Application Note

FESTO

# Servo press kit YJKP - Parse logging data

Parse logging data of the servo press kit YJKP

YJKP

100133

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# 1 Components/Software used

| Type/Name | Version Software/Firmware | Date of manufacture |
|---|---|---|
| Servo press kit YJKP | general | -- |
| Application software YJKP (GSAY-A4-F0-Z4-1.1.1) | V1.1.1 | -- |
| Firmware controller (CECC-X) | V3.2.10 | -- |
| Firmware motor controller (CMMP-AS) | V4.0.1501.2.3 | -- |

Table 1.1: 1 Components/Software used

# 2 Application description

This application note describes how you can parse the logging data of the servo press kit.

# 3 Parse logging data

## 3.1 Data storage and format

The data storage of the logging file depends on the storage device.
The logging file is stored in CSV-Format.

| Data storage device | Save destination |
|---|---|
| USB | File PressResults.log in the directory (/servo_press/logging) |
| SD card | File PressResults.log in the directory (/servo_press/logging) |

Table 3-1: Data storage devices for logging

## 3.2 Statistics

| Section | Description |
|---|---|
| Part no. | Sequential number of the press process |
| Program name | Name of the program |
| Program ID | ID number of the program |
| Timestamp | Date and time of the press process |
| Result | Result of the press process (TRUE --› OK \| FALSE --› Not OK) |
| Max. position | Maximum electric cylinder position achieved during the whole press process |
| Max. force | Maximum force sensor value achieved during the whole press process |
| NOK source | Information about why the press process was terminated (only with result = not OK)<br>• Digits 1...3 contain the step number of the press process being carried out (example: 010 = step 10)<br>• The last digit contains the actual reason why the press process was terminated (Table: Digit 4 coding) |

Table 3-2: (Statistics)

| Digit 4 coding | Description |
|---|---|
| 1 | Termination by the "Position mode" step |
| 2 | Termination by the "Force mode" step |
| 3 | Termination by the "Digital signal mode" step |
| 4 | Termination due to the waiting time for "Read input" being exceeded (time out) |
| 5 | Termination as a result of the "Windowing" evaluation |
| 6 | Termination as a result of the "Threshold" evaluation |
| 7 | Termination as a result of the "Envelope" evaluation |
| 8 | Press process was terminated manually<br>• When the servo press software has control priority: FALSE at the CECC-X-M1-YJKP - input X3.5<br>• When the host has control priority: FALSE at the host interface - control word bit 4 |

Table 3-3: Digit 4 coding

## 3.3 Curves

| Section | Description |
|---|---|
| No. | Number of recorded curves |

Table 3-4: (Curves)

## 3.4 Intersection (Curve 1-5)

| Section | Description |
|---|---|
| Max. position | Maximum position of curve X |
| Max. force | Maximum force of curve X |
| NOK source | Information about why the press process was evaluated with not OK<br>• Digit 1 contain the evaluation method of the press process being evaluated with not OK (1 = Window, 2 = Threshold, 3 = Envelope)<br>• Digit 1 contain the number of the evaluation method of the press process being evaluated with not OK<br>• Example: Hex code: 203 → Threshold 3 |
| Window X: Intersection | Intersection code see Table 3-6: Window intersection code (1 = Intersection \| 0 = No intersection) |
| Window X: Up side position | Position of up side intersection point |
| Window X: Up side force | Force of up side intersection point |
| Window X: Down side position | Position of down side intersection point |
| Window X: Down side force | Force of down side intersection point |
| Window X: Left side position | Position of left side intersection point |
| Window X: Left side force | Force of left side intersection point |
| Window X: Right side position | Position of right side intersection point |
| Window X: Right side force | Force of right side intersection point |
| Window X: Min. position | Maximum position inside window X |
| Window X: Max. position | Maximum position inside window X |
| Window X: Min. force | Maximum force inside window X |
| Window X: Max. force | Maximum force inside window X |
| Threshold X: Intersection | 1 = Intersection \| 0 = No intersection |
| Threshold X: Position | Position of intersection point |
| Threshold X: Force | Force of intersection point |
| Envelope X: Intersection | Intersection code see Table 3-7: Envelope intersection code (1 = Intersection \| 0 = No intersection) |
| Envelope X: Up side position | Position of up side intersection point |
| Envelope X: Up side force | Force of up side intersection point |
| Envelope X: Down side position | Position of down side intersection point |
| Envelope X: Down side force | Force of down side intersection point |

Table 3-5: Intersection (Curve 1-5)

| Hex Code | Up side | Down side | Left side | Right side |
|---|---|---|---|---|
| 0001 | -- | -- | -- | x |
| 0010 | -- | -- | x | -- |
| 0100 | -- | x | -- | -- |
| 1000 | x | -- | -- | -- |

Table 3-6: Window intersection code

| Hex Code | Up side | Down side |
|---|---|---|
| 01 | -- | x |
| 10 | x | -- |

Table 3-7: Envelope intersection code

## 3.5 Variables

| Section | Description |
|---|---|
| No. | Number of variable |
| Value | Value of variable |

Table 3-8: (Variables)

