

# Counters

## 24 x 48 digital counters

### Types FKA01, FKA02, FKA03

CARLO GAVAZZI



- 8-digit LCD display
- 8 mm digits
- Reset button with locking function
- 8 years battery lifetime
- 2 inputs (FKA01, FKA02); 1 input (FKA03)
- Up-down counting mode (through electrical control)
- For front panel mounting
- 24 x 48 mm housing
- Filter function for bounce-free counting with mechanical contacts

## Product Description

24 x 48 mm up to 2 inputs up-down counters for flush mounting. NPN, PNP or voltage inputs allow connection to any type of sensors or

open collector output. The front key, which can be locked, allows fast and easy counting reset.

## Ordering Key

**FKA 01 X 724**

Housing \_\_\_\_\_  
 Function \_\_\_\_\_  
 Type \_\_\_\_\_  
 Item number \_\_\_\_\_  
 Output \_\_\_\_\_  
 Input range \_\_\_\_\_

## Type Selection

| Mounting    | Input                            | Counting mode      | Max. counting frequency | Model            |
|-------------|----------------------------------|--------------------|-------------------------|------------------|
| Front panel | NPN or voltage free contact      | Adding/Subtracting | 7 KHz                   | <b>FKA01X724</b> |
| Front panel | NPN, PNP or voltage free contact | Adding/Subtracting | 12 KHz                  | <b>FKA02X724</b> |
| Front panel | Voltage                          | Adding             | 30 Hz                   | <b>FKA03XW24</b> |

## Input Specifications

|                                                                                                                                     |                                                                                                                       |                                                                                                                                                               |                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Input A (FKA01)</b><br>Input type<br><br>Low level<br>High level<br>Max counting frequency<br>Input resistance                   | NPN open collector or voltage free contact<br>0 to 0,7 V DC<br>3 to 30 V DC<br>7 kHz<br>≈1 MΩ                         | <b>Input B (Reset) (FKA03)</b><br>Input type<br><br>Low level<br>High level<br>Min pulse time<br>Max counting frequency<br>Input resistance                   | Voltage (10 to 260 V AC/DC) (galvanic insulation)<br>0 to 2 V AC/DC<br>10 to 260 V AC/DC<br>16 ms<br>30 Hz<br>≈160 kΩ           |
| <b>Input A (FKA02)</b><br>Input type<br><br>Low level<br>High level<br>Max counting frequency<br>Input resistance                   | PNP open collector or voltage free contact<br>0 to 0,7 V DC<br>4 to 30 V DC<br>12kHz<br>≈100 kΩ                       | <b>Reset (FKA01, FKA02)</b><br>Input type<br><br>Low level<br>High level<br>Min pulse time<br>Input resistance                                                | NPN open collector or voltage free contact<br>0 to 0,7 VDC<br>3 to 30 V DC<br>50 ms<br>≈2 MΩ                                    |
| <b>Input A (FKA03)</b><br>Input type<br><br>Low level<br>High level<br>Min pulse time<br>Max counting frequency<br>Input resistance | Voltage (10 to 260 V AC/DC) (galvanic insulation)<br>0 to 2 V AC/DC<br>10 to 260 V AC/DC<br>16 ms<br>30 Hz<br>≈160 kΩ | <b>Electrical locking of the reset key</b><br>Input type<br><br>Low level<br>High level<br>Input not active<br>Input in contact with GND<br>Input resistance  | NPN open collector or voltage free contact<br>0 to 0,7 V DC<br>3 to 5 V DC<br>Reset key locked<br>Reset key unlocked<br>≈2,2 MΩ |
| <b>Input B (FKA01, FKA02)</b><br>Input type<br><br>Low level<br>High level<br>Max counting frequency<br>Input resistance            | NPN open collector or voltage free contact<br>0 to 0,7 V DC<br>3 to 30 V DC<br>30 Hz<br>≈1 MΩ                         | <b>Operating mode switch (FKA01, FKA02)</b><br>Input type<br><br>Low level<br>High level<br>Input not active<br>Input in contact with GND<br>Input resistance | NPN open collector or voltage free contact<br>0 to 0,7 V DC<br>3 to 5 V DC<br>Adding mode<br>Subtracting mode<br>≈2,2 MΩ        |

