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Parameters and alarms

ObiFold V0100

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1) Machineparameters

1.1) *Overview machine parameters*

01 Reserved
02 Reserved
03 Reserved
04 Reserved
05 Reserved
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07 Reserved
08 Reserved
09 Reserved
10 Reserved
11 Minimum ski width
12 Maximum ski width
13 Reserved
14 Reserved
15 Photocell filter time
16 Reserved
17 Reserved
18 Reserved
19 Reserved
20 Reserved
21 Speed of lengthfold belts
22 Measurement stop correction
23 Maximum total lengthfold blow time
24 Reserved
25 Maximum length at feed-in photocell
26 Distance to begin of blowpipes
27 Position of left lengthfold photocell
28 Position of right lengthfold photocell
29 Waiting position for left blowpipe
30 Waiting position for right blowpipe
31 Maximum waiting position in lengthfold
32 Time-out distance crossfold photocell
33 Reserved
34 Reserved
35 Reserved
36 Distance photocell to 1st crossfold
37 Distance 1st crossfold to 2nd crossfold
38 Waiting position in crossfold
39 Time-out distance stacker photocell
40 Maximum length at stacker photocell
41 Reserved
42 Reserved
43 Reserved
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45 Reserved
46 Delay reverse 1st crossfold
47 Delay blowpipe 1st crossfold
48 Delay reverse 2nd crossfold
49 Delay blowpipe 2nd crossfold
50 Reserved
51 Stack position stacker 1
52 Stack position stacker 2
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54 Maximum piecelength for stacker

55 Stacker throw out distance
56 Delay stop stacker motor / open flaps
57 Time open stacker flaps
58 Reserved
59 Reserved
60 Reserved
61 Delay start conveyor after stacking
62 Conveyor shift time
63 Delay conveyor cylinder back
64 Direction of central conveyor
65 Speed of central conveyor
66 Width of one stacker
67 Standby time central conveyor
68 Reserved
69 Reserved
70 Reserved
71 Position to reject pieces
72 Shift stacker at program change
73 Reserved
74 Reserved
75 Reserved
76 Reserved
77 Reserved
78 Reserved
79 Reserved
80 Reserved
81 Reserved
82 Reserved
83 Reserved
84 Reserved
85 Reserved
86 Reserved
87 Reserved
88 Reserved
89 Reserved
90 Reserved
91 Reserved
92 Reserved
93 Reserved
94 Reserved
95 Reset counters without password
96 Automatic reset of warnings
97 First warn in case of lengthfold jam
98 Reserved
99 Reserved
100 CAN-bus station number this PLC
101 CAN-bus baudrate
102 Delay return to home screen
103 Reserved
104 Reserved
105 Reserved
106 Reserved
107 Reserved
108 Reserved
109 Reserved
110 Reserved

1.2) Machine parameters details

06 Standby time

When the machine isn't used for this time, it will automatically switch off. Time is in seconds. A value of 0 disables the standby time.

11 Minimum ski width

The ski width in case the proximity switch of the minimum position is covered. Value is in millimeters.

12 Maximum ski width

The ski width in case the proximity switch of the maximum position is covered. Value is in millimeters.

15 Photocell filter time

The filter time of the photocells in milliseconds (0,001s). If a photocell is (un)covered for a time shorter than this time, the software will ignore the signal.

21 Speed of lengthfold belts

The speed of the lengthfold conveyor in steps of 0,1 meters/minute.

22 Measurement stop correction

In case of a stop on the backside when feeding, the measured length is corrected with this value (millimeters). The standard value of this parameter is 100.

23 Maximum total lengthfold blow time

The maximum blowtime on one side in the lengthfold in milliseconds (0,001s). After this time, the blowing cycle is stopped, even if the photocell is still covered.

25 Maximum length at feed-in photocell

The maximum allowed length of a piece at the feed-in photocell in millimeters. When a piece is detected which is longer than this distance, the machine is stopped and an alarm is displayed.

26 Distance to begin of blowpipes

The distance between the feed-in photocell and the beginning of the blowpipes of the lengthfold in millimeters.

27 Position of left lengthfold photocell

The distance between the feed-in photocell and the left photocell in the lengthfold section in millimeters.

28 Position of right lengthfold photocell

The distance between the feed-in photocell and the right photocell in the lengthfold section in millimeters.

29 Waiting position for left blowpipe

The distance between the feed-in photocell and the position where the piece will wait until the left lengthfold is made. Distance is in millimeters.

