

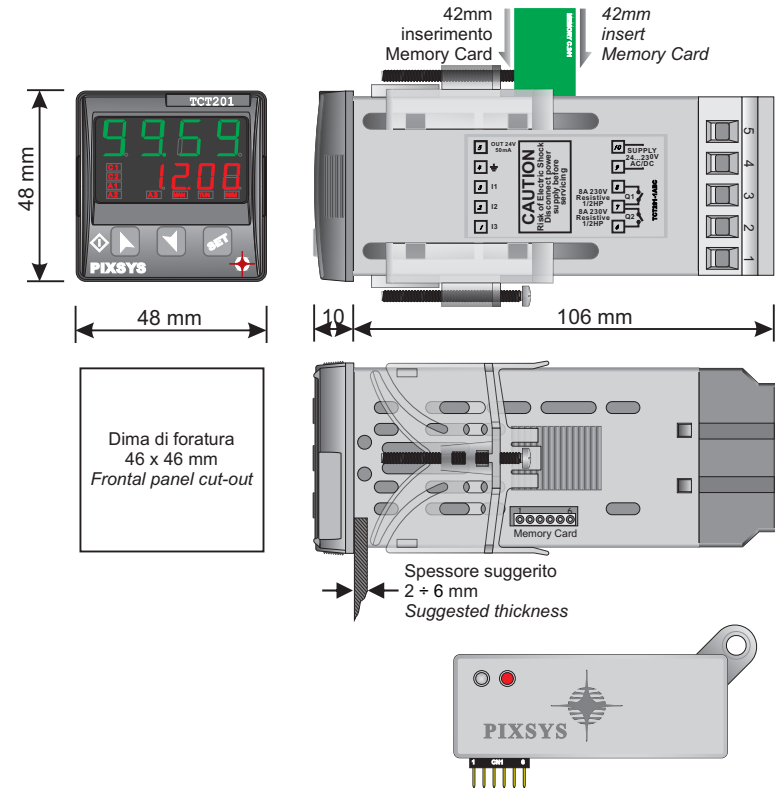


TCT201-2ABC USER MANUAL

PIXSYS www.pixsys.net
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Software V 2.03
2300.10.138-RevA 130510



SIZE AND INSTALLATION



SETPOINT MODIFICATION		
PRESS		DISPLAY
1		Visualizes SETPOINT 1 / 2
2	or	Modify selected SET

TECHNICAL DATA	
Operating temperature	Operating temperature 0-40°C, humidity 35..95uR%
Sealing	Front panel IP65 (with gasket), IP20 box and terminal bloks
Material	PC ABS UL94VO self-extinguishing
Digital Inputs	3PNP/NPN configurable as analogue for potentiometers.
Outputs	2 relays 5A resistive charge.
Back-UP	Rechargeable battery, approx. 60days autonomy
Programming Software	Labsoftview 2.0
Power supply	24...230Vac/Vdc +/-15% 50/60Hz / 2W

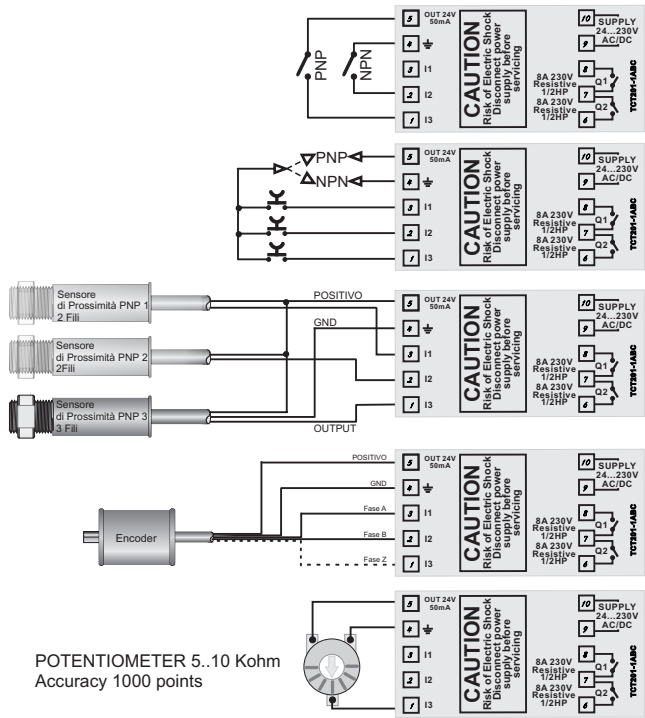
INTRODUCTION

Thanks for choosing a Pixsys device.

