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1 - Description

1.1 - General

The 87 620●●● multifunction counter has 5 operating modes:

Mode	Description	Page
PRESELECTOR <i>F c t P C</i>	Electrical pulse counting with activation of contact(s) when one or two preset value(s) is(are) reached.	55
TACHOMETER <i>F c t t R</i>	Calculates the number of electrical pulses per second or per minute.	60
TIME COUNTER <i>F c t t C</i>	Measurement of time elapsed between 2 electrical states with activation of contact(s) when the preset time(s) is(are) reached.	64
MULTITOTALISER <i>F c t P U</i>	Electrical pulse counting on 2 distinct(s) counting inputs: Totaliser A and Totaliser B.	69
BATCH COUNTER <i>F c t b C</i>	Preselector with a single preset value (see above) with incrementation of a counter each time the preselector activates its contact	74

1.2 - Technical Description

1.2.1 - Display

LED display	LCD display
<ul style="list-style-type: none"> - 7 segments, 6 digits and a programmable decimal point, - Red in colour, - Height: 7.6 mm LED, - 4 indicators: (P1, P2, G, PG). 	<ul style="list-style-type: none"> - 6 digits and a programmable decimal point, - Height: 9 mm LCD, - 4 indicators: (P1, P2, G, PG).

1.2.2 - Inputs

- Counting inputs A and B.
- Control inputs B and C (Partial stoppage of counting (called Gate function), display reset or maintained).
- Contact, voltage or solid-state inputs (NPN or PNP).

Input modes

- Counting inputs.
- Counting direction input and counting input.
- Differential inputs (adding or subtracting).
- Inputs with phase discriminator, use of edges.

Counting frequency

Counting input frequency	5 KHz with 1 input/2.5 KHz with 2 inputs
Counting input minimum pulse duration	17 ms at 30 Hz, 250 μ s at 2.5 KHz

1.2.3 - Outputs

Relay	
1 or 2 changeover	Response time < 5 ms
Rated current	5 A
Minimum current	10 mA
Maximum switching voltage	⎓ 30 V, ~ 250 V
Minimum switching voltage	~ / ⎓ 5 V
PNP solid-state	
Maximum current	30 mA
Switching voltage	⎓ 12...24 V for version with DC power supply ⎓ 12...30 V for version with AC power supply

The outputs OUT1 for P1 and OUT2 for P2 are available as solid-state or relay outputs.

1.2.4 - Supply

Max. current consumption with pulse transmitter	
⎓ 12...24 V ± 10 %	< 150 mA
~ 24 V ± 10 % - 50/60 Hz	< 250 mA
⎓ 12...24 V ± 10 % - 50/60 Hz	< 150 mA
⎓ 12...30 V ± 10 % - 50/60 Hz	< 150 mA

1.3 - Presentation and environment

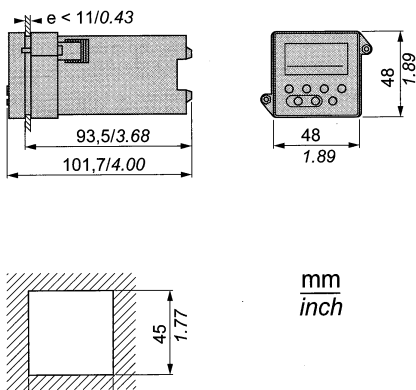
Electrical connection to terminal	Screw
Front panel dimensions	48 x 48 per DIN 43700
Panel mounting	By self-interlocking clamp by means of M3 set screws, 45 x 45 cutout
Thickness of panel	≤ 11 mm
Attachment	By front panel screw terminals
Protection	By front panel seal
Weight	- Approx. 100 g for the DC version with 1 preset - Approx. 200 g for the others versions
Protection category	Front panel : IP 65 (IEC 144)
Operating temperature range	0 °C...50 °C
Storage temperature range	- 20 °C...70 °C

1.4 - Physical description



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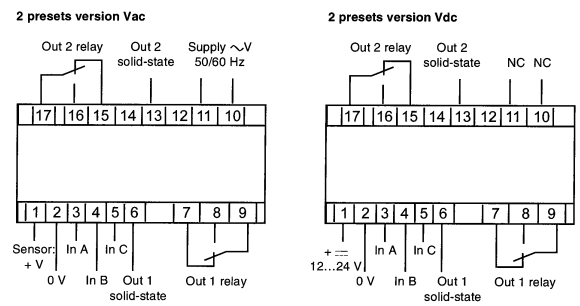
Dimensions



1.6 - Connection

The diagram below shows a complete wiring configuration.

