

Specifications

Counter Input	mechanical contact (NO) or electronic (from PNP / NPN sensor)
Input RESET	<input type="checkbox"/> NO mechanical contact
Counting Range	1...9999
Prescaling Multiplying Coefficient	1...999
Input Isolation	optical, 750 VAC
Output	<input type="checkbox"/> relay 5A/250VAC with NO/NC contact, <input type="checkbox"/> SSR 1A/250VAC, <input type="checkbox"/> open collector NPN 40mA/40V, <input type="checkbox"/> 5...24 VDC, 30 mA for external SSR
Output Pulse Duration	0.1...9.9 s
Power Supply	<input type="checkbox"/> 230 VAC, <input type="checkbox"/> 115 VAC, <input type="checkbox"/> 12 VAC, <input type="checkbox"/> 12 VDC, <input type="checkbox"/>
Operating Temperature / Humidity	-10...65 °C / 0...85% RH
Storage Temperature / Humidity	-20...65 °C / 0...95% RH, non-condensing
Protection Class: front / terminals	IP40 / IP20

Warranty and Support

.....
serial number

.....
manufacturing date

QC check mark(passed)
(stamp)

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P.O.Box 378
Plovdiv 4000, BULGARIA
tel: +359 32 646523, 646524
fax: +359 32 634089, 646517
e-mail: support@comeco.org

QD-8.2.4-WC

Warranty

COMECO warrants this product to be free from defects in materials and workmanship for 2 years. If your unit is found to be defective within that time, we will promptly repair or replace it. This warranty does not cover accidental damage, wear or tear, or consequential or incidental loss. This warranty does not cover any defects caused by wrong transportation, storage, installation, or operating (see 'Specifications').

Technical support

In the unlikely event that you encounter a problem with your COMECO device, please call your local dealer or contact directly our support team.

PROGRAMMABLE COUNTER

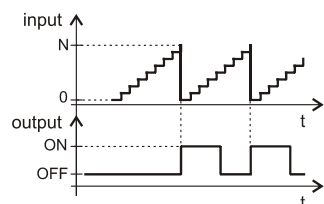
CT38

OPERATION MANUAL



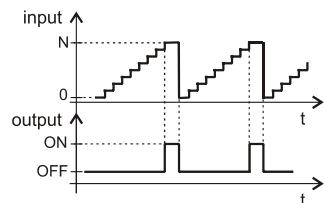
Please read this Operation Manual before mounting and operating!
Save the Manual for future references!

Setting and Adjusting

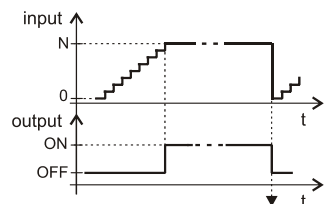


- ◆ To set the desired counting mode, use **CLEAR**:

□ (the device counts up or down to the set-point value and activates the output for the set duration; the counter resets at output activation and starts counting again immediately, regardless of the output pulse duration);

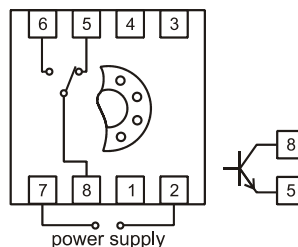


□ (the device counts up or down to the set-point value and then activates the output for the programmed duration; the counter retains the accumulated value while the output is active, and resets and restarts counting immediately after the output deactivates);



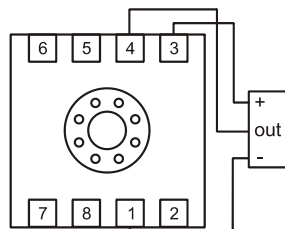
□ (the device counts up or down to the set-point value and then activates the output; the counter keeps its value and the output stays active till **CLEAR** is pressed; with key release, the output deactivates and the counter resets and restarts counting).

Wiring

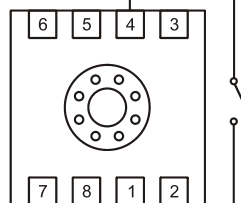


Wiring via 8-pin socket

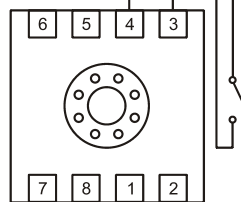
- ◆ Wire the power supply and the output via the socket terminals according to the diagram on the left.



- ◆ To connect active sensor to the counter input, adhere to the left diagram.



