

# 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 $\overline{\text{---}}$ | 1 relay                           | <b>87629111</b> |
|                           | Counter, Preselection chronometer | 1      | 115 V $\sim$                      | 1 relay                           | <b>87629113</b> |
|                           | Counter, Preselection chronometer | 1      | 230 V $\sim$                      | 1 relay                           | <b>87629114</b> |
|                           | Counter, Preselection chronometer | 2      | 10 → 30 V $\overline{\text{---}}$ | 1 changeover relay,<br>1 NO relay | <b>87629121</b> |
|                           | Counter, Preselection chronometer | 2      | 115 V $\sim$                      | 1 changeover relay,<br>1 NO relay | <b>87629123</b> |
|                           | Counter, Preselection chronometer | 2      | 230 V $\sim$                      | 1 changeover relay,<br>1 NO relay | <b>87629124</b> |

### Accessories

| Description                    | Code            |
|--------------------------------|-----------------|
| Adaptor for 72 x 72 mm cut-out | <b>26546842</b> |
| Adaptor for 55 x 55 mm cut-out | <b>26546846</b> |
| DIN rail adaptor               | <b>26546841</b> |

### General characteristics

#### Environmental characteristics

|                                     |   |
|-------------------------------------|---|
| Supply                              | 11 → 30 V $\overline{\text{---}}$ / 115 V $\sim$ / 230 V $\sim$     |
| 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 $\overline{\text{---}}$ version<br>250 $\sim$ 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 $\mu$ s  |
| 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 $\sim$                                 | -40/+15% 50 mA 230 V $\sim$<br>-40/+15% 40 mA 115 V $\sim$  |
| Programming and current value backed up via EEPROM memory    | ✓   |
|  | 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               |

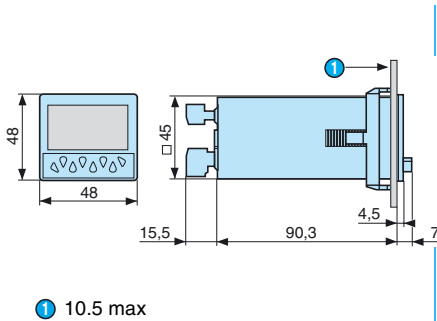
### Input characteristics

|             |  |
|-------------|--|
| 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 <sub>DC</sub>                           |
| Low level   | 0 → 2 V <sub>DC</sub>                              |

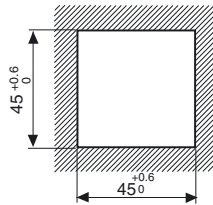
### Relay output characteristics

|                                    |  |
|------------------------------------|--|
| Changeover relay                   | ✓  |
| NO contact                         | Depending on version                     |
| Maximum current                    | 3 A                                      |
| Minimum current                    | 30 mA                                    |
| Maximum voltage                    | 30 V <sub>DC</sub> / 250 V <sub>AC</sub> |
| Min. voltage                       | 5 V <sub>AC</sub>                        |
| Response time                      | < 10 ms                                  |
| Mechanical life (operations)       | 20 x 10 <sup>6</sup>                     |
| Number of operations               | 1 x 10 <sup>5</sup>                      |
| Output modes: maintained or pulsed | 0.01 → 99.99 s                           |

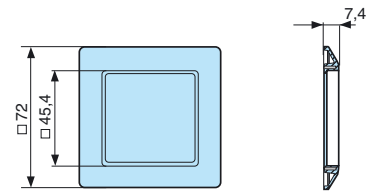
### Dimensions (mm)



