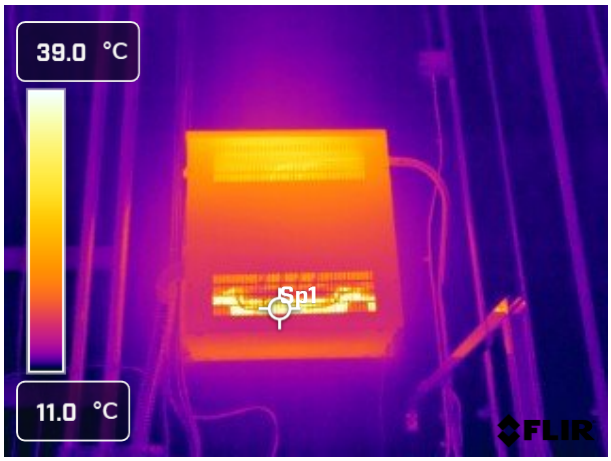

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 11:47:07 AM
File name	FLIR5401.jpg
Minimum temp.	10.9 °C
Maximum temp.	52.5 °C
Page number	19
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse - Main Distribution - Transformer	
Equipment	*Hammond 45kva transformer*
Minimum temp.	10.9 °C
Maximum temp.	52.5 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 36.9 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 11:47:07 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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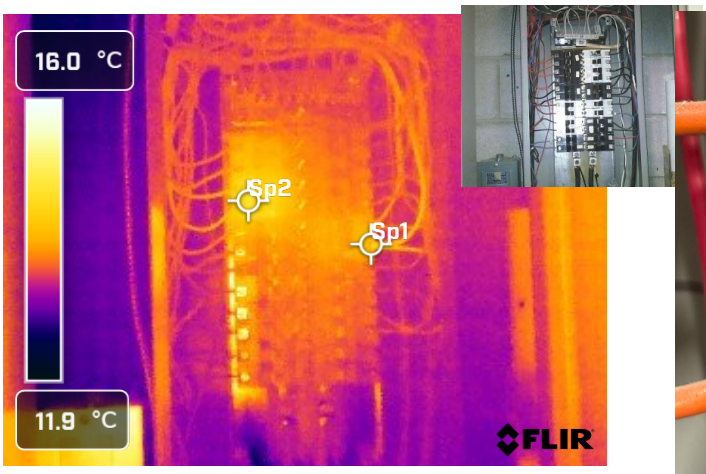

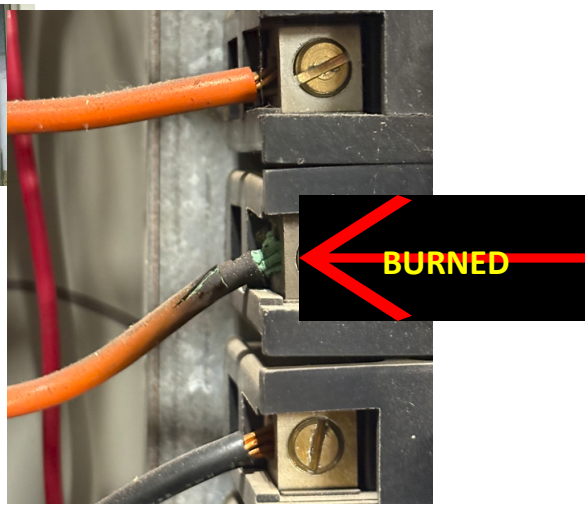

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 11:05:34 AM
File name	FLIR5397.jpg
Minimum temp.	12.4 °C
Maximum temp.	18.1 °C
Page number	20
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Closet in Warehouse - Panel H	
Equipment	*Federal Pioneer 120/208 100A breaker panel*
Minimum temp.	12.4 °C
Maximum temp.	18.1 °C
Measurements:	No hot spots detected
Visual Inspection Notes:	CCT #10, 12 - double tapped. Standard single-pole breakers are designed to handle only one circuit. Although thermographic inspection did not indicate active overheating at the time of scanning, visual examination revealed that the conductor on CCT 7 shows signs of previous short-circuit damage and insulation burning. A conductor subjected to a short circuit may have compromised insulation integrity and potential annealing or weakening of the conductor strands, which can reduce its current-carrying capacity and mechanical strength. This condition increases the risk of future faults, arcing, equipment damage,
Corrective Action:	Assign each circuit its own breaker in accordance with the Canadian Electrical Code. conduct a thorough inspection of the affected conductor along its entire accessible length. Replace the damaged section or the entire conductor as required to ensure insulation integrity and proper ampacity rating. Inspect associated terminations, overcurrent protection devices, and connected equipment for additional damage. Verify that the overcurrent device is properly rated and functioning, and perform insulation resistance testing prior to re-energization to confirm safe operation
Created	2026-02-10 11:05:34 AM