30 Waiting position for right blowpipe

The distance between the feed-in photocell and the position where the piece will wait until the right lengthfold is made. Distance is in millimeters.

31 Maximum waiting position in lengthfold

The distance between the feed-in photocell and the position where the piece will wait until the crossfold is ready and the lengthfold is finished. Distance is in millimeters.

32 Time-out distance crossfold photocell

The maximum distance between the feed-in photocell and the moment the piece has to be detected by the crossfold photocell. Distance is in millimeters.

36 Distance photocell to 1st crossfold

The distance between the crossfold photocell and the folding point of the 1st crossfold. Distance is in millimeters.

37 Distance 1st crossfold to 2nd crossfold

The distance between the 1st crossfold photocell and the 2nd crossfold. Distance is in millimeters.

38 Waiting position in crossfold

The distance between the 2nd crossfold and the position where the piece waits until the stacker is ready for a new piece. Distance is in millimeters.

39 Time-out distance stacker photocell

The maximum distance between the 2nd crossfold and the moment the piece has to be detected by the stacker photocell. Distance is in millimeters.

40 Maximum length at stacker photocell

The maximum allowed length of a piece at the stacker photocell in millimeters. When a piece is detected which is longer than this distance, the machine is stopped and an alarm is displayed.

46 Delay reverse 1st crossfold

The delay between the moment the folding point of the 1st crossfold is reached and the moment the belts of the 1st crossfold reverse. Time is in milliseconds.

47 Delay blowpipe 1st crossfold

The delay between the moment the folding point of the 1st crossfold is reached and the moment the blowpipes of the 1st crossfold start. Time is in milliseconds.

48 Delay reverse 2nd crossfold

The delay between the moment the folding point of the 2nd crossfold is reached and the moment the belts of the 2nd crossfold reverse. Time is in milliseconds.

49 Delay blowpipe 2nd crossfold

The delay between the moment the folding point of the 2nd crossfold is reached and the moment the blowpipes of the 2nd crossfold start. Time is in milliseconds.

51 Stack position stacker 1

The distance between the stacker photocell and the stack position of stacker 1. Distance is in millimeters.

52 Stack position stacker 2

The distance between the stacker photocell and the stack position of stacker 2. Distance is in millimeters.

53 Stack position stacker 3

The distance between the stacker photocell and the stack position of stacker 3. Distance is in millimeters.

54 Maximum piecelength for stacker

The maximum length of a piece in millimeters which the stacker is allowed to stack. Pieces longer than this length will not be stacked but thrown out after the stacker.

55 Stacker throw out distance

When a piece has to be rejected, this is the distance in millimeters the stacker continues running to throw out the piece.

56 Delay stop stacker motor / open flaps

The delay between stopping the stacker conveyor and opening the flaps. Is used to make sure the conveyor is completely stopped before the flaps are opened. Time is in milliseconds.

57 Time open stacker flaps

The time the stacker flaps are opened when a piece is stacked. Time is in milliseconds.

61 Delay start conveyor after stacking

When the stacker flaps open to stack the last piece of a stack, the conveyor will wait for this time before the stack is shifted. Time is in milliseconds.

62 Conveyor shift time

The time the cylinder of a conveyor is activated to put a stack onto the central conveyor. Time is in milliseconds.

63 Delay conveyor cylinder back

The time the cylinder of a stacker needs to return to rest position after putting a stack onto the central conveyor. Time is in milliseconds.

64 Direction of central conveyor

The direction of the central conveyor. Value 0 means the conveyor runs from the first to the last stacker (towards the operator). Value 1 means the other way around (away from the operator).

65 Speed of central conveyor

The speed of the central conveyor in dm/minute (0,1 meters/minute).

66 Width of one stacker

The width of a stacker conveyor in millimeters.

67 Standby time central conveyor

When a stack is put onto the central conveyor, the conveyor continues running for this time. Time is in seconds. A value of 0 means that the conveyor will not go into standby.

71 Position to reject pieces

The location where pieces are rejected when the reject button is pushed.

0 = No reject

1 = At 1st crossfold

2 = At 2nd crossfold

3 = After stacker

72 Shift stacker at program change

The moment the stackers are emptied in case of a program change.

0 = No emptying

1 = When program changes

2 = When first piece arrives at stacker

95 Reset counters without password

When this parameter has a value of 1, counters per program can be reset without the need of a password.

96 Automatic reset of warnings

A value of 1 means that warnings are automatically reset when the next piece doesn't cause the warning. In case of a value of 0, warnings can only be reset with the startbutton on the control panel.