Counter TCT201 can be set in 2 different modes: Single or Double counter, all with independent setting.
3 universal digital inputs are availables (NPN/PNP) and can be used for bidirectional encoders reading, or Up/Down count function, count inversion, Lock/ Hold to lock or hold current visualization.

One input is also analogue in order to allow setpoint modification by an external potentiometer.

WIRING DIAGRAM



Potentiometer:

To modify Set1 or Set2 by external potentiometer follow the steps below:
1- use potentiometers 5kOhm to 10kohm
2- connect cursor to pin I3; a wrong connection may damage the potentiometer and lead to lock of the device.
3- accuracy on input is max 1000 points, therefore set the parameters "Upper limit" and "Lower limit" with a max difference of 1000 units.
(Ex.: LoS1 to 50,0 and uPS1 to 150,0 to modify time value related to Set1 between 50 and 150 seconds with steps of one tenth). Greater differences would make unstable the less significant digit.
4- To calibrate the scale of potentiometer enter the configuration mode and select: Hin.3 as Pot Fin.3 as Set1 or Set2 P.tAr as Enable
Exit configuration mode and place potentiometer at minimum level and press key, then place potentiometer at max level and press key: the device automatically exit the calibration procedure.
N.B.: A switch-off of the device would interrupt the calibration.

MEMORY CARD (optional)

Parameters and setpoint values can be copied from one device to another using the Memory car.

There are two methods:

> **With the device connected to the power supply** insert the memory card **when the controller is off**.

On activation display 1 shows and display 2 shows

(Only if the values stored on Mmemory Card are correct).

By pressing the key display 2 shows

Confirm using the key .

The device loads the new data and starts again.

> **With the controller disconnected from the power supply:**

The memory card is equipped with an internal battery with a life of about 1000 uses.

Insert the memory card and press the programming button.

When writing the parameters, the LED turns red and on completing the procedure it changes to green. It is possible to repeat the procedure.

▲ UPDATING MEMORY CARD.

To *update* the memory card values, follow the procedure described in the first method, setting display 2 to so as not to load the parameters on controller.

Enter configuration and **change at least one parameter**. Exit configuration. Changes are saved automatically.

LOADING DEFAULT VALUES			
PRESS		DISPLAY	DO
1	SET for 3 seconds	Display 1 shows with 1°digit blinking, while Display 2 shows	
2	Or	Modifies blinking digit and pass to the next one pressing	Enter password
3	to confirm	Device loads default values	Switch the device off and restart it

MODIFY CONFIGURATION PARAMETERS

PRESS		DISPLAY	DO
1	SET for 3 seconds	Display 1 shows with first digit blinking, while Display 2 shows	
2	or	Modifies blinking digit and pass to the next one pressing	Enter password
3	to confirm	Display shows first parameter of configuration table	
4	or	Scroll paremeters	
5	+ or	Increase or decrease visualized value pressing and an arrow key	Enter the new data that will be saved when releasing arrow key
6	+	End configuration, controller exits from programming mode	

PARAMETERS LIST

FUNCTION CONFIGURATION

P-01 Counter Function	Counter functions	
Single (1 Counter)	1 counter functioning	Default
Double (2 Counters)	2 counters functioning	

BACKUP MEMORY CONFIGURATION

P-02 Power-off Memory	Power-off memory	
Disable	No counter stored at power-off	Default
Counter 1	Counter 1 stored at power-off	
Counter 2	Counter 2 stored at power-off	
All Counters	All counters stored at power-off	