If the product only has one preset, the terminals not connected are named as "nc" and must not be connected.

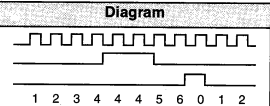
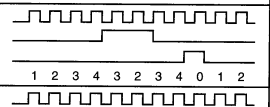
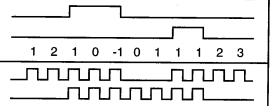
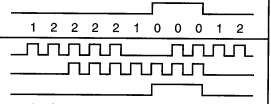


Connector screw tightening torques in Nm/lb-in
 Terminals 1-6 0.2/1.75

TERMINAL	DESCRIPTION
1	- Auxiliary power supply providing 12-24 volts dc only in ac voltage version to actuate pulse generators up to 50 mA. Note: For the dc power supply, this terminal is used for the direct current positive input.
2	0 Volt or common - for use with the sensor power supply, inputs A, B and C, and solid-state outputs 1 and 2
3	Input A (see the Role of counting and control inputs parameter)
4	Input B (see the Role of counting and control inputs parameter)
5	Input C - Programmable for use as a 0 reset input or gate (see Role of counting and control inputs parameter)
6	Solid-state output provides a PNP output signal
7	Changeover output 1: NC
8	Changeover output 1: NO
9	Changeover output 1: Common
10	Alternating current input - neutral (not wired for dc power supply products)
	Alternating current input - line (not wired for dc power supply products)

2 - Input and output mode

2.1 - Counting and control input modes (function + diagram)

			Diagram
<i>InEdr</i>	Input A Input B Input C Display	Counting Gate Reset	
<i>InEdr</i>	Input A Input B Input C Display	Counting direction Reset	
<i>InEdG</i>	Input A Input B Input C Display	Counting Counting direction Gate	
<i>InRsr</i>	Input A Input B Input C Display	Adding Subtracting Reset	
<i>InRSG</i>	Input A Input B Input C Display	Adding Subtracting Gate	

2.2 - Output modes

The outputs operate in correspondence with the pulse counter.
 The outputs are monostable or bistable according to the configuration set.
 In operation with resetting mode:

- If the preset value P1 is reached, the output OUT1 is activated.
- If the preset value P2 is reached, the output OUT2 is activated.

Zero reset mode or original mode

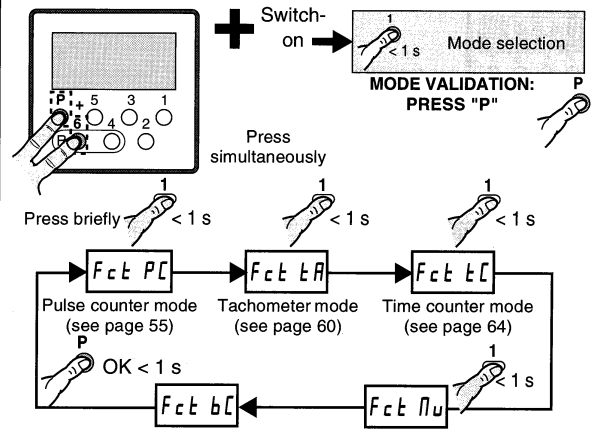
Static reset <i>r s b l o</i>	Counting	
	Reset	
	Display	1 2 0 0 0 0 0 0 1 2
Dynamic reset <i>r s c P t</i>	Counting	
	Reset	
	Display	1 2 0 1 2 3 4 5 6 7 8

Reset mode

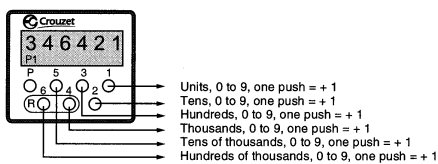
Upcounting <i>r s o</i>	Counting	
	Reset	
	Display	1 2 0 1 2 3 4 5 0 1 2
Operation with electrical, automatic or manual Reset		

