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Parameters and alarms

Multifold Super V0102

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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 Run time feed conveyor when no piece
When the lengthfold conveyor is started with one of the switches under the belts, this is the time the conveyor runs. If no piece is detected at the lengthfold section after this time, the conveyor will be stopped. Time is in ms (0,001s).

12 Minimum piece length
If the photocell at the beginning of the lengthfold section detects a piece shorter than this length (mm), this piece is ignored and a warning is displayed.

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 belts
The speed of the belts in 0,1 meters/minute. Is used to measure the length of the piece and to convert millimeter units to time units.

22 Measurement backside 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.

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 Basic stopposition in lengthfold
The center of the piece will be stopped in this position to make the lengthfold. This position can be overruled by parameter 27 or when the previous piece is still in the lengthfold when the piece arrives in this position. Value is in millimeters.

27 Minimum stopposition in lengthfold
The lengthfold will not stop for folding until the front side of the piece has passed this position in the lengthfold (mm). Is used to be sure the previous piece is out of the lengthfold when the next piece arrives at fold position.

28 Delay start ski width adjustment
The ski width will not be adjusted until the backside of the piece is this far in the lengthfold (seen from the photocell at the beginning of the lengthfold section). Value is in mm.

31 Maximum waiting position in lengthfold
If a piece arrives in the lengthfold stopposition, but the previous piece is still in the lengthfold, the lengthfold will continue running, but only until the front of the piece has reached this position. Value is in mm.

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. Otherwise the machine will give an error or a warning. 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 folding point and the 2nd crossfold folding point. Distance is in millimeters.

38 Moment fingers 1st crossfold up
The moment the fingers of the 1st crossfold go up after the front of the piece passed the photocell at the beginning of the crossfold section. Value is in millimeters.

39 Distance fingers 1st crossfold up
The distance the fingers of the 1st crossfold stay up to transport the piece on the 1st crossfold belts. Distance is in millimeters.

46 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. Otherwise the machine will give an error. Distance is in millimeters.

47 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.

48 Wait function when stacker not ready
0 = Don't wait. Throw piece out when they are too close at the stacker.
1 = Wait in crossfold. See parameter 49.
2 = Wait in lengthfold until crossfold and stacker are both ready.

49 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. Value is in mm. Waiting position should be before the photocell at the beginning of the stacker section.

51 Stack position stacker 1
The distance between the stacker photocell and the stack position of stacker 1. Distance is in millimeters. Stop position is calculated in relation to the front of the piece.

52 Stack position stacker 2
The distance between the stacker photocell and the stack position of stacker 2. Distance is in millimeters. Stop position is calculated in relation to the front of the piece.

53 Stack position stacker 3
The distance between the stacker photocell and the stack position of stacker 3. Distance is in millimeters. Stop position is calculated in relation to the front of the piece.

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 after the piece has reached the last stacker. This is to throw out the piece.

56 Delay stop stackermotor / 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 shifter after stacking
When the stacker flaps open to stack the last piece of a stack, the shifters to push the stack away will wait for this time. Is used to be sure the piece is well on the stack before the stack is moved. Value is in milliseconds.

62 Time of shifter when shifting
The time the cylinders of the shifters are activated in case of a program change or when the button on the control panel is pushed. Time is in milliseconds.

63 Delay shifter cylinder back
The time the cylinder of a shifter needs to return to rest position after pushing away a completed stack. Value is in milliseconds and is used to be sure the next piece will only be stacked when the shifter is back in place.

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). Is used to make sure stacks are not pushed against each other on this conveyor.

66 Width of one stacker
The maximum width of a completed stack in millimeters. Is used to make sure stacks are not pushed against each other on the central conveyor.

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.

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.

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.

98 Counter to display in overview screen
The counter values drawn in the machine picture in the overview screen
0 = Total counters
1 = Counters of current program
2 = Counters of today

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/communicationspeed 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 Vacuum below feeding belts on
03 Reserved
04 Stop piece on backside
05 Lengthlimit piece type A/B
06 Lengthlimit piece type B/C
07 Reserved
08 Reserved
09 Reserved
10 Reserved
11 Hole compensation
12 Reserved
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 = Start on switches under belts. Subprogram is selected by switch number.
2 = Start on switches under belts. Subprogram is selected by piece length.

02 Vacuum below feeding belts on
Value 0 is vacuum motor below feeding belts off. Value 1 is motor on.

04 Stop piece on backside
Value 0 means no stop during feeding in. In any other case this value is the distance the front of the piece will run into the lengthfold until the conveyor makes an extra stop to be able to make some manual corrections. Value is in mm.

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.

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 possible.

