# Electronic multifunction counters with preselection

## ➜ Up counters/Down counters - 48 x 48 - CTR48E "Essential"

- **Counter, Preselection chronometer**
- **Maximum input frequency 5 k Hz**
- **Simple parameter setting, configuration using text menus**
- **Easy modification of presets**
- **Multiplication factor**
- **3 A changeover relay**
- **Backlit LCD display (green) : 6 digits, height 9 mm**
- **IP 65 sealed panel**
- **Option of locking the keypad, completely or partially (preset, programming)**
- **Accessories for 72 x 72 or 55 x 55 cut-out, DIN rail adaptor**

## Part numbers

| Type | Functions | Preset | Voltages | Output | Code |
|---|---|---|---|---|---|
| Green backlit LCD display | Counter, Preselection chronometer | 1 | 10 → 30 V⎓ | 1 relay | **87629111** |
| | Counter, Preselection chronometer | 1 | 115 V∿ | 1 relay | **87629113** |
| | Counter, Preselection chronometer | 1 | 230 V∿ | 1 relay | **87629114** |
| | Counter, Preselection chronometer | 2 | 10 → 30 V⎓ | 1 changeover relay, 1 NO relay | **87629121** |
| | Counter, Preselection chronometer | 2 | 115 V∿ | 1 changeover relay, 1 NO relay | **87629123** |
| | Counter, Preselection chronometer | 2 | 230 V∿ | 1 changeover relay, 1 NO relay | **87629124** |

## Accessories

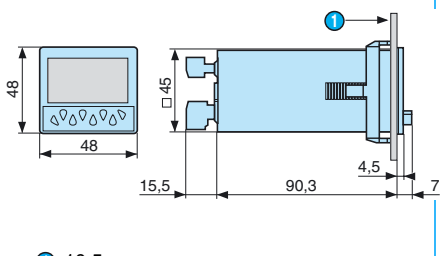
| Description | Code |
|---|---|
| Adaptor for 72 x 72 mm cut-out | **26546842** |
| Adaptor for 55 x 55 mm cut-out | **26546846** |
| DIN rail adaptor | **26546841** |

## General characteristics

| | |
|---|---|
| **Environmental characteristics** | |
| Supply | 11 → 30 V⎓ / 115 V ∿ / 230 V∿ |
| Relative humidity (no condensation) | EN 60068-2-30 40/93% RLF |
| Altitude | 0 < 2000 m |
| Certifications | CE |
| Vibration resistance in 3 axes | 10-55 Hz/1 min/XYZ EN 60068-2-6: 30 min. in each direction |
| Connection by screw terminals | Débrochable |
| Protection | Conforming to standard EN 60529 IP65 for panel/IP20 for connections |
| Front panel watertight seal | ✓ |
| Temperature limits use (°C) | -10 → +50 |
| Temperature limits stored (°C) | -25 → +75 |
| Weight (g) | 150 ⎓ version<br>250 ∿ version |
| **General characteristics** | |
| Reset to zero or to preset | On panel: if not locked during programming<br>Electrical: automatic, voltage or solid state (NPN or PNP depending on programming) |
| Minimum pulse time | Impulse counter: < 15 ms<br>Chronometer: 500 µs |
| Option to protect against reset from front panel | ✓ |
| Scale factor (each input pulse is multiplied by this figure) | 00.0001 → 99.9999 |
| Decimal point selectable for ease of reading | 0<br>0.0<br>0.00<br>0.000<br>0.0000<br>0.00000 |
| Sensor supply version ∿ | -40/+15% 50 mA 230 V∿<br>-40/+15% 40 mA 115 V∿ |
| Programming and current value backed up via EEPROM memory | ✓<br>Service life 10 years |