3 - Operating and configuration mode

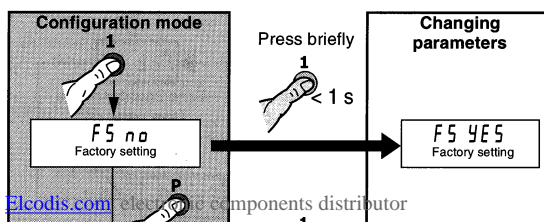
3.1 - Mode selection



3.3 - Programming of the preset and gain values



Example: P + 5



4 - Preselector mode

4.1 - Description of the preselector mode

F c t P C

The CPT4 multifunction electronic counter configured in preselector mode enables:

- the upcounting/downcounting of electrical pulses,
- the display of current value, taking into account the Gain G, also known as the weighting factor, or scale factor,
- activation of a contact OUT1 when the value P1 is reached,
- activation of a contact OUT2 when the value P2 is reached,
- manual reset, electrical reset (using input C) or automatic reset by programming.
- operation with reset to zero or reset to the main preset value.

where:

- P1: intermediate preset.
- P2: main preset.

Note: In the case of a counter with only one preset, P1 is the main preset.

4.2 - Configuration of the preselector mode

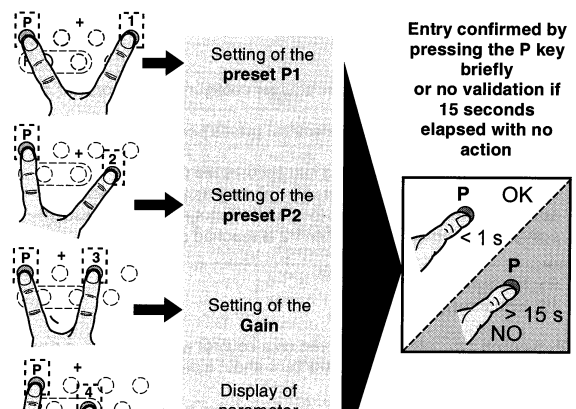
PARAMETERS	VALUES	DESCRIPTION			
Setting to default configuration	<i>FS n0*</i>	- Manual reset			
	<i>FS 4E5</i>	- Default factory setting (parameters marked*)			
Function of counting and control inputs	<i>in. CGr*</i>	Counting	Input A	Input B	Input C
	<i>in. Cdr</i>	Counting	Counting direction (2)	Gate	Reset
	<i>in. CdG</i>	Counting	Counting direction (2)	Gate	Reset
	<i>in. ASr</i>	Adding	Subtracting	Gate	Reset
	<i>in. ASG</i>	Adding	Subtracting	Gate	Reset
	<i>in. ARr</i>	Adding	Adding	Gate	Reset
	<i>in. PPr</i>	Phase A (1)	Phase B (1)	Gate	Reset
	<i>in. PPG</i>	Phase A (1)	Phase B (1)	Gate	Reset
	Display of decimal point on screen	<i>dP..*</i>	xxxxxx no decimal point		
<i>dP..0</i>		xxxxx.x			
<i>dP..00</i>		xxxx.xx			
<i>dP..000</i>		xxx.xxx			

PARAMETERS	VALUES	DESCRIPTION
Duration of the output signal OUT1	<i>SI OFF</i>	- No output signal
	<i>SI On</i>	- Bistable output (disappears on transmission of OUT2)
	<i>SI 0.02</i>	- 20 ms
	<i>SI 0.05</i>	- 50 ms
	<i>SI 0.10*</i>	- 100 ms
	<i>SI 0.20</i>	- 200 ms
Duration of the output signal OUT2	<i>SI 0.50</i>	- 500 ms
	<i>SI 1.00</i>	- 1 s
Operation of OUT2 on an intermediate reset	<i>Dur n*</i>	- No transmission (if external reset before P2 is reached, the output is not activated) (1)
	<i>Dur y</i>	- With transmission OUT2 on a reset (In the event of a reset on OUT2 the output is activated) (1)
Logic of NPN or PNP inputs	<i>In. NH</i>	- HTL inputs for NPN (sensitive to a level "0" ≤ 2 V and "1" ≥ 8 V)
	<i>In. PH*</i>	- HTL inputs for PNP (sensitive to a level "0" ≤ 2 V and "1" ≥ 8 V)
	<i>In. NL</i>	- TTL inputs for NPN (sensitive to a level "0" ≤ 2 V and "1" ≥ 3.8 V)
	<i>In. PL</i>	- TTL inputs for PNP (sensitive to a level "0"

