

# Zelio Count Counters

Catalog


January **2013**





---

- Selection guide** .....page 2
- **Presentation** ..... page 4
  - Introduction..... page 4
  - Totalising counters ..... page 4
  - Preselection counters ..... page 4
  - Hour counters ..... page 5
  - Tachometers ..... page 5
  - Batch counters ..... page 5
- **Reference** ..... page 6
  - Electromechanical and electronic totalising counters ..... page 6
  - Electromechanical preset counters ..... page 6
  - Electromechanical and electronic totalising timers ..... page 7
  - Electronic preselection and multifunction counters ..... page 7
  - Totalising counters ..... page 7

<b>Function</b>	<b>Totalising counters</b>				
					
<b>Display type</b>	Mechanical			LCD	
<b>Font panel dimensions (h x w) in mm</b>	20 x 30	31 x 41.5	50 x 60	24 x 48	
<b>Number of display digits</b>	6 digits	5 or 6 digits (depending on model)	6 or 6 digits (depending on model)	8 digits	
<b>Maximum counting frequency</b>	25 Hz	10 or 20 Hz (depending on model)	10 or 25 Hz (depending on model)	30 Hz or 7.5 kHz	40 Hz or 7.5 kHz
<b>Input type</b>	Contact			Volt-free contact or transistor	Volt-free contact, transistor or voltage level
<b>Output type</b>	-				
<b>Reset type</b>	Without	Manual or without (depending on model)	Manual or without	Manual or transistor	Manual, volt-free contact or transistor
<b>Supply voltage</b>	~ 24 V	~ 24 V, ~ 48 V, ~ 115 V	~ 24 V, ~ 115 V	Lithium battery	
<b>Display capacity</b>	0...999 999	0...99 999 or 0...9 999 999 (depending on model)	0...999 999 or 0...99 999 999 (depending on model)	0...99 999 999	
<b>Time ranges</b>	-				
<b>Number of presets or partial count</b>	-				
<b>References</b>	<b>XBK T60000U00M</b>	<b>XBK T50000U●●M XBK T70000U00M</b>	<b>XBK T60000U1●M XBK T80000U00M</b>	<b>XBKT81030U33E</b>	<b>RC87610340</b>
<b>Pages</b>	6				7



<b>Preselection counters</b>	<b>Hour counters</b>	<b>Multifunction:</b> - preselection, - tachometer, - chronometer, - totalising counter, - batch counter.	
------------------------------	----------------------	--	--



Mechanical		LCD	LCD or LED
75 x 60	48 x 48	24 x 48	48 x 48
5 digits	7 digits	8 digits	6 digits
25 Hz	–		5 kHz or 2.5 kHz if counting on 2 inputs
Contact (20 VA / 220 V / 1A max)	Contact	Volt-free contact or transistor	Transistor or voltage
Contact (volt free)	–		1 or 2 transistors and 1 or 2 changeover relays
Manual or Manual and electrical	Without	Transistor or manual with electrical interlocking facility	Manual, electrical or automatic
~ 24 V	~ 24 V, ~ 115 V, ~ 230 V	Lithium battery	~ 24 V, ~ 115 V, ~ 230 V
0...99 999	–		- 99 999...999 999
–	0...99 999.99 h	0...999 999.99 h	0...99 999.9 h 0...99 999.9 min 0...99 999.9 s 0...99 h 59 min 59 s
1	–		1 or 2
<b>XBKP50100●●0M</b>	<b>XBKH7000000●M</b>	<b>XBKH81000033E</b>	<b>XBKP6●●30G3●E</b>

6	7
---	---



More technical information on [www.schneider-electric.com](http://www.schneider-electric.com)

## Introduction

Counters, associated with detection products (photo-electric detectors, inductive sensors, limit switches, etc) or dialogue products (pushbuttons, selector switches, etc) can be used to provide an additional control system function: counting.

## Functions

Counters complement the range of display units and operator dialogue terminals by offering simple display and entry functions. They are fully compatible with detection and human-machine interface products.

## Technologies

The range is divided into two technologies:

- electromechanical, which is more suitable for slow counting applications of around 10 Hz,
- electronic (LCD or LED display) which is suitable for counting frequencies of around 1 kHz.

