



AMT VIEWPOINT™ USER GUIDE


AMT VIEWPOINT


HELP


AMT312S
Firmware: 0x15 - Datecode: 0000





 Encoder Datasheet


 AMT Landing Page

 Viewpoint User Guide

 Mounting Instructions

 Same Sky Blog

 Resource Library


 Technical Support


CURRENT CONFIGURATION:
R: 2048 D: Counter-Clockwise P: 6

Resolution: 2048

Direction: Counter-Clockwise

Pole Count: 6

 PROGRAM



U V W

ALIGN

QUADRATURE

COMMUTATION

Z

A

B

I 0.0439

P 0.0879

T 0.1758

S 0.0439

Readings are in Mechanical Degrees

RECONNECT

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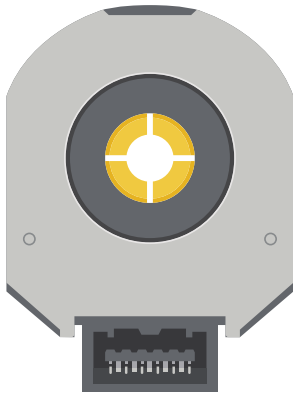
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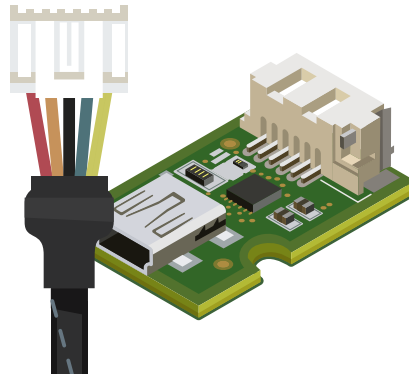
INTRODUCTION

The AMT Viewpoint™ is a Graphical User Interface (GUI) that allows for an unprecedented level of visibility and control thanks to the innovative design of the AMT modular encoder series. Via the simple software interface, users are able to set and control a range of parameters, reducing development time and virtually eliminating tedious steps in the assembly process. Additionally, the software allows engineers access to a range of diagnostic data for quick analysis during design or in the field.

What You'll Need:



AMT11, AMT13, AMT20, AMT21, AMT22,
AMT23, AMT24, AMT25, AMT31,
or AMT33 Encoder

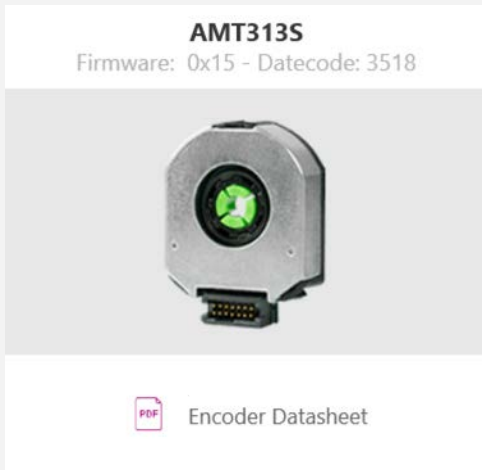
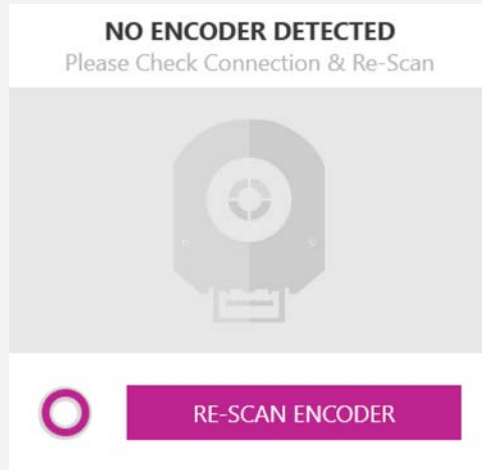


The Appropriate AMT Programming
Module and Cable



A Windows PC
(Windows 10 or higher required)

GETTING STARTED



- 1 Download the AMT Viewpoint:
www.sameskydevices.com/amt-viewpoint
- 2 Plug the AMT Programming Module into your PC using your own USB Mini B to Type A cable.
- 3 Connect the encoder to the programming cable.
- 4 Open the AMT Viewpoint GUI.
- 5 Upon opening, the GUI will search for an encoder (see below).
- 6 If the “NO ENCODER DETECTED” message appears, double check your encoder’s connection and click “RE-SCAN”.
- 7 Once an encoder has been detected the window will populate with an encoder specific layout.

GETTING STARTED



1 Encoder Overview Card

When an encoder is connected, this card highlights the firmware revision, date code, and quick link to the datasheet.

2 Resource Card

[AMT Landing Page](#) - View the most up-to-date information on the AMT Viewpoint. Read the change logs for recent updates and download the latest versions.

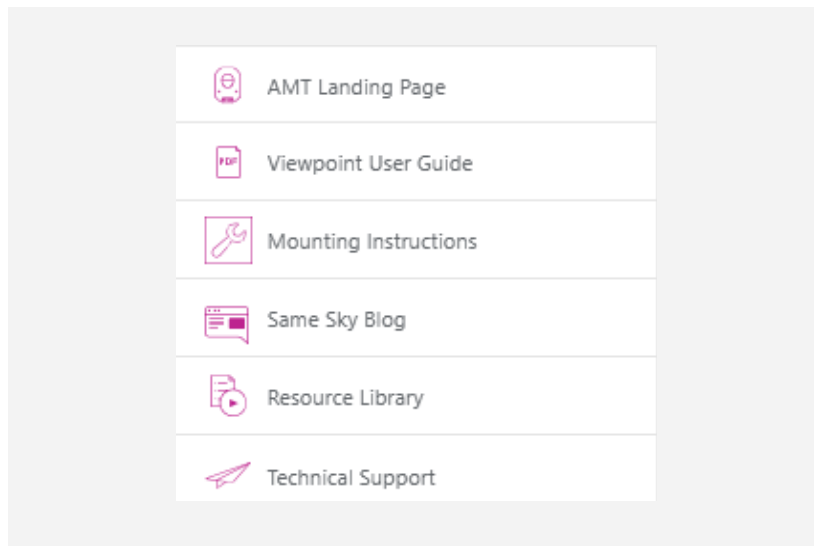
[Viewpoint User Guide](#) - This guide.