PARAMETERS	VALUES	DESCRIPTION
Reset interlocking by keys (6 + 4)	<i>r 5 unL</i> *	- Manual reset possible (keys 6 + 4)
	<i>r 5 Loc</i>	- Reset by keys, interlocked or delayed (see Interlocking mode parameter)
Interlocking of access to preset P1	<i>P 1 unL</i> *	- Access to preset P1 possible (keys P + 1)
	<i>P 1 Loc</i>	- Access to P1 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to preset P2	<i>P 2 unL</i> *	- Access to preset P2 possible (keys P + 2)
	<i>P 2 Loc</i>	- Access to P2 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to gain G	<i>G R unL</i> *	- Access to gain possible (keys P + 3)
	<i>G R Loc</i>	- Access to gain interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking mode for reset, presets and gain	<i>R I I unL</i> *	- Access to interlocked parameters possible after pressing > 10 s
	<i>R I I Loc</i>	- Access to interlocked parameters impossible

4.3 - Use of the preselector mode

Display or modification of presets P1, P2 and gain G (they can be interlocked by programming)



5 - Tachometer mode

5.1 - Description of the tachometer mode

F c t t R

The CPT4 multifunction electronic counter configured in tachometer mode enables:

- upcounting/downcounting of electrical pulses per second or per minute (counting on rising edges),
- display of current value, taking into account the Gain G,
- remaining of display of current value as long as input C is active,
- activation of contact OUT1 as long as P1 is not reached or passed,
- activation of contact OUT2 when P2 is reached or passed.

where:

- P1: low threshold.
- P2: high threshold

This function can only be configured on a counter with 2 presets; a counter with 1 preset will behave like a counter without a preset.

5.2 - Configuration of the tachometer mode

PARAMETERS	VALUES	DESCRIPTION
Default configuration	<i>F S n0*</i>	- Manual reset
	<i>F S yE5</i>	- Default factory setting (parameters marked *)
Function of counting and control inputs	<i>In. CH *</i>	Counting input
	<i>In. CDH</i>	Counting
	<i>In. RSH</i>	Adding
	<i>In. RRH</i>	Adding
	<i>In. PPH</i>	Phase A (1) Phase B (1)
Time unit	<i>U. SEC*</i>	- Pulses/second
	<i>U. Min</i>	- Pulses/minute
Display of decimal point on screen	<i>dP - *</i>	xxxxx no decimal point
	<i>dP - 0</i>	xxxx.x
	<i>dP - 00</i>	xxxx.xx
	<i>dP - 000</i>	xxx.xxx
Minimum input frequency	<i>LF 1*</i>	- 1 Hz (if no pulse after 1 s, the display returns to 0)
	<i>LF 0.12</i>	- 0,125 Hz (if no pulse after 8 s, the display

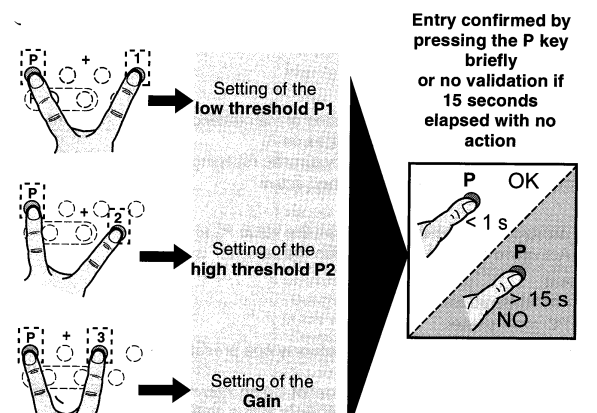
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PARAMETERS	VALUES	DESCRIPTION
Maximum input frequency	Frq L	- Attenuation at 30 Hz (to avoid contact bounce being taken into account)
	Frq H*	- No attenuation (5 KHz or 2.5 KHz if two-way counting)
Clearance of low threshold for starting	SUP n*	- Without
	SUP y	- With (OUT1 active if the current value has passed P1 once)
Interlocking of the access to the low threshold P1 (1)	P1 unL*	- Access to the low threshold P1 possible (keys P + 1)
	P1 Loc	- Access to P1 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of the access to the high threshold P2 (1)	P2 unL*	- Access to the high threshold P2 possible (keys P + 2)
	P2 Loc	- Access to P2 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to Gain G	GR unL*	- Access to gain possible (keys P + 3)
	GR Loc	- Access to gain interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking mode for presets and gain	All unL*	- Access to interlocked parameters possible after pressing > 10 s
	All Loc	- Access to interlocked parameters impossible

