dimensions   **48 x 24 x 48mm**

pulse counter
elapsed-time counter

✓ **triggering 0 to 260V AC/DC**
   (depending on the version)
✓ **electric reset**
✓ **front panel reset can be disabled**
✓ **suppression of predecimal places**
✓ **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, seconds**
   or 1/10 seconds

backlight
complete with mounting frame

description

Counters in this series are suited to simple counting tasks. Installation is very simple as a consequence of the compact dimensions and the help that the supplied mounting frame provides.

The voltage supply takes place by means of an internal lithium battery. The counter itself is controlled through voltage impulses or a potential-free contact. You can reset the device via another potential-free contact or the button on the front side. This can be electrically locked against unauthorized use. As an option, the devices can be equipped with background illumination. The electric connections are made via screw terminals.
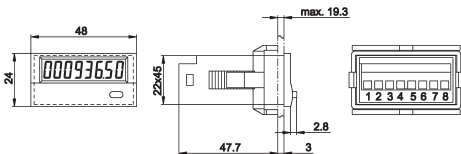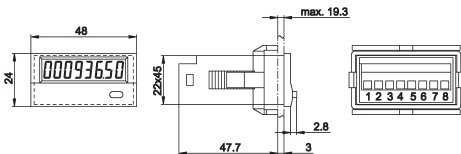
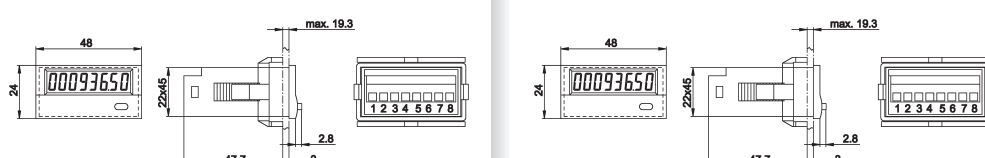The impulse counters have an 8-digit LCD display. With the aid of an electric contact, it is possible to select between counting up and counting down. The maximum frequency of the count is 30Hz. When using the pnp counter input with the **CI090100** and/or **CI090110**, also faster processes up to 12kHz can be evaluated.

The time counters are preferentially used as elapsed-operating hours counters. You can choose between two display options: Seconds and/or hours as a decimal number or a breakdown into hours, minutes and seconds. Two time ranges are available.

application examples

▶ simple counting tasks
▶ elapsed hour counters

article-no.	**CI090100**	**CI095400**
version	**pulse counter**	**pulse counter**
function	**fast, slow count** **adding, subtracting**	**slow count** **adding**
input	**pnp, npn, floating contact**	**AC/DC**

article-no.	**CI090110**	**CI095410**
version	**pulse counter, backlight**	**pulse counter, backlight**
function	**fast, slow count** **adding, subtracting**	**slow count** **adding**
input	**pnp, npn, floating contact**	**AC/DC**

TECHNICAL DATA

function	fast, slow count adding, subtracting	slow count adding
input	npn, pnp, floating contact	10 ... 260V AC/DC
operating voltage	integrated lithium battery, life approx. 8 years backlight 24V DC ±20% / 50mA	integrated lithium battery, 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 ... +9999999	-9999999 ... +9999999
dimensions	48x24x48mm	48x24x48mm
housing	panel housing 48x24mm according to DIN 43700	panel housing 48x24mm according to DIN 43700
housing material	plastic	plastic
fitting depth	approx. 48mm	approx. 48mm
operating temperature	-10 ... +60°C	-10 ... +60°C
temperature (terminals)	-20 ... +70°C	-20 ... +70°C
air humidity	80% no condensation	80% no condensation
system of protection (EN 60529)	IP65 frontal	IP65 frontal
connection	8-pin screw terminal	8-pin screw terminal
mounting	front panel with screw-on mounting or with clamp and sealing	front panel with screw-on mounting or with clamp and sealing
mounting accessories	**AC000031**	**AC000031**

article-no.	**CZ090902**	**CZ095402**
version	**elapsed-time-operating hours counter**	**elapsed-time-operating hours counter**
function	**programmable time ranges**	**programmable time ranges**
input	**npn, floating contact**	**AC/DC**

