

dimensions 48 x 24 x 48mm

pulse counter  
elapsed-time counter

- ✓ actuation 10 to 260V AC/DC (depending on version)
  - ✓ electrical reset
  - ✓ lockable front side reset button
  - ✓ leading zero suppression
  - ✓ LCD display
- pulse counter
- ✓ frequency of count up to 12kHz
  - ✓ display range -9999999 ... 99999999
- elapsed-time counter
- ✓ elapsed hour counter
  - ✓ time recording in hours, minutes, sec. or seconds and 1/10 sec.



**backlight  
complete with mounting frame**

**description**

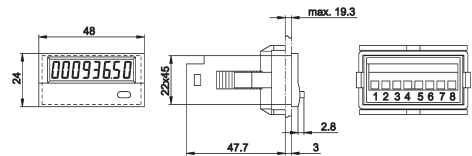
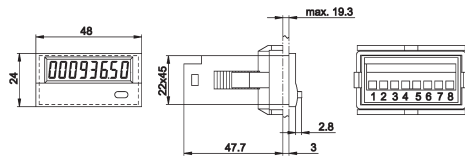
The counters of this series are suitable for simple counting tasks. Installation is very simple due to the compact dimensions and using the provided mounting frame. The voltage supply comes from an internal lithium battery, and the counter itself is actuated by voltage pulses or a potential-free contact. A reset can be carried out via another potential-free contact or using the button on the front. This is electrically lockable to prevent unauthorized access. The devices can be optionally equipped with backlighting. The electrical connections are made using screw terminals. The pulse counters have an 8-digit LCD display. An electrical

contact can be used to choose between counting up or counting down. The maximum counting frequency is 30Hz, and fast processes up to 12kHz can also be evaluated when using the pnp count input with the **CI090100** or the **CI090110**. The elapsed-time counters are primarily for use as elapsed hour counters. You can choose between two display options: Seconds and hours as a decimal number, or divided up into h, min and seconds. Two time ranges are available.

**application examples**

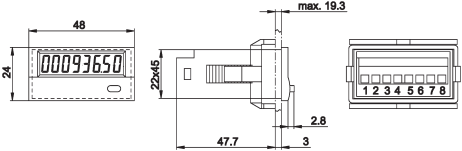
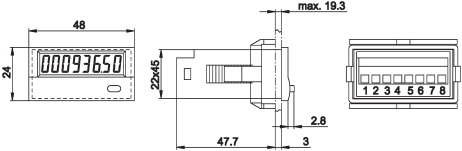
- ▶ Simple counting tasks
- ▶ Elapsed hour counter

article-no.	<b>CI090100</b>	<b>CI095400</b>
version	<b>pulse counter</b>	<b>pulse counter</b>
function	<b>fast, slow count adding, subtracting</b>	<b>slow count adding</b>
input	<b>pnp, npn, potential-free contact</b>	<b>AC/DC</b>
article-no.	<b>CI090110</b>	<b>CI095410</b>
version	<b>pulse counter, backlight</b>	<b>pulse counter, backlight</b>
function	<b>fast, slow counting, adding, subtracting</b>	<b>slow counting adding</b>
input	<b>pnp, npn, potential-free contact</b>	<b>AC/DC</b>



**TECHNICAL DATA**

function	<b>fast, slow counting adding, subtracting</b>	<b>slow counting adding</b>
input	<b>nnp, npn, potential-free contact</b>	<b>10 ... 260V AC/DC</b>
operating voltage	<b>integrated lithium battery, service life approx. 8 years backlight 24V DC ±20% / 50mA</b>	<b>integrated lithium battery, service life approx. 8 years backlight 24V DC ±20% / 50mA</b>
input frequency	<b>nnp: 30Hz, pnp: 12kHz</b>	<b>nnp: 30Hz, pnp: 12kHz</b>
display	<b>LCD, 8 decades, 8mm high</b>	<b>LCD, 8 decades, 8mm high</b>
display (counter reading)	<b>-9999999 ... +9999999</b>	<b>-9999999 ... +9999999</b>
dimensions	<b>48x24x48mm</b>	<b>48x24x48mm</b>
housing	<b>switch panel housing 48x24mm in accordance with DIN 43700</b>	<b>switch panel housing 48x24mm in accordance with DIN 43700</b>
housing material	<b>plastic</b>	<b>plastic</b>
installation depth	<b>approx. 48mm</b>	<b>approx. 48mm</b>
operating temperature	<b>-10 ... +60°C</b>	<b>-10 ... +60°C</b>
storage temperature	<b>-20 ... +70°C</b>	<b>-20 ... +70°C</b>
humidity	<b>80% non-condensing</b>	<b>80% non-condensing</b>
degree of protection (EN 60529)	<b>IP65 front side,</b>	<b>IP65 front side</b>
connection (terminals)	<b>8-pin screw terminal strip</b>	<b>8-pin screw terminal strip</b>
mounting	<b>front frame with screw-on mounting, or with clamp and sealing</b>	<b>front frame with screw-on mounting or with clamp and sealing</b>
mounting accessories	<b>AC000031</b>	<b>AC000031</b>