(1) Only for units with 2 presets.

5.3 - Use of the tachometer mode

Display or modification of presets P1, P2 and gain G (they can be interlocked by programming).



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6 - Timer mode

6.1 - Description of the timer mode

F c t t C

Inputs A, B and C:

- Input A : Measurement of duration of maintenance of input A or time elapsed between two rising edges on A.
- Input B : manual, electrical or automatic resetting when active.
- Input C: Display maintained when active.

- Activation of contact OUT2 when the value P2 is reached.
- Activation of contact OUT1 when the value P1 is reached.

where:

- P1: intermediate preset.
- P2: main preset.

Note: In the case of a counter with only one preset, P1 is the main preset.

6.2 - Configuration of the timer mode

PARAMETERS	VALUES	DESCRIPTION
Default configuration	<i>F S 00*</i>	- Manual reset
	<i>F S 4 E S</i>	- Default factory setting (parameters marked *)
Time unit	<i>t u S E c *</i>	- Second
	<i>t u m i n</i>	- Minute
	<i>t u h r</i>	- Hour
	<i>t u H M S</i>	- Format HH.MM.SS
Display of decimal point on screen	<i>t u . . *</i>	xxxxxx no decimal point
	<i>t u . . 0</i>	xxxxx.x
	<i>t u . . 00</i>	xxxx.xx
	<i>t u . . 000</i>	xxx.xxx
Reset mode	<i>r S 0*</i>	- Upcounting mode; no automatic reset to zero; manual or electrical reset.
	<i>r S R 0</i>	- Upcounting mode; reset to zero automatic when main preset is reached. (1)
	<i>r S P 2</i>	- Downcounting mode; no automatic reset to preset value. (1)
	<i>r S R P 2</i>	- Downcounting mode; automatic reset to main preset when zero is reached. (1)
Duration of the output signal OUT1	<i>S I 0 F F</i>	- No output signal
	<i>S I 0 n</i>	- Bistable output (disappears on transmission of OUT2)

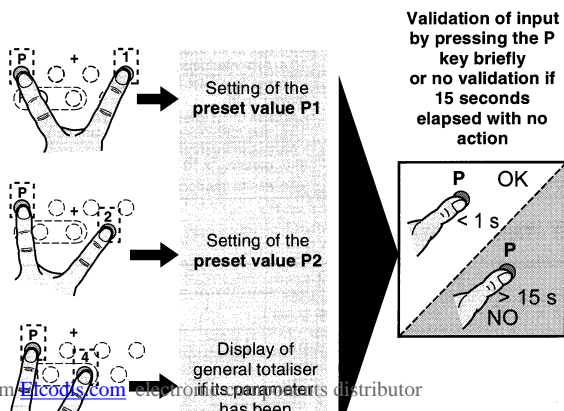
PARAMETERS	VALUES	DESCRIPTION
Operating types	<i>t c c P u *</i>	- Accumulated time duration while input A is active (1)
	<i>t c c P P</i>	- Accumulative time duration between 2 rising edges on A (2)
	<i>t c S P u</i>	- Time duration while input A is active (1), (3)
	<i>t c S P P</i>	- Time duration between 2 rising edges (2), (3)
Transmission of OUT2 on an intermediate reset	<i>D u r n *</i>	- No transmission (if external reset before P2 is reached, the output is not activated) (4)
	<i>D u r y</i>	- With transmission OUT2 on reset (In the event of reset on OUT2 the output is activated) (4)
Logic of NPN or PNP inputs	<i>I n . P H</i>	- HTL inputs for NPN (sensitive to a level "0" $\leq \dots 2 V$ and "1" $\geq \dots 8 V$)
	<i>I n . P H *</i>	- HTL inputs for PNP (sensitive to a level "0" $\leq \dots 2 V$ and "1" $\geq \dots 8 V$)
	<i>I n . P L</i>	- TTL inputs for NPN (sensitive to a level "0" $\leq \dots 2 V$ and "1" $\geq \dots 3.8 V$)
	<i>I n . P L</i>	- TTL inputs for PNP (sensitive to a level "0" $\leq \dots 2 V$ and "1" $\geq \dots 3.8 V$)
Maximum input frequency	<i>F r q L</i>	- Attenuation at 30 Hz (to avoid contact bounce being taken into account)
	<i>F r q H *</i>	- No attenuation (5 KHz or 2.5 KHz if two-way counting)
Static or dynamic reset	<i>r s b l o *</i>	- Static: no counting during resetting time - Dynamic: counting possible during resetting time