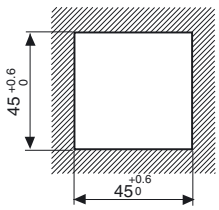
| Operating characteristics | |
|---|---|
| Functions | Preselection counter, Chronometer |
| Number of presets | 1 or 2 |
| Display | LCD with green backlighting |
| Height digits (mm) | LCD 9 |
| Display details | - 999 999 → 999 999 |
| **Input characteristics** | |
| Inputs | 2 counter inputs<br>1 reset input, 1 locking input |
| Input modes | Dir: Directional<br>AS: up/dn<br>PP: phase |
| Input type | Voltage or solid state |
| High level | 3.5 → 30 V⎓ |
| Low level | 0 → 2 V⎓ |
| **Relay output characteristics** | |
| Changeover relay | ✓ |
| NO contact | Depending on version |
| Maximum current | 3 A |
| Minimum current | 30 mA |
| Maximum voltage | 30 V⎓ / 250 V~ |
| Min. voltage | 5 V~ |
| Response time | < 10 ms |
| Mechanical life (operations) | 20 x $10^6$ |
| Number of operations | 1 x $10^5$ |
| Output modes: maintained or pulsed | 0.01 → 99.99 s |

## Dimensions (mm)

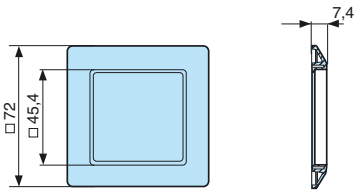



1 10.5 max

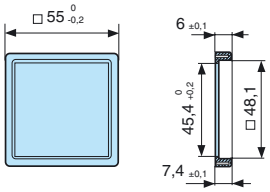
**Panel cut-out**



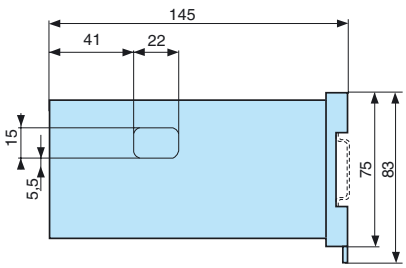

**26546842 - Adaptor for 72 x 72 mm cut-out**

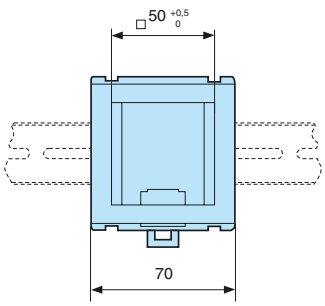



**26546846 - Adaptor for 55 x 55 mm cut-out**



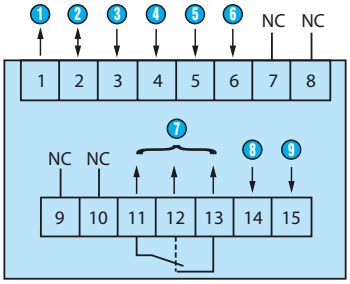

**26546841 - DIN rail adaptor**



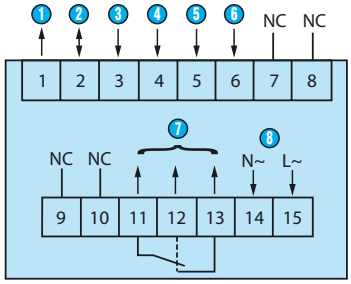
## Connections

**87629111**



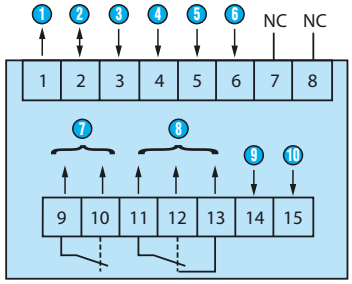

1. Sensor voltage supply (* UB interconnected)
2. GND (0 V⎓)
3. INP A (signal A input)
4. INP B (signal B input)
5. Reset (Reset input)
6. Lock (locking switch input)
7. 11-12-13: Output 1
8. 14-15: Supply
9. Power supply - GND

**87629113 / 114**



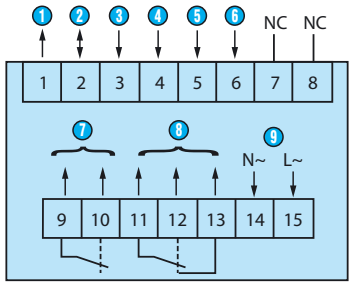

1. Sensor voltage supply
2. GND (0 V⎓)
3. INP A (signal A input)
4. INP B (signal B input)
5. Reset (Reset input)
6. Lock (locking switch input)
7. 11-12-13: Output 1
8. 14-15: Supply