Measurements

Sp1	14.3 °C
Sp2	14.6 °C

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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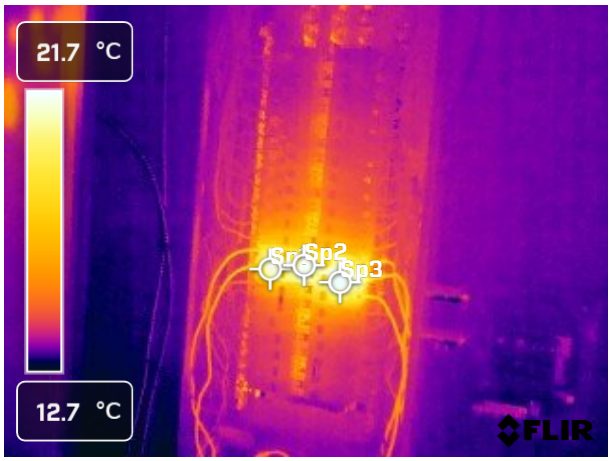

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 11:18:04 AM
File name	FLIR5398.jpg
Minimum temp.	12.6 °C
Maximum temp.	29.0 °C
Page number	21
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Closet in Warehouse - Panel A

Equipment	*Siemens 120/240V 225A breaker panel*
Minimum temp.	12.6 °C
Maximum temp.	29.0 °C
Measurements:	Load measurements CCT# 26,27,28,29 - 8.5A

Measurements

Dt1	
Sp2-Sp1	6.8 °C
Sp1	21.2 °C
Sp2	28.0 °C
Sp3	22.5 °C

Visual Inspection Notes:	Thermographic imaging indicates that overall breaker temperatures are consistent with the applied heater load; however, localized heating is present at SP2 on the bus mounting bracket/bolt connection. This pattern suggests a high-resistance connection at the mechanical joint rather than a load-related condition. Localized resistance heating at bolted bus connections can lead to progressive deterioration, increased oxidation, and potential failure if not addressed.
Corrective Action:	De-energize the equipment and inspect the SP2 bus mounting bolt and bracket assembly for looseness, corrosion, or improper contact surface condition. Clean all mating surfaces, replace any compromised hardware, and reassemble using manufacturer-specified torque values. After corrective work, perform a follow-up thermographic scan under normal load to confirm that the abnormal heating condition has been resolved.
Created	2026-02-10 11:18:04 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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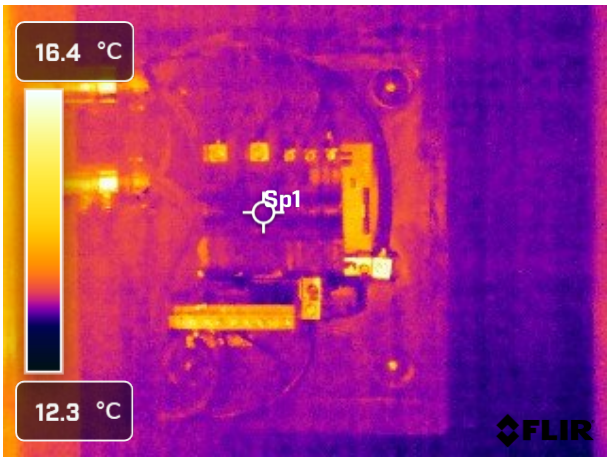

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 11:21:49 AM
File name	FLIR5399.jpg
Minimum temp.	12.9 °C
Maximum temp.	18.9 °C
Page number	22
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Closet in Warehouse - Panel A Pony Panel	
Equipment	*Federal Pioneer 120/240V 70A breaker panel*
Minimum temp.	12.9 °C
Maximum temp.	18.9 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 13.3 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 11:21:49 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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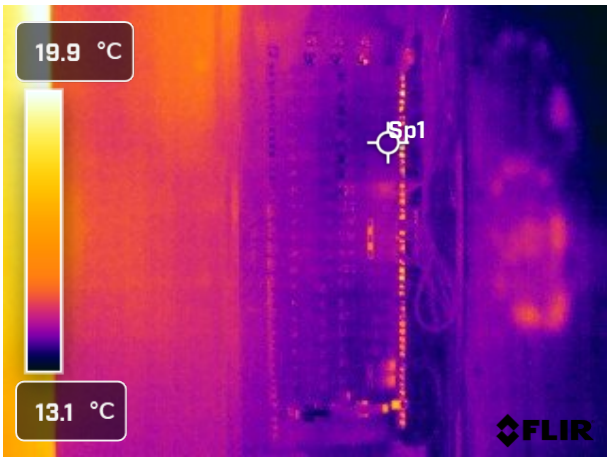

