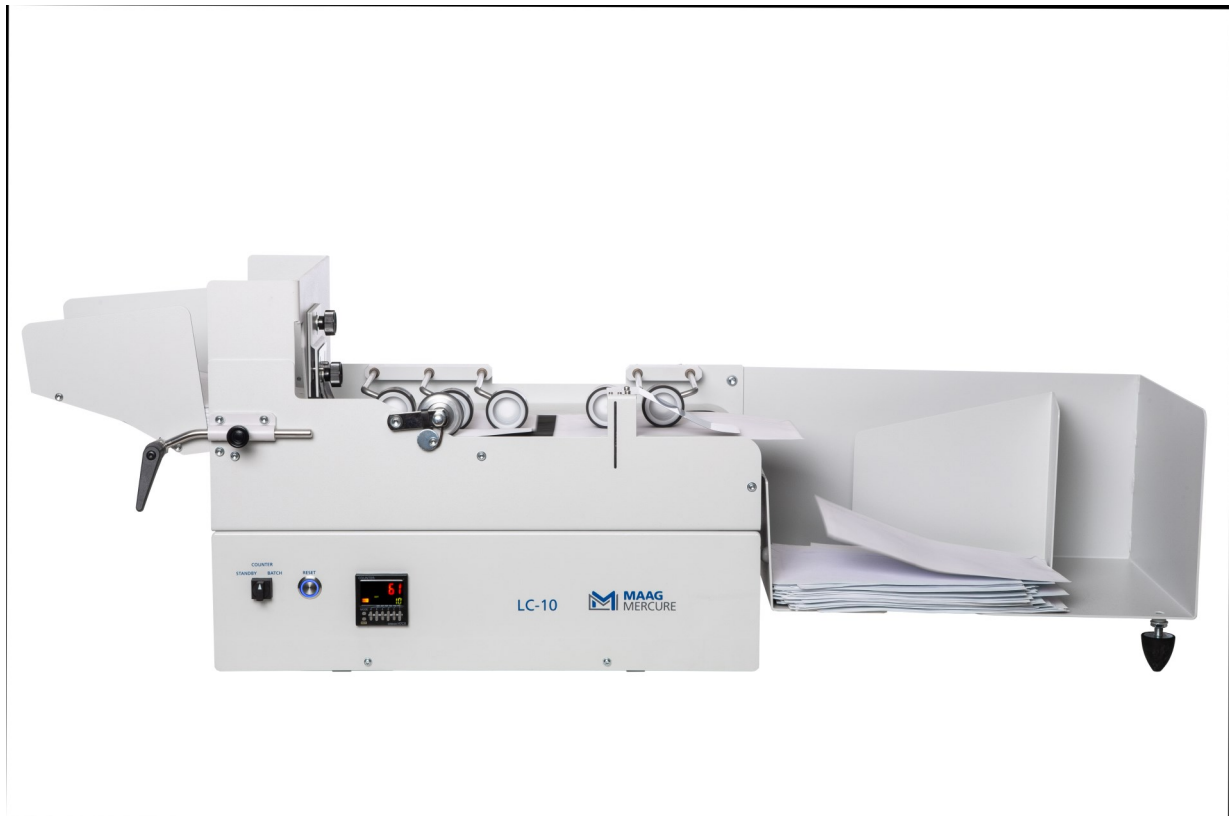


# Document- and Envelope Counting Machine

## Modell LC-10 (IR)



**OPERATING MANUAL**

**ENGLISH**

**Copyright by MAAG MERCURE AG**

**This Operating Manual is valid for:**

<u>Typ</u>	<u>Bestellnummer</u>
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<b>LC-10</b>	<b>ID / No 10031</b>
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Envelope counting machine, thickness up to 10mm, all formats up to C4, with integrated, programmable batch counter, large receiving tray 382mm

Input: 85...260VAC/50...60Hz

<b>LC-10 IR</b>	<b>ID / No 10032</b>
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Envelope counting machine, thickness up to 10mm, all formats up to C4, with integrated, programmable batch counter, automatic start/stop and large receiving tray 382mm

Input: 85...260VAC/50...60Hz

Version of documentation: BA\_MM\_LC-10\_1905en

Release: 1.0

Datum: 14.05.2019

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## **1 Manufacturer's declaration**

Manufacturer: **MAAG MERCURE AG**, Webereistrasse 59, CH-8134 Adliswil  
www.maag-mercure.swiss — Phone: +41 (0)44 710 40 41

declares, under its sole responsibility, that the products comply with the provisions defined in the legislation listed in the table below:

Name of the product: Envelope- and Document Counting Machine

Model(s): **LC-10 (IR)**

Community harmonisation legislation Harmonised standards

DIRECTIVE 2014/35/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the harmonisation of the laws of the Member States relating to the provision of information on the market in electrical equipment designed for use within certain voltage limits (LVD):

EN60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013

DIRECTIVE 2014/30/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the harmonisation of the laws of the Member States relating to electromagnetic fields Compatibility (EMC):

EN61000-6-3: 2007 +A1: 2011

EN61000-3-2: 2014

EN61000-3-3: 2013

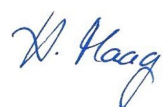
EN61000-6-1: 2007

DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS):

EN50581: 2012

Date: May 14th, 2019

**MAAG MERCURE AG, CH-8134 Adliswil**



Hans E. Maag  
CEO

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## 2 Safety Instructions

### 2.1 Symbols and Reference Key

Symbols: Assembly and commissioning by qualified personnel in accordance with operating instructions.

Please take heed of the following symbols and references. They are divided up into safety steps and are classified under ISO 3864-2.

#### **DANGER**



**This means there is an immediate threatening danger.**

**When instructions have not been followed, death or serious harm to the body (invalidity) can be caused.**

#### **WARNING**



**This means there is a potentially dangerous situation.**

**When the instructions have not been followed, death or serious harm to the body (invalidity) can be caused.**

#### **CAUTION**



**This means there is a potentially dangerous situation.**

**When the instructions have not been followed, damage to objects as well as little or minor harm to the body can be caused.**

#### **INFORMATION**



**This means general advice: useful operator tips and operating recommendations which do not affect the safety and health of personnel.**

## 2.2 Basic Safety Precautions



### **Before use :**

Please read this instruction booklet thoroughly.