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 Stoptime in lengthfold
05 Delay start left template
06 Time left template fast
07 Time left template slow
08 Delay start right template
09 Time right template
10 Ski's smaller after lengthfold
11 Reserved
12 Reserved
13 Reserved
14 Reserved
15 Reserved
16 Crossfold type
17 Crossfold fixed format
18 Reverse piece at 1st crossfold
19 Reverse piece at 2nd crossfold
20 Reserved
21 Folding point 1st crossfold
22 Folding point 2nd crossfold
23 Moment blow leading edge 2nd crossfold
24 Time blow leading edge 2nd crossfold
25 Valve thick/thin pieces enabled
26 Blowtime 1st crossfold
27 Delay start blow 1st crossfold
28 Knifetime 1st crossfold
29 Delay start knife 1st crossfold
30 Reserved
31 Blowtime 2nd crossfold
32 Delay start blow 2nd crossfold
33 Knifetime 2nd crossfold
34 Delay start knife 2nd crossfold
35 Reserved
36 Stacker number
37 Stacking height
38 Couple stacker 2 with 1
39 Couple stacker 3 with 2
40 Stacker shift off time

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.

04 Stoptime in lengthfold
The time the lengthfold is stopped to make the lengthfold. Value is in milliseconds.

05 Delay start left template
The delay between the moment the lengthfold is stopped and the moment the cycle of the left template starts. Value is in milliseconds.

06 Time left template fast
The time the left template moves fast to make the left lengthfold. Value is in milliseconds.

07 Time left template slow
The time the left template moves slow to make the left lengthfold. Value is in milliseconds. This time starts after the time in parameter 6 is done.

08 Delay start right template
The delay between the moment the lengthfold is stopped and the moment the cycle of the right template starts. Value is in milliseconds.

09 Time right template
The time the right template moves to make the right lengthfold. Value is in milliseconds.

10 Ski's smaller after lengthfold
Value 0 means ski's will stay in position after the lengthfold is made. Other value means that the ski's will move this value smaller after the stop in the lengthfold is done.

16 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

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

18 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.

19 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.

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

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

23 Moment blow leading edge 2nd crossfold
The moment the blowpipe to blow the leading edge downwards at the 2nd crossfold is activated. Value is in millimeters from the folding point of the 1st crossfold.

24 Time blow leading edge 2nd crossfold
The time the blowpipe to blow the leading edge downwards at the 2nd crossfold is activated. Value is in milliseconds.

25 Valve thick/thin pieces enabled
If this parameter is set to 1, the valve for thick/thin pieces at the 2nd cross fold will be activated when a piece arrives. Value 0 means that the valve will not be active.

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

27 Delay start blow 1st crossfold
The standard value of this parameter is 100. If the value is smaller than 100, blowing will start earlier than reversing, otherwise blowing will start later than reversing. Time is in milliseconds.

28 Knifetime 1st crossfold
The time the knife at the 1st crossfold is activated. Time is in milliseconds.

29 Delay start knife 1st crossfold
The standard value of this parameter is 100. If the value is smaller than 100, knife will start earlier than reversing, otherwise knife will start later than reversing. Time is in milliseconds.

31 Blowtime 2nd crossfold
The time the blowpipe at the 2nd crossfold is activated. Time is in milliseconds.

32 Delay start blow 2nd crossfold
The standard value of this parameter is 100. If the value is smaller than 100, blowing will start earlier than reversing, otherwise blowing will start later than reversing. Time is in milliseconds.

33 Knifetime 2nd crossfold
The time the knife at the 2nd crossfold is activated. Time is in milliseconds.

34 Delay start knife 2nd crossfold
The standard value of this parameter is 100. If the value is smaller than 100, knife will start earlier than reversing, otherwise knife will start later than reversing. Time is in milliseconds.

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

37 Stacking height
When a stack reaches this number of pieces, the shifter is activated and a new stack starts.

38 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.

39 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.

40 Stacker shift off time
The time the cylinder of the shifter is activated in case the stack reaches it's adjusted stacking height. Time is in milliseconds.

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

003 VARAN-BUS ERROR
The connection with one or more backplanes on the varan IO-bus is lost. As soon as connection is re-established, message will disappear.

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.

015 FEED-IN PHOTOCELL 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.

017 PIECES TOO CLOSE LENGTHFOLD
A piece arrived at the maximum waiting position in the lengthfold, but the previous piece is still in the lengthfold. Remove the last piece and restart.

024 JAM FEED-IN PHOTOCELL
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 from the lengthfold 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 from the crossfold and restart the machine.

027 JAM STACKER PHOTOCELL
The photocell at the start of the stacker section has been covered too long. If a piece is jammed, remove it at the photocell and restart.

056 Piece too short feed-in
The photocell at the beginning of the lengthfold has detected a piece which is too short. This can be caused by a belt covering this photocell sometimes.

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.

066 Pieces too close stacker
A piece arrived at the stacker while the previous one was still waiting to be stacked. The piece which was waiting will be thrown out.

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 de 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.