EPIC SAFETY

aero-k

Wi-Fi/Ethernet Alarm System Communicator

General Installation Guide

V1.8

Firmware V1.0

Contents

1. Overview

a. Description

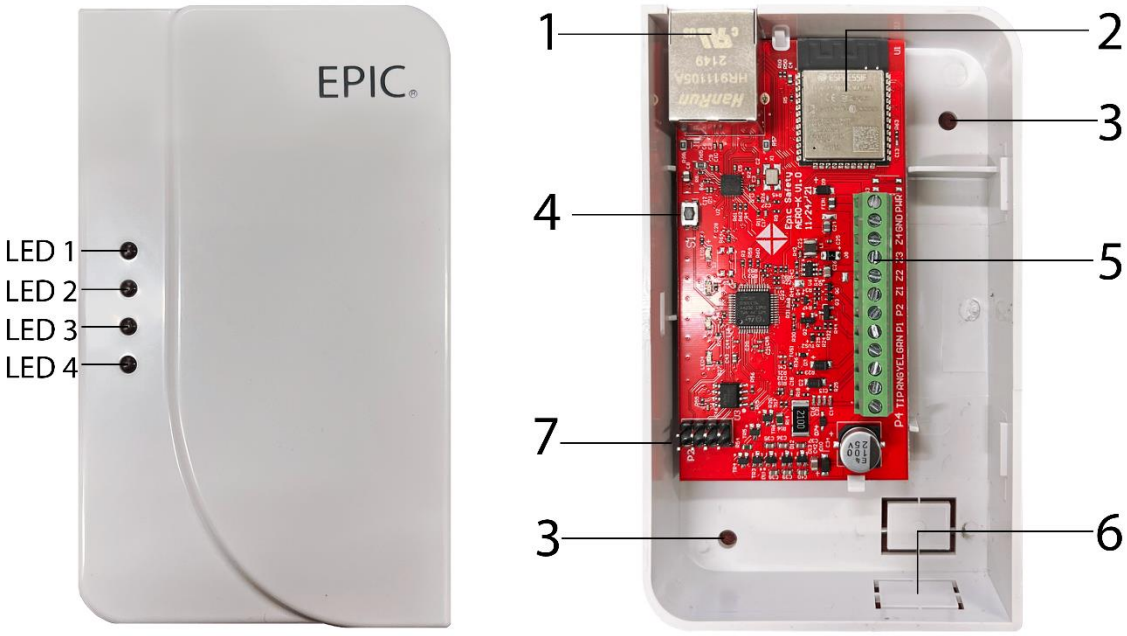
Aero-K is a primary alarm communicator utilizing Ethernet and Wi-Fi technologies. Aero-K connects to supported DSC and Honeywell panels via keybus for system monitoring. It employs dial capture monitoring to handle alarms in CID and SIA formats. For legacy alarm systems, Aero-K offers three dedicated zones for monitoring burglary, fire, and panic alarms, alongside keyswitch arming and disarming functionalities through zone 1 and PGM 1. Refer to section **7** (PGM Output Functions) for more information on the PGM multipurpose functionality.

The convenience of remote access with Aero-K allows users to access and control their systems from anywhere via the Aryo cloud platform. This platform is accessible on web browsers, iOS, and Android smartphones, offering unparalleled flexibility and accessibility.

b. In the Box

- aero-k
- Quick Start Guide

c. Parts Identification



1) RJ45 connector

2) WiFi module

3) Mounting holes

4) Button

5) Terminal block

6) Wire entrance

7) RF Expansion port

2. Introduction

a. Operational Scenarios

- Take-over any existing alarm system.
- Modernize old or legacy systems.
- Replace any system on the 3G network.
- Upgrade and replace traditional landline systems.
- New installations.

b. Device & Cloud Features

Aero-K:

- Compact and lightweight design.
- Ethernet and Wi-Fi connectivity options.
- Low-power consumption and energy-efficient design for cost-effective operation.
- Compatibility with DSC PowerSeries & Honeywell keybus, and CID & SIA formats for all other panels.
- Concurrent use of landline digital account and IP account facilitating versatile connectivity options.
- Remote control and monitoring via Aryo cloud platform.
- Multiple arming modes available.
- Up to 2-partition keyswitch arming when using dial capture.
- Partition and zone status monitoring.
- Remote programming for easy configuration.
- Entry delay monitoring.
- Flexible use of 2 PGMs for automation.
- Full supervision.
- Temperature monitoring for environmental control.
- Voltage detection for enhanced system reliability.
- Full event reporting to Aryo cloud and Central Monitoring Station.
- Daily summary reports and remote diagnostics.
- User code management with 1 master code (for the primary user) and up to 40 user codes.