## General Specifications

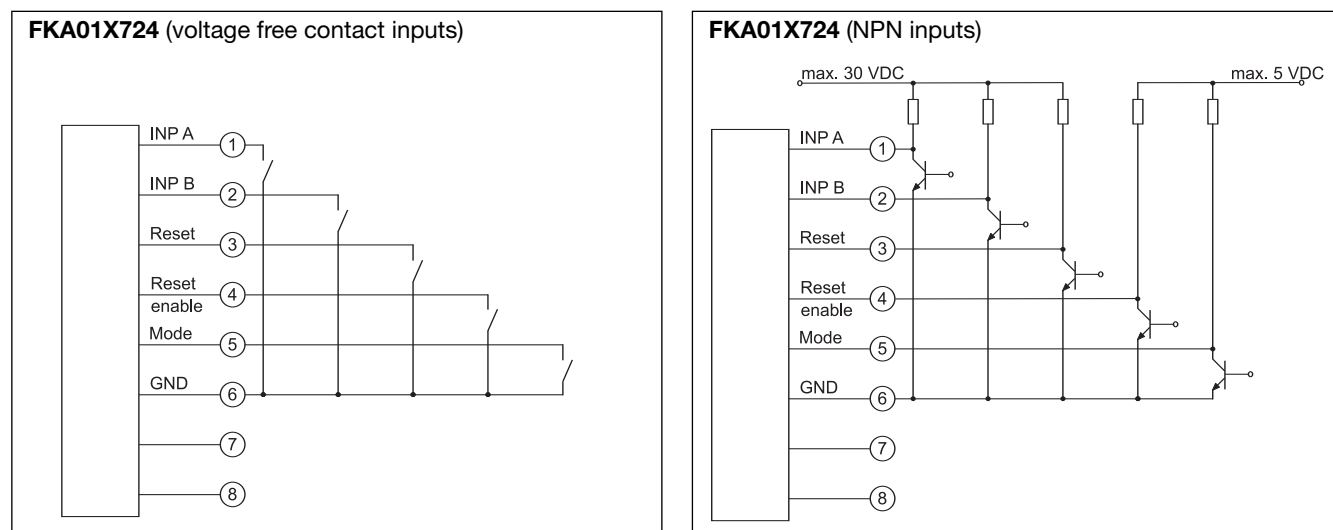
|                                                      |                                                                  |                                             |                                                           |
|------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------|
| <b>Power supply</b>                                  | Non-replaceable lithium battery (lifetime up to 8 years at 20°C) | <b>Housing dimensions</b>                   | 24 x 48 mm                                                |
| <b>Overvoltage category</b><br>(FKA03: Inp A, Inp B) | II (EN 61010 Part 1)                                             | <b>Weight</b>                               | 50 g                                                      |
| <b>Display</b>                                       |                                                                  | <b>Panel cut out</b>                        | 22,2 <sup>+0,3</sup> x 45 <sup>+0,6</sup> mm              |
| Counting range                                       |                                                                  | <b>Screw terminals</b><br>Tightening torque | Max. 0.5 Nm according to IEC EN 60947                     |
| FKA01, FKA02<br>FKA03                                | -9999999 to 99999999<br>0 to 99999999                            | <b>Approvals</b>                            | UL                                                        |
| Counting direction                                   |                                                                  | <b>CE Marking</b>                           | Yes                                                       |
| FKA01, FKA02<br>FKA03                                | Up or down<br>Up                                                 | <b>EMC</b>                                  |                                                           |
| Digit height                                         | 8 mm                                                             | Immunity                                    | Electromagnetic Compatibility<br>According to EN61000-6-2 |
| <b>Environment</b>                                   | (EN 60529)                                                       | Emission                                    | According to EN61000-6-3                                  |
| Degree of protection                                 | IP 65 front                                                      |                                             |                                                           |
| Pollution degree                                     | 2                                                                |                                             |                                                           |
| Operating temperature                                | -10° to +55°C, R.H.<85%                                          |                                             |                                                           |
| Storage temperature                                  | -20° to +70°C                                                    |                                             |                                                           |

## Pin assignment and adjustable operating modes

| Screw terminal   | 1            | 2           | 3                 | 4                             | 5                                    |                                | 6     | 7           | 8           |
|------------------|--------------|-------------|-------------------|-------------------------------|--------------------------------------|--------------------------------|-------|-------------|-------------|
| Designation      | INP A        | INP B       | Reset             | Reset Enable                  | Operating mode control inputs (Mode) |                                | GND   | -           | -           |
| Model            |              |             |                   |                               |                                      |                                |       |             |             |
| <b>FKA01X724</b> | 7 kHz (NPN)  | 30 Hz (NPN) | Reset input (NPN) | Reset key locking input (NPN) | Not active = Adding                  | Contact with GND = Subtracting | 0 VDC | No function | No function |
| <b>FKA02X724</b> | 12 kHz (PNP) |             |                   |                               |                                      |                                |       |             |             |