97 First warn in case of lengthfold jam

Value 1 means that when a piece doesn't arrive at the crossfold photocell, first a warning is given.

Value 0 means that the machine will stop on the first error.

100 CAN-bus stationnumber this PLC

Stationnumber of this PLC. Every PLC in a CAN network has to have a unique stationnumber.

101 CAN-bus baudrate

Baudrate/communication-speed of this PLC. Every PLC in a CAN network has to be adjusted

to the same baudrate.

102 Delay return to home screen

When the main screen is not activated, and the screen isn't used for this time, the main screen will be activated again. Steps of seconds (0=disabled).

2) Program parameters, general adjustments

2.1) Overview program parameters, general adjustments

- 01 Feeding method
- 02 Delay start feeding conveyor
- 03 Run time feeding conveyor
- 04 Stop piece on backside
- 05 Lengthlimit piece type A/B
- 06 Lengthlimit piece type B/C
- 07 Reserved
- 08 Reserved
- 09 Reserved
- 10 Use photocell width measurement
- 11 Hole compensation
- 12 Ski'
- 13 Reserved
- 14 Reserved
- 15 Reserved
- 16 Reserved
- 17 Reserved
- 18 Reserved
- 19 Reserved
- 20 Reserved

2.2) Program parameters, general adjustments details

01 Feeding method

- 0 = Continuously
- 1 = Continuously, but stop when lengthfold busy
- 2 = Start on photocell
- 3 = Start on button

02 Delay start feeding conveyor

The time the photocell on the feeding conveyor must be covered before the conveyor starts. Time is in milliseconds. Feeding method must be set to 2.

03 Run time feeding conveyor

The time the feeding conveyor runs to bring the piece into the lengthfold section. Time is in milliseconds.

04 Stop piece on backside

Value 1 means that the feeding conveyor makes an extra stop on the back of the piece to be able to make some manual corrections. Value 0 means no stop.

05 Lengthlimit piece type A/B

The limit in millimetres between pieces of type A and type B. Pieces shorter than this limit will be of type A.

06 Lengthlimit piece type B/C

The limit in millimetres between pieces of type B and type C. Pieces longer than this limit will be of type C.

10 Use photocell width measurement

0 = Don't use photocell

1 = Photocell is limit A/B

2 = Photocell is limit B/C

11 Hole compensation

The maximum size of a hole in a piece which has to be corrected by the software. Size is in millimeters. This parameter reduces the maximum piece length.

12 Ski's smaller after lengthfold

When this parameter is 1, the ski's will go smaller when the piece is still in the lengthfold. This increases production, but can decrease folding quality.

3) Program parameters, adjustments per piece type

3.1) Overview program parameters, adjustments per piece type

- 01 Lengthfold type
- 02 Ski/lengthfold width
- 03 Reserved
- 04 No stop in lengthfold
- 05 Time lengthfold blowpipe on
- 06 Time lengthfold blowpipe off
- 07 Extra time blowpipes lengthfold
- 08 Fast start blowpipes lengthfold
- 09 Reserved
- 10 Crossfold type
- 11 Crossfold fixed format
- 12 Reverse piece at 1st crossfold
- 13 Reverse piece at 2nd crossfold
- 14 Folding point 1st crossfold
- 15 Folding point 2nd crossfold
- 16 Blowtime 1st crossfold
- 17 Blowtime 2nd crossfold
- 18 Reserved
- 19 Reserved
- 20 Reserved
- 21 Stacker number
- 22 Stacking height
- 23 Couple stacker 2 with 1
- 24 Couple stacker 3 with 2
- 25 Reserved

3.2) Program parameters, adjustments per piece type details

01 Lengthfold type

Lengthfold setting

- 0 = No lengthfold
- 1 = 1 lengthfold (left)
- 2 = French fold

02 Ski/lengthfold width

The width of the ski's in the lengthfold in millimeters.

04 No stop in lengthfold

Value 0 means that the stoptime in the lengthfold is automatically calculated. This can be overruled with a value of 1. In this case, no stop is made, but this can cause jams.

05 Time lengthfold blowpipe on

When the machine makes a lengthfold, the blowpipes will be switched on and off. This parameter is the time in milliseconds, the blowpipe is on.

06 Time lengthfold blowpipe off

When the machine makes a lengthfold, the blowpipes will be switched on and off. This parameter is the time in milliseconds, the blowpipe is off.

07 Extra time blowpipes lengthfold

The time a blowpipe in the lengthfold continues after the photocell is free. Time is in milliseconds.