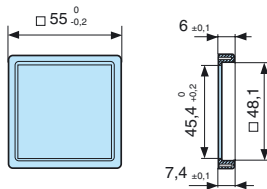
#### Panel cut-out



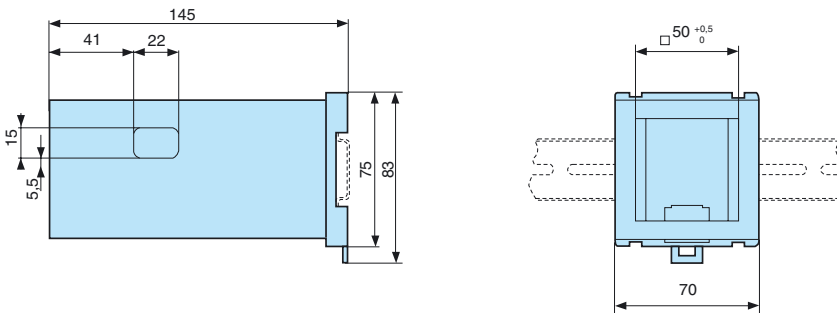
#### 26546842 - Adaptor for 72 x 72 mm cut-out



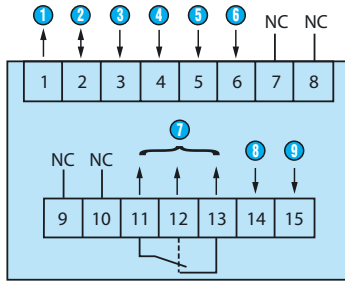
#### 26546846 - Adaptor for 55 x 55 mm cut-out



#### 26546841 - DIN rail adaptor

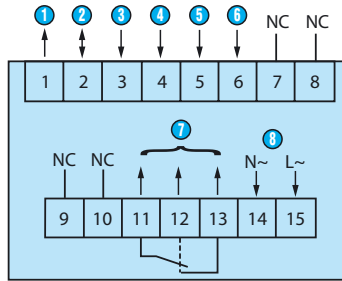


## 87629111



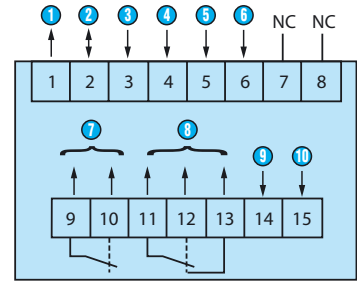
- ① Sensor voltage supply (\* UB interconnected)
- ② GND (0 V<sub>---</sub>)
- ③ INP A (signal A input)
- ④ INP B (signal B input)
- ⑤ Reset (Reset input)
- ⑥ Lock (locking switch input)
- ⑦ 11-12-13: Output 1
- ⑧ 14-15: Supply
- ⑨ Power supply - GND

## 87629113 / 114



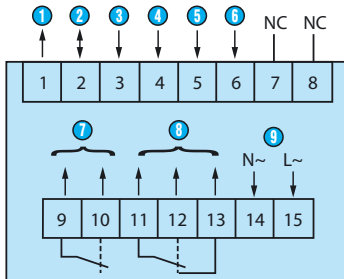
- ① Sensor voltage supply
- ② GND (0 V<sub>---</sub>)
- ③ INP A (signal A input)
- ④ INP B (signal B input)
- ⑤ Reset (Reset input)
- ⑥ Lock (locking switch input)
- ⑦ 11-12-13: Output 1
- ⑧ 14-15: Supply