- ◆ When connecting passive contact at NPN or PNP input type (see device label), follow respectively the third or the fourth diagram.



Important notes:

- ◆ Strictly observe the supply voltage and relay contact requirements!
- ◆ Power supply must be turned off during the wiring!

Overview

CT38 is a single-channel programmable counter with simplified programming. The device has an optically isolated universal counting input for both mechanical contacts and electronic sensors. Equipped with a 4-digit display, CT38 may accumulate up to 9999 pulses, and its software enables up- and down-counting and allows programming of preliminary multiplier/divider. The device has a relay output for switching on and off electrical actuators, whose behavior at reached set-point is user programmable. Optionally, CT38 may be equipped with an additional, RESET input.

Mounting

Panel mounting

- ◆ Remove the mounting clamp.
- ◆ Place CT38 into a 45 x 45 mm panel cut-out.
- ◆ Put on the clamp and tighten.
- ◆ Wire the socket and plug it into the unit.

Rail mounting

- ◆ Mount the socket on the rail.
- ◆ Connect the cables to the socket.
- ◆ Plug CT38 into the socket.

Waste Disposal



Do not dispose of electronic devices together with household waste material!

If disposed of within European Union, this product should be treated and recycled in accordance with the laws of your jurisdiction implementing the WEEE Directive 2002/96 on the Waste Electrical and Electronic Equipment.

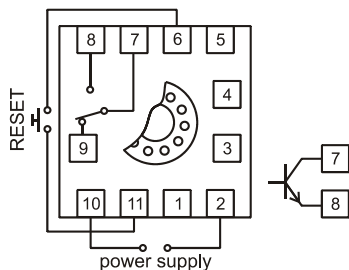
Setting and Adjusting



The device returns to Operating mode automatically if no key has been pressed for about 10 seconds.

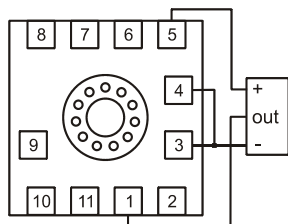
- ◆ Press **MODE** to enter counting direction adjustment mode.
- ◆ Using **CLEAR**, choose between \downarrow (forward direction: 0, 1, ..., N) and \uparrow (reverse direction: N, N-1, ..., 0).
- ◆ Select the decimal point position by **x1**.
- ◆ Set whether the counts to be stored at power-off (\downarrow) or not (\uparrow) via **x10**.
- ◆ Press **MODE** to enter input frequency adjustment mode.
- ◆ Use **x1** to select between ≤ 50 Hz (< 50 Hz: for mechanical contact) and ≥ 50 Hz (> 50 Hz: for active sensor).
- ◆ To return to Operating mode, press and hold **MODE** for 2 seconds.

Wiring

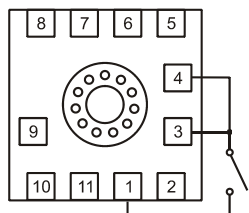


Wiring via 11-pin socket

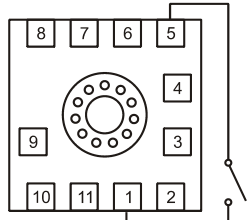
- ◆ Wire the power supply, the output, and the discrete input via the socket terminals according to the diagram on the left.



- ◆ To connect active sensor to the counter input, adhere to the second diagram.



- ◆ When connecting passive contact at NPN or PNP input type (see device label), follow respectively the third or the fourth diagram.



Important notes:

- ◆ Strictly observe the supply voltage and relay contact requirements!
- ◆ Power supply must be turned off during the wiring!

Setting and Adjusting



*Counter content may be cleared at any time by pressing and holding **CLEAR**.*

Operating mode

At power-on, CT38 enters Operating mode. The display shows the current number of counted pulses, and the 'OUT' LED – the output state.

Set-point adjustment

To adjust the counter set point, use the keys **x1**, **x10**, **x100**, and **x1000** during Operating mode.

Programming mode

- ◆ During Operating mode, press and hold **MODE** to enter pre-scaling coefficient adjustment mode. The 'SMPL' LED starts blinking.
- ◆ Use **CLEAR** to select multiplying (\times) or dividing (\div) input pre-scaling coefficient and adjust its value with **x1**, **x10**, and **x100**.
- ◆ Press **MODE** to proceed to adjustment of the counting mode and the output pulse duration. The 'MODE' LED starts blinking.
- ◆ Adjust the output pulse duration via **x1** and **x10**.