INPUT CONFIGURATION

P-03 Hardware input 1	Input 1 hardware configuration	
P-04 Hardware input 2	Input 2 hardware configuration	
P-05 Hardware input 3	Input 3 hardware configuration	
NPN	NPN (not available on input 3)	
PNP	PNP	Default
TTL	TTL	
Potent.	Potentiometer (available only for input 3)	

P-06 Filtre Delay Input 1	Input 1 digital filter configuration	
P-07 Filtre Delay Input 2	Input 2 digital filter configuration	
P-08 Filtre Delay Input 3	Input 3 digital filter configuration	
No delay	Input filter disabled	Default
0,5 ms	Filter of 0,5 ms	
...	...(Step 0,5 ms)	
100,0 ms	Filter of 100,0 ms	

P-09 Active State Input 1	Active state input 1	
P-10 Active State Input 2	Active state input 2	
P-11 Active State Input 3	Active state input 3	
High Level	High level (available only for input 1)	
Low Level	Low level (available only for input 2)	
Rising edge	Rising edge	Default
Falling edge	Falling edge	

P-12 Function Input 3	Function associated to input 3	
Disable	Disabled	
Encoder Z	Loading encoder Z	
Load Counter 1	Loading counter 1	Default
Load Counter 2	Loading counter 2	
Load Counter 1&2	Loading counters 1 and 2	
Set1	Set1 setting by potentiometer	
Set2	Set2 setting by potentiometer	

P-13 Function Key UP	Function associated to UP (up arrow key)	
Disable	Disabled	Default
Load Counter 1	Loading counter 1	
Load Counter 2	Loading counter 2	
Load Counter 1&2	Loading counters 1 and 2	
Potentiom. Tarature	Potentiometer calibration procedure	
Disable	Disabled	Default
Enable	Enabled	

COUNTER CLOCK CONFIGURATION

P-15 Clock Counter 1	Counter 1 count mode selection	
P-33 Clock Counter 2	Counter 2 count mode selection	
Disable	Disabled	Default C2
Encoder	Bidirectional encoder (I1) phase A, (I2) phase B	
I1 Up, I2 Off	UP mode (I1)	Default C1
I1 Down, I2 Off	DOWN mode (I1)	
I1 Off, I2 Up	UP mode (I2)	
I1 Off, I2 Down	DOWN mode (I2)	
I1 Up, I2 Down	UP mode (I1) - DOWN mode (I2)	
I1 Up, I2 Incr./Decr.	UP mode (I1) with reverse direction (I2)	
I1 Up, I2 En./Lock	UP mode (I1) with count lock (I2)	
I1 Up, I2 En./Hold	UP mode (I1) with keeping value on display (I2)	
I1 Down, I2 En./Lock	DOWN mode (I1) with count lock (I2)	
I1 Down, I2 En./Hold	DOWN mode (I1) with keeping value on display (I2)	
Output Counter 2/1	UP count on rising edge of counter 2/1	

COUNTER DISPLAY CONFIGURATION

P-16 Display Counter 1	Counter 1 visualization selection	
P-34 Display Counter 2	Counter 2 visualization selection	
Disable	Counter value not visualized	Default C2
Visualized	Counter value visualized	Default C1
P-17 Decimal Point Counter 1	Counter 1 visualization format	
P-35 Decimal Point Counter 2	Counter 2 visualization format	
0	No decimal digit visualization	Default
0.0	1 decimal digit visualization	
0.00	2 decimal digits visualization	
0.000	3 decimal digits visualization	
P-18 Counter 1 input counts	Counter 1 input counts (1...9999)	Default 1
P-36 Counter 2 input counts	Counter 2 input counts (1...9999)	Default 1
P-19 Counter 1 Visualized Counts	Counter 1 visualized counts (1...9999)	Default 1
P-37 Counter 2 Visualized Counts	Counter 2 visualized counts (1...9999)	Default 1