- Remote firmware updates for enhancements.

Aryo cloud platform:

- Mobile app integration for on-the-go control and monitoring via smartphones and tablets.
- End-to-end device and user data encryption for enhanced protection.
- Multi-factor authentication options for enhanced user verification.
- Support multiple languages for user interface.
- Centralized management of multiple alarm systems within a single app.
- Mobile keypad for full interactive and user functions.
- Comprehensive command and keypad-based interactions.
- Emergency buttons for immediate response activation.
- Single and group zone bypass and un-bypass functionalities.
- Effortless cancellation of false alarms and dispatch of resources.
- Management of master and user codes.
- Customizable user permissions and access levels for tailored security settings.
- Advanced analytics and reporting tools for trend analysis and security insights.
- Customizable Push, Email, SMS, and Audible notifications.

3. Pre-Installation Requirements

- Conduct a placement test to find a suitable location with the best signal strength.
- DO the wiring when both Aero-K and the alarm panel are powered down.
- DO NOT route any wire over the alarm panel or Aero-K circuit boards.
- Install and program your alarm panel before connecting it to Aero-K.
- DO NOT power up Aero-K prior to user and device registration.
- Connect Aero-K and one of our LTE products (Surf, Surf-K, and Surf-KM) to the same alarm panel when dual path connectivity and communication type are needed. For example, use Aero-K for keybus and Surf for dial capture monitoring.
- Install and operate Aero-K within its specified temperature ranges to prevent any possible damage.
- DO NOT install the unit close to heating source, direct sunlight, or in a damp location.
- DO NOT connect Aero-K to a phone line. This will damage the device.
- Always connect Aero-K to an approved power source and battery backup.
- Use a relay when connecting panel PGM that supplies power to the Aero-K zone. Otherwise, it will damage the device.

a. Cable Length

Using Station Z or CAT 5 type wire, Aero-K can be installed up to 1000 feet away from the alarm panel. Please note that the below table serves as a guideline only, and the maximum

wire length could be different depending on the interference level generated by the environment, alarm panel, and other accessories in the system.

Cable Type & Size	Number of wires	Communication Format	Keybus & Power	Keybus & Tip/Ring	Tip/Ring & Power	Keybus & Tip/Ring & Power
Station Z 4 x 22AWG DO NOT CONNECT SPARE WIRES	One wire	Keybus	1000ft	-	-	-
		CID	-	200ft	1000ft	-
		SIA	-	100ft	1000ft	-
	Two wires	Keybus	1000ft	-	-	-
		CID	-	1000ft	1000ft	-
		SIA	-	1000ft	1000ft	-
	Three wires	Keybus	-	-	-	-
		CID	-	-	-	1000ft
		SIA	-	-	-	1000ft
CAT 5 8 x 24AWG DO NOT CONNECT SPARE WIRES Power +: Orange pair Power -: Blue pair Keybus GRN: Green Keybus YEL: White/Green TIP: Brown RING: White/Brown	One wire	Keybus	1000ft	-	-	-
		CID	-	1000ft	1000ft	200ft
		SIA	-	1000ft*	1000ft	200ft
	Two wires	Keybus	1000ft	-	-	-
		CID	-	1000ft	1000ft	1000ft
		SIA	-	1000ft	1000ft	1000ft
	Three wires	Keybus	-	-	-	-
		CID	-	-	-	1000ft
		SIA	-	-	-	1000ft

*For this specific configuration, power cable must not exceed 500ft.

4. Monitoring Options

- **Keybus** enables Aero-K to communicate with the panel and keypads directly for faster status reporting. It also allows for the use of additional commands such as zone status, bypass/unbypass, and no entry delay arming. Keybus monitoring is available for supported DSC PowerSeries and Honeywell Vista series panels.
- **Dial capture** allows Aero-K to detect and capture CID and SIA events and monitor any alarm system that uses these two formats. Dial capture monitoring is available by connecting the TIP and RNG terminals of Aero-K to any panel that can communicate in CID and SIA formats.
- **Legacy** monitoring is available for older panels that do not support CID/SIA format. Aero-K can use 3 input zones to monitor legacy alarm panel outputs by providing burglary, fire, and panic alarms.

5. Setup & Installation Steps

The required steps for setting up the cloud, device, and alarm panel are summarized in the following. Refer to section **3** for pre-installation requirements.

a. Add User & Device on Aryo Cloud

- Register the user on the Dealer dashboard of Aryo cloud platform.
- Add the device to the platform.
- Assign the newly added device to the registered user.
- Assign a specific account number obtained from your CMS for the system.
- If required, assign additional account numbers to other partitions. If the corresponding sections are left blank, the alarm panel account number set in the previous step is considered for all partitions.

b. Install & Program Alarm Panel

Install, wire, and program the alarm panel, making sure it is in working condition prior to connecting Aero-K to it.