The Zelio count range covers all counting functions. There are various product families:

- **totalising counters,**
- **preselection counters,**
- **hour counters,**
- **tachometers,**
- **batch counters.**

## Totalising counters

Totalising counters are used for counting events from electrical pulses or contacts. The value is displayed and updated in increments at each new pulse or contact. They are unidirectional.

## Applications

### ■ In automatic mode

The totalising counter performs this function in conjunction with a photo-electric detector, inductive sensor or limit switch, which detects the passing of a part and translates this by adding one unit to the number of parts counted by the totalising counter.

### ■ In manual mode

The totalising counter performs this operation in conjunction with a pushbutton. Pressing the button adds one unit to the value displayed. This system can be used with a ticket dispenser or a manual assembly station.

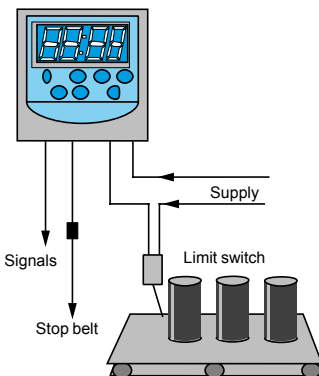
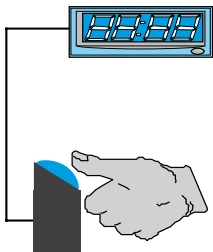
## Preselection counters

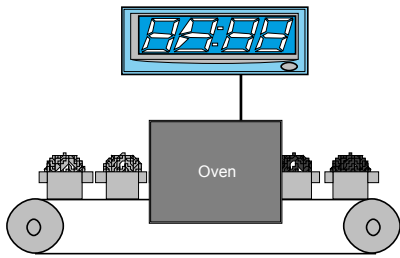
Preselection counters are used for counting events from electrical pulses or contacts. The value is displayed and updated by adding or subtracting at each new pulse. They allow manual entry of a preset value. When this preset value is reached, they send an electrical signal. They can be used for upcounting or downcounting.

## Applications

Upcounting or downcounting the number of parts.

The preselection counter counts the number of parts in the same way as a totalising counter. When the selected value is reached, the preselection counter, in conjunction with various sensors, sends a signal to trigger actions such as stopping a machine or conveyor belt.



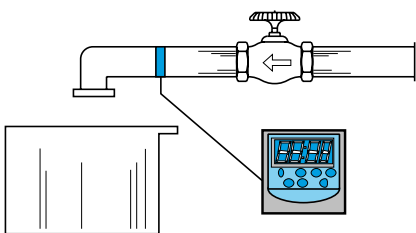


## Hour counters

Hour counters (also called timers or chronometers) are used to count and display times in different formats and with different modes depending on the type of counter used.

### Applications

- Duration of an oven heating time,
- Use of a machine, n time and in hours, in order to perform maintenance.



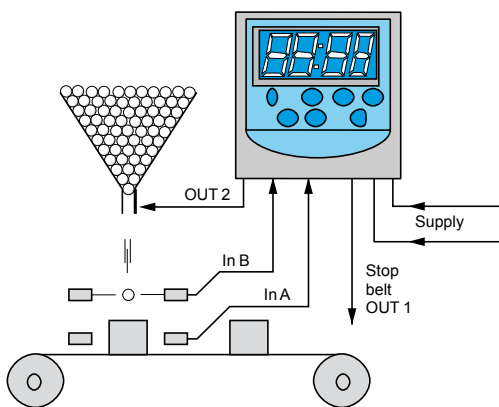
## Tachometers

Tachometers are used for measuring speed (linear or rotary), rates (in minutes or hours) or flow (volumetric).

The tachometer receives pulses at a frequency to be measured. A scale factor allows the required values to be displayed (speeds, rates, flows, etc.)

### Applications

- Automatic control of conveyor belt speed,
- Flow measurement,



Example: packing 50 capsules per container and grouping 10 containers in cartons.

## Batch counters

Batch counters are used for counting a number of parts per batch and counting a total number of batches; they send a signal each time the preset value is reached.

### Example

On a packing line, 50 capsules are to be counted into containers and 10 containers placed into a carton.

