

# CPT4 Multifunction Counter



- ▶ Counter, Ratemeter, Timer, Multi-totalizer, Batch Counter
- ▶ Configuration using text menus
- ▶ Easy modification of presets and multiplication coefficient
- ▶ SPDT and solid state outputs
- ▶ LCD and LED display
- ▶ IP65 sealed front panel
- ▶ 1/16 DIN-Sized (48 x 48mm) housing



## Input Specifications

Input Power $\pm$ 10%	12-24VDC 24VAC 115VAC 230VAC
Sensor Supply (AC Input Only)	12-30VDC, max 50mA
Display	6 Digit LCD or LED
Display height	LCD < 9mm LED < 7.6mm
Inputs	3 inputs 2 counter inputs Gate and reset input
Input Modes	Adding, Subtracting, Directional, Cumulative, Independent, Phase
Input type	Voltage or solid state
Low Level	< 2 VDC
High Level	> 8 to 40 VDC
Counter Speed	5 kHz for simple counting 2.5 kHz for counting on both inputs
Minimum pulse time	Counting input: 17 mS at 30 Hz 250 $\mu$ S at 2.5KHz 100 $\mu$ S at 5KHz

## Output Specifications

Solid state output max current	30 mA
Solid state output max voltage	24 VDC for DC version 30 VDC for AC version
Relay output current	0.01 to 5 A
Relay output voltage	5 - 30 VDC / 5 - 250 VAC
Response time	< 5 mS
Mechanical life (operations)	$1 \times 10^7$
Electrical life (operations at 5A AC1)	$1 \times 10^5$
Output maintained or pulsed	20, 50, 100, 200 500 mS or 1 second

## General Specifications

Operating Temperature Range	0 to +50°C
Storage Temperature Range	-20 to +60°C
Relative humidity (no condensation)	DIN 40040 -40/90°C / %RLF
Altitude	0 < 2000 m / 3048 m (transport)
Standards	UL, cUL E96337
Vibration resistance in 3 axes	10m/s <sup>2</sup> (10 to 150 Hz) conforming to IEC/EN 68 part 2-6. 100 m/s <sup>2</sup> (18mS) conforming to IEC/EN 68 part 2-27
Protection	IP 65 (front panel) IP20 (for connections) IEC 144
Weight	100g for DC version with 1 preset. 200g for all others
Scaling factor	0.001 to 999,999
Programming and current value backed up via EEPROM	Write cycle: > 100,000 Read cycle: unlimited Last 10 years

## Part Numbers

1 Solid State output and 1 SPDT output			
Preset	Supply Voltage	Display	Part Number
1	12-24 VDC	LCD	87620111
1	24 VAC	LCD	87620112
1	115 VAC	LCD	87620113
1	230 VAC	LCD	87620114
1	12-24 VDC	LED	87620211
1	24 VAC	LED	87620212
1	115 VAC	LED	87620213
1	230 VAC	LED	87620214

## Part Numbers

2 Solid State outputs and 2 SPDT outputs			
Preset	Supply Voltage	Display	Part Number
2	12-24 VDC	LCD	87620121
2	24 VAC	LCD	87620122
2	115 VAC	LCD	87620123
2	230 VAC	LCD	87620124
2	12-24 VDC	LED	87620221
2	24 VAC	LED	87620222
2	115 VAC	LED	87620223
2	230 VAC	LED	87620224

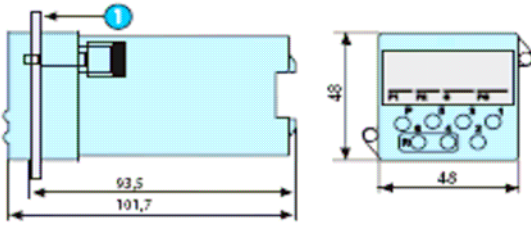
## Part Number

Accessories		
Description	Part Number	
Panel cut-out adapter plate for 72x72mm	87620300	

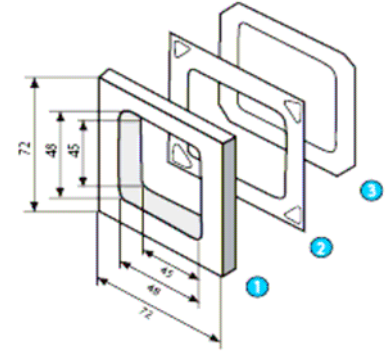
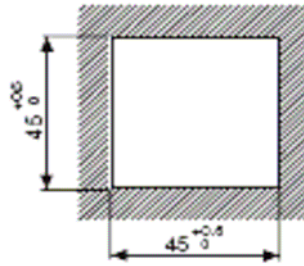
## Dimensions mm

## Panel cut-out

## Adapter Plate



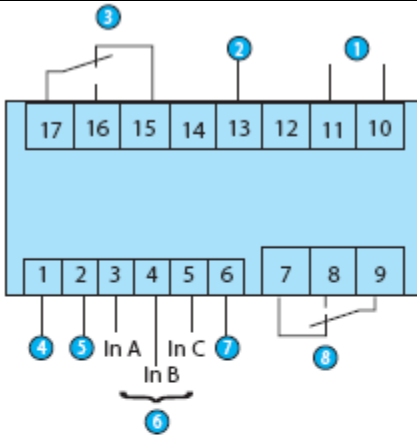
1 Panel thickness  $1 < 10$  mm



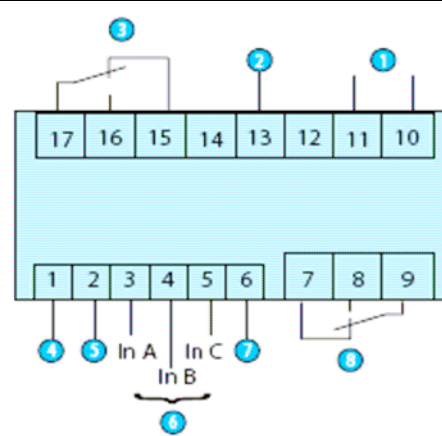
- 1 Front frame
- 2 Seal
- 3 Clamping frame