[Assembly Instructions](#) - Watch the video or text instructions for putting together your AMT encoder.

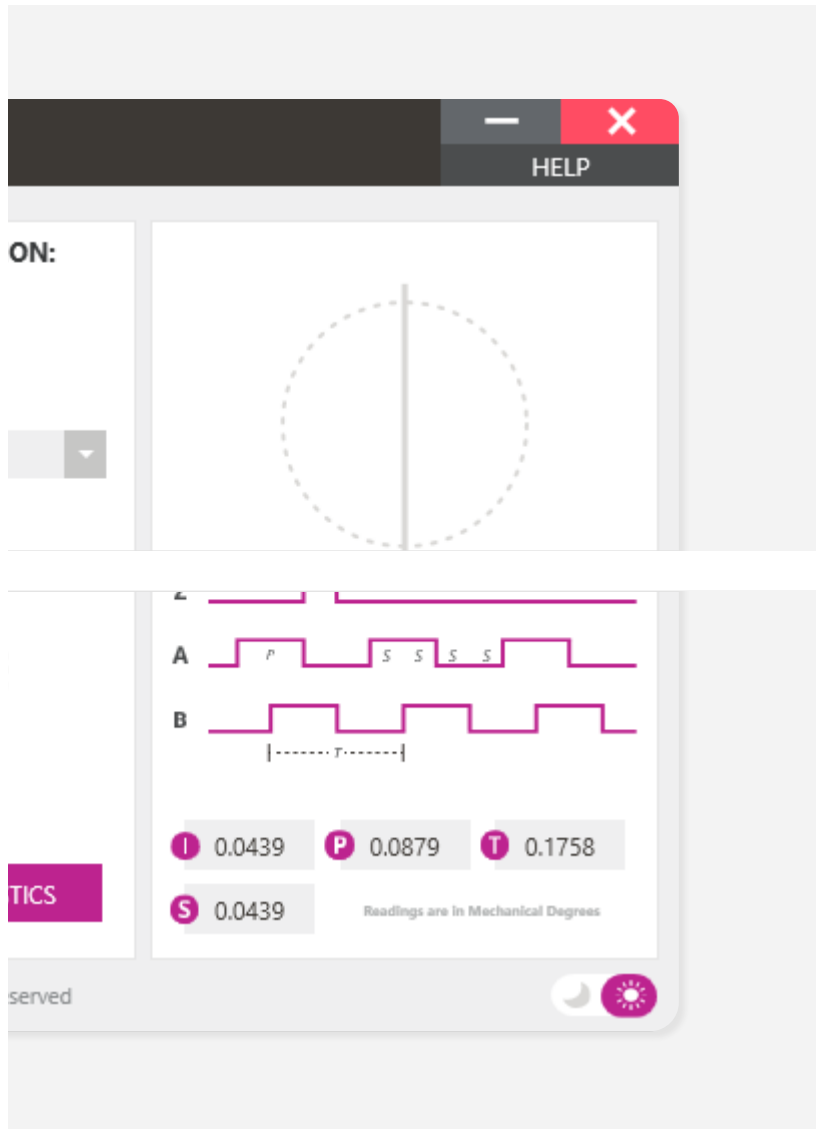
[Same Sky Blog](#) - Read our ever-expanding selection of encoder-specific blog posts.

[Resource Library](#) - View all of Same Sky's motion-specific resources from sample code to videos.

[Technical Support](#) - Contact Same Sky for any technical questions or issues you're experiencing.



GETTING STARTED



1 Help Button

View a menu with an array of links designed to help you overcome any roadblocks you may hit while using the GUI.

[About AMT Viewpoint](#) - Learn about the details behind the AMT Viewpoint including version number.

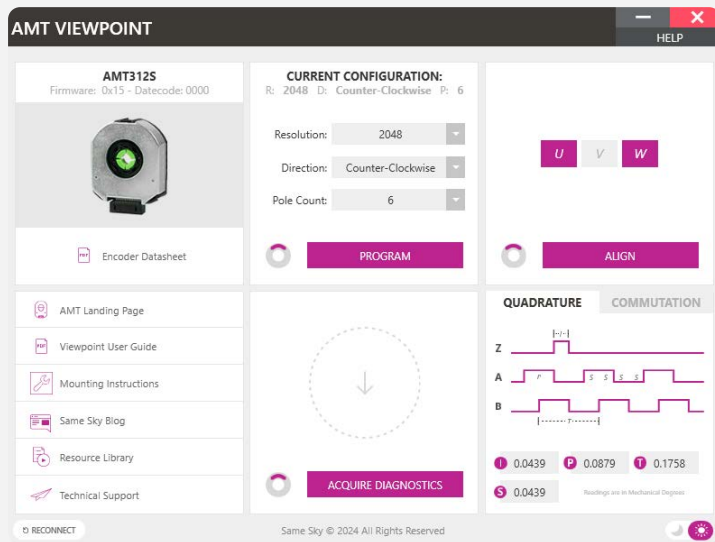
[Contact Same Sky](#) - Get in touch with us for any questions you might have on the AMT Viewpoint.

[AMT Viewpoint User Guide](#) - This guide.

2 Theme Toggle

Toggle between light and dark themes based on preference.

ENCODER SPECIFIC WINDOWS



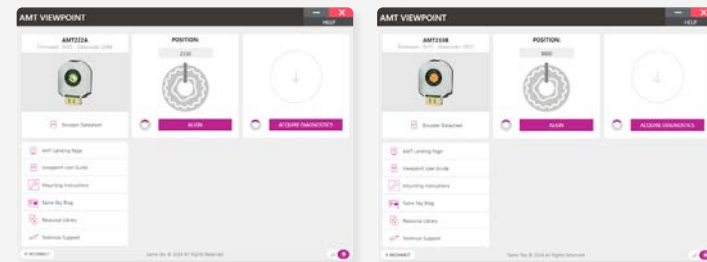
AMT31 & AMT33



AMT11 & AMT13

AMT20

AMT21 & AMT24



AMT22 & AMT25

AMT23

The AMT Viewpoint's format and settings will adapt based on the type of encoder that is connected. On the following pages, features and interface instructions for each AMT encoder series is discussed.

