TEMPERATURE MONITORING PROTOCOL

TEMPERATURE MONITORING PROTOCOL

ROBOT OPERATIONS

Polar Dynamics Robotics, Inc.

Document ID: TMP-2024-001

Effective Date: January 15, 2024

1. PURPOSE AND SCOPE

1. This Temperature Monitoring Protocol ("Protocol") establishes man

2. This Protocol applies to all BlueCore(TM)-enabled AMRs and asso

2. DEFINITIONS

1. "Critical Temperature Range" means the operating temperature ran

2. "Temperature Excursion" means any deviation outside the Critical T

3. "Monitoring System" means the Company's proprietary thermal ma

4. "Operating Personnel" means Company employees and authorized

3. TEMPERATURE MONITORING REQUIREMENTS

1. Continuous Monitoring

a) All AMRs must maintain continuous temperature monitoring throug

sensors[2] -

b) Temperature data shall be logged at intervals not exceeding 30 sec

c) Data transmission to central monitoring systems must occur at mini

5-minute intervals.

2. Sensor Specifications

a) Primary temperature sensors must maintain accuracy of 0.5 C.

b) Redundant sensors shall be installed in critical components.

c) Calibration must be performed quarterly per SOP-CAL-2024.

3. Alert Thresholds

a) Warning Alert: 2 C from range limits

b) Critical Alert: 5 C from range limits

c) Emergency Shutdown: Beyond Critical Temperature Range

4. OPERATIONAL PROCEDURES

1. Pre-Operation Verification

a) Temperature monitoring systems must be verified operational befo
deployment.

b) System diagnostics must confirm sensor calibration status.

c) Communication links with central monitoring must be validated.

2. Active Monitoring

a) Operating Personnel shall maintain real-time monitoring of tempera

b) Alert responses must follow Incident Response Protocol IRP-2024-

c) Temperature logs must be archived for minimum 3 years.

3. Maintenance Requirements

a) Monthly inspection of all temperature monitoring components.

b) Quarterly validation of sensor accuracy.

c) Annual replacement of critical monitoring components.

5. INCIDENT RESPONSE

1. Temperature Excursion Response

a) Immediate notification to Operations Control Center.

b) AMR return to designated safe zone if possible.

c) Emergency shutdown if Critical Alert thresholds exceeded.

2. Documentation Requirements

a) Incident reports filed within 24 hours.

b) Root cause analysis completed within 5 business days.

c) Corrective action plan implemented within 10 business days.

6. COMPLIANCE AND TRAINING

1. Personnel Requirements

a) Annual certification in temperature monitoring procedures.

b) Quarterly review of incident response protocols.

c) Documentation of all training completion.

2. Audit Requirements

a) Monthly internal compliance reviews.

b) Quarterly third-party system audits.

c) Annual comprehensive protocol review.

7. LIABILITY AND INDEMNIFICATION

1. The Company shall not be liable for any consequential damages re

2. Operating Personnel must acknowledge this Protocol through signe

8. PROTOCOL MODIFICATIONS

1. This Protocol may be modified by the Company with 30 days writte

2. Emergency modifications may be implemented immediately when r

9. EXECUTION

IN WITNESS WHEREOF, this Protocol is executed by authorized rep

POLAR DYNAMICS ROBOTICS, INC.

By:

Name: Dr. James Barrett

Title: Chief Robotics Officer

Date: January 15, 2024

By:

Name: Sarah Nordstrom

Title: Chief Operating Officer

Date: January 15, 2024

10. REVISION HISTORY

Version 1.0 - January 15, 2024 - Initial Protocol Release

Previous Versions: None

[END OF DOCUMENT]