**87629121**



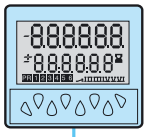

1. Sensor voltage supply (* UB interconnected)
2. GND (0 V⎓)
3. INP A (signal A input)
4. INP B (signal B input)
5. Reset (Reset input)
6. Lock (locking switch input)
7. 9-10: Output 1
8. 11-12-13: Output 2
9. 14-15: Supply
10. Power supply - GND

**87629123 / 124**




1. Sensor voltage supply
2. GND (0 V⎓)
3. INP A (signal A input)
4. INP B (signal B input)
5. Reset (Reset input)
6. Lock (locking switch input)
7. 9-10: Output 1
8. 11-12-13: Output 2
9. 14-15: Supply

**Programming diagram**



**Cntr**

- **Input** — PnP / npn
- **FrQ** — HIGH / Low
  Low=30Hz HIGH=max
- **In.Cnt** — dir / AS / PP
  **dir**: Count direction
  **AS**: Differential counting A-B
  **PP**: Quadrature Input
- **Loc** — ProG / PrESEt / PrgPrE
  **ProG:** Programming us locked
  **PrESEt:** Preset value us locked
  **PrgPrE:** Preset and programming us locked
  (The activation is with the electrical input LOCK)
  (the choice is valid for P1 and P2 in the case of version to two pres.)
- **Out.oP** — rS0 / rSA0 / rSAP2 / rSP2
  **rS0**: Count mode Add (reset to zero)
  **rSP2**: Count mode Sub (reset to main preset)
  **rSA0**: Count mode Add with automatic reset
  **rSAP2**: Count mode Sub with automatic reset
- **MultPl** — 00,0001...99,9999
- **dEcPt** — 0 / 0,0 / 0,00 / 0,000 / 0,0000 / 0,00000
- **rESMod** — no rEs / ELrES / Man.rE / Man.EL
  **norES**: No reset
  **ELrEs**: Electrical reset
  **ManrE**: Manual reset
  **ManEL**: Manual and electrical reset

**tiMErC**

- **Input** — PnP / npn
- **FrQ** — HIGH / Low
  Low=30Hz HIGH=max
- **StArt** — tcCab / tcCbb / FrErun
  **FrErun**: Gate Mode (INPA)
  **tcCab**: Start edge to input A Stop edge to input B (comulative)
  **tcCbb**: Start edge to input B Stop edge to input B (comulative)
- **Loc** — ProG / PrESEt / PrgPrE
  **ProG:** Programming us locked
  **PrESEt:** Preset value us locked
  **PrgPrE:** Preset and programming us locked
  (The activation is with the electrical input LOCK)
  (the choice is valid for P1 and P2 in the case of version to two pres.)
- **Out.oP** — rS0 / rSA0 / rSAP2 / rSP2
  **rS0**: Count mode Add (reset to zero)
  **rSP2**: Count mode Sub (reset to main preset)
  **rSA0**: Count mode Add with automatic reset
  **rSAP2**: Count mode Sub with automatic reset
- **tUnit** — SEC / MIN / hour / h.Min.S /
- **dEcPt** — 0 / 0,0 / 0,00 / 0,000 / 0,0000 / 0,00000
- **rESMod** — no rEs / ELrES / Man.rE / Man.EL
  **norES**: No reset
  **ELrEs**: Electrical reset
  **ManrE**: Manual reset
  **ManEL**: Manual and electrical reset
- **S1**

permanent signal

timed signal

- **tiMES1** — 00.01..99,99s
  Time signal output regulation
- ****S2**

permanent signal

timed signal

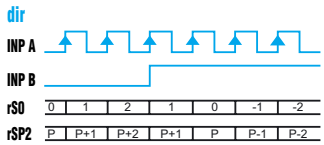
**Only version 2 preset

- **tiMES1** — 00.01..99,99s
  Time signal output regulation

| | Low : 1.0 V<br>High : 4.0 V | | Low : 3.0 V<br>High : 30.0 V | |
|---|---|---|---|---|
| | rS0<br>rSP2 | rSA0<br>rSAP2 | rS0<br>rSP2 | rSA0<br>rSAP2 |
| **dir** | 15 kHz | 1.5 kHz | 5 kHz | 1.2 kHz |
| **AS** | 10 kHz | 1.5 kHz | 5 kHz | 1.2 kHz |
| **PP** | 10 kHz | 0.7 kHz | 2.4 kHz | 0.5 kHz |