article-no.	<b>CZ090902</b>	<b>CZ095402</b>
version	elapsed time counter, elapsed hour counter	elapsed time counter, elapsed hour counter
function	programmable time ranges	programmable time ranges
input	npn, potential-free	AC/DC
article-no.	-	<b>CZ095412</b>
version	-	elapsed time counter, elapsed hour counter backlight
function	-	programmable time ranges
input	-	AC/DC
article-no.	<b>CZ090900</b>	<b>CZ095400</b>
version	elapsed time counter, elapsed hour counter	elapsed time counter, elapsed hour counter
function	programmable time ranges	programmable time ranges
input	npn, potential-free	AC/DC
article-no.	-	<b>CZ095410</b>
version	-	elapsed time counter, elapsed hour counter backlight
function	-	programmable time ranges
input	-	AC/DC
		
<b>TECHNICAL DATA</b>		
function	programmable time ranges	programmable time ranges
input	npn, potential-free	10 ... 260V AC/DC
operating voltage	integrated lithium battery, service life approx. 8 years backlight 24V DC ±20% / 50mA	integrated lithium battery, service life approx. 8 years backlight 24V DC ±20% / 50mA
input frequency	npn: 30Hz, pnp: 12kHz	npn: 30Hz, pnp: 12kHz
display	LCD, 8 decades, 8mm high	LCD, 8 decades, 8mm high
display (counter reading)	-9999999 ... 99999999	programmable time range
dimensions	48x24x48mm	48x24x48mm
housing	switch panel housing 48x24mm in accordance with DIN 43700	switch panel housing 48x24mm in accordance with DIN 43700
housing material	plastic	plastic
installation depth	approx. 48mm	approx. 48mm
operating temperature	-10 ... +60°C	-10 ... +60°C
storage temperature	-20 ... +70°C	-20 ... +70°C
humidity	80% non-condensing	80% non-condensing
degree of protection (EN 60529)	IP65 front side,	IP65 front side
connection (terminals)	8-pin screw terminal strip	8-pin screw terminal strip
mounting	front frame with screw-on mounting, or with clamp and sealing	front frame with screw-on mounting or with clamp and sealing
mounting accessories	<b>AC000031</b>	<b>AC000031</b>

### connection

terminal	CI0901XX pulse counter	CZ0909XX elapsed-time counter	CI0954XX pulse counter	CZ0954XX elapsed-time counter
1	INP A count fast	n. c.	INP count	timing input
2	INP B count slow	INP B timing input	common AC/DC	common AC/DC
3	ext. reset	ext. reset	ext. reset	ext. reset
4	enable front reset	enable front reset	enable front reset	enable front reset
5	mode	mode	n. c.	mode
6	GND	GND	GND	GND
7	- background option-illumination	- background option-illumination	- background option-illumination	- background option-illumination
8	+ background option-illumination	+ background option-illumination	+ background option-illumination	+ background option-illumination

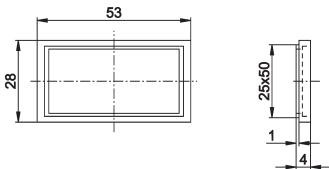
### description: pulse counter

	CI090100 CI090110	CI095400 CI095410		
input	PNP	AC/DC		
function	fast and slow counting processes	slow counting processes		
INP A	fast counting, PNP, 12kHz	slow counting, AC/DC, 30Hz		
INP B	slow counting, NPN or potential-free contact, 30Hz	ext. reset, AC/DC		
MODE	adding or subtracting	adding		

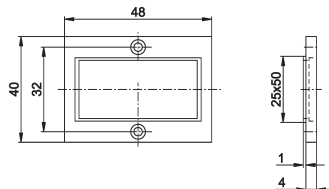
### description: elapsed-time counter

	CZ090902 -	CZ095402 CZ095412	CZ090900 -	CZ095400 CZ095410
input	NPN	AC/DC	NPN	AC/DC
function	time recording hrs., min. hrs., 1/100 hrs.	time recording hrs., min. hrs., 1/100 hrs.	time recording hrs., min., sec sec., 1/10 sec.	time recording hrs., min., sec sec., 1/10 sec.
INP A	-	timer, AC/DC	-	timer, AC/DC
INP B	timer, NPN	ext. reset, AC/DC	timer, NPN	ext. reset, AC/DC
MODE	99999 h 59 min or 99999.99 h	99999 h 59 min or 99999.99 h	9999 h 59 min 59 s or 9999999.9 s	9999 h 59 min 59 s or 9999999.9 s

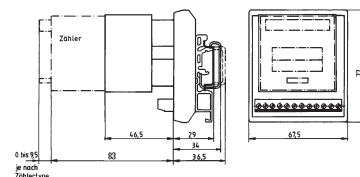
### front frame for bracket mounting



### for screw-on mounting



### Adapter for DIN-rail AC000031



This data sheet contains only the available standard versions.

You will receive operating instructions upon delivery of the devices. These explain the functions and the programming in detail.

**Warning:** Never use these devices in applications where the safety of a person depends on their functionality.

This data sheet as well as your personal contact can be found at [www.ipf-electronic.com](http://www.ipf-electronic.com)