## CPT4 - 2 presets AC version

## CPT4 - 2 presets DC version



- 1 VAC power supply
- 2 Solid state output 2
- 3 Relay output 2
- 4 Auxiliary power supply
- 5 0 V or common
- 6 Counter and control input
- 7 Solid state output 1
- 8 Relay output 1

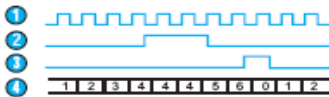


- 1 NC : Not connected
- 2 Solid state output 2
- 3 Relay output 2
- 4 VDC positive input
- 5 0 V or common
- 6 Counter and control input
- 7 Solid state output 1
- 8 Relay output 1

NB : Terminal 1 can be linked to inputs A, B or C via a contact when these inputs need an auxiliary power supply.

## Functions

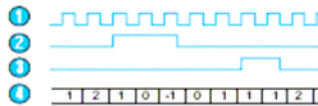
### Counter input Simple counting - In CGr



- 1 Input A : Counter
- 2 Input B : Gate
- 3 Input C : Reset\*
- 4 Display

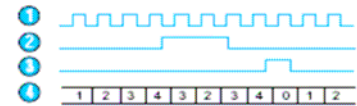
\* The RESET input is configured as solid state by default.

### Directional counting - In CdG



- 1 Input A : Counter
- 2 Input B : Counting direction
- 3 Input C : Gate
- 4 Display

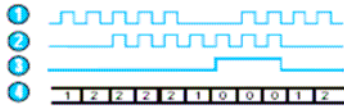
### Directional counting - In Cdr



- 1 Input A : Counter
- 2 Input B : Counting direction
- 3 Input C : Reset\*
- 4 Display

\* The RESET input is configured as solid state by default.

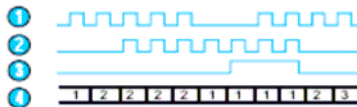
### Individual counting - In Asr



- 1 Input A : Upcounter
- 2 Input B : Downcounter
- 3 Input C : Reset\*
- 4 Display

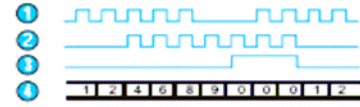
\* The RESET input is configured as solid state by default.

### Individual counting - In ASG



- 1 Input A : Upcounter
- 2 Input B : Downcounter
- 3 Input C : Gate
- 4 Display

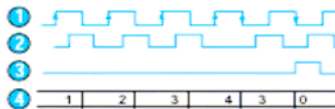
### Cumulative counting - In Aar



- 1 Input A : Counter
- 2 Input B : Counter
- 3 Input C : Reset\*
- 4 Display

\* The RESET input is configured as solid state by default.

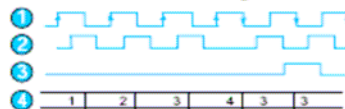
### Phase discriminator - In PPr



- 1 Input A : Channel A
- 2 Input B : Channel B
- 3 Input C : Reset\*
- 4 Display

\* The RESET input is configure solid state by default.

### Phase discriminator - In PPg



- 1 Input A : Channel A
- 2 Input B : Channel B
- 3 Input C : Gate
- 4 Display

### Output mode

#### Counting in the direction of the cycle - rS 0 rS A0



- 1 Counting
- 2 Reset
- 3 Display

Operation with electrical, automatic or manual Reset

### Counting in the opposite direction to the cycle - rS P2/rS AP2



- 1 Counting  
(Eg : P2 = 8)
- 2 Reset
- 3 Display

Operation with electrical, automatic manual Reset

### Reset

#### Solid state reset - rS blo



- 1 Counting
- 2 Reset
- 3 Display

#### Dynamic reset - rS cPt



- 1 Counting
- 2 Reset
- 3 Display

## Functions

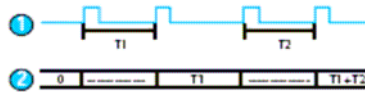
### Timing mode

#### tc cPu



- 1 tc cPu
- 2 Display

#### tc cPP



- 1 tc cPP
- 2 Display

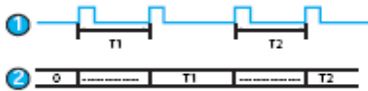
#### tc SPU



- 1 tc SPU
- 2 Display

A new time delay resets the first one

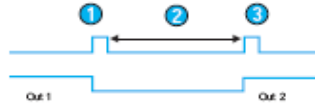
#### tc SPP



- 1 Display

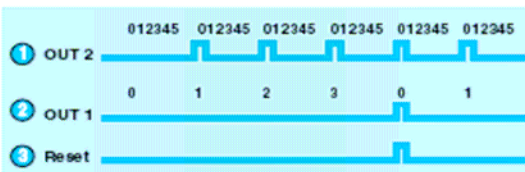
A new time delay resets the first one

### Ratometer operating mode



- 1 Low threshold
- 2 Normal operation
- 3 High threshold

### Batch counter operating mode



- 1 Current counter
- 2 Batch counter
- 3 Reset