

Counting Input	NO contact or no-voltage electronic switch
Residual Voltage	max. 0.5 VDC
RESET Input	NO contact or no-voltage electronic switch
Minimum RESET Pulse Duration	20 ms
ON-sense / OFF-sense	< 10 k Ω / > 750 k Ω
Counting Input Active Front	rising
Maximum Input Frequency	<input type="checkbox"/> 1 Hz, <input type="checkbox"/> 30 Hz, <input type="checkbox"/> 1 kHz, <input type="checkbox"/> selectable
Manual RESET	<input type="checkbox"/> front-panel button
Power Supply	3 V lithium battery CR2477
Battery Life	\approx 7 years (at 20 °C)
Display Resolution	<input type="checkbox"/> 1, <input type="checkbox"/> 0.1
Operating Temperature / Humidity	-10...55 °C / 35...85% RH
Storage Temperature	-25...65 °C (non-freezing)
Protection Class	IP20
Vibration Resistance (mechanical)	0.75 mm at 10...55 Hz for 1 h
Vibration Resistance (malfunction)	0.3 mm at 10...55 Hz for 10 min
Shock Resistance (mechanical)	3 x 300 m/s ² (\approx 30 G)
Shock Resistance (malfunction)	3 x 100 m/s ² (\approx 10 G)
Dielectric Strength	2000 VAC for 1 min
Insulation Resistance	> 100 M Ω at 500 VDC

BATTERY-POWERED COUNTER

CT36

OPERATION MANUAL



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

Warranty and Support

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.

.....
serial number.....
manufacturing dateQC check mark(passed)
(stamp)
 88 Slavyanska Str.
 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

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Declaration of Conformity



The undersigned hereby declares, on behalf of COMECO Inc., that this device has been manufactured in compliance with standards EN 61000, EN 61010 and EN 61326, and meets the requirements of Directives 2004/108/EC and 2011/65/EU (battery not included).



 Vladimir Sakaliyski
 CEO
 COMECO Inc.

Overview

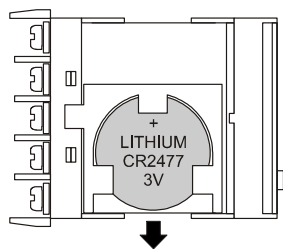
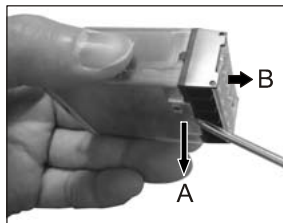
CT36 is a simple and low-cost battery-powered electronic counter, enclosed in a small plastic box with 48x24 mm front size. Equipped with a 8-digit LCD display, CT36 can count up to 99999999 units. It has 2 inputs - counting input with counting speed up to 1000 cps and a RESET input. Both inputs can accept input signals from mechanical or electronic switches. A RESET button on the front panel is also available. CT36 is powered by an incorporated lithium battery that has approximately 7 years of life cycle. CT36 may be equipped with microswitches allowing front frequency selection as well as front reset key enabling. Thanks to its small size and long-life battery operation, CT36 can be very useful for many applications requiring independent supply and small mounting dimensions such as integration in water meters, gas meters, etc.

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.

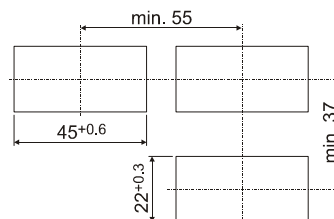


The life of the incorporated battery is ~7 years at normal conditions, during which no maintenance is required. When necessary, the battery should be replaced following the steps below:

- ◆ Place the tip of a flat screwdriver and using it as a lever, gently hold up the lock part toward (A).
- ◆ Do the same from the opposite side of the box.
- ◆ Pull the terminal block toward (B) and open the case.
- ◆ Push the battery and detach it out toward the marked direction.
- ◆ Insert a new battery with correct model and alignment of polarity pushing it toward opposite direction.

Important notes:

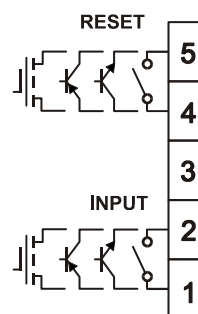
- ◆ Strictly follow the restriction below! Disregarding may cause a fire, explosion and may result in material losses and human injury!
- ◆ Use only batteries of the specified type given in 'Specifications'!
- ◆ Do not burn up or disassemble the battery!
- ◆ Do not charge, short, shock, heat, and throw the battery in fire!
- ◆ Do not use other battery together!
- ◆ Do not put a battery as reserve!
- ◆ Do not solder on the battery directly!
- ◆ When dispose insulate the battery with tape.
- ◆ Do not store under direct sun, high temperature and humidity!
- ◆ Strictly observe the operating conditions given in 'Specifications'!



Important notes:

- ◆ The device is designed for indoor use only!
- ◆ Do not let dust inflow into the unit. It may cause a fire or malfunction.
- ◆ If clean the unit, do not use water or organic solutions. It may cause a fire.
- ◆ Strictly observe the operating conditions given in 'Specifications'!

- ◆ Place CT36 into a panel cut-out observing the limitations on the left figure.
- ◆ Insert the enclosed rubber sealing.
- ◆ Tighten the unit into place using the enclosed mounting bracket.



To connect a passive contact or no-voltage NPN, PNP or MOS-gate switch to the counting or RESET input, follow the diagram on the left.



The contacts connected to the input should allow a 10 μ A current to flow freely.



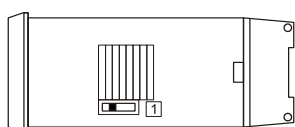
Adjustments are not available for variants with fixed input speed and RESET source!

Front RESET key

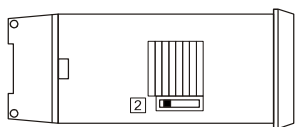
- ◆ The front RESET key function is factory enabled (default).
- ◆ To disable front RESET slide the micro-switch toward (1) as shown on the left figure.

Counting speed

- ◆ The maximum counting input frequency is factory set to 1kHz (default).
- ◆ To change the counting speed slide the micro-switch backward (2) as shown on the left figure.



- front RESET enabled
- front RESET disabled



- 1000 Hz
- 30 Hz
- 1 Hz



RESET must be applied every time after changing counting speed!

Precautions

- ◆ All signal wires must be shielded, distanced from power cables, and as short as possible.
- ◆ If mechanical contact is to be connected to the counting input, use a counter variant with maximum input frequency up to 30 Hz to avoid the influence of the parasitic mechanical oscillations.
- ◆ If any of the input signal ON/OFF times is less than the half period (1/F), where F is the maximum input frequency, proper counter operation is not guaranteed!

Operation mode

CT36 starts counting immediately after a correct input signal is connected properly and does not call for any operation procedure.