AMT11 & 13 SERIES

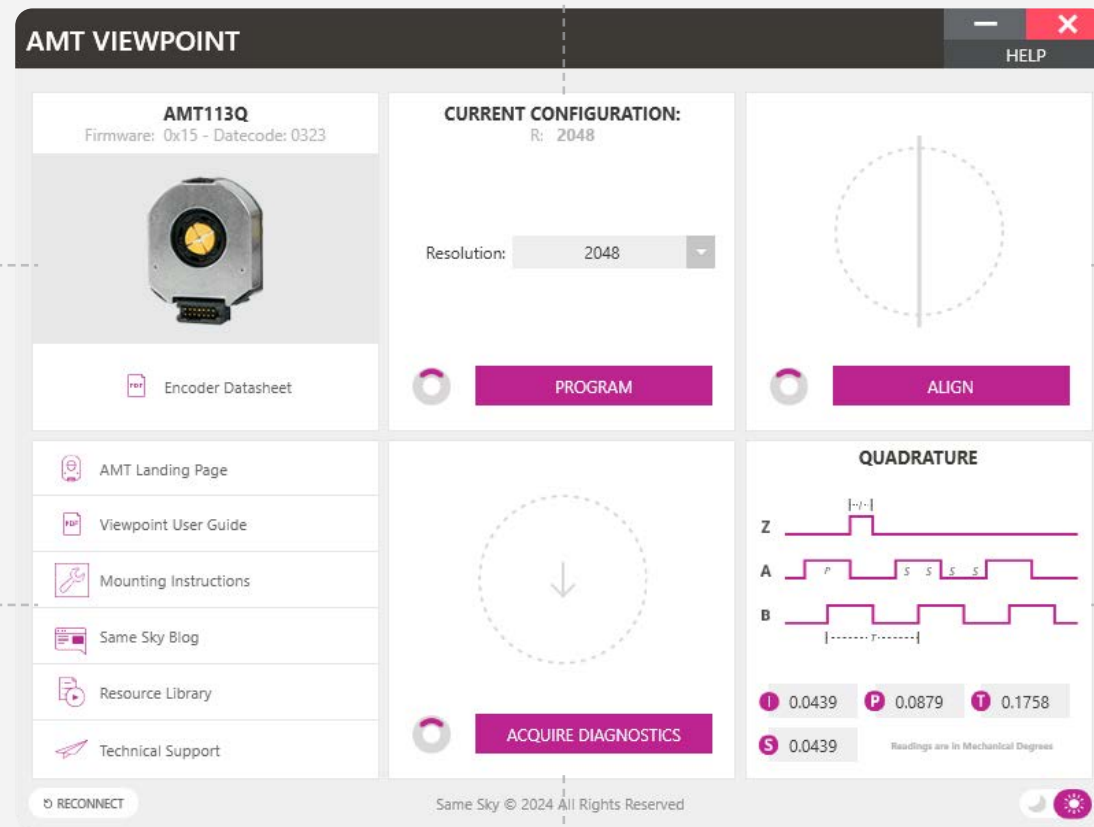
Current Configuration Card

Encoder Overview Card

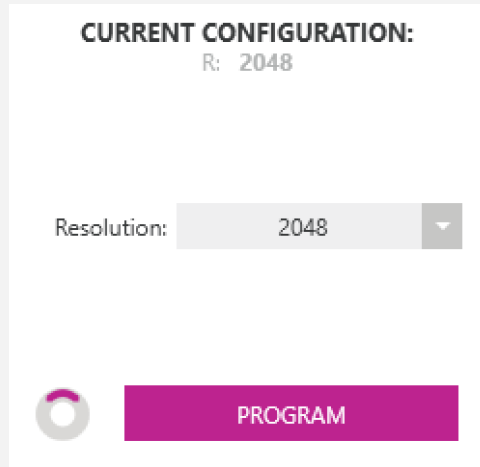
Alignment Card

Resource Card

Waveforms Card

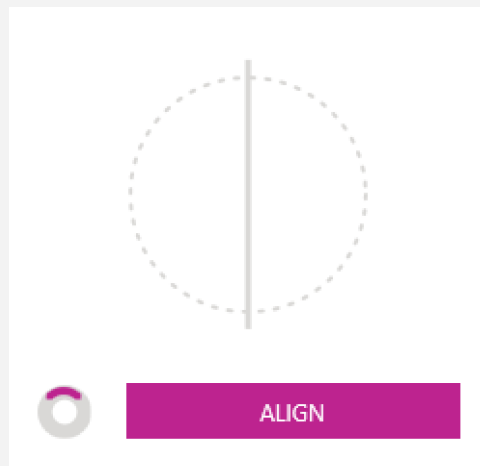


AMT11 & 13 SERIES



1 Current Configuration Card

To program an encoder, select programmable options from the dropdown menus and press the “PROGRAM” button. The status circle will spin while the encoder is being programmed. This will take about 30 seconds. When programming is complete, the circle will appear green.



2 Alignment Card

Typically when aligning an encoder the user must go through a tedious installation process to accurately align the mechanical disk. The AMT encoder is unique in that its index can be set digitally. With the push of a button (or more accurately, the delivery of a serial command), the encoder can be instantly aligned to its current position.

To align an encoder using the AMT Viewpoint, simply press the “ALIGN” button. This action will only take a second. It is finished when the status circle appears completely green. The zero position is now stored in the encoder’s memory and will remain there even after power has been removed.

AMT11 & 13 SERIES

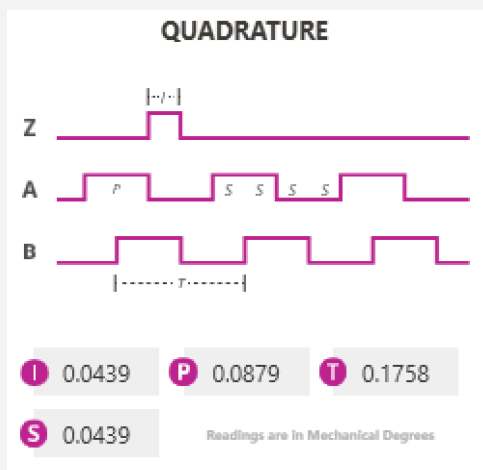


3 Diagnostics Card

Same Sky's encoders allow for the extraction of diagnostic information for quicker field failure analysis. To gather diagnostics from an encoder, click "ACQUIRE DIAGNOSTICS" and wait for the data to be retrieved.