Important advice regarding the use, safety and the warranty of the machine is given. The machine is radio-screened and complies with technical specifications.

This instruction booklet allows the user to set up and operate this Envelope Counting Machine in complete safety. The instructions and especially the safety precautions should be respected by all who use this Envelope Counting Machine. In addition, further local rules and regulations must be adhered to for accident prevention.

The operating instructions must always be kept near the Envelope Sealing Machine .



***Should the Envelope Counting Machine be used for any other purpose than the one for which it was intended, used incorrectly or subjected to bad repair or maintenance, no liability for any damages can be guaranteed!***

## 2.3 Safety Advice



### **Caution when on standby**

—> **The machine should be turned off when :**

- ◆ setting the guide plate and pile angle for size
- ◆ replacing worn parts with new ones
- ◆ the machine is jammed (such as an envelope or belt track jam)



## **WARNUNG**

***The Document– and Envelope Counting machine must not be used:***

- ◆ in wet or damp areas.
- ◆ in temperatures below 10°C or over 50°C
- ◆ in areas containing highly flammable material
- ◆ in areas with explosive material
- ◆ in very dirty or dusty environments
- ◆ in corrosive environments (e.g. where the air has a high salt content)



***Safety instructions when the machine is on or in use:***

- ◆ do not carry out any manipulations
- ◆ do not touch the conveyor belt
- ◆ do not put your hands on the transport system and the sealer table
- ◆ Keep hands, long hair or dangling jewellery etc. away from the feed and moving parts

---

## 3 Description of the Document– and Envelope Counting machine

### 3.1 General Information

The automatic document and letter counting machine LC-10 counts reliably up to 12'000 documents and letters of the format C5 and is suitable for all commercial letters of the formats C6/5 to C5 as well as C4 / C4 pocket envelopes.

Any type of form, voting room, card or letterhead of at least 80gr/m<sup>2</sup> can also be counted. The machine is also equipped with a programmable batch function, which makes it possible to set a target value. After reaching it, the machine stops automatically and the counted units can be removed from the collection box. By pressing the start function button again, the machine continues to run until the preset setpoint value is reached again.

The totalizer also determines the total number.

The machine is easy and convenient to operate in a small space. The automatic function sequence only requires the replenishment of letter or form stacks.

Optionally, the machine can also be equipped with an automatic start/stop function (model LC-10 IR). This function no longer allows manual switching on and off.

The machine starts as soon as a document or letter stack is inserted into the format pusher and stops automatically with a delay of approx. 3-4 seconds after the last document or letter has passed through.

### 3.2 Description of function

The belt speed is not variable and runs at a speed of approximately 70cm/s. It is optimally adjusted to envelope/form lengths from C6/5 to C4. The conveyor belt can be stopped at any time by actuating a toggle switch on the front of the machine.

## 4 Set up

### 4.1 Transportation



To transport the document and letter counting machine, remove the format slider from the machine.

If possible, use the original packaging when moving or transporting.



---

## 4.2 Commissioning of the Document- and Envelope Counting machine

1. The document- and envelope counting machine shall be placed on a horizontal and solid base. The stacking box must rest on the stand surface.
2. Connect the document- and envelope counting machine to an earthed socket (2-pole plus earth) at 230VAC or 115VAC with the supplied mains cable according to the type plate.



**To make the machine ready for operation, always switch it off (control lamp must not light!).**

3. The machine can be aligned by adjusting the two rear machine feet.
4. Check whether the machine is horizontal or slightly inclined towards the front (max. 2%). If necessary, place the machine feet underneath.
5. Insert the sliding table into the lateral sliding table guides and lock it with both knurled nuts after reaching the desired position.

## 4.3 Power supply

The power supply is specified as follows:

90...132VAC/60Hz und 180...264VAC/50Hz



***Always observe the type plate on the machine!***

---

## 5 Operation Instructions

### 5.1 Standard use

1. Switch on the main toggle switch on the left side of the machine (control lamp lights up).
2. Align the five transport rollers as centred as possible on the rear wall by axially shifting their lever arms in the bearings.
3. Assemble envelopes or documents of the same width, align all closing flaps of the envelopes on the same side.
4. Adjust the format slide according to the envelope/document width with the addition of approx. 2 mm and pull it out to the left for long formats.
5. Adjust the stacking angle in the collecting box according to the envelope size.
6. Grasp an envelope or document stack with your left hand and insert them all facing upwards on the same side.



