

Dial-type Analog Timer CT02

- ♦ Very low cost
- ♦ Wide time range
- ♦ 48x48 mm or 96x48 mm DIN-sized front panel
- ♦ 8 operating modes
- ♦ Main and auxiliary relays
- ♦ Panel or rail mounting

The CT02 timer is designed for time sequence control of electrical actuators. The time setting adjustment is done by rotating a dial on the front panel and the timing is started at power-on or by external 'start/stop' contact. Various modes of operation – on-delay, off-delay, pulse output, and cyclical output – are available. The operating modes as well as the time range (for variant 'S') can be selected via micro switches. The timer may be equipped with up to 2 relays – main timing relay and auxiliary relay, which is activated at power-on or simultaneously with the main relay. CT02 has no indication, is very easy to set and operate, and yet has all the main functions of a modern electronic timer.



Technical specifications

Input ⁽¹⁾

| | | |
|-----------------------|---|--|
| Input type | passive contact (NO) | |
| Input function | external 'Start/Stop' or front-panel 'Start/Stop' button ⁽²⁾ | |

| Times and modes | 'N' | 'S' |
|--|--|---------------------|
| Ranges ⁽³⁾ | 1...10 s, 10...100 s, 1...10 min, 10...100 min | 0...1, 0...3, 0...6 |
| Dial multiplication coefficient | - | x1 s, x10 s, x1 min |
| Delay | ON or OFF | ON or OFF |
| Output pulse | yes | no |
| Cyclic mode | yes | no |

| Outputs | (up to 2 - main and auxiliary) | |
|---|--------------------------------------|--|
| Relay electromechanical | 5A/250V w/ NO/NC contact | |
| Solid state relay ⁽⁴⁾ | 1A/250VAC | |
| MOS gate ⁽⁴⁾ | 0.1A/60V, optically isolated | |
| Transistor gate ⁽⁵⁾ | open collector, 40mA/40V | |
| Output for external SSR | 12/24 V, 30 mA | |
| Main (timer) relay | time operated | |
| Auxiliary relay | activates at power-on ⁽⁶⁾ | |

| Accuracy | |
|--------------------------|---------------------------|
| Measurement error | 1% (2% for 'N') from span |
| Temperature drift | 0.007% from span for 1 °C |

| Power supply | |
|--|--------------------|
| Mains supply voltage ^(1,2) | 230 VAC or 115 VAC |
| SMPS voltage ⁽⁷⁾ | 24...230 V |
| Isolated low voltage ^(1,2) | 24 VDC |
| Non-isolated low voltage | 24 VDC |
| Consumption | max. 2 VA |

⁽¹⁾ Only for variant 'N'

⁽²⁾ Only for case 'H'

⁽³⁾ For variant 'S', ranges are user selectable; for variant 'N', ranges are fixed and should be specified in customer order.

⁽⁴⁾ Ask for availability!

⁽⁵⁾ ONLY with isolated power supply!

⁽⁶⁾ For variant 'S', a mode may be selected when auxiliary relay operates TOGETHER WITH the main time operated relay.

⁽⁷⁾ Only for variant 'S'

⁽⁸⁾ Ordered separately (see 'Accessories')

Indication and controls

| | |
|-----------------------|--|
| LEDs | LED for the time operated relay |
| Rotating dial | for time adjustment |
| Micro switches | for mode selection and multiplication coefficient setting ⁽⁷⁾ |

Operating conditions

| | |
|----------------------------|----------------------------|
| Ambient temperature | -10...65 °C |
| Ambient humidity | 0...85 %RH |
| Storage temperature | -20...65 °C |
| Storage humidity | 0...95 %RH, non-condensing |

Design and materials

| | |
|------------------------------------|--|
| Case material | plastic |
| Mounting | 'H': in 93x45 mm panel cut-out; 'S': in 45x45 mm panel cut-out or on 35 mm DIN rail |
| Wiring: | |
| - for variant 'N' | 'H': screw terminals; 'S': socket UNDECAL ⁽⁸⁾ |
| - for variant 'S' | socket OCTAL ⁽⁸⁾ |
| Dimensions: | |
| - for variant 'N' | 'H': 96x48(front)x136 mm; 'S': 48x48(front)x102 mm |
| - for variant 'S' | 48x48(front)x95 mm |
| Mounting depth | 'H': 120 mm; 'S': max. 105 mm (w/ socket) |
| Weight | max. 250 g |
| Protection, front/terminals | IP40 / IP20 |

Ordering code CT02* - G0.G1.G4.G5G5.G6.G8

| Code | Feature or option | Code values |
|-----------|-----------------------------------|---|
| * | Variant | N - normal, S - simplified |
| G0 | Case (front panel) ⁽¹⁾ | S - 48x48 mm, H - 96x48 mm |
| G1 | Power supply | A - 230 VAC ^(1,2) , B - 115 VAC ^(1,2) , D - 24 VDC, non-isolated, K - 24...230 V ⁽⁷⁾ , Q - 24 VDC, isolated ^(1,2) |
| G4 | Start/Stop | A - at power-on, C - from front-panel button ⁽²⁾ , D - from input ⁽¹⁾ |
| G5 | Relay output | X - none ⁽⁹⁾ , C - relay NO/NC, D - SSR ⁽⁴⁾ , E - open collector NPN ⁽⁵⁾ , J - for external SSR, M - isolated MOS gate ⁽⁴⁾ |
| G6 | Time range ⁽¹⁾ | LS - 1...10 s, HS - 10...100 s, LM - 1...10 min, HM - 10...100 min |
| G8 | Operating mode ⁽¹⁾ | B - selectable, D - delay ON, E - delay OFF, F - output pulse, G - cyclic |

⁽⁹⁾ A main relay MUST be installed!