

May 24, 2021 | V 1.0

Software Function Guide TN056S-E Historic Path Function



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Overview

Cermate Historic Path Function Makes Precision Manufacturing More Efficient

Consumer commodities always have high volume and comprehensive models; the biggest challenge for precision manufacturing is efficiently and effectively producing and reducing extra waste.

Using the Historic Path function on Cermate PM Designer/PanelExpress to generate a visualized chart helps operators quickly determine the production result. Once the accumulated data becomes critical information, the know-how used for cross-check to avoid error happens frequently.

Cermate Products

HMI: PA2 / PK2 / PT2 / PX / IT400 Series Gateway: SX51 / SX52 / ES Series PanelExpress v4.0 version

Software

OS: Windows 7(64 bit) / Windows 10(64 bit) PM Designer: PM Designer v4.0.5.18 or higher version

Software Download Link

Please download the latest PM Designer from the link below.

https://www.cermate.com/downloadsoftware.html

PM Designer v4.0 Setting

1. Add "Data Loggers"

| Project Manager | |
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2. Since the Historic Path function example here will use 3 parameters, so you

have to select at least 3 words for Sample Size (Figure 2).

| Data Logger | | | < |
|--|--|--|-------------------|
| General Data Item Advanced | | | |
| Name: ID: 0 ~ | | | |
| | | Save Data to File | |
| | Storage | | |
| | Battery Backed RAM O RAM (volatile) | | |
| Sample Size: 3 words | | | |
| Number of Samples: 1000 | | | |
| Sampling Method | Sample Full Processing | | |
| () Timed | Stop Sampling | | |
| ○ Triggered | Notify | | |
| ○ Triggered by Event Processor | | | |
| ○ Clocked | | | |
| ○ Timed (sub-second) | External Control | | |
| Passive | Clear Buffer | | |
| O Passive (sub-second) | Enable Sampling | Add a serial number to each record when generating the CSV and TXT files | |
| Data Logging Macro | Publish MQTT Message | Reverse the order of the high word and low word of 32-bit data | |
| | | Use Database | |
| | | | |
| | Latest Recorded Data Word Address: \$L0:0 - \$L0:2 | | |
| | Logging Buffer Size: 10000 words | | |
| Data Arriving Macro Accessible To External Data Logger | | | |
| | | | (Γ: αα. 2) |
| | | 確定 取満 説明 | (Figure 2) |

- 3. Define Data (Figure 3).
 - L0:0 Define as X coordinate
 - L0:1 Define as Y coordinate
 - L0:2 Define as Z coordinate

| D | at | a Logge | r | | |
|---|----|---------|-----------|----------|------------|
| | G | eneral | Data Item | Advanced | |
| | | Addr | Name | | |
| | | L0:0 | x | | |
| | | L0:1 | Y | | |
| | | L0:2 | Z | | |
| | | | _ | | (Figure 3) |

4. Object -> Historic Display -> Historic Path Display (Figure 4).



- 5. Open "Historic Path Display" for the setting (Figure 5).
- Associated Data Logger: Select the data logger

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- X Coordinate: Select L0:0 here for X and define Min/Max
- Y Coordinate: Select L0:1 here for Y and define Min/Max
- Display Quadrant: Set to 1/2/3/4 quadrant

| Historic Path Display | × |
|---|--|
| General Point Selection Axis Visibility Gradient | |
| ID: HSC0000 Note: Shape Transparent Border Color: BG Color: Chart BG Color: | |
| Associated Data Logger (0) Data Source Data Logger) File Display Quadrant: 1 ~ X Coordinate Data Iten: X / V Coordinate Data Iten: Y / V V Coordinate Data Iten: Y / V V V V V V V V V V V V V V V V V V | Z Value Data Item: Z Number of Value Ranges: Image No. Range No. Low Bound (>=) Color 1 (Highest) 7 Image Address 2 6 Image Address 3 5 Image Address 4 4 Image Address 6 2 Image Address 7 1 Image Address 8 (Lowest) Image Address |
| | 確定 取消 說明 (Figu |



6. Z Value: Select L0:2 for Z coordinate and set curve color(up to 8 colors).



7. Define each Color and corresponding Low Bound (Figure 7).

| Z Value | | | | | |
|-----------------------------|----------------|-------|--|--|--|
| Data Item: Z 🗸 | | | | | |
| Number of Value Ranges: 8 ~ | | | | | |
| Range No. | Low Bound (>=) | Color | | | |
| 1 (Highest) | 7 | | | | |
| 2 | 6 | | | | |
| 3 | 5 | | | | |
| 4 | 4 | | | | |
| 5 | 3 | | | | |
| 6 | 2 | | | | |
| 7 | 1 | | | | |
| 8 (Lowest) | | | | | |

(Figure 7)

Real Case (Figure 8)

Historic Path function used on cutting machine, different colors mean defined pressure value, which is to monitor the cutting path to make efficient and effective production.





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