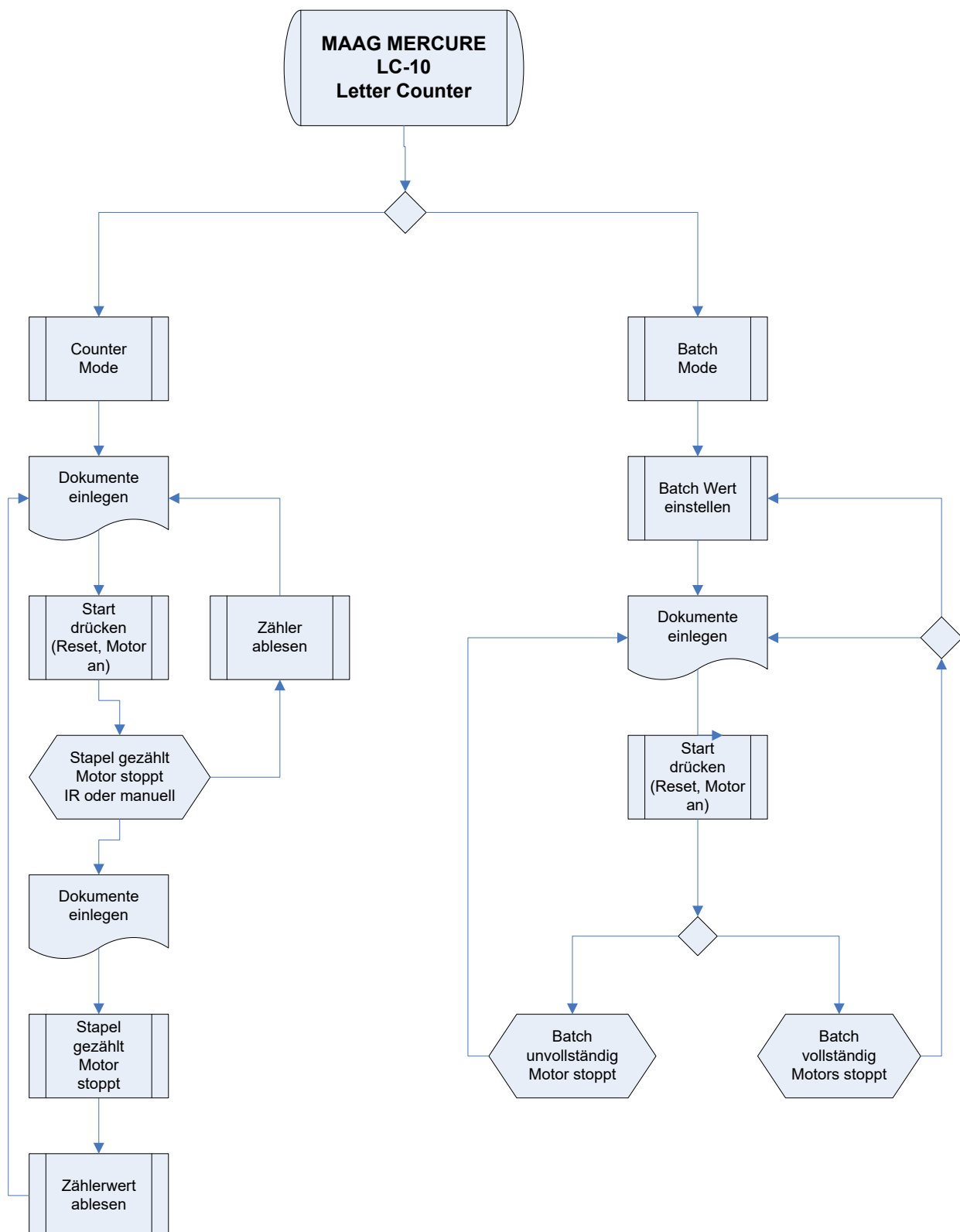
Only when the conveyor belt is running, create the envelope/document stack so that the lowest envelope or document is always captured first!

- Remove the counted envelopes or documents from the stacking box and add further envelopes/document stacks.
- Additional letter stacks can be added while running.
- When the machine is idling, it can be switched off completely by means of a toggle switch.

### 5.2 Operation with preselection counter

- Switching between 4-digit preset counter and 4-digit time relay
- When used as a preset counter, the display can be switched over to monitor the total counter value (8 digits).
- Integrated pre-scaling for meter operation
- Clock generator time function with adjustable ON/OFF ratio for cyclic control available for time relay function
- Four setpoints that can be changed via the keys on the front panel (setpoint bank)
- The finger protection for the connection terminals corresponds to VDE0106/P100.
- Front panel corresponds to NEMA4/IP66
- Complies with UL, CSA and IEC safety regulations and has CE marking

### 5.3 Flow chart

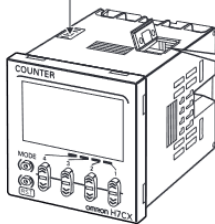


## 5.4 Function and settings of the H7CX counter

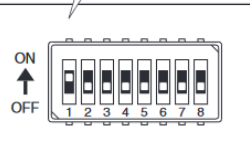
### Step1 Set the basic parameters.

(If the desired I/O mode is not listed below or to set all parameters using the front panel keys, perform **Step3**, below.)

Key-protect switch



Be sure to set pin 1 to ON.



	Item	OFF	ON
1	DIP switch settings	Disabled	Enabled
2	Counting speed	30 Hz	5 kHz
3	Input mode	UP	DOWN
4	Output mode	Refer to the table on the right.	
5			
6	Output time	0.5 s	0.05 s
7	Minimum reset signal	20 ms	1 ms
8	Input selection	NPN	PNP

Pin 4	Pin 5	Output mode
OFF	OFF	N
ON	OFF	F
OFF	ON	C
ON	ON	K-1

**Note:** All pins are factory-set to OFF.

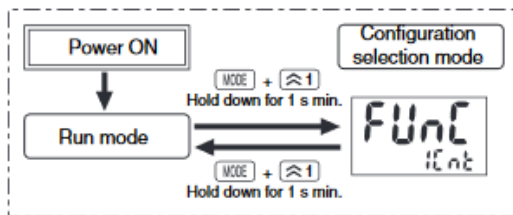
- When setting functions using the DIP switch, be sure to set pin 1 of the DIP switch to ON.
- DIP switch settings are effective when the power is turned ON again. (Perform DIP switch settings while the power is OFF.)



### Step2 The H7CX-A□-N is a Counter that contains more than one functional counter.

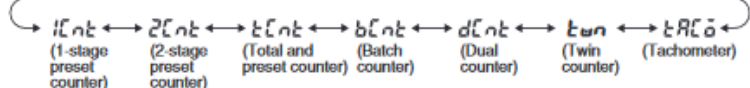
When using the Counter in any mode other than the default mode\*, use the following chart to enter Configuration Selection Mode and set the functions that are suitable to the application.

\* The default mode is 1-stage preset counter configuration (2-stage preset counter configuration for 2-stage models).

**Note:** **Step2** can be performed first, followed by **Step1**.



Select the function from Table 1 using the  (  ) Key.