For alarm panel programming instructions suggested for Aero-K functionality, refer to Epic's product manual corresponding to your alarm panel vendor and model number.

c. Connect Aero-K to Alarm Panel

Refer to section **6.f** for further information on Aero-K terminals.

i. Keybus

Connect the alarm panel's power terminals to those of Aero-K and the alarm panel keybus terminals to the YEL and GRN terminals on Aero-K.

ii. Dial Capture

Connect the power terminals from the alarm panel to those of Aero-K. Additionally, establish connections by linking the alarm panel Tip and Ring to TIP and RNG terminals on the Aero-K.

If using keyswitch arming, use PGM1 and zone 1 for partition 1 or PGM2 and zone 4 for partition 2.

iii. Keybus + Dial Capture

For locked alarm panels that were monitored before, connecting Tip and Ring lines in addition to keybus to the alarm panel will eliminate the TLM trouble.

iv. Legacy

There are 3 Aero-K input zones to monitor burglary, fire, and panic signals. Connect the positive (+) and ground (-) of a 12 VDC relay to the corresponding panel siren terminals. Connect the N.O. output of the relay to zone 2 on Aero-K to monitor burglary signals of any panel or both burglary and fire signals for all DSC legacy panels.

Use other available panel outputs to monitor other signals. PGM1 and zone 1 can be used for keyswitch arming.

d.Setup Network Connection

Aero-K can connect to network using Ethernet or WiFi. Refer to the configurations below, depending on the selected method.

i. Ethernet Configuration

1. Plug in the Ethernet cable to Aero-K.
   - If Aero-K receives an IP through DHCP and operates normally, the WiFi Access Point (AP) function turns off after 10 minutes.

     If the connection is successful, LED 5 and LED 6 on the RJ45 connector will be on (refer to section **6.e** for details). If the connection fails, check the router and Ethernet cable connection from both sides. If required, disconnect and reconnect the Ethernet cable, and/or reboot the router.

If it is required to switch to WiFi mode, while the device is currently connected to the network via Ethernet, unplug the Ethernet cable first. This will enable the WiFi AP function of the device. If WiFi setting has not been done before or needs to be re-configured, follow the WiFi configuration steps from step 2 to connect to the network through WiFi.

ii. WiFi Configuration

WiFi configuration can be set using smartphones or computer following the steps below after installing the device.

1. Power up the alarm panel and Aero-K.
2. Turn on WiFi on your Android phone, iPhone, or computer.
3. Find “aero-k” in the WiFi list and connect to it.
4. The setup will pop-up automatically.
   - If this step succeeds, go to step 6.
   - If the page does not pop up automatically or if you are using a computer, go to step 5 for the manual setup.
5. **Manual Setup**: Open a browser and type 192.168.4.1 (IP address) of Aero-K in the web page address input and press “go” on your phone key input or “enter” on your computer.
   - If the page still does not show up, turn off WiFi and turn it back. Then, start from step

3 again.

6. On SSID section, open up the drop-down menu (click on ‘V’) to choose your intended WiFi SSID from the drop-down menu.
   - If there is no WiFi list or you cannot find the intended WiFi SSID, you can directly input the desired WiFi SSID after checking the “Enable Hidden SSID” box.
7. Enter your WiFi password and press “Connect” button.
8. If the settings are successful, the page will close automatically.
   - Depending on the browser, the WiFi settings page may not close automatically. In this case, close the page manually.
9. If Aero-K receives the IP through DHCP and operates normally, the WiFi AP function is turned off after 10 minutes.

After WiFi configuration succeeds, the WiFi connection to “aero-k” will be terminated automatically. You may need to connect back your phone or computer to the original network.

If WiFi re-configuration is required, hold the buttons shortly (1 sec) to enable WiFi setup mode. Then, start the configuration from step 2.

e. Complete Aryo Cloud Configurations

Complete the device and alarm panel configurations on Aryo cloud. For further information, refer to our dealer portal.

f. Configure User’s Mobile App

- After completing the registration, user will receive an email from Aryo cloud with a link to set up their account.
- User downloads Aryo app from the App Store (iOS) or Google Play (Android).
- Upon successful logging in to Aryo app, they will be prompted to change their password.
- Once the new password is set, the user is now able to use the app to access and manage their system, depending on the type of communication*.
  *User updates the default master code for remote control when keybus is not used.