SETPOINT CONFIGURATION

P-20 Display Set 1	Counter 1 setpoint visualization selection	
P-38 Display Set 2	Counter 2 setpoint visualization selection	
Disable	Setpoint value not visualized	Default C2
Visualized	Setpoint value visualized	
Modifiable	Setpoint value visualized and modifiable	Default C1
P-21 Lower Limit Set 1	Set 1 minimum value (0...9999)	Default 0
P-39 Lower Limit Set 2	Set 2 minimum value (0...9999)	Default 0
P-22 Upper Limit Set 1	Set 1 maximum value (0...9999)	Default 999
P-40 Upper Limit Set 2	Set 2 maximum value (0...9999)	Default 999

AUTOMATIC LOAD CONFIGURATION

P-23 Automatic Load Counter 1	Counter 1 automatic loading	
P-41 Automatic Load Counter 2	Counter 2 automatic loading	
Disable	Automatic loading disabled	Default
Counter ≥ Set 1	Loading if counter = Set1	
Counter ≥ Set 2	Loading if counter = Set2	
Counter ≥ Set 1+Output Duration 1	Loading if counter = Set1 + "Output Duration 1"	
Counter ≥ Set 2+Output Duration 2	Loading if counter = Set2 + "Output Duration 2"	
Counter ≥ Visualized counts	Loading if counter = "Visualized Counts"	

COUNTER LOAD VALUE CONFIGURATION

P-24 Counter Load Value 1	Counter 1 loading value	Default 0
P-42 Counter Load Value 2	Counter 2 loading value	Default 0

COUNTER OUTPUT MODE CONFIGURATION

P-25 Counter 1 Output Mode	Counter 1 output mode	
P-43 Counter 2 Output Mode	Counter 2 output mode	
Disable	Disabled output	Default
Counter ≥Set	Output active if Counter ≥Set	
Counter ≥Set * Output Duration (time)	Output active for "Output Duration" time if Counter ≥Set	
Counter ≥Set * Output Duration (counts)	Output active for "Output Duration" counts if Counter ≥Set	
Counter ≥Set1+Set2	Output active if Counter ≥Set1+Set2	

OUTPUT DURATION CONFIGURATION

P-26 Output 1 Duration	Counter 1 output duration	Default 10
P-44 Output 2 Duration	Counter 2 output duration	Default 10
Output Duration Input by User	Value modifiable by user	Default
Latch output (clear only by load)	Latch output resettable by counter loading	
Min output duration	Output duration minimum value	
Max output duration	Output duration maximum value	

COUNTER FREQUENCY DISPLAY CONFIGURATION

P-27 Display Frequency Counter 1	Counter 1 frequency visualization	
P-45 Display Frequency Counter 2	Counter 2 frequency visualization	
Disable	Counter frequency value not visualized	Default
Visualized	Counter frequency value visualized	
P-28 Decimal Point Frequency Counter 1	Counter 1 frequency format	
P-46 Decimal Point Frequency Counter 2	Counter 2 frequency format	
0	Visualization with no decimal digit	Default
0.0	Visualization with 1 decimal digit	
0.00	Visualization with 2 decimal digits	
0.000	Visualization with 3 decimal digits	
P-29 Counter 1 Input frequency	Counter 1 input frequency (1...9999Hz)	Default 1
P-47 Counter 2 Input frequency	Counter 2 input frequency (1...9999Hz)	Default 1
P-30 Counter 1 Visualized Frequency	Counter 1 visualized frequency	Default 1
P-48 Counter 2 Visualized Frequency	Counter 2 visualized frequency	Default 1
P-31 Output Q1 Setup	Output Q1 settings	
P-32 Output Q2 Setup	Output Q2 settings	
Disable	Disabled output	Default C2
Out Counter 1 n.o.	Counter 1 output on n.o. contact	Default C1
Out Counter 1 n.c.	Counter 1 output on n.c. contact	
Out Counter 2 n.o.	Counter 2 output on n.o. contact	
Out Counter 2 n.c.	Counter 2 output on n.c. contact	

TCT201-2ABC “COUNTER”