Once data has been acquired it will need to be saved and sent to Same Sky for review. The files can be sent to:

www.sameskydevices.com/contact



4 Waveforms Card

The AMT11 and AMT13 encoders allow for multiple resolutions to be selected. This card calculates the various timing values for each resolution. Select a different resolution to adjust the values.

AMT20 SERIES

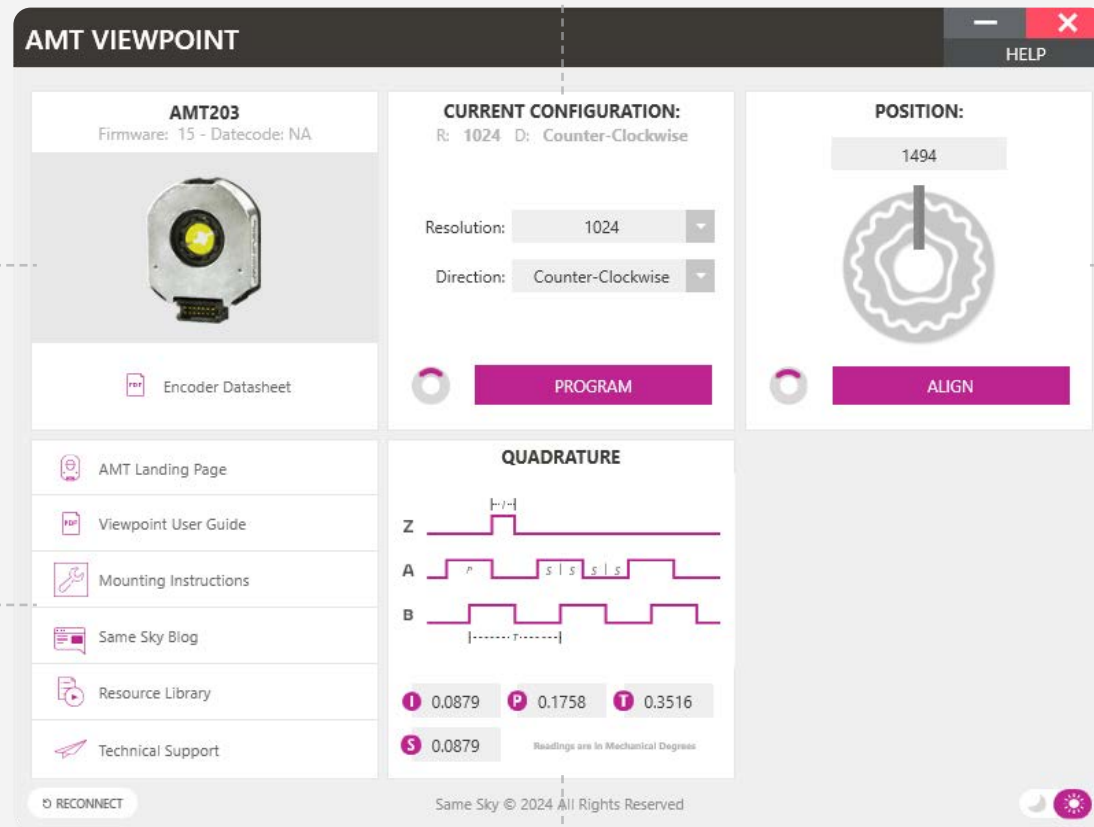
Current Configuration Card

Encoder Overview Card

Position Card

Resource Card

Waveforms Card



AMT20 SERIES

1 Current Configuration Card

To program an encoder, select programmable options from the dropdown menus and press the “PROGRAM” button.

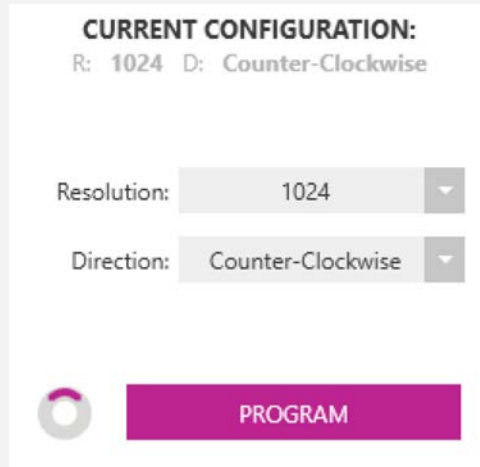
The status circle will spin while the encoder is being programmed. This will take about 4 seconds. When programming is complete, the circle will appear green. The AMT20 does not have the ability to reset itself, so after programming the encoder, it must be power cycled. Once programming is complete a message will appear instructing you to remove the encoder from the programming cable.

2 Position Card

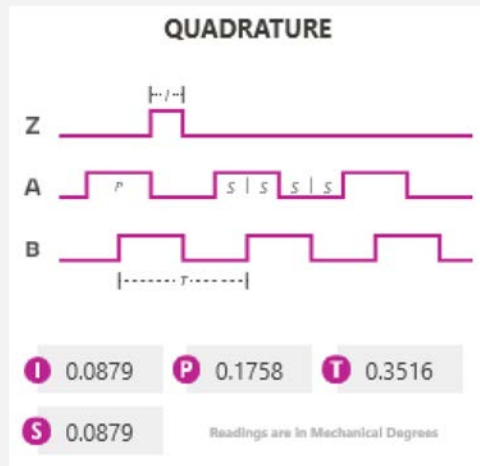
The AMT20 is a digital serial absolute encoder, so with the AMT Viewpoint you have the ability to view the current absolute position, along with the ability to zero set that position.

Typically when aligning an encoder the user must go through a tedious installation process to accurately align the mechanical disk. The AMT encoder is unique in that its zero position can be set digitally. With the push of a button (or more accurately, the delivery of a serial command), the encoder can be instantly aligned to its current position.