08 Fast start blowpipes lengthfold

Value 1 is that the lengthfold blowpipes don't wait for the ski's to be in position. Value 0 means that the lengthfold will wait for the ski's.

10 Crossfold type

Crossfold setting

- 0 = No crossfold
- 1 = 1 cross on 1st fold
- 2 = 1 cross on 2nd fold
- 3 = French fold
- 4 = 2 crossfolds

11 Crossfold fixed format

Value 0 is no fixed format. Other value is the size of the piece at the stacker in mm.

12 Reverse piece at 1st crossfold

When bypassing the 1st crossfold, the piece will be reversed when the value is 1. A value of 0 means a bypass on the front side of the piece.

13 Reverse piece at 2nd crossfold

When bypassing the 2nd crossfold, the piece will be reversed when the value is 1. A value of 0 means a bypass on the front side of the piece.

14 Folding point 1st crossfold

The folding point or overlap of the 1st crossfold in millimeters. The standard value of this parameter is 100.

15 Folding point 2nd crossfold

The folding point or overlap of the 2nd crossfold in millimeters. The standard value of this parameter is 100.

16 Blowtime 1st crossfold

The time the blowpipe at the 1st crossfold are activated. Time is in milliseconds.

17 Blowtime 2nd crossfold

The time the blowpipes at the 2nd crossfold are activated. Time is in milliseconds.

21 Stacker number

The stacker where the pieces are stacked. Stacker 1 is the stacker closest to the crossfold.

22 Stacking height

When a stack reaches this number of pieces, the conveyor is activated and a new stack starts.

23 Couple stacker 2 with 1

Value 1 means that stacker 2 also uses stacker 1. Can be used in case of long pieces. If the value is 0, only stacker 2 is used.

24 Couple stacker 3 with 2

Value 1 means that stacker 3 also uses stacker 2. Can be used in case of long pieces. If the value is 0, only stacker 3 is used.

4) Alarms

001 EMERGENCY STOP

One of the emergency stops on the machine is/has been pushed. When no emergency switch is active anymore, the emergency stop can be reset with the 'reset' button.

002 MOTOR THERMICAL OFF

The thermal protection of one of the motors is active. Check if the concerning motor is jammed and release the protection again.

006 ERROR INVERTER

One of the frequency inverters is in alarm (motor stuck?). Reset can be done by switching off the inverter with the emergency stop and wait for about 20 seconds.

010 OBJECT OVERFLOW

Internal error. Too many pieces in the memory of the PLC. Restart the PLC.

011 SKI ENCODER ERROR

During the movement of the ski's, no encoder pulses have been detected for too long. Can be caused by a malfunction of the encoder of the motor.

015 FEED-IN PHOTOCCELL COVERED

When the machine must start, the photocell at the start of the lengthfold section must be free. Remove pieces at this photocell and try again.

016 PIECES TOO CLOSE LENGTHFOLD

A new piece arrived in the lengthfold section while the previous piece wasn't finished. Remove the new piece and restart the machine.

020 ERROR BLOWPIPE LEFT

After the maximum blowtime, the left photocell in the lengthfold is still covered. Remove the piece and restart the machine.

021 ERROR BLOWPIPE RIGHT

After the maximum blowtime, the right photocell in the lengthfold is still covered. Remove the piece and restart the machine.

024 JAM FEED-IN PHOTOCCELL

The photocell at the start of the lengthfold section has been covered too long. Remove the piece and restart the machine.

025 JAM IN LENGTHFOLD

A piece didn't arrive at the photocell at the start of the crossfold section. If the piece is jammed, remove it and restart the machine.

026 JAM IN CROSSFOLD

A piece didn't arrive at the photocell at the start of the stacker section. If the piece is jammed, remove it and restart the machine.

027 JAM STACKER PHOTOCCELL

The photocell at the start of the stacker section has been covered too long. Remove the piece and restart the machine.

061 Jam in lengthfold

A piece didn't arrive at the photocell at the start of the crossfold section. If this happens twice, the machine will be stopped.

070 Fixed format not possible

The adjusted fixed format can't be reached because the length of the piece doesn't make this possible. Increase the format of the fixed format parameter.

098 Battery almost empty

The battery in the PLC is almost empty. It has to be replaced every year. Replace the battery as soon as possible to prevent loss of data.

099 CPU temperature too high

The temperature of the PLC-processor is too high. Reason can be a broken fan or a too high environment temperature.

128 Waiting for start

The machine is waiting for a start signal to be given by the startbutton.

130 Operating

The machine is running, no alarms or other notifications.