PARAMETERS	VALUES	DESCRIPTION
Reset interlocking by keys (6 + 4)	<i>r s u n L *</i>	- Manual setting to zero possible (keys 6 + 4)
	<i>r s L o c</i>	- Manual setting to zero interlocked or delayed (see Interlocking mode parameter)
Interlocking of access to preset value P1	<i>P 1 u n L *</i>	- Access to preset P1 possible (keys P + 1)
	<i>P 1 L o c</i>	- Access to P1 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to preset value P2	<i>P 2 u n L *</i>	- Access to preset P2 possible (keys P + 2)
	<i>P 2 L o c</i>	- Access to P2 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking mode for reset and presets	<i>R I I u n L *</i>	- Access to interlocked parameters possible after pressing > 10 s
	<i>R I I L o c</i>	- Access to interlocked parameters impossible

6.3 - Timer operating mode

6.4 - Use of the timer mode

Display or modification of presets P1, P2 (they can be interlocked by programming).



7 - Multitotaliser mode

7.1 - Description of the multitotaliser mode

F c t n u

The CPT4 multifunction electronic counter configured in multitotaliser mode enables the number of pulses on two inputs to be counted independently of each other. It only operates with 2 preset values. A counter with only one preset behaves as if it did not have a preset.

It allows:

- counting of electrical pulses on input A (Totaliser A),
- counting of electrical pulses on input B (Totaliser B),
- main display of value A + B or A - B (according to configuration),
- taking into account of a Gain factor (common to the two totalisers and to the main display),
- manual setting to zero of totaliser A or totaliser B (without effect on main display),
- electrical setting to zero of totaliser A or totaliser B and the main display by activation of input C,
- activation of a contact OUT1 when the intermediate preset value P1 is reached for input A.

7.2 - Configuration of the multitotaliser mode

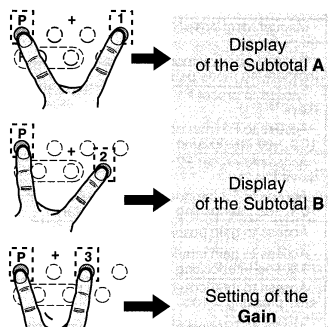
PARAMETERS	VALUES	DESCRIPTION
Default configuration	<i>F S n0*</i>	- Manual reset
	<i>F S YES</i>	- Default factory setting (parameters marked *)
Function of counting and control inputs		Input A Input B Input C
	<i>in. ARR*</i>	Adding Adding Reset
	<i>in. ASr</i>	Adding Subtracting Reset
Display of decimal point on screen	<i>dP - *</i>	xxxxxx no decimal point
	<i>dP - 0</i>	xxxxx.x
	<i>dP - 00</i>	xxxx.xx
	<i>dP - 000</i>	xxx.xxx
Duration of the output signal OUT1	<i>S 1 OFF</i>	- No output signal
	<i>S 1 On</i>	- Bistable output
	<i>S 1 0. 02</i>	- 20 ms
	<i>S 1 0. 05</i>	- 50 ms
	<i>S 1 0. 10*</i>	- 100 ms
	<i>S 1 0. 20</i>	- 200 ms
	<i>S 1 0. 50</i>	- 500 ms