[continued]



AMT20 SERIES



To align an encoder using the AMT Viewpoint, simply press the “ALIGN” button. This action will only take a second. It is finished when the status circle appears completely green. The zero position is now stored in the encoder’s memory and will remain there even after power has been removed. Again, the AMT20 does not have the ability to reset itself, so after programming the encoder, it must be power cycled. Once programming is complete a message will appear instructing you to remove the encoder from the programming cable.

3 Waveforms Card

The AMT20 encoder allows for multiple resolutions to be selected. This card calculates the various timing values for each resolution. Select a different resolution to adjust the values.

AMT21 & 24 SERIES

New Firmware Card

Encoder Overview Card

Position Card

Resource Card

Diagnostics Card


Current Configuration Card


AMT VIEWPOINT


HELP


AMT213C


Firmware: 0x11 - Datecode: 0620





 Encoder Datasheet


 AMT Landing Page

 Viewpoint User Guide

 Mounting Instructions


 Same Sky Blog

 Resource Library

 Technical Support

NEW FIRMWARE AVAILABLE

Current: 0x11 - Available: 0x16




UPDATE FIRMWARE

CURRENT CONFIGURATION:

Node Address: 0x54


Node Address: 0x54





SET CONFIGURATION

POSITION: 1512

TURN: 0





 ZERO TURNS



ACQUIRE DIAGNOSTICS

RECONNECT

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AMT21 & 24 SERIES

1 Current Configuration Card

The AMT21 & AMT24 are able to share a bus with multiple encoders. To do this each encoder must have a unique RS485 node address. Select an address from the dropdown list and click “SET CONFIGURATION” to program the encoder with the new address.

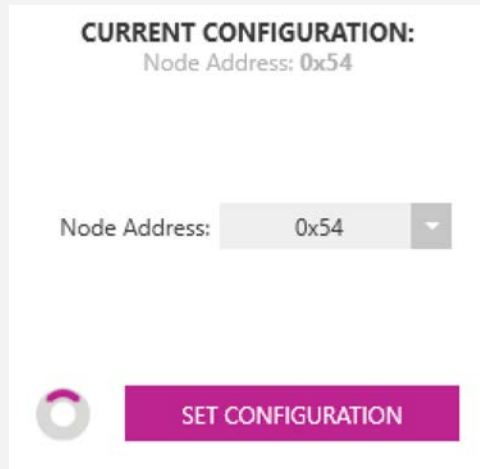
The status circle will spin while the encoder is being programmed. This will take about 4 seconds. When programming is complete, the circle will appear green.

2 Position Card

The AMT21 & AMT24 are digital serial absolute encoders, so with the AMT Viewpoint you have the ability to view the current absolute position, along with the ability to zero set that position.


Typically when aligning an encoder the user must go through a tedious installation process to accurately align the mechanical disk. The AMT encoder is unique in that its zero position can be set digitally. With the push of a button (or more accurately, the delivery of a serial command), the encoder can be instantly aligned to its current position.

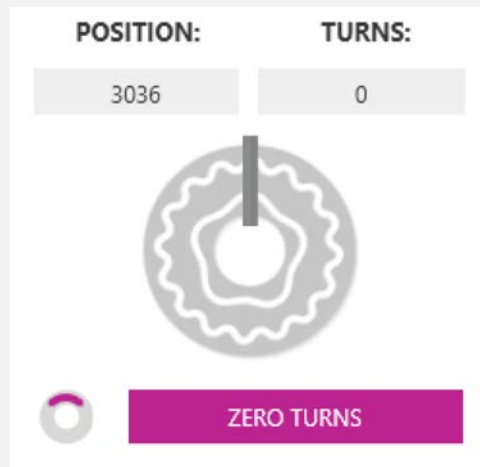
[continued]



CURRENT CONFIGURATION:
Node Address: 0x54


Node Address: 0x54 ▼

 **SET CONFIGURATION**

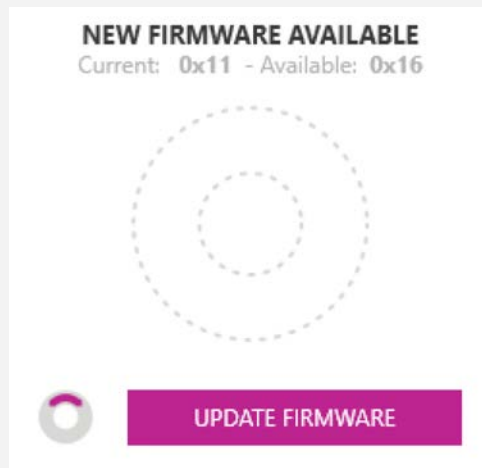


POSITION: 3036 **TURNS:** 0



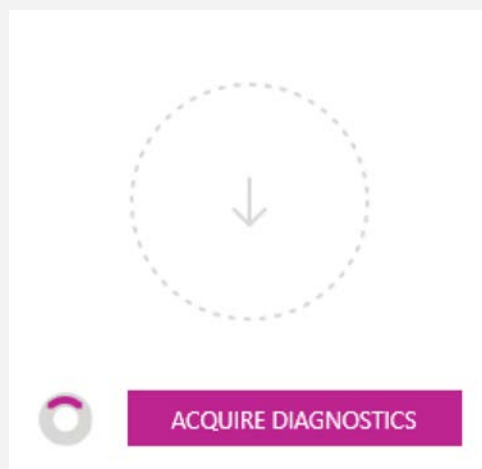
 **ZERO TURNS**

AMT21 & 24 SERIES



3 New Firmware Card

If a firmware update is available, this card will appear showing the newest firmware version. Click “UPDATE FIRMWARE” to update the encoder’s firmware.



4 Diagnostics Card

Same Sky’s encoders allow for the extraction of diagnostic information for quicker field failure analysis. To gather diagnostics from an encoder, click “ACQUIRE DIAGNOSTICS” and wait for the data to be retrieved.

