

TEMPERATURE EXCURSION RESPONSE PROTOCOL

TEMPERATURE EXCURSION RESPONSE PR

Polar Dynamics Robotics, Inc.

Effective Date: January 15, 2024

Document ID: PDR-TERP-2024-01

Version: 3.0

1. PURPOSE AND SCOPE

1. This Temperature Excursion Response Protocol ("Protocol") establ

2. This Protocol applies to all Company AMRs equipped with BlueCore

2. DEFINITIONS

1. "Temperature Excursion" means any deviation from the prescribed

a) Duration greater than 30 minutes; and/or

b) Temperature variation of 3 C from specified operating parameters

2. "Critical Components" refers to:

a) BlueCore(TM) navigation systems

b) Thermal management units

c) Power distribution modules

d) Sensor arrays

e) Drive train assemblies

3. "Qualified Personnel" means Company engineers and technicians

3. DETECTION AND NOTIFICATION

1. AMR Operating System Requirements:

- a) Continuous temperature monitoring at 60-second intervals
- b) Automated alerts when temperature thresholds are breached
- c) Real-time data transmission to central monitoring system

2. Notification Protocol:

- a) Immediate notification to facility supervisor
- b) Alert to Company Technical Support within 15 minutes
- c) Escalation to Engineering Team Lead if excursion exceeds 60 minutes

4. IMMEDIATE RESPONSE PROCEDURES

1. Initial Assessment:

- a) AMR to execute safe-stop protocol
- b) Remote diagnostic scan of Critical Components
- c) Evaluation of environmental conditions
- d) Documentation of circumstances and conditions

2. Containment Actions:

- a) Isolation of affected AMR(s)
- b) Activation of backup systems if applicable
- c) Implementation of temporary operational restrictions

5. INVESTIGATION AND ANALYSIS

1. Data Collection Requirements:

- a) Temperature logs for previous 24 hours
- b) AMR performance metrics
- c) Environmental condition records
- d) Maintenance history
- e) Operator reports

2. Root Cause Analysis:

- a) Review of system diagnostics
- b) Analysis of environmental factors
- c) Evaluation of maintenance records
- d) Assessment of operating procedures
- e) Review of similar incidents

6. CORRECTIVE ACTIONS

1. Required Measures:

- a) Implementation of immediate corrective actions
- b) Development of preventive measures
- c) Update of operating procedures as needed
- d) Modification of monitoring parameters if required
- e) Retraining of relevant personnel

2. Documentation Requirements:

- a) Detailed incident report
- b) Corrective action plan
- c) Implementation timeline
- d) Verification of effectiveness

- e) Sign-off by authorized personnel

7. RETURN TO SERVICE

1. Authorization Requirements:

- a) Completion of all corrective actions
- b) Verification of system stability
- c) Approval by Qualified Personnel
- d) Documentation of return-to-service testing

2. Monitoring Requirements:

- a) Enhanced monitoring for 48 hours post-incident
- b) Daily performance reviews for one week
- c) Weekly status reports for one month

8. RECORD RETENTION

1. Required Records:

- a) Incident reports
- b) Investigation documentation
- c) Corrective action plans
- d) Testing and verification results
- e) Return to service authorization

2. Retention Period:

All records shall be maintained for a minimum of three (3) years from of the incident.

9. PROTOCOL REVIEW AND UPDATES

1. This Protocol shall be reviewed annually by the Engineering Team
2. Updates shall be approved by the Chief Technology Officer and do

10. COMPLIANCE AND ENFORCEMENT

1. Compliance with this Protocol is mandatory for all Company person
2. Violations may result in disciplinary action up to and including termi

AUTHORIZATION

This Protocol is hereby authorized and approved:

Dr. Elena Frost

Chief Executive Officer

Polar Dynamics Robotics, Inc.

Marcus Chen

Chief Technology Officer

Polar Dynamics Robotics, Inc.

Date: January 15, 2024