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 11:30:12 AM
File name	FLIR5400.jpg
Minimum temp.	13.0 °C
Maximum temp.	22.4 °C
Page number	23
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse outside show room door - Panel M	
Equipment	*Siemens 120/240V 225A breaker panel*
Minimum temp.	13.0 °C
Maximum temp.	22.4 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 13.8 °C
Visual Inspection Notes:	CCT #38/40 is a 2-pole 20A breaker with only one conductor terminated. In this configuration, the breaker may not provide proper overcurrent protection or common trip functionality, as it is designed to operate with two ungrounded conductors and it is non compliant with CEC.
Corrective Action:	Verify circuit design and either install the required second conductor or replace the breaker with a properly rated single-pole 20A breaker to ensure code compliance and proper protection.
Created	2026-02-10 11:30:12 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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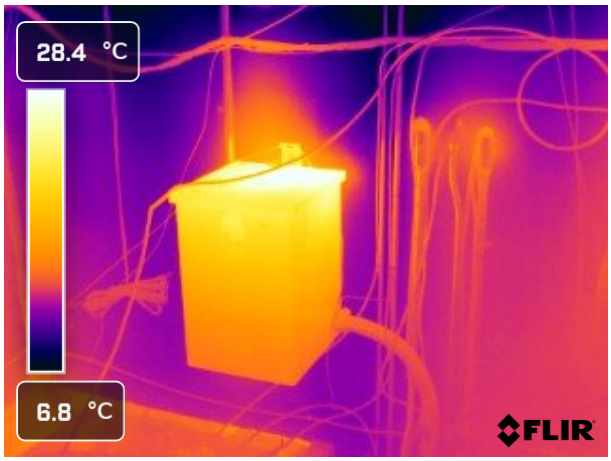

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 11:52:04 AM
File name	FLIR5402.jpg
Minimum temp.	5.4 °C
Maximum temp.	30.3 °C
Page number	24
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Warehouse next to mezzanine Transformer	
Equipment	*Unable to read manufacturing label*
Minimum temp.	5.4 °C
Maximum temp.	30.3 °C
Measurements:	No hot spots detected **Measurements**
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 11:52:04 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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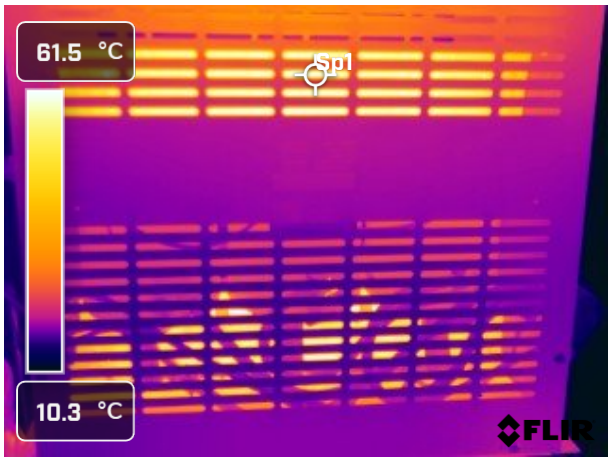

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 11:52:43 AM
File name	FLIR5404.jpg
Minimum temp.	10.0 °C
Maximum temp.	65.5 °C
Page number	25
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Mezzanine - Transformer	
Equipment	*JVC 600V 120/208V 45kva transformer*
Minimum temp.	10.0 °C
Maximum temp.	65.5 °C
Measurements:	No hot spots detected

Measurements

Sp1	59.9 °C

Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 11:52:43 AM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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Observation: Transformer on mezzanine is partially covered with stored materials, including pillows and shelving units.

Code Reference: OESC Rule 2-306 – working space and clearances must be maintained around electrical
equipment.

Hazard: Restricted access and airflow creates risk of overheating, fire, and prevents safe maintenance or
emergency shutdown.

Corrective Action: Remove all stored materials immediately. Maintain minimum clearances around transformer
per OESC and manufacturer guidelines. Ensure area remains clear of combustible or conductive items. Inspect transformer for potential damage caused by prior obstruction.

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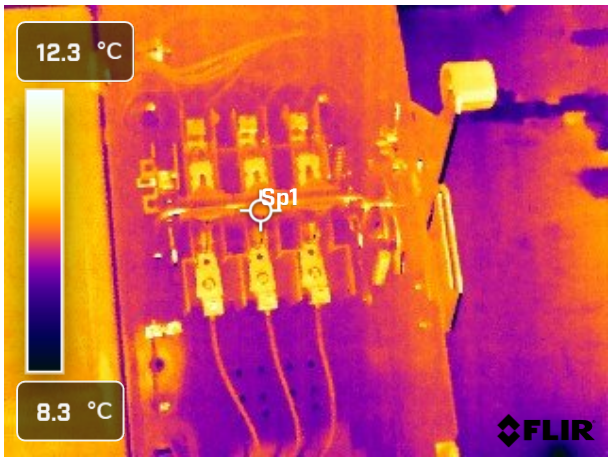