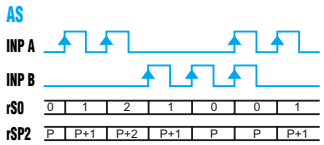
## Curves

### Counter: dir



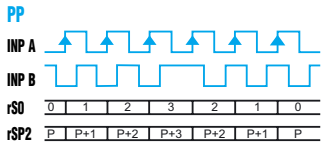

A 90° B
Inp A: Counter input
Counting on an edge
Inp B: Reversal of direction
rS0: Display 0 → Preset
rSP2: Display Preset → 0

### Counter: AS



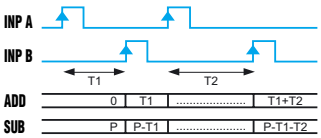

Inp A: Add. counter input 1
Inp B: Sub. counter input 2
rS0: Display 0 → Preset
rSP2: Display Preset → 0

### Counter: PP



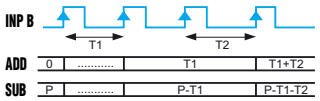

A 90° B
Inp A: Counter input
Counting on an edge
Inp B: Reversal of direction
rS0: Display 0 → Preset
rSP2: Display Preset → 0

### Chronometer: Start tcCAb



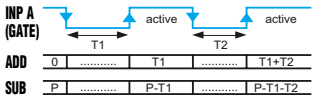

Inp A: On
Inp B: Off
Add: Display 0 → Preset
Sub: Display Preset → 0

### Chronometer: Start tcCbb



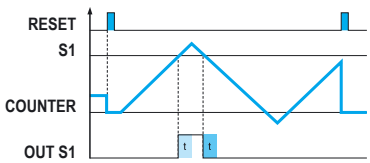

Inp A: No function
Inp B: On/Off
RS0/RSP2
Add: Display 0 → Preset
Sub: Display Preset → 0

### Chronometer: Start FrErun

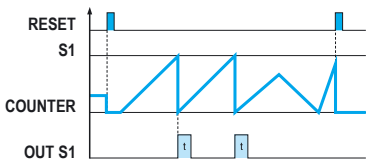



InpA: Gate
Time measurement via InpA
InpB: No function

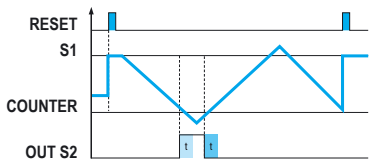
### Output operation 1: rS0



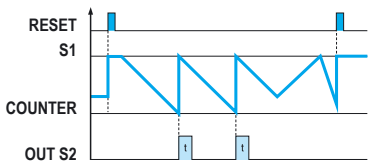

### Output operation 1: rSA0



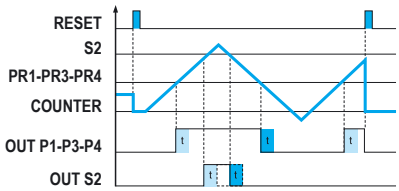

### Output operation 1: rSP2



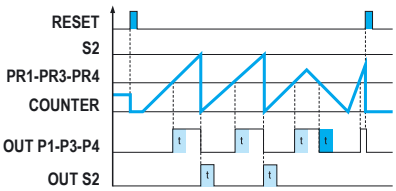

### Output operation 1: rSAP2



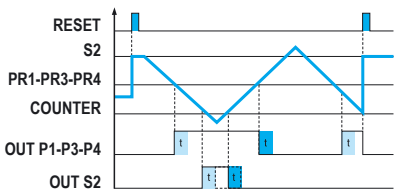

### Output operation 2: rS0



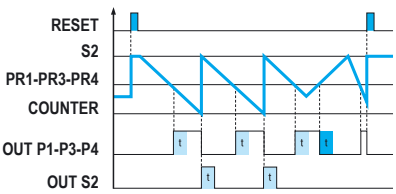

### Output operation 2: rSA0




### Output operation 2: rSP2




### Output operation 2: rSAP2






Crouzet

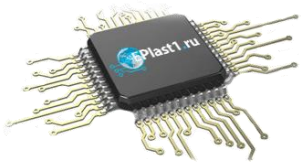
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

**Телефон:** 8 (812) 309 58 32 (многоканальный)
**Факс:** 8 (812) 320-02-42
**Электронная почта:** org@eplast1.ru
**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.