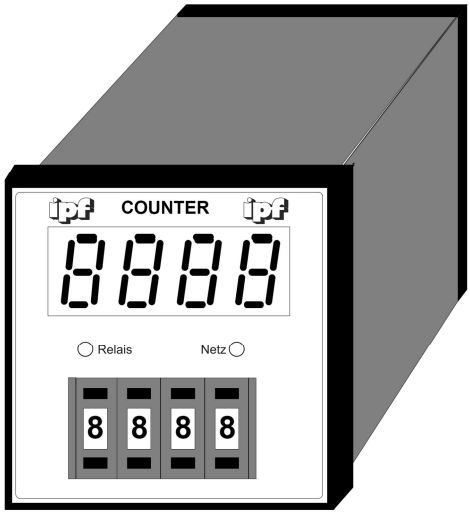
Manual

impulse counter CI044420

1. Technical Data

operating voltage	230V AC; 24V
power consumption	5VA
ambient temperature	-20 °C … +70 °C
duty cycle	100% ED
auxiliary voltage	24V DC 150mA
input level	8V … 30V
current consumption (input)	10mA bei 24V
relay output	change-over contact 250V/3A
transistor output	PNP 24V 50mA
Frontpanel-fit-in	68x68mm
fitting depth	120mm
protection class housing	IP 40
protection class clamps	IP 20



2. Control elements

Coding switches at the device's front:

With the coding switches 1 to 4 you set the pre-set pulse value

DIP – switch at the device's rear side

S1 ON	timed contact
S1 OFF	permanent contact
S2 ON	count up
S2 OFF	count down
S3 ON	automatical reset
S3 OFF	external reset
S4 ON	counting frequency 20Hz
S4 OFF	counting frequency 1500Hz

Note: Saving of settings is possible in DC-mode only!

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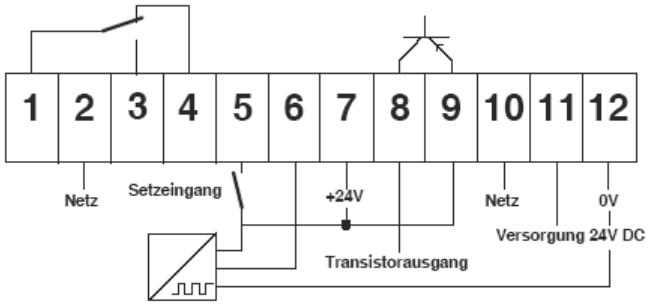
3. **Electrical connection**

terminal 1	relay center contact
terminal 2	operating voltage (UB) e.g. 230V DC
terminal 3	relay make contact
terminal 4	relay brake contact
terminal 5	external reset (pnp)
terminal 6	counting input (pnp)
terminal 7	auxiliary voltage + 24V DC (150mA max.)
terminal 8	pnp output + 24V DC (50mA)
terminal 9	connect when pnp-outputs assigned with internal or external auxiliary voltage
terminal 10	operating voltage (UB) e.g. 230V AC
terminal 11	UB + 24V DC (clamps 2 and 10 are not connected!)
terminal 12	0V DC (minus for UB 24V DC and auxiliary voltage)

S3 ON automatic reset on the value (BCD switch) counting down// reset to „0“ by counting up when turning on the power supply
S3 OFF memory the value the counter is switched off (power supply)



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4. Functional description

functional description	DIP – switches S1	S2	S3	S4	description
1. counting up, permanent contact, memory	**OFF**	**ON**	**OFF**		The Dip-switches on the back of the counter are set, **S1 OFF; S2 ON; S3 OFF** By putting on the power supply on terminal 2 and 10 (220V AC) or 24V DC on terminal 11 and 12 the counter counts up on the stored value. When the counter reaches the value set by the BCD switches the Relays switch, and the p-mos output goes to 0 Ohm. Any further signals will not be counted. The counter needs a signal on the reset input to count again from zero up to the set value. On any time the counter is switched of, the value will be stored, and it counts up on the stored value when it is switched on.
2. counting up, timed contact, memory	**ON**	**ON**	**OFF**		The Dip-switches on the back of the counter are set, **S1 ON; S2 ON; S3 OFF** By putting on the power supply on terminal 2 and 10 (220V AC) or 24V DC on terminal 11 and 12 the counter counts up on the stored value.. By reaching the set value (BCD-switch) the outputs will be set (time from 0.1-1sec). The counter will automatically reset and it counts up again from 0 to the value on the BCD-switches. The timed contacts can be set by the poti on the back of the counter. (Timing range: 0.1-1sec optional 1-10sec) By switching off the power supply the counter stores the value displayed in the front, when the counter now is switched on the stored value will be displayed, and it counts up on the stored value.
3. counting down, permanent contact, memory	**OFF**	**OFF**	**OFF**		The Dip-switches on the back of the counter are set, **S1 OFF; S2 OFF; S3 OFF** By putting on the power supply on terminal 2 and 10 (220V AC) or 24V DC on terminal 11 and 12 the counter counts down on the stored value. Same function like described in counting up, permanent contact.....
4. counting down, timed contact, memory	**ON**	**OFF**	**OFF**		The Dip-switches on the back of the counter are set, **S1 ON; S2 OFF; S3 OFF** By putting on the power supply on terminal 2 and 10 (220V AC) or 24V DC on terminal 11 and 12 the counter counts down on the stored value. Same function like description in counting up, timed contact.
5. automatical reset, memory			**ON** **OFF**		S3 ON automatic reset on the value (BCD switch) counting down// reset to „0“ by counting up when turning on the power supply S3 OFF memory the value the counter is switched off (power supply)
6. determination of counting frequency				**ON** **OFF**	The DIP – switch S4 effects a limitation of the input frequency in all above mentioned counting modes. 20 Hz for mechanical limit switches and relay contacts 1500 Hz for electronic transmitters

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

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