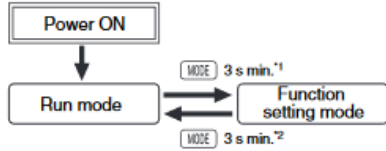
**Note:** The configuration that can be selected depends on the model.



**Diese Einstellungen werden jeweils werksseitig durchgeführt!**

### Step3 Parameters that cannot be set with the DIP switch are set with the operation keys on the front panel.

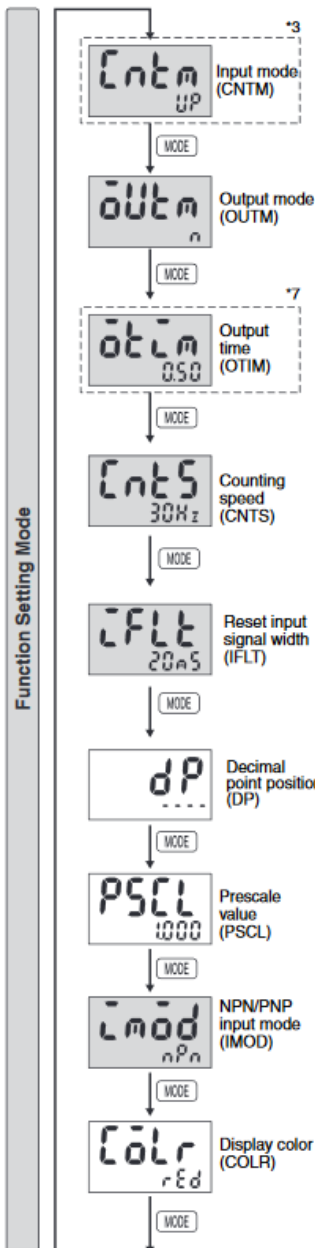
Change to Function Setting Mode.



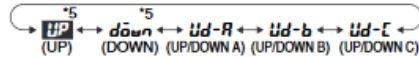
For details on operations and display in run mode, refer to page page 20. The display depends on the selected configuration.

- \*1 If the mode is switched to the function setting mode during operation, operation will continue.
- \*2 Changes made to settings in function setting mode are enabled for the first time when the mode is changed to run mode. Also, when settings are changed, the counter is reset (present value initialized and output turned OFF) on returning to run mode.

The characters displayed in reverse video are the default settings.  
When performing settings with operation keys only, set pin1 of the DIP switch to OFF (factory setting).  
If pin 1 of the DIP switch is set to ON, the setting items indicated by will not be displayed.  
For 6-digit models, only Keys are provided.  
Displays for 6-digit models are given in parentheses.

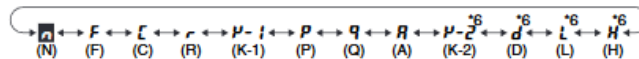


• Set the input mode using the () Keys.



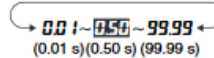
**Note:** Displayed only when Twin Counter Mode is not selected.  
\*5 Displayed for output modes other than K-2, D, L, and H only.

• Set the output mode using the () Keys.



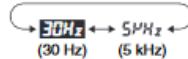
\*6 Displayed only when the input mode is Ud-R, Ud-b, or Ud-L.  
(Not displayed when the function is set to  $\Sigma n$ .)

• Set each digit using the individual () Keys.

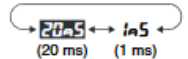


**Note:** Displayed only when the output mode is C, R, K-1, P, Q, A, or K-2.

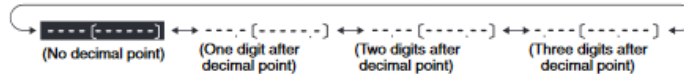
• Set the counting speed using the () Keys.



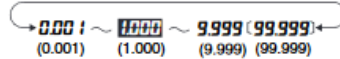
• Set the Reset input signal width using the () Keys.



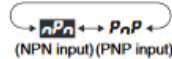
• Set the decimal point position using the () Keys.



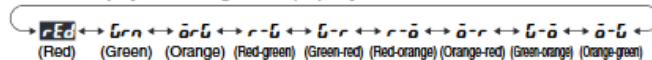
• Set each digit using the individual () Keys.



• Set the NPN/PNP input mode using the () Keys.

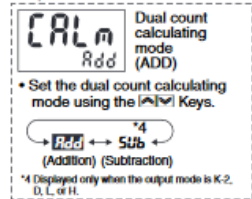


• Set the display color using the () Keys.



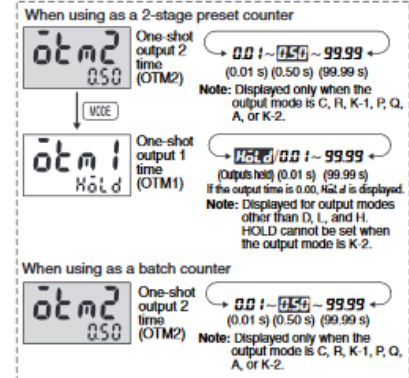
**Note:** Displayed for terminal-block models (except H7CX-A11□) only.