Once data has been acquired it will need to be saved and sent to Same Sky for review. The files can be sent to:

www.sameskydevices.com/contact

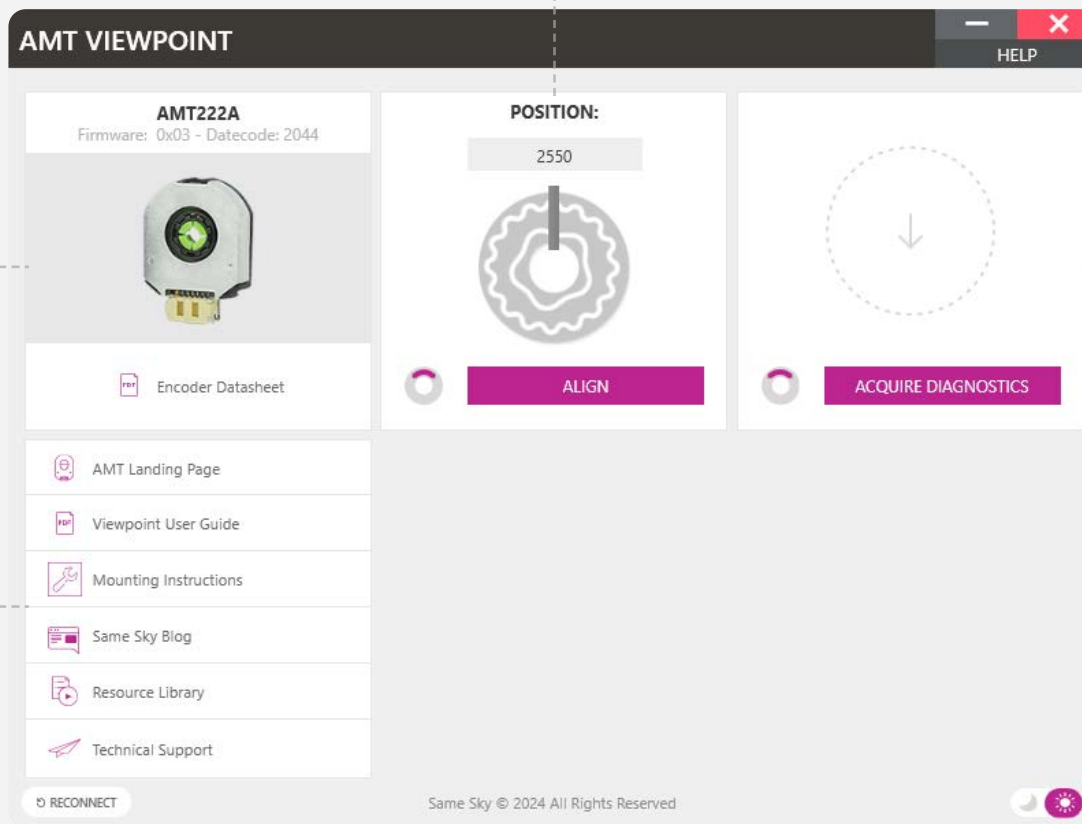
AMT22 & 25 SERIES

Position Card

Encoder Overview Card

Diagnostics Card

Resource Card



AMT22 & 25 SERIES

1 Position Card

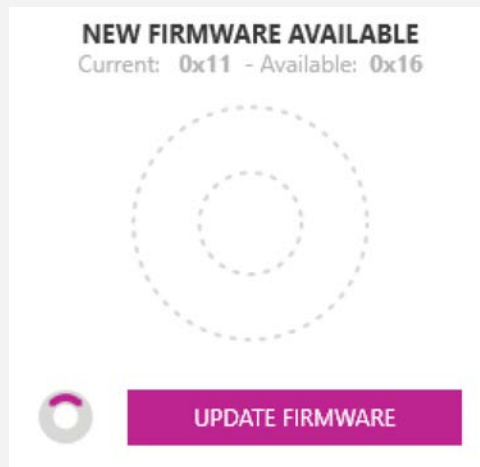
The AMT22 & AMT25 are digital serial absolute encoders, so with the AMT Viewpoint you have the ability to view the current absolute position, along with the ability to zero set that position.

Typically when aligning an encoder the user must go through a tedious installation process to accurately align the mechanical disk. The AMT encoder is unique in that its zero position can be set digitally. With the push of a button (or more accurately, the delivery of a serial command), the encoder can be instantly aligned to its current position.

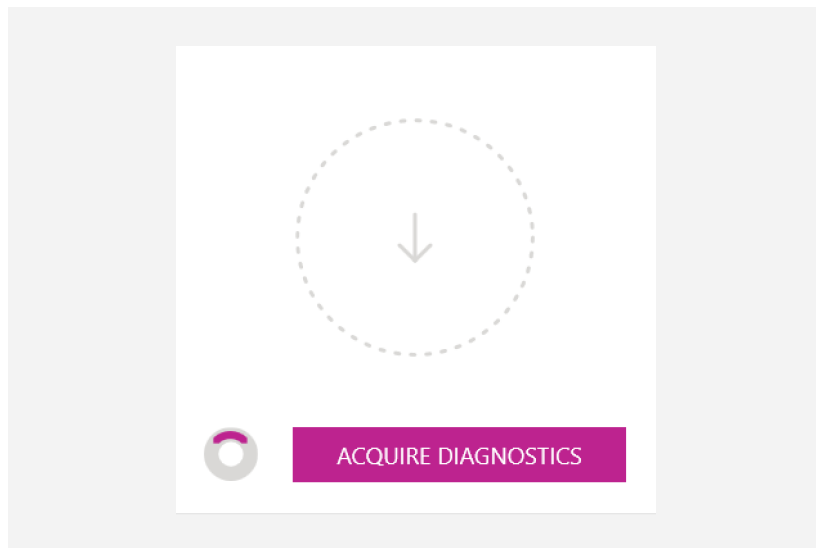
To align an encoder using the AMT Viewpoint, simply press the “ALIGN” button. This action will only take a second. It is finished when the status circle appears completely green. The zero position is now stored in the encoder’s memory and will remain there even after power has been removed.

2 New Firmware Card

If a firmware update is available, this card will appear showing the newest firmware version. Click “UPDATE FIRMWARE” to update the encoder’s firmware.