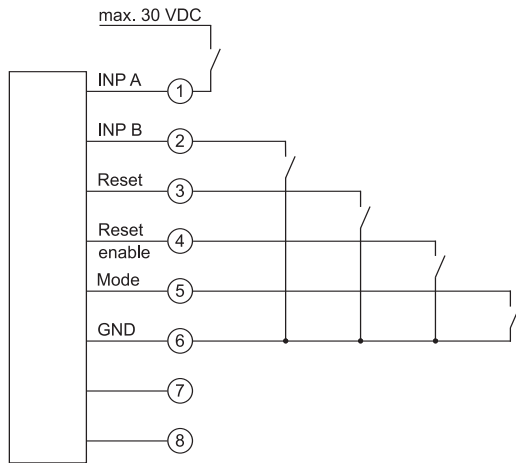
| Screw terminal   | 1           | 2                                     | 3           | 4                             | 5           | 6     | 7           | 8           |
|------------------|-------------|---------------------------------------|-------------|-------------------------------|-------------|-------|-------------|-------------|
| Designation      | INP A       | Common                                | INP B       | Reset Enable                  | -           | GND   | -           | -           |
| Model            |             |                                       |             |                               |             |       |             |             |
| <b>FKA03XW24</b> | Count input | Common connection for INP A and INP B | Reset input | Reset key locking input (NPN) | No function | 0 VDC | No function | No function |

## Wiring Diagram

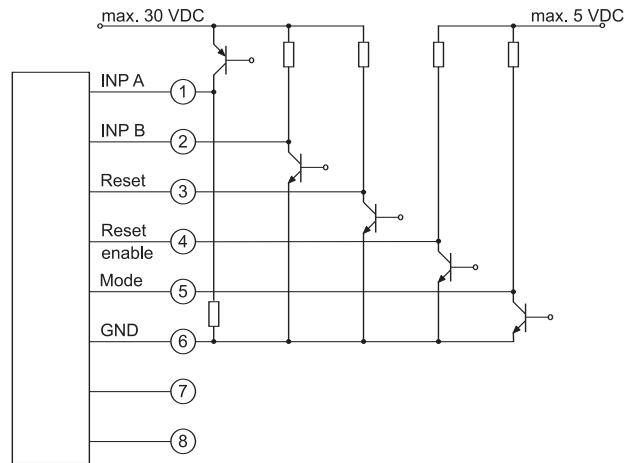


## Wiring Diagram (cont.)

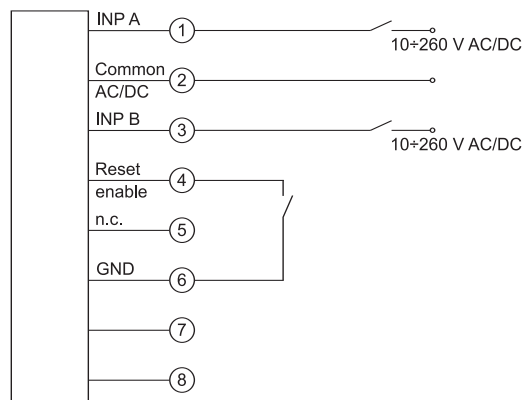
**FKA02X724** (voltage free contact inputs, except for INP A)



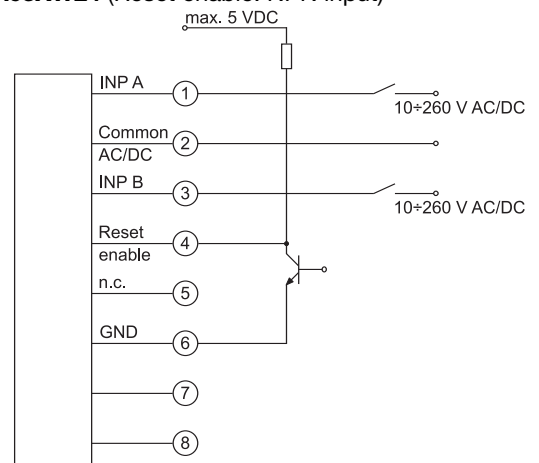
**FKA02X724** (NPN inputs, except for INP A (PNP))



**FKA03XW24** (Reset enable: voltage free contact input)

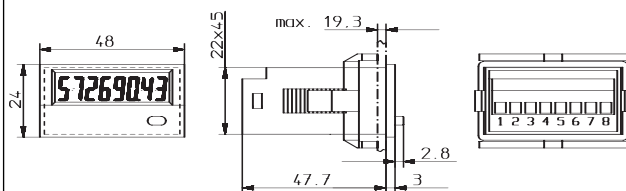


**FKA03XW24** (Reset enable: NPN input)



## Dimensions

(FKA01, FKA02, FKA03)





**ООО «НИОКРсистемс»** - это оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов. Реализуемая нашей компанией продукция насчитывает более полумиллиона наименований.

Благодаря этому наша компания предлагает к поставке практически не ограниченный ассортимент компонентов как оптовыми, мелкооптовыми партиями, так и в розницу.

Благодаря развитой сети поставщиков, помогаем в поиске и приобретении экзотичных или снятых с производства компонентов.

### **Наша компания это:**

- Гарантия качества поставляемой продукции
- Широкий ассортимент
- Минимальные сроки поставок
- Техническая поддержка
- Подбор комплектации
- Индивидуальный подход
- Гибкое ценообразование
- Работаем по 275 ФЗ