6. Performance Guide

a.Signal Level

The signal level is reported using RSSI (Received Signal Strength Indicator) method which can be converted to dBm (decibel-milliwatts). The RSSI and corresponding signal strength bar can be seen in the table below:

RSSI	Signal Level (dBm)	Service Level
99	NA	No service
0-3	-113~-90	
4-14	-89~-85	Poor signal- Device will trigger signal strength trouble event.
15-24	-83~-65	Acceptable
25-31	-63~-51	Good

This data is for reference only, and may not be applicable for all situations.

b.Temperature

For correct operation, the system must be in the operating range for temperature level. The default temperature levels, and their corresponding interpretations are listed below. Dealers will be able to adjust the high and low temperatures and view the current value on the Aryo cloud platform.

Aero-K Temp. (°C)	Interpretation
< -5 °C	Low – Aero-K will trigger low temperature trouble event.
-5 °C to 50 °C	Normal
> 50 °C	High – Aero-K will trigger high temperature trouble event.

c. Voltage

For proper operation, both alarm panel and Aero-K should be powered by approved power source within the recommended range. Different voltage levels and corresponding interpretations for the alarm panel are listed below.

Panel Voltage (VDC)	Interpretation
< 9	Low voltage - Aero-K will trigger voltage trouble event.
10.1 – 13	Acceptable
13.1 – 14.5	Good

> 14.5	High voltage - Aero-K will trigger voltage trouble event.

d.Button Functions

Aero-K button is used for a few functions according to the table below:

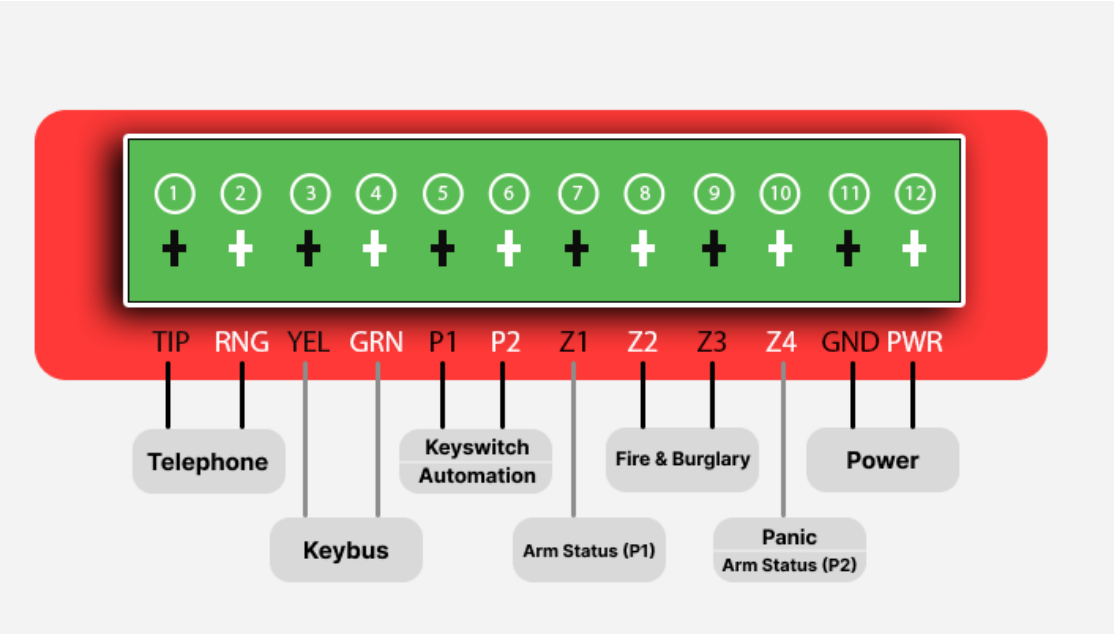
Button Press Time (sec)	Function Name	Function Use	Duration Time	LED Indicators
1 sec	Self-Test	1- To send device information such as signal level, voltage, and temperature to Aryo cloud. 2- To re-configure WiFi setting if required. 3- Could be also used for exiting the Signal Level Mode, before the duration specified in the next row ends.	Immediate	Blinks once
5 sec	Signal Level Mode	To select the best mounting location based on the signal level of Aero-K. **LED Indications** — **RSSI** LED 1 Blink — 0 ~ 13 LED 1 On — 14 ~ 15 LED 2 Blink — 16 ~ 17 LED 2 On — 18 ~ 19 LED 3 Blink — 20 ~ 22 LED 3 On — 23 ~ 25 LED 4 Blink — 26 ~ 28 LED 4 On — 29 ~ 31	30 sec	Slow blinking
10 sec	Reboot Device	If required for troubleshooting or WiFi setting re-configuration.	Immediately	Fast blinking
15 sec	Reset SSL	When a device is reused for a new client or moved to a new location.	Immediately	Alter blinking