## 87629121



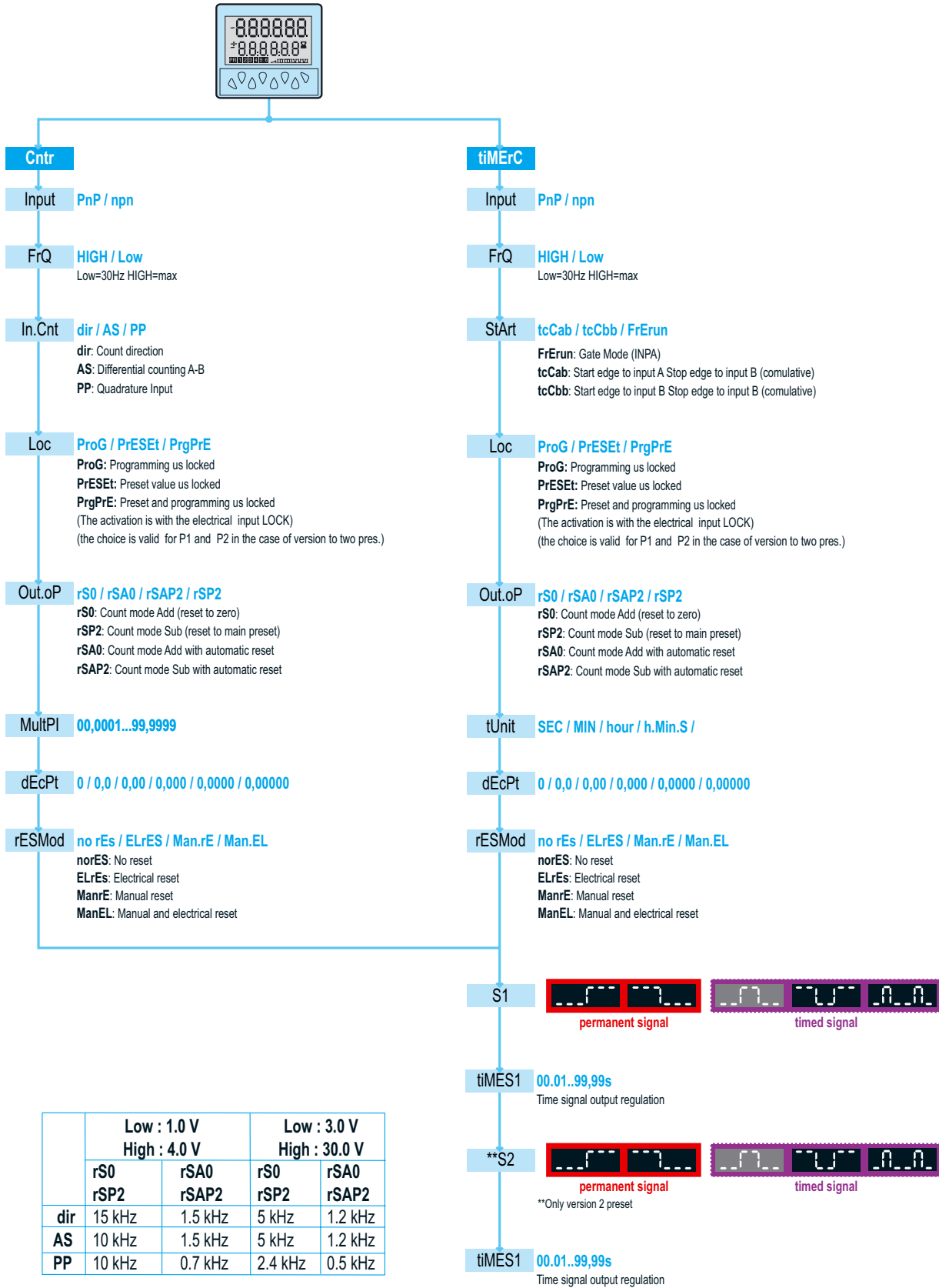
- ① Sensor voltage supply (\* UB interconnected)
- ② GND (0 V<sub>---</sub>)
- ③ INP A (signal A input)
- ④ INP B (signal B input)
- ⑤ Reset (Reset input)
- ⑥ Lock (locking switch input)
- ⑦ 9-10: Output 1
- ⑧ 11-12-13: Output 2
- ⑨ 14-15: Supply
- ⑩ Power supply - GND

## 87629123 / 124

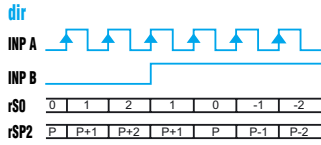


- ① Sensor voltage supply
- ② GND (0 V<sub>---</sub>)
- ③ INP A (signal A input)
- ④ INP B (signal B input)
- ⑤ Reset (Reset input)
- ⑥ Lock (locking switch input)
- ⑦ 9-10: Output 1
- ⑧ 11-12-13: Output 2
- ⑨ 14-15: Supply