- P1 : number of batches (10)
- P2 : number of capsules (50).



XBKT50000U●●M



XBKT60000U00M



XBKT60000U1●M



XBKT70000U00M



XBKT80000U00M



XBKT81030U33E



XBKP50100D●0M



XBKP50100U●0M

### Electromechanical and electronic totalising counters

Supply voltage	Number of display digits	Maximum counting frequency	Reset type	Reference	Weight
V		Hz			kg
<b>Counters with mechanical display</b>					
~ 24	5	20	Manual	XBKT50000U10M	0.100
	6	25	Without	XBKT60000U00M	0.030
		25	Manual	XBKT60000U10M	0.150
	7	20	Without	XBKT70000U00M	0.100
	8	25	Without	XBKT80000U00M	0.150
~ 48	5	20	Without	XBKT50000U08M	0.100
~ 115	5	10	Manual	XBKT50000U11M	0.100
	6	10	Manual	XBKT60000U11M	0.030

### Counters with LCD display

Lithium battery	8	30 or 7500	Manual or transistor	XBKT81030U33E	0.050
-----------------	---	------------	----------------------	---------------	-------

### Electromechanical preset counters, 5 digits

Supply voltage	Number of display digits	Counting frequency	Number of presets	Reset type	Reference	Weight
V		Hz				kg
<b>Subtracting preset counters with mechanical display</b>						
~ 24	5	25	1	Manual	XBKP50100D10M	0.200

Manual and electrical XBKP50100D20M 0.240

### Adding preset counters with mechanical display

~ 24	5	25	1	Manual	XBKP50100U10M	0.200
------	---	----	---	--------	---------------	-------

Manual and electrical XBKP50100U20M 0.240





XBKH7000000●M



XBKH81000033E



XBKP61●30G3●E



XBKP62●30G3●E

- 8 or 6 digits LCD display, digit height 7 mm
- Totalising counter:
  - 7 kHz and 40 Hz inputs
  - maximum counting capacity : 99 999 999 impulses
- Hour counter/chronometer:
  - start/stop inputs
  - 4 time ranges:
    - 99 999.9 hours - 99 999.9 min
    - 99 999.9 s - 99 h 59 min 59 s
- Powered by lithium battery:
  - vreset from front panel or remote reset



RC87610340

Electromechanical and electronic totalising timers					
Supply voltage	Number of display digits	Mains supply frequency	Reset type	Reference	Weight
V		Hz			kg
Timers with mechanical display					
~ 24	7	50	Without	XBKH70000004M	0.060
~ 115	7	50	Without	XBKH70000001M	0.060
~ 230	7	50	Without	XBKH70000002M	0.060

Supply voltage	Number of display digits	Display mode	Reset type	Reference	Weight
V					kg
Timers with LCD display					
Lithium battery	8	1/100 of an hour	Manual or transistor	XBKH81000033E	0.050

Electronic preselection and multifunction counters, 48 x 48, 6 digits, LCD or LED					
Supply voltage	Number of display digits	Counting frequency	Number of presets	Reference	Weight
V		kHz			kg
Manual, electrical and automatic reset					
Preselection counters with LCD display					
~ 24	6	5	1	XBKP61130G30E	0.150
			2	XBKP61230G30E	0.150
~ 115	6	5	1	XBKP61130G31E	0.250
			2	XBKP61230G31E	0.250
~ 230	6	5	1	XBKP61130G32E	0.250
			2	XBKP61230G32E	0.250
Preselection counters with LED display					
~ 24	6	5	1	XBKP62130G30E	0.150
			2	XBKP62230G30E	0.150
~ 230	6	5	1	XBKP62130G32E	0.250
			2	XBKP62230G32E	0.250

Totalising counters, LCD 24 x 48		
Description	Reference	Weight
Impulse counter	RC87610340	0.060

**Schneider Electric Industries SAS**

[www.schneider-electric.com](http://www.schneider-electric.com)

Head Office  
35, rue Joseph Monier  
F-92500 Rueil-Malmaison  
France

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Design: Schneider Electric  
Photos: Schneider Electric  
Printed by:

DIA5ED2130108EN

January 2013