e.LED Indications

Condition	Status	LED	Color	On	Off	Fast blink	1 blink	2 blinks
Power	DC power on	1	Red	X				
	DC power off	1	Red		X			
	Device not registered	1	Red				X	
	Device troubles	1	Red			X		
Network Status	Connected to a network via Ethernet	2	Green	X				
	Connected to a network via Wi-Fi	2	Green				X	
	Not connected to a network (SSID exists)	2	Green		X			
	Not connected to a network, Waiting for setting Wi-Fi SSID and password	2	Green			X		
	Poor signal in Wi-Fi mode	2	Green					X
Server Network	Connecting to server	3	Green				X	
	Disconnected from server	3	Green		X			
	Communicating with server	3	Green			X		
	Connection with server is normal, but not communicating	3	Green	X				
Panel Communication	Dial Capture	4	Green				X	
	Keybus	4	Green			X		
	Dial Capture and Keybus	4	Green	X				
	Legacy	4	Green		X			
	Firmware update in progress	All	Red/ Green	Alternating LEDs. LEDs 1&2 are on/off while LEDs 3&4 are off/on.				
LINK/ACT Network	Connected to the network (LINK)	5*	Green	X				
	Communicating with network (ACT)	5	Green			X		
	Not connected to the network	5	Green		X			
LINK100 Network	Connected with 100M network (Good speed)	6*	Yellow	X				
	Not connected to 100M network	6	Yellow		X			

*LEDs on RJ45 connector

f. Terminal Connections



i. Aero-K Terminals Description

Aero-K terminals and their connections to alarm panel are described in the table below:

Aero-K Terminal	Alarm panel Terminal	Description
Tip (TIP)	TIP	Aero-K TIP/RNG terminals connect to the Tip/Ring interface of any alarm panel that uses CID or SIA format to capture all generated signals and send them to Aryo cloud and the CMS.
Ring (RNG)	RING	
Keybus Yellow (YEL)	YEL	Aero-K supports DSC PowerSeries and Honeywell keybus interface. Yellow (YEL) and Green (GRN) terminals can be connected to Aero-K YEL and GRN to allow interaction with DSC PowerSeries panels to monitor events and provide status of the alarm panel.
Keybus Green (GRN)	GRN	
PGM 1 (P1)	Keyswitch zone(s) or used for automation	Aero-K has two PGM outputs for keyswitch arming, for remote arming/disarming, and automation functionality for variety of purposes, as outlined in section **7**.
PGM 2 (P2)		

Zone 1 (Z1) (Dry contact only)	Available PGM **Always use a relay** when connecting panel PGM that supplies voltage/current to the Aero-K zone. Otherwise, it will damage the device.	Aero-K zone 1 can be connected to alarm panel PGM to receive arm/disarm status of partition 1.
Zone 2 (Z2) (Dry contact only)	Siren output **Always use a relay** on siren/bell output for monitoring burglary and/or fire.	Aero-K zone 2 is used as the common burglary input to monitor the burglary alarm signal received from the alarm panel output. For DSC panels, this zone can be used for both fire and burglary detection when connected to the siren output.
Zone 3 (Z3) (Dry contact only)	Available PGM **Always use a relay** when connecting panel PGM that supplies voltage/current to the Aero-K zone. Otherwise, it will damage the device.	Aero-K zone 3 is used as the common fire input to monitor the fire alarm signal received from the alarm panel output.
Zone 4 (Z4) (Dry contact only)	Available PGM **Always use a relay** when connecting panel PGM that supplies voltage/current to the Aero-K zone. Otherwise, it will damage the device.	Aero-K zone 4 is used as the common panic input to monitor the panic alarm signal received from the alarm panel output. It can also provide arm/disarm status of partition 2 of the panel when not monitoring legacy panels.
Ground (GND)	Ground	Aero-K could be powered by an alarm panel auxiliary 9-14 VDC. External auxiliary power source with backup battery can be used if they use a common ground. The device can still operate with a power range of 6 to 20 VDC. Aero-K monitors panel voltage and generates power trouble when voltage drops below 9 VDC.
Power (PWR)	9-14 VDC	

ii. Other Hardware Connections

RF expansion port is for future addition of more wireless capabilities to Aero-K.