## Programming diagram

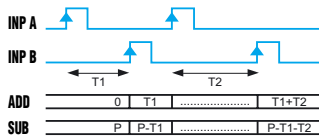


Counter: dir



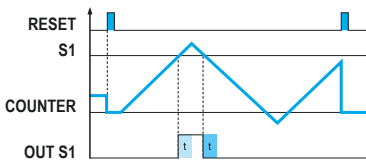
A 90° B  
 Inp A: Counter input  
 Counting on an edge  
 Inp B: Reversal of direction  
 rS0: Display 0 → Preset  
 rSP2: Display Preset → 0

Chronometer: Start tcCAb

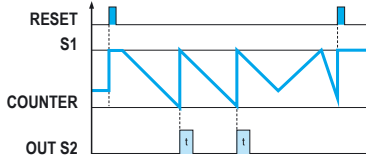


Inp A: On  
 Inp B: Off  
 Add: Display 0 → Preset  
 Sub: Display Preset → 0

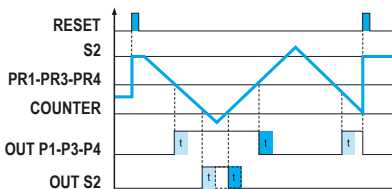
Output operation 1: rS0



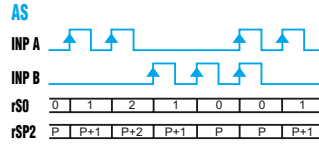
Output operation 1: rSAP2



Output operation 2: rSP2

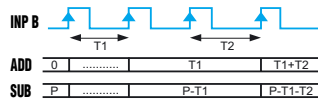


Counter: AS



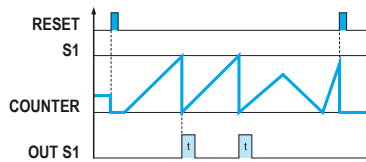
Inp A: Add. counter input 1  
 Inp B: Sub. counter input 2  
 rS0: Display 0 → Preset  
 rSP2: Display Preset → 0

Chronometer: Start tcCbb

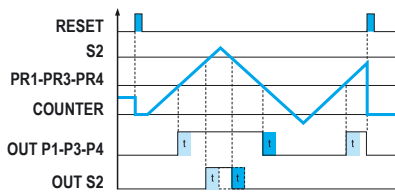


Inp A: No function  
 Inp B: On/Off  
 RS0/RSP2  
 Add: Display 0 → Preset  
 Sub: Display Preset → 0

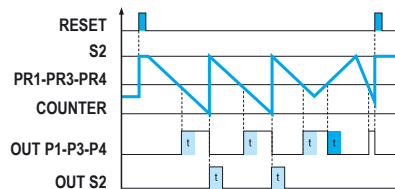
Output operation 1: rSA0



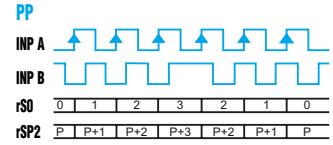
Output operation 2: rS0



Output operation 2: rSAP2

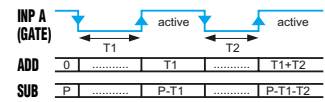


Counter: PP



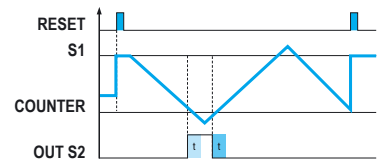
A 90° B  
 Inp A: Counter input  
 Counting on an edge  
 Inp B: Reversal of direction  
 rS0: Display 0 → Preset  
 rSP2: Display Preset → 0

Chronometer: Start FrErun

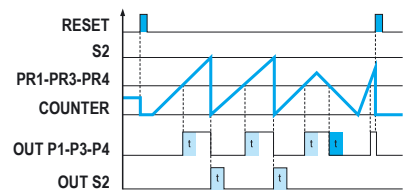


InpA: Gate  
 Time measurement via InpA  
 InpB: No function

Output operation 1: rSP2



Output operation 2: rSA0



## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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