\*3 When Using Dual Counter Operation

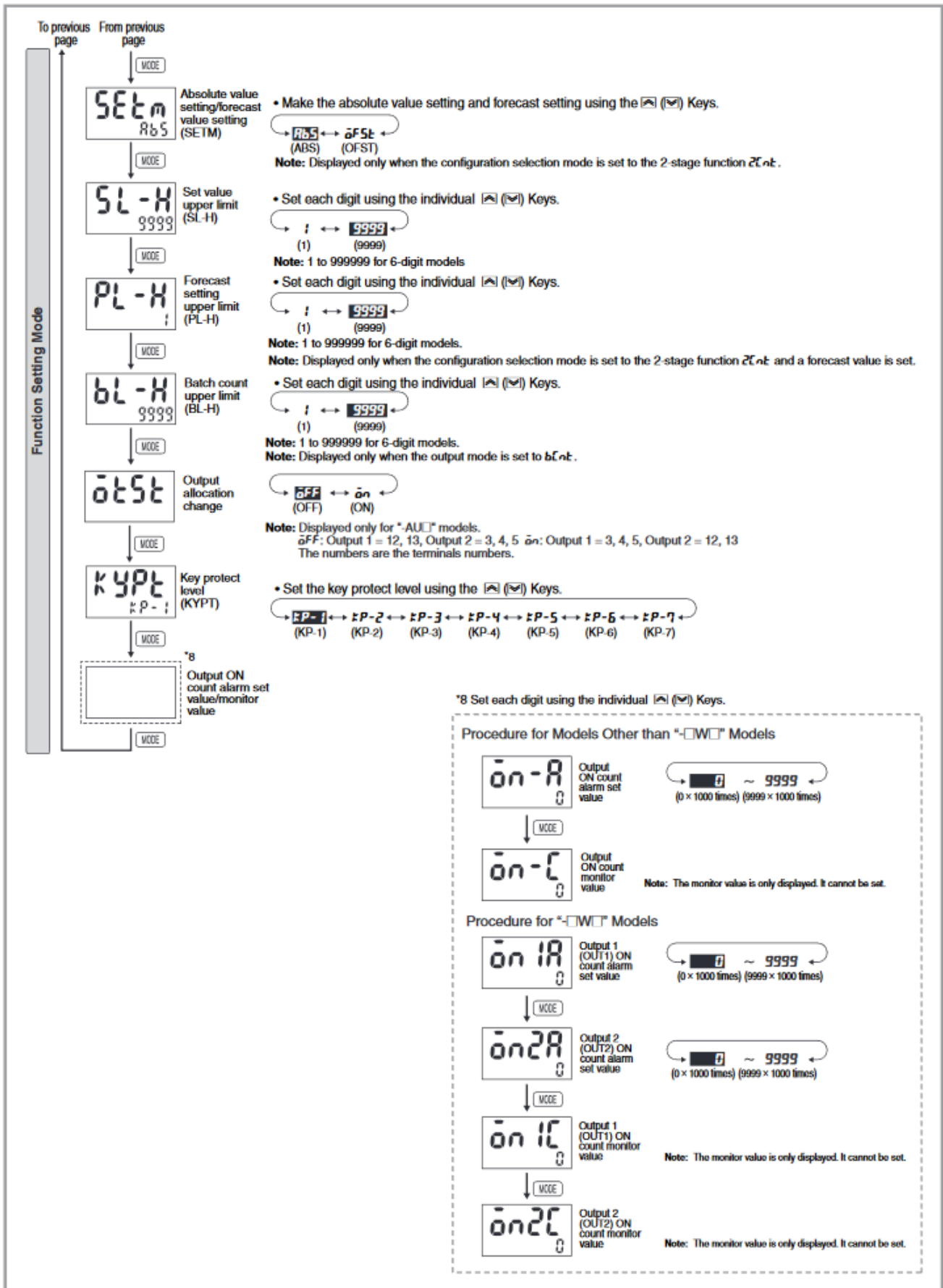


\*4 Displayed only when the output mode is K-2, D, L, or H.

\*7 Set each digit using the individual () Keys.



From next page To next page



## Explanation of Functions

Items marked with stars ★ can be set using the DIP switch.

### Input Mode (E n t a)★

Set increment mode (UP), decrement mode (DOWN), or one of the increment/decrement modes (UP/DOWN A, UP/DOWN B, or UP/DOWN C) as the input mode.

Input modes other than UP or DOWN modes cannot be set using the DIP switch and so use the operation keys if other modes are required. (For details on the operation of the input modes, refer to *Input Modes and Present Value* on page page 21.)

### Dual Count Calculating Mode (E R L a)

When using as a dual counter, select either ADD (addition) or SUB (subtraction) as the calculation method for the dual count value.

ADD: Dual count value = CP1 PV + CP2 PV

SUB: Dual count value = CP1 PV - CP2 PV

### Output Mode (o u t a)★

Set the way that control output for the present value is output. The possible settings are N, F, C, R, K-1, P, Q, A, K-2, D, L, and H.

Output modes other than N, F, C, or K-1 cannot be set using the DIP switch and so use the operation keys if other modes are required. The output modes that can be set vary with the model.

(For details on the operation of the output modes, refer to *Input/Output Mode Settings* on page page 22.)

### One-shot Output Time (o t a)★

Set the one-shot output time (0.01 to 99.99 s) for control output.

One-shot output can be used only when C, R, K-1, P, Q, A, or K-2 is selected as the output mode. Output times other than 0.5 s or 0.05 s cannot be set with the DIP switch and so use the operation keys if other settings are required.

### One-shot Output 2 Time (o t a 2)★

Set the one-shot output time (0.01 to 99.99 s) for control output (OUT2).

One-shot output can be used only when C, R, K-1, P, Q, A, or K-2 is selected as the output mode. Output times other than 0.5 s or 0.05 s cannot be set with the DIP switch and so use the operation keys if other settings are required.

### One-shot Output 1 Time (o t a 1)★

Set the one-shot output time (0.01 to 99.99 s) for control output (OUT1).

One-shot output can be used only when D, L, or H is selected as the output mode.

If the output time is set to 0.00, Hold is displayed, and outputs are held.

### Counting Speed (E n t 5)★

Set the maximum counting speed (30 Hz/5 kHz) for CP1 and CP2 inputs together.

If contacts are used for input signals, set the counting speed to 30 Hz. Processing to eliminate chattering is performed for this setting.

### Reset Input Signal Width (E F L t)★

Set the reset input signal width (20 ms/1 ms) for reset/reset 1 and total reset/reset 2 inputs together.

If contacts are used for the input signal, set the input signal width to 20 ms. Processing to eliminate chattering is performed for this setting.

### Decimal Point Position (d P)

Decide the decimal point position for the present value, CP1/CP2 present values, set value (SV1, SV2), total count value, and dual count set value.