7. PGM Output Functions (Automation)

a. Features

Aero-K features up to two programmable outputs (PGMs) for various household uses. These PGMs can be used to control garage doors, sirens, and strobe lights, among various other uses depending on Aero-K communication type. See the table in section **7.d** for the details.

b. Keyswitch - Dial Capture/ Legacy

When using Aero-K for dial capture or legacy monitoring and remote arm/disarm, PGM 1 must be connected to a keyswitch zone on the alarm panel. For remote arm/disarm on multi-partition systems (dial capture only), PGM 2 must be connected to another keyswitch zone for partition 2, on the alarm panel. Any available PGM can be used for automation functionality.

c. Keybus

When using keybus for monitoring, both PGM 1 and 2 can be used for automation functionality, as remote arm/disarm is handled by the keybus connections.

d. PGM Output Function Table

1. Using Keybus

Output	Momentary/ Maintained	Time Duration	Keyswitch 1	Garage Door	Open Door Strike	Open Gates	Siren	Strobe
PGM 1	Maintained	2 sec -300 sec		O				
	Maintained	2 sec -300 sec			O			
	Maintained	2 sec -300 sec				O		
	Maintained	2 sec -300 sec					O	
	Maintained	2 sec -300 sec						O
Output	**Momentary/ Maintained**	**Time Duration**	**Keyswitch 2**	**Garage Door**	**Open Door Strike**	**Open Gates**	**Siren**	**Strobe**
PGM 2	Maintained	2 sec -300 sec		O				
	Maintained	2 sec -300 sec			O			
	Maintained	2 sec -300 sec				O		
	Maintained	2 sec -300 sec					O	
	Maintained	2 sec -300 sec						O

2. Using Dial Capture (Tip/Ring)

Output	Momentary/ Maintained	Time Duration	Keyswitch 1	Garage Door	Open Door Strike	Open Gates	Siren	Strobe

PGM 1	Momentary	1 sec	O					
	Maintained	2 sec -300 sec		O				
Output	**Momentary/ Maintained**	**Time Duration**	**Keyswitch 2**	**Garage Door**	**Open Door Strike**	**Open Gates**	**Siren**	**Strobe**
PGM 2	Momentary	1 sec	O					
	Maintained	2 sec -300 sec		O				
	Maintained	2 sec -300 sec			O			
	Maintained	2 sec -300 sec				O		
	Maintained	2 sec -300 sec					O	
	Maintained	2 sec -300 sec						O

3. Using Legacy

Output	**Momentary/ Maintained**	**Time Duration**	**Keyswitch 1**	**Garage Door**	**Open Door Strike**	**Open Gates**	**Siren**	**Strobe**
PGM 1	Momentary	1 sec	O					
	Maintained	2 sec -300 sec		O				
Output	**Momentary/ Maintained**	**Time Duration**	**Keyswitch 2**	**Garage Door**	**Open Door Strike**	**Open Gates**	**Siren**	**Strobe**
PGM 2	Maintained	2 sec -300 sec		O				
	Maintained	2 sec -300 sec			O			
	Maintained	2 sec -300 sec				O		
	Maintained	2 sec -300 sec					O	
	Maintained	2 sec -300 sec						O

8. Trouble Conditions & Troubleshooting

a. Trouble Conditions

Aero-K also monitors some important parameters such as alarm panel power, temperature, communication of keybus and Tip/Ring of the alarm panel for proper functionality and would report these conditions to Aryo cloud and CMS.

i. Primary Power Failure

If alarm panel power rises above 14.5V or falls below 9V, Aero-K will send a trouble event to Aryo cloud server and CMS.

ii. WiFi Signal Error

If WiFi is configured but there is no connection or the signal is poor, Aero-K will send a trouble event to Aryo cloud server and CMS.

iii. Ethernet Signal Error

If Ethernet cable is plugged in but there is no connection, Aero-K will send a trouble event to Aryo cloud server and CMS.

iv. No Network

If Aero-K cannot connect to the intended network, Aero-K will send a trouble event to Aryo cloud server and CMS.

v. Keybus Communication Failure

When connected to a DSC or Honeywell alarm panel keybus terminals, Aero-K continuously supervises the keybus communication path for normal operation. If Aero-K stops receiving data from the keybus line, Aero-K will send a trouble event to Aryo cloud server and CMS.

vi. Aryo Communication Failure

If there is any error or failure in device communication with the cloud, Aero-K will send a trouble event to Aryo cloud server and CMS.

vii. High/Low Temperature

If the temperature goes above 50 degrees Celsius or falls below -5 degrees Celsius, Aero-K will send a trouble event to Aryo cloud server and CMS.

CID codes for supervisory and troubles

Power	970
WiFi Signal Error	979
Ethernet Signal Error	980
No Network	981
Keybus Communication Failure	975
Aryo Communication Failure	976
High Temperature	977
Low Temperature	978

b.Troubleshooting

Trouble Category	Trouble	Indication	Solution
Primary Power Failure	Panel Voltage below 9V or above 14.5V	First LED blinks quickly.	Check the output voltage of DC/Auxiliary terminals of the alarm panel.