AMT22 & 25 SERIES



3 Diagnostics Card

Same Sky's encoders allow for the extraction of diagnostic information for quicker field failure analysis. To gather diagnostics from an encoder, click "ACQUIRE DIAGNOSTICS" and wait for the data to be retrieved.

Once data has been acquired it will need to be saved and sent to Same Sky for review. The files can be sent to:

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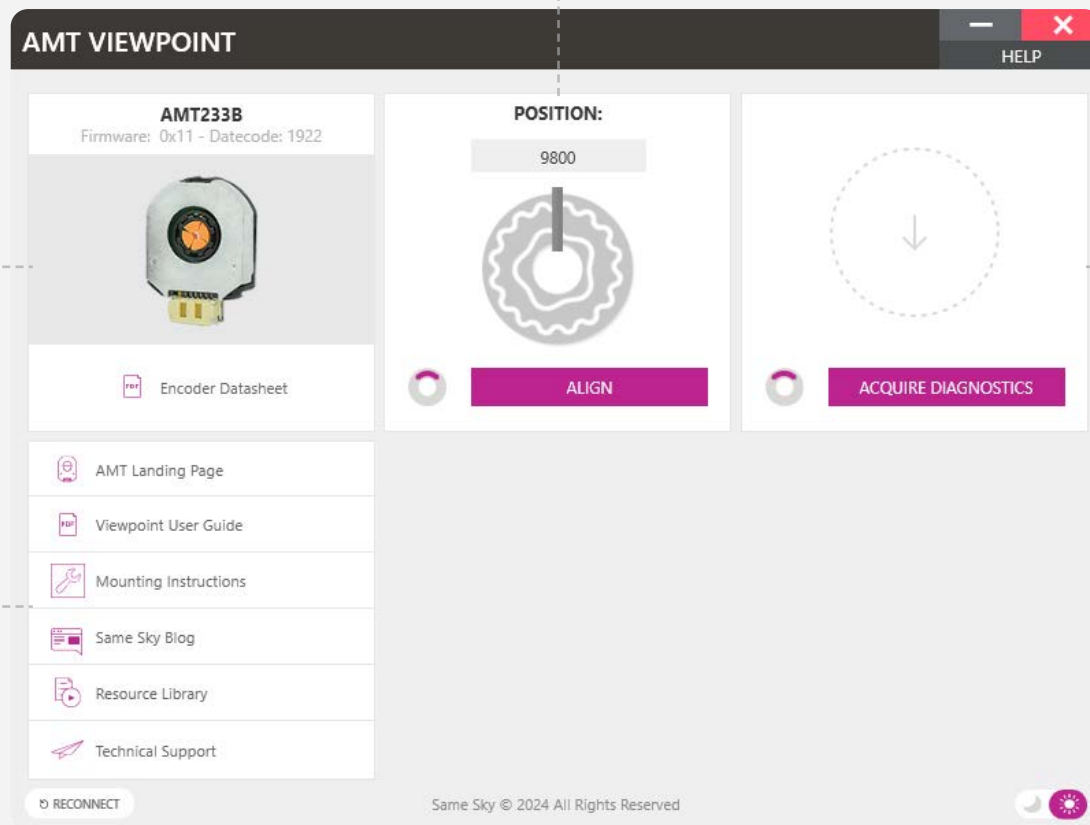
AMT23 SERIES

Position Card

Encoder Overview Card

Diagnostics Card

Resource Card



AMT23 SERIES

1 Position Card

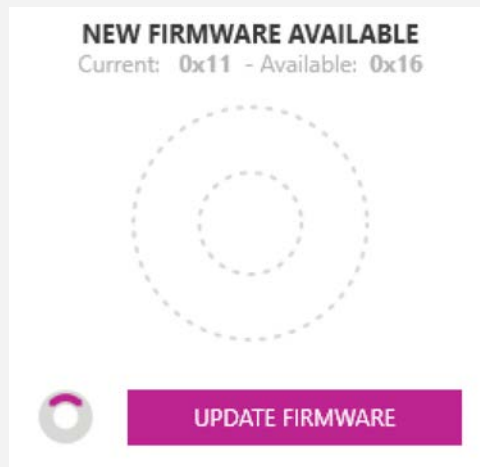
The AMT23 is a digital serial absolute encoder, so with the AMT Viewpoint you have the ability to view the current absolute position, along with the ability to zero set that position.

Typically when aligning an encoder the user must go through a tedious installation process to accurately align the mechanical disk. The AMT encoder is unique in that its zero position can be set digitally. With the push of a button (or more accurately, the delivery of a serial command), the encoder can be instantly aligned to its current position.

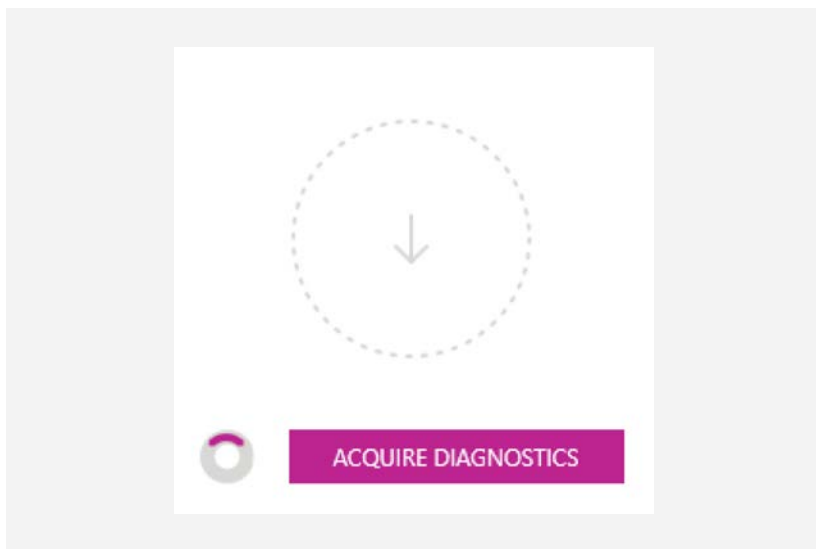
To align an encoder using the AMT Viewpoint, simply press the “ALIGN” button. This action will only take a second. It is finished when the status circle appears completely green. The zero position is now stored in the encoder’s memory and will remain there even after power has been removed.