## 3.6 Sequencer

| Section | Description |
|---|---|
| Steps | Number of steps |
| No. | Number of step |

Table 3-9: Sequencer

**Function:**

| Function | Description |
|---|---|
| 1 | Position mode |
| 2 | Force mode |
| 3 | Digital signal mode |
| 4 | Delay time |
| 5 | Tare |
| 6 | Read input |
| 7 | Set output |
| 8 | Variable |

Table 3-10: Function

**Function position mode:**

| Input | Description |
|---|---|
| 1 | Record (TRUE → Active \| FALSE → Inactive) |
| 2 | Position method (TRUE → Relative \| FALSE → Absolute) |
| 3 | Configuration target position (TRUE → Variable \| FALSE → Value) |
| 4 | Value target position mm |
| 5 | Variable target position |
| 6 | Configuration target distance (TRUE → Variable \| FALSE → Value) |
| 7 | Value target distance mm |
| 8 | Variable target distance |
| 9 | Configuration max. force (TRUE → Variable \| FALSE → Value) |
| 10 | Value max. Force N |
| 11 | Variable max. force |
| 12 | Configuration velocity (TRUE → Variable \| FALSE → Value) |
| 13 | Value velocity mm/s |
| 14 | Variable velocity mm/s |

Table 3-11: Function position mode

**Function force mode:**

| Input | Description |
|---|---|
| 1 | Record (TRUE → Active \| FALSE → Inactive) |
| 2 | Position method (TRUE → Relative \| FALSE → Absolute) |
| 3 | Configuration target position (TRUE → Variable \| FALSE → Value) |
| 4 | Value target force N |
| 5 | Variable target force N |
| 6 | Configuration max. position (TRUE → Variable \| FALSE → Value) |
| 7 | Value max. position mm |
| 8 | Variable max. Position |
| 9 | Configuration max. distance (TRUE → Variable \| FALSE → Value) |
| 10 | Value max. Distance |
| 11 | Variable max. Distance |
| 12 | Configuration velocity (TRUE → Variable \| FALSE → Value) |
| 13 | Value velocity mm/s |
| 14 | Variable velocity mm/s |

Table 3-12: Function force mode

**Function digital signal mode:**

| Input | Description |
|---|---|
| 1 | Record (TRUE → Active \| FALSE → Inactive) |
| 2 | Position method (TRUE → Relative \| FALSE → Absolute) |
| 3 | Digital signal |
| 4 | Configuration max. position (TRUE → Variable \| FALSE → Value) |
| 5 | Value max. position mm |
| 6 | Variable max. position |
| 7 | Configuration max. distance (TRUE → Variable \| FALSE → Value) |
| 8 | Value max. distance |
| 9 | Variable max. distance |
| 10 | Configuration velocity (TRUE → Variable \| FALSE → Value) |
| 11 | Value velocity mm/s |
| 12 | Variable velocity mm/s |
| 13 | -- |
| 14 | -- |

Table 3-13: Function digital signal mode

**Function delay time:**

| Input | Description |
|---|---|
| 1 | Configuration delay time (TRUE → Variable \| FALSE → Value) |
| 2 | Value delay time ms |
| 3 | Variable velocity mm/s |
| 4 | -- |
| 5 | -- |
| 6 | -- |
| 7 | -- |
| 8 | -- |
| 9 | -- |
| 10 | -- |
| 11 | -- |
| 12 | -- |
| 13 | -- |
| 14 | -- |

Table 3-14: Function delay time

**Function tare:**

| Input | Description |
|---|---|
| 1 | Tare (TRUE → Active \| FALSE → Inactive) |
| 2 | Configuration offset (TRUE → Variable \| FALSE → Value) |
| 3 | Value offset N |
| 4 | Variable offset |
| 5 | -- |
| 6 | -- |
| 7 | -- |
| 8 | -- |
| 9 | -- |
| 10 | -- |
| 11 | -- |
| 12 | -- |
| 13 | -- |
| 14 | -- |

Table 3-15: Function tare

**Function read input:**

| Input | Description |
|---|---|
| 1 | Number of input |
| 2 | Read input (TRUE → TRUE \| FALSE → FALSE) |
| 3 | -- |
| 4 | -- |
| 5 | -- |
| 6 | -- |
| 7 | -- |
| 8 | -- |
| 9 | -- |
| 10 | -- |
| 11 | -- |
| 12 | -- |
| 13 | -- |
| 14 | -- |

Table 3-16: Function read input

**Function set output:**

| Input | Description |
|---|---|
| 1 | Number of output |
| 2 | Set output (TRUE → TRUE I FALSE → FALSE) |
| 3 | -- |
| 4 | -- |
| 5 | -- |
| 6 | -- |
| 7 | -- |
| 8 | -- |
| 9 | -- |
| 10 | -- |
| 11 | -- |
| 12 | -- |
| 13 | -- |
| 14 | -- |

Table 3-17: Function set output

**Function variable:**

| Input | Description |
|---|---|
| 1 | Number of variable |
| 2 | Value of variable |
| 3 | -- |
| 4 | -- |
| 5 | -- |
| 6 | -- |
| 7 | -- |
| 8 | -- |
| 9 | -- |
| 10 | -- |
| 11 | -- |
| 12 | -- |
| 13 | -- |
| 14 | -- |