<table>
<tr><td rowspan="2">WiFi Signal Error</td><td>Poor signal</td><td>1. First LED blinks quickly.
2. Second LED blinks slowly, two at a time.</td><td rowspan="2">1. Press the button shortly (1 sec).
2. Check if the WiFi is configured properly. Reconfigure WiFi if required following section 5.d.ii.
3. Check the router. Power down the router and power it up (if required).
4-Reboot the device if issue remains.</td></tr>
<tr><td>SSID exists but no connection</td><td>1. First LED blinks quickly.
2. Second LED is off.</td></tr>
<tr><td rowspan="2">Ethernet Signal Error</td><td>When the Ethernet IP is set but there is no LINK/ACT connection.</td><td>1. First LED blinks quickly.
2. Fifth LED is off.</td><td rowspan="2">1. Check both cable connections on both ends. Disconnect and reconnect cables if required.
2. Check the router and power it down and up, if required.</td></tr>
<tr><td>When the Ethernet IP is set but there is no LINK100 connection.</td><td>1. First LED blinks quickly.
2. Sixth is off.</td></tr>
<tr><td rowspan="2">No Network</td><td>When connection is not possible through Ethernet</td><td rowspan="2">1. First LED blinks quickly.
2. Second LED blinks quickly.</td><td>1. Check cable connections on both ends. Disconnect and reconnect cables.
2. Check the router and power it down and up, if required.</td></tr>
<tr><td>When connection is not possible through WiFi in the scenarios below:

a. Setup is not done since WiFi set up page doesn’t show up at initial setup or reconfiguration stage.

b. Set up is done but there is no connection.</td><td>a.
1.Try the manual WiFi setup described in section 5.d.ii.
2.If the issue exists, turn off and on the WiFi on your phone or computer.
3.If the situation remains after several attempts, reboot the device.

b.
1.Press the button shortly (1 sec) to enable WiFi function.
2. Reconfigure WiFi as described in section 5.d.ii.
3. If the issue remains, reboot the router and device. Repeat the configuration steps.</td></tr>
<tr><td>Keybus Communication Failure</td><td>No data received from the keybus panel terminals, after a certain period.</td><td>First LED blinks quickly.</td><td>Check if the keybus lines (Yellow, Green) are connected properly to the alarm panel and to Aero-K.</td></tr>
</table>

Aryo Communication Failure	No connection to Aryo cloud.	1. First LED blinks quickly. 2. Second LED blinks quickly. 3. Third LED is off.	If it does not operate normally even after waiting for a while, check the following. 1. Check WiFi configuration and Ethernet connection. 2. Check that the device is properly registered in the cloud server.
High/Low Temperature	Ambient temperature being out of the operating range of Aero-K.	First LED blinks quickly.	Check the ambient temperature, identify the cause of the temperature abnormality, and eliminate the cause.

9. Specifications

Hardware	**aero-k**
Dimensions	115mm*70mm*26.7mm
Weight	83g
Operating temperature	-5°C to 50°C
Humidity	86%
Input voltage	9-14 VDC
Operating voltage	6-20 VDC
Mounting	2 screw holes
PGM current tolerance	350 mA
Standby current draw at 13.5V (Ethernet)	70 mA
Peak current draw at 13.5V (Ethernet)	95 mA
Standby current draw at 13.5V (Wi-Fi)	50mA
Peak current draw at 13.5V (Wi-Fi)	80 mA
Keybus (DSC & Honeywell)	Y
Tip/Ring	Y
Legacy	Y
Zones	4
PGMs	2
Status LEDs	4

RF Expansion Port	1
Communication	Ethernet & WiFi
Certifications	FCC, IC

10. Warranty

a. Product Warranty

Subject to the limitations set forth herein and in Epic's warranty policy document, Epic warrants that the Products sold by it to its authorized dealers shall be free, under normal use and service, from defects in material and workmanship for a period of twelve (12) months from the date of purchase. Epic does not warrant Products that do not have a serial number. This warranty shall also be void if there is a failure to maintain the Products and the systems in which they operate in proper working conditions. During the warranty period, Epic shall, at its option, repair or replace any defective product upon return of the Product by the dealer, to Epic, at no charge for labor and materials. This warranty is for the benefit of the authorized dealer only and is therefore non-transferable, non-assignable, and is voided when the Warranted Product is transferred to another party.