article-no.	-	**CZ095412**
version	-	**elapsed-time-operating hours counter**
	-	**backlight**
function	-	**programmable time ranges**
input	-	**AC/DC**

article-no.	**CZ090900**	**CZ095400**
version	**elapsed-time-operating hours counter**	**elapsed-time-operating hours counter**
function	**programmable time ranges**	**programmable time ranges**
input	**npn, floating contact**	**AC/DC**

article-no.	-	**CZ095410**
version	-	**elapsed-time-operating hours counter**
	-	**backlight**
function	-	**programmable time ranges**
input	-	**AC/DC**

TECHNICAL DATA

function	programmable time ranges	programmable time ranges
input	npn, floating contact	10 ... 260V AC/DC
operating voltage	integrated lithium battery, life approx. 8 years backlight 24V DC ±20% / 50mA	integrated lithium battery, life approx. 8 years backlight 24V DC ±20% / 50mA
input frequency	*	*
display	LCD, 8 decades, 8mm high	LCD, 8 decades, 8mm high
display (counter reading)	programmable time ranges	programmable time ranges
dimensions	48x24x48mm	48x24x48mm
housing	panel housing 48x24mm according to DIN 43700	panel housing 48x24mm according to DIN 43700
housing material	plastic	plastic
fitting depth	approx. 48mm	approx. 48mm
operating temperature	-10 ... +60°C	-10 ... +60°C
temperature (terminals)	-20 ... +70°C	-20 ... +70°C
air humidity	80% no condensation	80% no condensation
system of protection (EN 60529)	IP65 frontal	IP65 frontal
connection	8-pin screw terminal	8-pin screw terminal
mounting	front panel with screw-on mounting or with clamp and sealing	front panel with screw-on mounting or with clamp and sealing
mounting accessories	**AC000031**	**AC000031**

* not specified

connection

| terminal	pulse counter CI0901XX	elapsed-time counter CZ0909XX	pulse counter CI0954XX	elapsed-time counter CZ0954XX
1	INP A count fast	not connected	INP count	timing input
2	INP B count slow	INP B timing input	common AC/DC	common AC/DC
3	external reset	external reset	external reset	external reset
4	enable front reset	enable front reset	enable front reset	enable front reset
5	mode	mode	not connected	mode
6	GND	GND	GND	GND
7	– option backlight	– option backlight	– option backlight	– option backlight
8	+ option backlight	+ option backlight	+ option backlight	+ option backlight

description pulse counter

	CI090100 CI090110	CI095400 CI095410		
input	pnp	AC/DC		
function	fast and slowly count count processes	slowly count processes		
INP A	fast count, pnp, 12kHz	slow count AC/DC, 30Hz		
INP B	slow count, npn or floating 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 h,min h, 1/100 h	time recording h,min h, 1/100 h	time recording h,min,sec sec, 1/10 sec	time recording h,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	99999h 59min or 99999.99h	99999h 59min or 99999.99h	9999h 59min 59sec or 999999.9sec	9999h 59min 59sec or 999999.9sec

front panel for clamp fixing
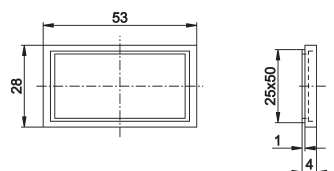
for screw fixing
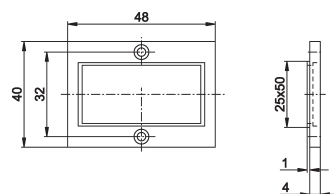
adaptor for DIN-rail AC000031
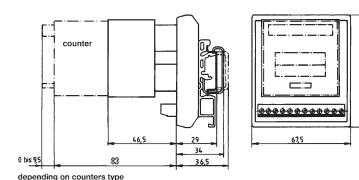
This data sheet contains the available standard versions only.

You will receive an operating manual when the device is supplied. This will provide a detailed explanation concerning the functions and programming.

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

You also find this data sheet, as well as contact details under www.ipf-electronic.com