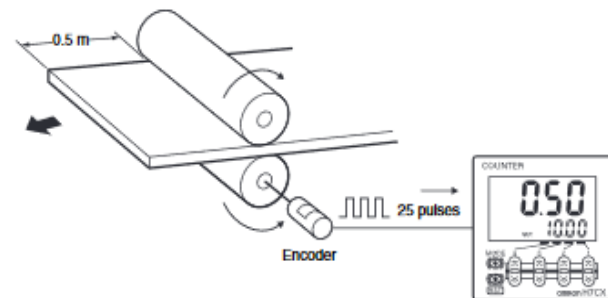
### Prescale Value (P 5 C L)

Pulses input to the counter are converted according to the specified prescale value.

(Setting range: 0.001 to 99.999 for 6-digit models and 0.001 to 9.999 for 4-digit models.)

Example: To display the feed distance for systems that output 25 pulses for a feed length of 0.5 m in the form □□.□□ m:

1. Set the decimal point position to 2 decimal places.
2. Set the prescale value to 0.02 (0.5 ÷ 25).



- Observe the following points when setting a prescale value. Set the set value to a value less than (Maximum countable value - Prescale value).  
Example: If the prescale value is 1.25 and the counting range is 0.000 to 999.999, set the set value to a value less than 998.749 (= 999.999 - 1.25).  
If the set value is set to a value greater than this, output will not turn ON.
- Output will turn ON, however, if a present value overflow occurs (FFFFFF or FFFF).

**Note:** If the prescale value setting is incorrect, a counting error will occur. Check that the settings are correct before using this function.

### NPN/PNP Input Mode (E a o d)

Select either NPN input (no-voltage input) or PNP input (voltage input) as the input format. When using a two-wire sensor, select NPN input.

The same setting is used for all external inputs.

For details on input connections, refer to *Input Connections* on page page 9.

### Display Color (E o L r) (Displayed for terminal block models (except H7CX-A11□) only.)

Set the color used for the present value.

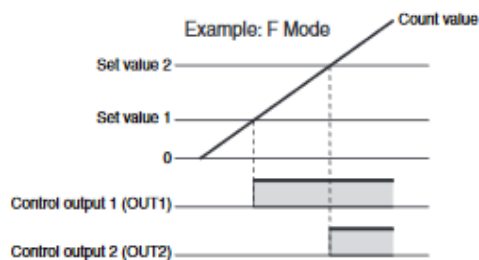
	Output OFF*	Output ON*
r E d		Red (fixed)
E r n		Green (fixed)
o r E		Orange (fixed)
r - E	Red	Green
E - r	Green	Red
r - o	Red	Orange
o - r	Orange	Red
E - o	Green	Orange
o - E	Orange	Green

\* Output 2 for 2-stage models.

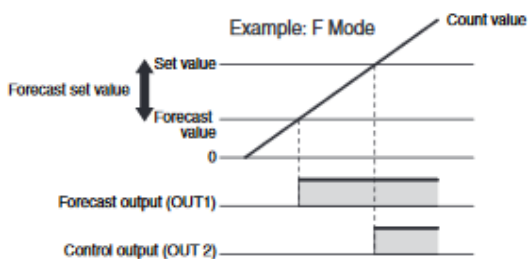
With the twin counter, output 1 and output 2 will both turn OFF when the output status is OFF. Either output 1 or output 2 will turn ON when the output status is ON.

### Absolute Value Setting/Forecast Value Setting (SELR)

For the 2 count output mode, an absolute value setting (Rb5) or forecast value setting (dF5E) can be set for set value 1. When a forecast value is set, specify the forecast value set value (i.e., the deviation for the set value). The forecast output (output 1) turns ON when the present value reaches the forecast value. If the forecast set value is greater than or equal to the set value, the forecast output (output 1) will turn ON as soon as counting starts.



If the forecast value setting is used, specify the set value 2 minus the forecast value setting for set value 1.



### Set Value Upper Limit (SL -H)

Set the upper limit for the set value when it is set in run mode. The setting can be made from 1 to 9999 for 4-digit models and from 1 to 999999 for 6-digit models.

### Forecast Set Upper Limit (PL -H)

Set the upper limit for the forecast set value. The setting can be made from 1 to 9999 for 4-digit models and from 1 to 999999 for 6-digit models.

### Batch Count Upper Limit (bL -H)

Set the upper limit for the batch count value. The setting can be made from 1 to 9999 for 4-digit models and from 1 to 999999 for 6-digit models.

### Output Allocation (dL5L)

When using an H7CX-AU□-N model as a 2-stage counter, the output can be flexibly allocated to either stage 1 or 2. The transistor output can be allocated to SV1 and the contact output to SV2 or vice versa, as in the following tables.

#### H7CX-AU-N/AUD1-N

	Output 1	Output 2
dFF	Transistor (12-13)	Contact (3, 4, 5)
dR	Contact (3, 4, 5)	Transistor (12-13)

#### H7CX-AUSD1-N

	Output 1	Output 2
dFF	Transistor (12-13)	Transistor with diode (3, 4, 5)
dR	Transistor with diode (3, 4, 5)	Transistor (12-13)

### Key Protect Level (FYPLE)

Set the key protect level.

### Output ON Count Alarm Set Value (dR-R)

Set the alarm value for the output ON count. The limit can be set to between 0 × 1000 (0 times) and 9999 × 1000 (9,999,000 times). Only the underlined values are set. The alarm will be disabled if 0 is set. If the total ON count of the output exceeds the alarm set value, E3 will be displayed on the Timer to indicate that the output ON count alarm value was exceeded. Refer to *Self-diagnostic Function* on page 36 for information on the E3 display.