PARAMETERS	VALUES	DESCRIPTION
Saving of outputs OUT1 and OUT2	<i>nEn n*</i>	- No saving of output states in the event of a power cut
	<i>nEn y</i>	- With saving of output states in the event of a power cut
With or without preset	<i>P n*</i>	- Without
	<i>P y</i>	- With
Reset interlocking by keys (6 + 4)	<i>r S unL*</i>	- Manual reset possible (keys 6 + 4)
	<i>r S Loc</i>	- Reset by keys, interlocked or delayed (see Interlocking mode parameter)
Interlocking of access to preset P1	<i>P 1 unL*</i>	- Access to preset P1 possible (keys P + 1)
	<i>P 1 Loc</i>	- Access to P1 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to preset P2	<i>P 2 unL*</i>	- Access to preset P2 possible (keys P + 2)
	<i>P 2 Loc</i>	- Access to P2 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to Gain G	<i>G R unL*</i>	- Access to gain possible (keys P + 3)
	<i>G R Loc</i>	- Access to gain interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking mode for reset, presets and gain	<i>R 1 1 unL*</i>	- Access to interlocked parameters possible after pressing > 10 s
	<i>R 1 1 Loc</i>	- Access to interlocked parameters impossible

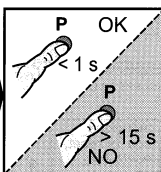
7.3 - Use of the multitotaliser mode

Display or modification of preset values P1, P2 and gain G (they can be interlocked by programming).

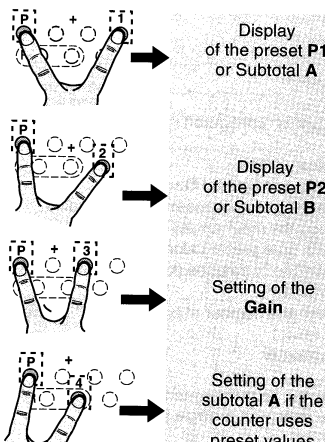
This mode allows 2 inputs to be counted independently of each other. By default, the multitotaliser does not use preset values $P \quad n$



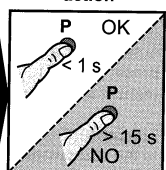
Entry confirmed by pressing the P key briefly or no validation if 15 seconds elapsed with no action



If the multitotaliser uses preset values, make sure that the value displayed on the counter is $P \quad y$



Entry confirmed by pressing the P key briefly or no validation if 15 seconds elapsed with no action



8 - Batch counter

8.1 - Description of the batch counter mode

F c t b C

The CPT4 multifunction electronic counter configured in batch counter mode enables:

- counting/downcounting of electrical pulses,
- display of current value, taking into account the Gain G,
- manual, electrical or automatic setting to zero/reset of current value,
- activation of a contact OUT2 when the main preset value P2 is reached,
- increment of a batch counter each time preset value P2 is reached,
- display of current value of the number of batches (keys P and 4)
- manual, electrical or automatic reset,
- activation of a contact OUT1 when the number of batches reaches the preset value P1,
- manual setting to zero of batch counter.

- The output OUT2 is activated, or not, on an intermediate reset, according to the counter user settings. For units with a single preset, the corresponding output is OUT1.

8.2 - Configuration of the batch counter mode

PARAMETERS	VALUES	DESCRIPTION
Default configuration	<i>F 5 n 0 *</i>	- Manual reset
	<i>F 5 4 E 5</i>	- Default factory setting (parameters marked *)
Function of counting and control inputs	<i>in. C G r *</i>	Counting Gate Reset
	<i>in. C d r</i>	Counting Gate Counting direction (2) Reset
	<i>in. C d G</i>	Counting Gate Counting direction (2) Gate
	<i>in. A S r</i>	Adding Subtracting Reset
	<i>in. A S G</i>	Adding Subtracting Gate
	<i>in. A R r</i>	Adding Adding Reset
	<i>in. P P r</i>	Phase A (1) Phase B (1) Reset
	<i>in. P P G</i>	Phase A (1) Phase B (1) Gate
Display of decimal point on screen	<i>d P . . *</i>	xxxxx no decimal point
	<i>d P . . 0</i>	xxxxx.x
	<i>d P . . 0 0</i>	xxxx.xx
	<i>d P . . 0 0 0</i>	xxx.xxx
Reset mode	<i>r 5 0 *</i>	- Upcounting mode; no automatic reset to zero; manual or electrical reset.
	<i>r 5 0 n</i>	- Upcounting mode; reset to zero automatic