For more detailed information on Epic's warranty policy, refer to the Warranty Policy document.

b. Warranty Update

Epic reserves the right to update or modify the terms and conditions of its warranty at any time, without prior notice. Any updates or modifications to the warranty will be communicated to the dealer through appropriate channels, such as official notifications or revised warranty documentation. It is the responsibility of the dealer to stay informed about any changes to the warranty and to ensure compliance with the updated terms.

c. Warranty Disclaimer

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS LIMITED WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. TO THE MAXIMUM EXTENT PERMITTED BY LAW, EPIC SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF EPIC CANNOT LAWFULLY DISCLAIM OR EXCLUDE IMPLIED WARRANTIES UNDER APPLICABLE LAW, THEN ALL IMPLIED WARRANTIES COVERING THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY TO THIS PRODUCT AS PROVIDED UNDER APPLICABLE LAW.

Epic's Limited Warranty is offered to its authorized dealers, only on the new Products according to Epic’s warranty policy that is published and updated from time to time. It includes replacement or repair of defective products returned in accordance with the Return Policy. Freight costs to the repair center are not covered. If repair attempts fail, replacement is the sole remedy. Epic holds no responsibility for the products manufactured by third parties. Epic also makes no assertion that its products are immune to compromise and/or circumvention.

All Epic’s services and information provided by Epic are offered on an “as is" basis. Epic shall not be held liable for any disruptions, errors, delays, or inaccuracies in the provision of its services, including Aryo cloud and app. Occasional interruptions, maintenance periods, and technical issues may occur, and Epic shall not be responsible for any resulting damages or losses.

d.Limitations of Liability

Epic shall not be held liable for indirect, incidental, special, exemplary, punitive, or consequential damages of any kind, including but not limited to loss of profits, data, revenue, production, or use, business interruption, cost of substitute, or replacement equipment, facilities or services, downtime, the claims of third parties (including Users), property damage, or the procurement of substitute goods or services. This applies to any damages arising out of or related to the use of Epic’s services, the use or performance of any product, whether based on contracts, tort (including negligence), or any other legal theory, even if Epic has been advised of the possibility of such damages.

Epic shall not be liable for any loss and/or damage to the user’s premises and the contents thereof, any injury or death to any person, any failure of the system to function, any error in performance, any inaccuracies or issues in transmission, reception, or handling by the recipient of any alarm signal to react properly, for any reason whatsoever, and such circumstances shall not create any liability for Epic, whether in breach of contract, tort, or otherwise.

Epic's usage of services is not intended to establish obligations under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), and no assurances are provided that the services fulfill HIPAA requirements. If the end User is (or becomes) a Covered Entity or Business Associate under HIPAA, Epic’s services cannot be employed for any involvement with Protected Health Information (as defined by HIPAA) without obtaining prior written consent from Epic.

Epic is not an insurer and assumes no responsibility for any damage, loss, or injury resulting from alarm system failures or signal monitoring, and the user must obtain their required insurance coverage. System failures may occur beyond Epic's control, and responses from authorities can be slow or ineffective. The system serves as a deterrent, not a comprehensive protection or substitute for insurance. Payment to Epic covers subscription services, not

insurance. Epic's charges are unrelated to User's premises value. In case of loss, the User's reimbursement sources are their resources or insurers.

The total aggregate liability of Epic, its affiliates, and their respective officers, directors, employees, and agents, for damages of any nature, regardless of the form of action, shall not exceed the total amount paid by the authorized parties to Epic in the twelve (12) months preceding the event giving rise to the claim.

e.Repair Under Warranty

All the warranty claims must be accompanied by a Return Merchandise Authorization (RMA) number which must be obtained before merchandise can be returned for any warranty replacement or repair. To request an RMA number, the customer can contact Epic's Technical Support Center via telephone. The Technical Support Center will provide troubleshooting assistance and if they find the product to be defective, will issue an RMA number. The RMA number must be displayed on the outside packaging of the returned item. Transportation charge, if any, incurred in connection with the return of a defective item to Epic shall be borne by the customer. Any collect shipments returned to Epic will be refused. Epic shall fix the goods without extra costs under the warranty period.

Epic shall pay any transportation charge incurred with the redelivery of a repaired or replacement item or ship the warranty item with customer's next order. If, however, Epic reasonably determines that the item can function, the customer shall pay all the transportation charges. If Epic determines, at its sole discretion, that the allegedly defective item is not covered by the terms of the warranty provided hereunder or that a warranty claim is made after the warranty period, the cost of repair by Epic, including all shipping fees, shall be paid by the customer.

Claims for damaged products or shortages when shipment arrived must be made by the customer immediately. If any goods are damaged on shipment arrival, it must be noted on the carrier's waybill prior to signing. Failure to note the shortages or damages on the carrier's waybill will result in the claim being denied. Epic will provide free replacement or credit note for the damaged products or product shortage claims.