2 New Firmware Card

If a firmware update is available, this card will appear showing the newest firmware version. Click “UPDATE FIRMWARE” to update the encoder’s firmware.



AMT23 SERIES



3 Diagnostics Card

Same Sky's encoders allow for the extraction of diagnostic information for quicker field failure analysis. To gather diagnostics from an encoder, click "ACQUIRE DIAGNOSTICS" and wait for the data to be retrieved.

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AMT31 & 33 SERIES

Current Configuration Card

Encoder Overview Card

Alignment Card

Resource Card

Waveforms Card

Diagnostics Card

The screenshot displays the AMT VIEWPOINT software interface, which is organized into several functional cards. At the top, a black header bar contains the 'AMT VIEWPOINT' logo on the left and a 'HELP' button on the right. The main content area is divided into three primary sections. The leftmost section, titled 'Encoder Overview Card', features a large image of an encoder unit and a link to the 'Encoder Datasheet'. Below this is a 'Resource Card' containing a list of links: 'AMT Landing Page', 'Viewpoint User Guide', 'Mounting Instructions', 'Same Sky Blog', 'Resource Library', and 'Technical Support'. The central section, labeled 'Current Configuration Card', displays the 'CURRENT CONFIGURATION' for an 'AMT312S' encoder, showing firmware '0x15 - Datecode: 0000'. It includes settings for Resolution (2048), Direction (Counter-Clockwise), and Pole Count (6), each with a dropdown menu. Below these settings are 'PROGRAM' and 'ALIGN' buttons. The rightmost section, the 'Waveforms Card', shows 'QUADRATURE' and 'COMMUTATION' waveforms for channels Z, A, and B. It also displays timing parameters: I (0.0439), P (0.0879), T (0.1758), and S (0.0439), with a note that 'Readings are in Mechanical Degrees'. At the bottom of the interface, there is a 'RECONNECT' button on the left, a copyright notice 'Same Sky © 2024 All Rights Reserved' in the center, and a settings icon on the right.

AMT VIEWPOINT

HELP

AMT312S
Firmware: 0x15 - Datecode: 0000

CURRENT CONFIGURATION:
R: 2048 D: Counter-Clockwise P: 6

Resolution: 2048
Direction: Counter-Clockwise
Pole Count: 6

Encoder Datasheet

AMT Landing Page
Viewpoint User Guide
Mounting Instructions
Same Sky Blog
Resource Library
Technical Support

QUADRATURE **COMMUTATION**

Z
A
B

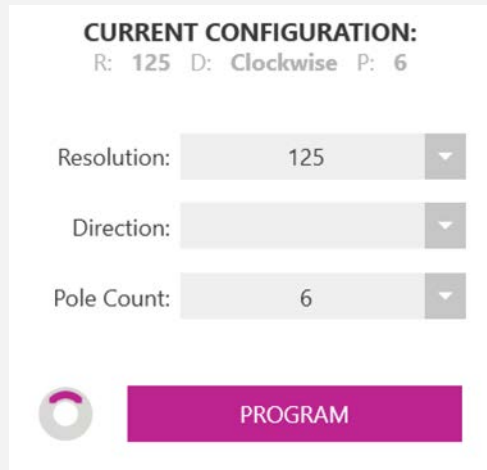
I 0.0439 P 0.0879 T 0.1758
S 0.0439

Readings are in Mechanical Degrees

RECONNECT

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AMT31 & 33 SERIES




CURRENT CONFIGURATION:
R: 125 D: Clockwise P: 6

Resolution: 125

Direction:

Pole Count: 6

 PROGRAM

1 Current Configuration Card

To program an encoder, select programmable options from the dropdown menus and press the “PROGRAM” button.

The status circle will spin while the encoder is being programmed. This will take about 30 seconds. When programming is complete, the circle will appear green.



U V W

 ALIGN

2 Alignment Card

When an AMT31 or AMT33 encoder is loaded into the AMT Viewpoint, the current U/V/W signal states are loaded onto the alignment card. Note that these values do not update in real time but are only loaded during connection and after the encoder programs and aligns.

Typically when aligning an encoder the user must go through a tedious installation process to accurately align the mechanical disk. The AMT encoder is unique in that its index can be set digitally. With the push of a button (or more accurately, the delivery of a serial command), the encoder can be instantly aligned to its current position.

[continued]

AMT31 & 33 SERIES



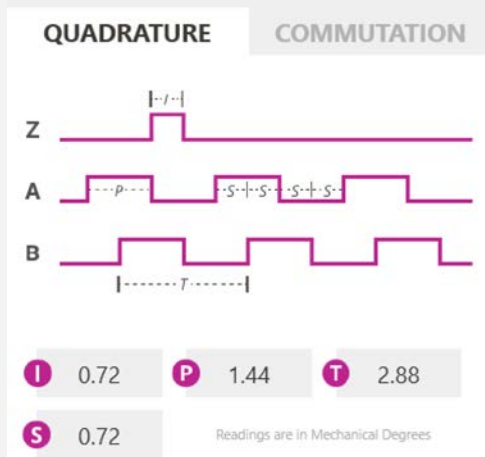
To align an encoder using the AMT Viewpoint, simply press the “ALIGN” button. This action will only take a second. It is finished when the status circle appears completely green. The zero position is now stored in the encoder’s memory and will remain there even after power has been removed. The U/V/W status boxes will update with the newly aligned position.

3 Diagnostics Card

Same Sky’s encoders allow for the extraction of diagnostic information for quicker field failure analysis. To gather diagnostics from an encoder, click “ACQUIRE DIAGNOSTICS” and wait for the data to be retrieved.

Once data has been acquired it will need to be saved and sent to Same Sky for review. The files can be sent to:

www.sameskydevices.com/contact



4 Waveforms Card

The AMT31 and AMT33 encoders allow for multiple resolutions to be selected. This card calculates the various timing values for each resolution. Select a different resolution to adjust the values.

Thank you for downloading the AMT Viewpoint™.

If you have any questions, you can contact us at: www.sameskydevices.com/contact