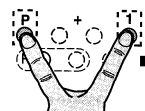
PARAMETERS	VALUES	DESCRIPTION
Duration of the output signal OUT1	5 1 0 F F	- No output signal
	5 1 0 n	- Bistable output
	5 1 0. 0 2	- 20 ms
	5 1 0. 0 5	- 50 ms
	5 1 0. 1 0*	- 100 ms
	5 1 0. 2 0	- 200 ms
	5 1 0. 5 0	- 500 ms
Duration of the output signal OUT2	5 1 1. 0 0	- 1 s
		- Same as OUT1
Operation of OUT2 on an intermediate reset	0 u r n *	- No transmission (if external reset before P2 is reached, the output is not activated)
	0 u r y	- With transmission OUT2 on a reset (In the event of a reset on OUT2 the output is activated)
Logic of NPN or PNP inputs	1 n. n H	- HTL inputs for NPN (sensitive to a level "0" ≤ 2 V and "1" ≥ 8 V)
	1 n. P H*	- HTL inputs for PNP (sensitive to a level "0" ≤ 2 V and "1" ≥ 8 V)
	1 n. n L	- TTL inputs for NPN (sensitive to a level "0" ≤ 2 V and "1" ≥ 3.8 V)
	1 n. P L	- TTL inputs for PNP (sensitive to a level "0" ≤ 2 V and "1" ≥ 3.8 V)
Maximum input		- Attenuation at 30 Hz (to avoid contact

PARAMETERS	VALUES	DESCRIPTION
Reset interlocking by keys (6 + 4)	r 5 u n L *	- Manual reset possible (keys 6 + 4)
	r 5 L o c	- Reset by keys, interlocked or delayed (see Interlocking mode parameter)
Interlocking of access to preset P1 Batch counter	P 1 u n L *	- Access to preset P1 possible (keys P + 1)
	P 1 L o c	- Access to P1 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to preset P2 Main counter	P 2 u n L *	- Access to preset P2 possible (keys P + 2)
	P 2 L o c	- Access to P2 interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking of access to Gain G	G R u n L *	- Access to gain possible (keys P + 3)
	G R L o c	- Access to gain interlocked (or possible after 10 s, see Interlocking mode parameter)
Interlocking mode for reset, presets and gain	R 1 1 u n L *	- Access to interlocked parameters possible after pressing > 10 s
	R 1 1 L o c	- Access to interlocked parameters impossible

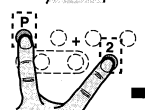
(1) Operation with phase discriminator.
 (2) Input B passive (0 V for PNP or 24 V for NPN) upcounting direction.
 Input B active (24 V for PNP or 0 V for NPN) for downcounting.

8.3 - Use of the batch counter mode

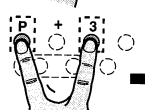
Display or modification of presets P1, P2 and gain G (they can be interlocked by programming).



Setting of the number of batches preset P1

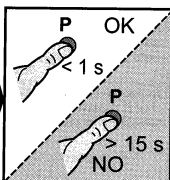


Setting of the batch preset P2



Setting of the Gain

Entry confirmed by pressing the P key briefly or no validation if 15 seconds elapsed with no action



9 - Encoding

Counter	87 620	X	Y	Z
Display	LCD	1		
	LED	2		
Preset	1 preset		1	
	2 presets		2	
Supply	⎓ 12 - 24 V ~ 24 V - 50/60 Hz ~ 115 V - 50/60 Hz ~ 230 V - 50/60 Hz			1 2 3 4

10 - Accessories

Adaptor 72 x 72

