

WARRANTY

production date

warranty card number

Product: **Two-period multifunctional timer**

Model: **CT03**

Output K1: ☐ EMR - 5A/250VAC ☐ open collector NPN - 40mA/40V
☐ for external SSR - 50mA/12(24)V

Output K2: ☐ EMR - 5A/250VAC ☐ open collector NPN - 40mA/40V
☐ for external SSR - 50mA/12(24)V

Power supply voltage: ☐ 230 VAC ☐ 110 VAC ☐ 90...250 VAC/DC
☐ 9...12 VAC ☐ 12...24 VAC/DC ☐

Serial No Quality Control Passed:
(signature, stamp)

SPECIFICATIONS

Digital display	3-digit LED, 9mm
LEDs	2 LEDs for relay control
Accuracy	± 0.02% from span
Operating temperature / humidity	0÷50°C / 0÷85% RH
Storage temperature / humidity	-10÷70°C / 0÷95% RH
Protection: front / terminals	IP54 / IP20
Consumption	Max. 2 VA

Warranty: Comeco warrants this product to be free from defects in materials and workmanship for one year. If your Comeco 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 unit, please call your local dealer or contact directly our support team at support@comeco.org.

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(date)

Retailer:

Buyer:

v4-11.03



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MULTIFUNCTIONAL TWO-PERIOD TIMER

CT 03

OPERATION MANUAL



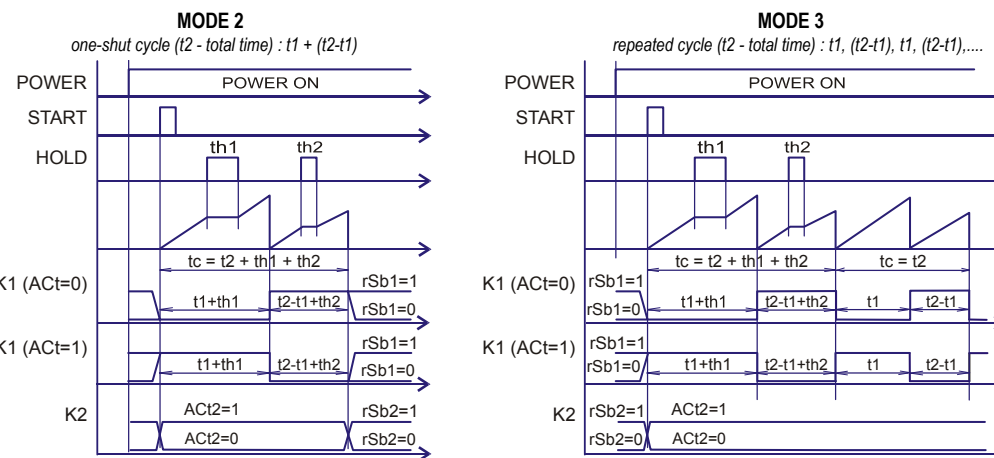
CT03 is a low-cost microprocessor-based device for time sequence control with a 48x48mm DIN sized front panel. There are two adjustable time periods forming a time cycle and four different timing modes. Period duration is adjustable via push-wheel switch on the front panel. The timer has two contact inputs for external start and HOLD and two output relays for timing control of processes by switching on and off electrical actuators. The relay action as well as the start/restart mode can be programmed with a set of parameters. CT03 is equipped with a three-digit display, indicating the current time, the parameters, or the operating mode. All modes of operation and parameters are user-programmable through the front panel keyboard. The extended features of CT03 simplify programming and timing process monitoring and make it a convenient solution of a wide range of problems.

Please read this Operation Manual before mounting and operating!

Mount CT03 into a 45x45mm panel cut-out (Fig.1) and tighten it into place by the snap-on mounting bracket. Wire the timer using OCTAL connector and strictly following the wire diagram on Fig.2. **Do not turn the power supply on while mounting and wiring!**



CT03 has two contact control inputs for external (re)start (START) and time-counting hold-up (HOLD). Combinations of two adjustable time periods – t1 (1st period, beginning after START) and t2 (2nd period or Total time) form 4 different timing modes (see time diagrams below). The duration of each period is adjustable within one of the following five sub-ranges: 0.00...9.99 sec, 0.0...99.9 sec, 0...999 sec, 0...999 min, and 0...999 min x 10. There are two control outputs – K1, which activates alternately with t1 and t2, and K2, which activates for the total cycle time - whose action can be programmed with parameters $\overline{R}t1.1$, $\overline{R}t1.2$, $\overline{R}t2.1$, $\overline{R}t2.2$, $\overline{R}t2.3$, and $\overline{R}t2.4$.



Normal stage
0 9 9

Press & hold to enter *Program stage*

SET_BCD
0 3 5

Press & hold for next parameter

DISPLAY
t1 or t2 (depending on SEt_sel parameter!)

Press & hold to see parameter value
Hold for 5 sec to save the new value (message $U\bar{E}t$ confirms the saving)

0...999 | Set Point for period t_1 (when $SEt_sel = 1$)
Set Point for period t_2 (when $SEt_sel = 0$)

Press & hold for next parameter

SET_BCD
0 3 5

Press & hold to see parameter value
Hold for 5 sec to save the new value (message $U\bar{E}t$ confirms the saving)

0...999 | Set Point for period t_1 (when $SEt_sel = 1$)
Set Point for period t_2 (when $SEt_sel = 0$)

Press & hold for next parameter

DISPLAY
d1 n

SET_BCD
1 x 2

Press & hold to see parameter value
Hold for 5 sec to save the new value (message $U\bar{E}t$ confirms the saving)

Dimension for period t_1
Dimension for period t_2

0 - sec x 0.1
1 - sec
2 - min
3 - min x 10
4 - sec x 0.01

Press & hold for next parameter

DISPLAY
n o d

SET_BCD
x x 2

Press & hold to see parameter value
Hold for 5 sec to save the new value (message $U\bar{E}t$ confirms the saving)

Operation modes

0 - one-shut operation | t_1 (first period) + t_2 (second period)
1 - cyclic operation | t_1 (first period) + t_2 (second period)
2 - one-shut operation | t_1 (first period) of t_2 (total time)
3 - cyclic operation | t_1 (first period) of t_2 (total time)

Press & hold for next parameter

DISPLAY
A C t

SET_BCD
1 x 0

Press & hold to see parameter value
Hold for 5 sec to save the new value (message $U\bar{E}t$ confirms the saving)

K2 state during active period | 0 - off
K1 state after start | 1 - on

Press & hold for next parameter

DISPLAY
r s b

SET_BCD
1 x 0

Press & hold to see parameter value
Hold for 5 sec to save the new value (message $U\bar{E}t$ confirms the saving)

K2 inactive condition | 0 - off
K1 inactive condition | 1 - on

Press & hold for next parameter

DISPLAY
S E t

SET_BCD
1 0 0

Press & hold to see parameter value
Hold for 5 sec to save the new value (message $U\bar{E}t$ confirms the saving)

SEt_sel | Select the period which will be AUTOMATICALLY read from the BCD switch | 0 - t1
| 1 - t2

SEt_res | Restart during the action | 0 - disabled
| 1 - enabled

SEt_aut | Automatic start at power on | 0 - disabled
| 1 - enabled

Press & hold to return to *Normal stage*

Returns to Normal stage if no key has been pressed for 5-10 seconds