### ON Count Alarm Set Values for Outputs 1 and 2 (OUT1 and OUT2) (dR1R and dR2R)

Set the ON count alarm values for the outputs 1 and 2. The limit can be set to between 0 × 1000 (0 times) and 9999 × 1000 (9,999,000 times). Only the underlined values are set. The alarm will be disabled if 0 is set. If the total ON count of instantaneous output 1 or 2 exceeds the alarm set value, E3 will be displayed on the Timer to indicate that the output ON count alarm value was exceeded. Refer to *Self-diagnostic Function* on page 36 for information on the E3 display.

### Output ON Count Monitor Value (dR-L)

The monitor value is only displayed. It cannot be set. The output ON count will be 1,000 times the displayed value.

### ON Count Monitor Values for Outputs 1 and 2 (OUT1 and OUT2) (dR1L and dR2L)

The monitor value for output 1 or 2 is only displayed. It cannot be set. The output ON count will be 1,000 times the displayed value.



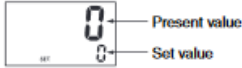
## Operation in Run Mode

### I/O Functions for Counter Operation

• Set values for each digit as required using the  $\left[ \text{▲} \right]$  ( $\left[ \text{▼} \right]$ ) Keys. ( $\left[ \text{▲} \right]$  Key only for 6-digit models.)

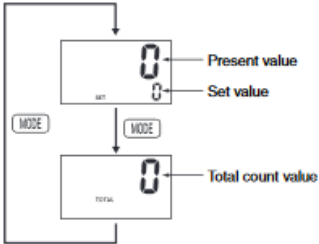
0 ↔ 1 ↔ 2 ↔ 3 ↔ 4 ↔ 5 ↔ 6 ↔ 7 ↔ 8 ↔ 9

#### 1-stage Preset Counter



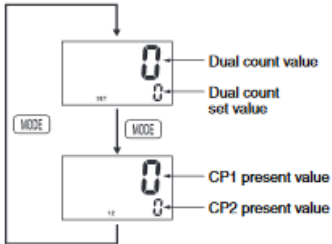
- Present Value**  
Shows the present count value.
- Set Value**  
Set the set values.

#### Total and Preset Counter



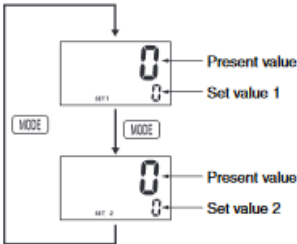
- Present Value/Set Value**  
Same as 1-stage preset counter.
- Total Count Value**  
Shows the present total count value.

#### Dual Counter



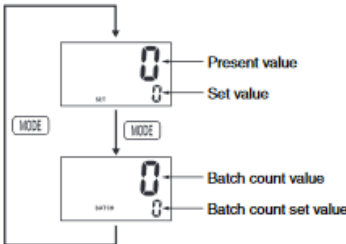
- Dual Count Value**  
Shows the sum of the CP1 present value and CP2 present value when the dual count calculating mode is ADD and shows the value obtained by subtracting the CP2 present value from the CP1 present value when the dual count calculating mode is SUB.
- Dual Count Set Value**  
Set the dual count set value. When the dual count value reaches the dual count set value, signals are output according to the specified output mode.
- CP1/CP2 Present Value**  
Show the present count values for CP1 and CP2 present values respectively.

#### 2-stage Preset Counter with Absolute Value Setting



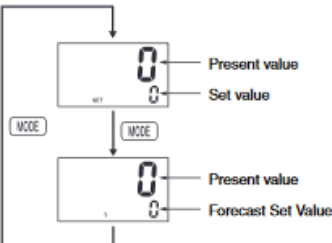
- Present Value**  
Shows the present count value.
- Set Values (Set Value 1 and Set Value 2)**  
Set the set values. When the present value reaches the set value (set value 1 or set value 2), a signal is output according to the specified output mode.

#### Batch Counter



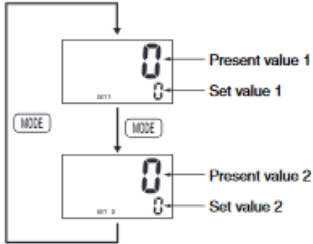
- Present Value/Set Value**  
Same as 1-stage preset counter.
- Batch Count Value**  
Shows the number of times the count has been completed for the present value.
- Batch Count Set Value**  
Set the batch count set value. When the batch count value reaches the batch count set value, batch output (OUT1) turns ON.

#### 2-stage Preset Counter with Forecast Value Setting



- Present Value**  
Shows the present count value.
- Set Values**  
Set the set values.
- Forecast Set Value**  
Set the deviation for the set value.

#### Twin Counter



- Present Values 1 and 2**  
Shows the present count value 1 or 2.
- Set Values 1 and 2**  
Setting for present value 1 or 2.

## 6 Maintenance and Service instructions



After use, the machine must be covered with the protective cover so that the rubber parts remain protected from external light, sunlight and heat!

The mains plug must first be pulled out of the socket or from the machine (only pull on the mains plug, never on the mains cable!).

This must be followed:

- Open or unscrew the electric casing for maintenance work.
- Replace the fine-wire fuse in the mains connection socket (fine-wire fuse 5 x 20 mm, 230 VAC / 800 mA or 115 VAC / 1.6 A). This is located in the mains connection socket.
- Cleaning and maintenance work
- Damage to the mains cable (must always be replaced immediately)
- Short-circuits and other electrical defects (contact the responsible specialist or an authorized representative)



*Only original spare parts may be used. For maintenance and repair, please contact your local representative. Improperly carried out repairs or maintenance can result in considerable dangers for the user!*

### 6.1 Cleaning

The conveyor belt must be cleaned from time to time on the outside with a cleaner using a lint-free rag.



Thus a good adhesion and consequently a complete envelope or document transport is guaranteed!