Table 3-18: Function variable

## 3.7 Recipes

| Section | Description |
|---|---|
| No. | Number of recipes |

Table 3-19: Recipes

## 3.8 Windowing, threshold, envelope (Curve 1-5)

| Section | Description |
|---|---|
| Windowing: Active | Windowing configuration (TRUE → Active I FALSE → Inactive) |
| Windowing Window X: Active | Window X configuration (TRUE → Active I FALSE → Inactive) |
| Windowing Window X: Conig. | Position method (TRUE → Relative I FALSE → Absolute) |
| Windowing Window X: Config. min. position | Configuration min. position (TRUE → Variable I FALSE → Value) |
| Windowing Window X: Min. position value | Value min. position |
| Windowing Window X: Min. position variable | Variable min. position |
| Windowing Window X: Config. max. position | Configuration max. position (TRUE → Variable I FALSE → Value) |
| Windowing Window X: Max. position value | Value max. position |
| Windowing Window X: Max. position variable | Variable max. position |
| Windowing Window X: Config. min. force | Configuration min force (TRUE → Variable I FALSE → Value) |
| Windowing Window X: Min. force value | Value min. force |
| Windowing Window X: Min. force variable | Variable min. force |
| Windowing Window X: Config. max. force | Configuration max. force (TRUE → Variable I FALSE → Value) |
| Windowing Window X: Max. force value | Value max. force |
| Windowing Window X: Max. force variable | Variable max. force |
| Windowing Window X: Config. down side | 0 = Don ‘t care<br>1 = Forbidden<br>2 = In<br>3 = Out |
| Threshold: Active | Threshold configuration (TRUE → Active I FALSE → Inactive) |
| Threshold Threshold X: Active | Threshold X configuration (TRUE → Active I FALSE → Inactive) |
| Threshold Threshold X: Config. | Position method (TRUE → Relative I FALSE → Absolute) |
| Threshold Threshold X: Mode | Threshold mode (TRUE → Force I FALSE → Position) |
| Threshold Threshold X: Config. position | Configuration position (TRUE → Variable I FALSE → Value) |
| Threshold Threshold X: Position value | Value position |
| Threshold Threshold X: Position variable | Variable position |
| Threshold Threshold X: Config. min. position | Configuration min. position (TRUE → Variable I FALSE → Value) |
| Threshold Threshold X: Min. position value | Value min. position |
| Threshold Threshold X: Min. position variable | Variable min. position |
| Threshold Threshold X: Config. max. position | Configuration max. position (TRUE → Variable I FALSE → Value) |
| Threshold Threshold X: Max. position value | Value max. position |

| Section | Description |
|---|---|
| Threshold Threshold X: Max. position variable | Variable max. position |
| Threshold Threshold X: Config. force | Configuration force (TRUE → Variable I FALSE → Value) |
| Threshold Threshold X: Force value | Value force |
| Threshold Threshold X: Force variable | Variable force |
| Threshold Threshold X: Config. min. force | Configuration min. force (TRUE → Variable I FALSE → Value) |
| Threshold Threshold X: Min. force value | Value min. force |
| Threshold Threshold X: Min. force variable | Variable min. force |
| Threshold Threshold X: Config. max. force | Configuration max. force (TRUE → Variable I FALSE → Value) |
| Threshold Threshold X: Max. force value | Value max. force |
| Threshold Threshold X: Max. force variable | Variable max. force |
| Threshold Threshold X: Config | 0 = Up<br>1 = Down<br>2 = Left<br>3 = Right |
| Envelope: Active | Envelope configuration (TRUE → Active I FALSE → Inactive) |
| Envelope Envelope X: Active | Envelope X configuration (TRUE → Active I FALSE → Inactive) |
| Envelope Envelope X: Conig. | Position method (TRUE → Relative I FALSE → Absolute) |
| Envelope Envelope X: Points up side | Number of points up side |
| Envelope Envelope X: No. | Number of envelope points |
| Envelope Envelope X: Config. force | Configuration force (TRUE → Variable I FALSE → Value) |
| Envelope Envelope X: Force value | Value force |
| Envelope Envelope X: Force variable | Variable force |
| Envelope Envelope X: Config. position | Configuration position (TRUE → Variable I FALSE → Value) |
| Envelope Envelope X: Position value | Value position |
| Envelope Envelope X: Position variable | Variable position |
| Envelope Envelope X: Points down side | Number of points up side |
| Envelope Envelope X: No. | Number of envelope points |
| Envelope Envelope X: Config. force | Configuration force (TRUE → Variable I FALSE → Value) |
| Envelope Envelope X: Force value | Value force |
| Envelope Envelope X: Force variable | Variable force |
| Envelope Envelope X: Config. position | Configuration position (TRUE → Variable I FALSE → Value) |
| Envelope Envelope X: Position value | Value position |
| Envelope Envelope X: Position variable | Variable position |

Table 3-20: Windowing, threshold, envelope (Curve 1-5)