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 12:00:17 PM
File name	FLIR5406.jpg
Minimum temp.	6.4 °C
Maximum temp.	15.5 °C
Page number	27
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Bay Door Distribution - Transformer Disconnect	
Equipment	*Siemens 600V 30A non fused disconnect*
Minimum temp.	6.4 °C
Maximum temp.	15.5 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 10.6 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 12:00:17 PM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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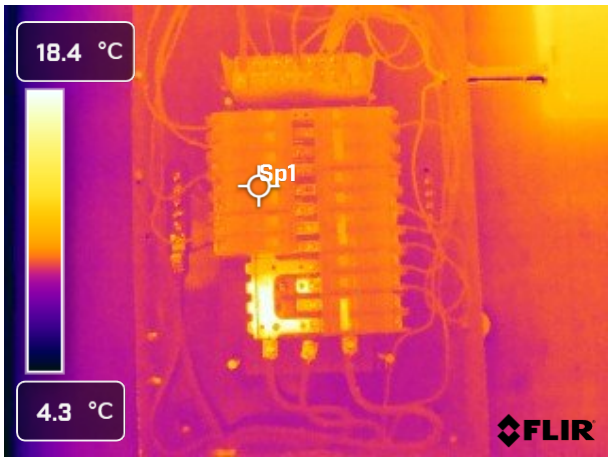

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 12:00:06 PM
File name	FLIR5405.jpg
Minimum temp.	4.0 °C
Maximum temp.	23.0 °C
Page number	28
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Bay Door Distribution - Panel A	
Equipment	*Sylvania 120/208V 125A breaker panel*
Minimum temp.	4.0 °C
Maximum temp.	23.0 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 10.4 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 12:00:06 PM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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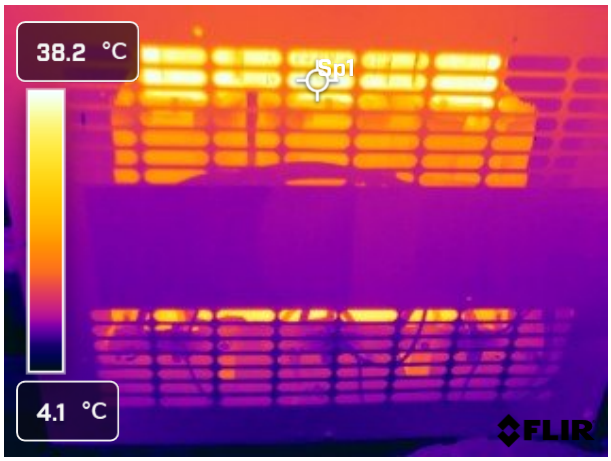

Camera information

Camera model	FLIR E76
Lens	FOL10
Camera serial	78523522
Filter	
Range max.	120.0 °C
Range min.	-20.0 °C
Field of view	41.90

File information

Created	2026-02-10 12:00:25 PM
File name	FLIR5407.jpg
Minimum temp.	2.7 °C
Maximum temp.	40.8 °C
Page number	29
Emissivity	0.95
Distance	1.00 m
Reflected temp.	20.0 °C

Location: Bay Door Distribution - Transformer	
Equipment	*Hammond 600V 120/208V 15kva disconnect*
Minimum temp.	2.7 °C
Maximum temp.	40.8 °C
Measurements:	No hot spots detected **Measurements** **Sp1** 36.4 °C
Visual Inspection Notes:	No anomalies found
Corrective Action:	
Created	2026-02-10 12:00:25 PM

HOT SPOT CRITERIA

Low - Less than 4.0C - Monitor next scan
Alert - 4.1C-8.0C - Repair when time permits
Severe - 8.1C-15.0C - Repair as soon as possible
Critical - Grater than 15.1C - Repair immediately

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8 Berwick Ave
Brampton, ON
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Empire Power Inc.
344 Edgeley Blvd Unit 32
Concord ON
L4K 4B7

Final Comments

It is recommended that preventive maintenance be conducted on the listed electrical equipment at this site as soon as possible and perform corrective actions listed in this report.

IR scans and preventative maintenance should be performed annually. This regular monitoring will help to maintain safe operating conditions and
ensure the longevity and proper performance of the equipment.

Please review the findings and recommendations outlined in this report and take necessary action to address any potential safety concerns.

We trust that the information provided in this report meets your expectations. We look forward to continuing to serve you and assist with all your electrical needs.

Should you have any questions or require further assistance, please don't hesitate to contact Expert Power Solutions Ltd.

This report has been revised and approved by:

Denny Masotti
Expert Power Solutions Ltd.
Cell: 647-554-6186

Cathy Piasentin