## 6.2 Replacing of the conveyor belt

1. Remove format slider (left), loosen M5x18 knurled screw slightly at front left.
2. Remove the collecting box (right), remove the rear 2xM6 knurled nut, 2xM6 spring washers and 2x M6 car body washers.
3. Remove pool (loosen large star grip M10 right)
4. In the case of a partition wall, loosen and remove the spring pressure plate with separating rubber and sliding tongue.
5. For the left front panel, loosen M5x20 screw plus washer M5 (approx. 6-8mm).
6. First loosen 2 M6x16 screws on the left and right of the front wall (left: through hole in top of side cover, right for collecting box).
7. Tilt the front wall slightly forwards, remove the side cover on the left.
8. Remove front wall screws M6x16 plus car body washers completely and pull out front wall towards front.
9. Pull off the timing belt on the right over the Motor-Pully clockwise with a little effort.
10. Pull the conveyor belt alternately towards the front using drive rollers.
11. First pull the new conveyor belt on the right over the drive roller approx. 5 cm, then guide it on the left over the roller, drive it alternately backwards until the belt is at the edge of the belt rollers, then lift the transport rollers on the right behind the drive pulley due to spring pressure (leave space for toothed belt).
12. Attach toothed belt to right-hand roller Pully (turn counterclockwise in Pully groove)
13. Slide in front wall (support rollers under the belt)
14. 2 pcs. Fix M6x16 screws, left with 3 car body washers, right with 1 car body washer, do not tighten fully yet!
15. Tilt the front wall slightly forwards, hang the side cover on the left again.
16. Tighten the left and right front panel strongly with M6x16.



**Make sure that the front wall is straight to the chassis and that the side cover is flush with the front!**

17. Screw on partition on both sides with 2x M4x10 Torx screws and washer M4.
18. Mount the separating rubber, separating rubber and spring pressure plate to the separating wall, tighten knurled screw M4 with washer M4 in the desired position (1-2-3).
19. Push the format slide into the sliding guide and fix it on both sides with M5x18 knurled screws each.
20. Mount the collecting box on the rear side, each with one M6 body washer, M6 spring washer and M6 knurled nut.

### 6.3 Adjustment of the conveyor belt

The lateral discharge of the conveyor rubber belt on its two belt rollers can be regulated by means of the two slotted screws on the rear wall. By turning these screws to the right while running, the belt runs forwards accordingly. By turning these screws to the left while running, the belt runs backwards accordingly.

The conveyor belt is correctly regulated during operation, as long as its front edge is flush with the front edges of the two belt rollers.

### 6.4 Replacing of transport roller rubber rings

Depending on the degree of wear, these rubber rings of the transport rollers should be replaced regularly. Always replace all 5 rubber rings at the same time!

These rubber rings can be easily pulled off the transport rollers by hand.

### 6.5 Replacing of the separating rubbers

Depending on the degree of wear, the separating rubber should be replaced regularly. Always replace together with the transparent plastic tongue!

The separating rubber is removed by loosening the knurled screw on the side plate.



**When inserting, make sure that the transparent plastic tongue is inserted first.**

## 6.6 Replacing of power socket

The new power plug consists of the mains cable socket, the fuse element (integrated) and the main on/off switch (250V/10A).



To disassemble and replace the switching element, the flat receptacles must first be removed. Then push out the power plug from the inside (press the snap-in tabs slightly together).

## 6.7 Maintenance of motor driving system

**The motor drive is basically maintenance-free!**

The driving system has an automatic belt tension and safety clutch.

If the motor drive is defective, the motor or toothed belt may have to be replaced!



**Please contact the responsible specialist or authorised representative!**

## 6.8 Replacing of the fuse

The fuse is located in the power plug. Fold out the cover with a fine screwdriver. Pull out the defective fuse and insert a new fuse according to the type plate (fine fuse 5 x 20 mm, 230 VAC / 800 mA or 115 VAC / 1.6 A).



**A spare fuse is located in the fuse module of the power plug on delivery. Please note that the external fuse is the replacement fuse and the internal fuse is the fuse used!**

## 7 Wear– and Spare Parts

Item No.	Description	Anzahl
251	Conveyor belt	1
252	Separating rubber with slide plastic sheet p/n 253b	1
257	Rubber ring broad for flaps feeding roller	5
258	Rubber ring small for flaps feeding roller	1
356	Rocker Switch black with on/off switch and fuse holder, 250V/10A	1
527	Permanent DC motor 24VDC, 5000 RPM, single worm gear 10:1, 900 Ncm, without pulley	1
529	PWM DC Power Controller 9-28V, 10A max.	1
530	150W Power supply, Va: 24V/6.5A	1
531	Motor carbon brush 5/6 mm with spiral spring (Set of 2 pcs)	1 Set
533	Signal-LED blue, 24VAC/DC	1
693	Pile angle universal to all receiving trays (magnetic version)	1
653	Format slide complete	1
99830	H7CX-AD-N OMI LCD Preselection Counter	1
990/SP	Spare Part Set	1 Set

## 8 Disposal

Envelope counting machines that can no longer be used should not be dismantled and recycled as a complete unit, but in individual parts and according to the type of material. Components that cannot be recycled must be disposed of in a way that is appropriate for their type.

## 9 Technical Data

Input power:	90...132VAC/60Hz und 180...264VAC/50Hz
Standby:	18 Watts / 80 mA
Nominal power:	91 Watts / 400 mA (max.)
Dimensions (incl. format slider):	1110 (max.) x 370 x 370 mm (L x B x H)
Weight:	24.2 kg
Piling option (for nested envelopes)	Standard
Length of receiving tray:	382 mm
Max. passage width of the documents:	250 mm (B5/B4, C6/5, C4)
Max. passage thickness:	10 mm
Batch-Counter (integrated):	LCD Preselector with red 7-segment display and integrated EEPROM
Counting speed fix (C6/5):	12'000 units per hour
Power cord length:	2 m
Radio interference suppression:	according to EU standard
Approval:	CE
Warranty:	2 years
Accessories (including):	Protecting cover, spare fuse, operating instructions
Applications:	Counting of letters and documents of all kinds according to the setpoint.  Counting of voting sheets, ballot papers etc. with paper thicknesses of min. 80g/m <sup>2</sup> .

In the interest of technical development, we reserve the right to make design and construction changes to the document and envelope counting machine.