Preset counter electronical

Kübler

Type 901

Your benefit
- Replacement for electromechanical preset counters
- no power supply necessary (battery-operated)
- Count and reset input electrically separated from counter through optocoupler input range 12 ... 250 V AC/DC
- 2 line LC display count, preset and level of the output
- screw terminal
- $_c$**R**$_{us}$ approval

Further product features
- Data security, trough 2 exchangeable lithium batteries, life time minimum 8 years
- easy programming
- Counter presets easily via presetting keys allocated to each decade

Output
Potential free relay, programmable normally open or normally closed contact

Technical data

Power supply:	2 pcs user exchangeable lithium-batteries Type 1/2 AA lithium 3,6 V
Display:	2 line LCD display, 6 digits: 999999 height of figures 7 or 4.5 mm
Input:	Reset, count and key lock inputs
Polarity of the inputs:	bidirectional optocoupler input for the reset and count inputs Reset, count and keyboard lock is connected to +3 V DC
Min pulse duration of the inputs:	Reset input: 50 ms Keyboard lock input: 15 ms
Switching levels of the inputs:	Low: < 3 V AC/DC High: 12 ... 250 V AC/DC
Input frequency:	max: 25 Hz
Input resistance:	110 kΩ
Output:	bistable relay with potential free contact (programmable as normally closed or normally

	opened contact)
max. switching voltage:	250 V AC/220 V DC
max. switching current:	2 A
max. switching capacity:	60 VA/30 W
Output responce time	< 20 ms, max. 4 Hz
Data retention:	via 2 batteries; 8 years at $5{\times}10^6$ power operations of the output relay and an ambient temperature of 25 °C
Ambient temperature:	−10 ... +50 °C
Storage temperature:	−25 ... +60 °C
EMC:	according to EC EMC directive 89/36/EWG
Immunity to interference:	EN 50081-2/EN 55011 class B
Emitted interference:	EN 6100-6-2
Protection:	IP65 (front)
Weight:	appr. 80 g

Programming
The counter is programmed using the keys on the front. The menu is shown on the display. The following modes are programmable:
1. Count mode (adding or subtracting)
2. Latch or automatic cycle
3. Output (normally open or normally closed)
4. Display Hold during automatic cycles in steps of 100 ms between 100 and 500 ms.
5. Decimal point up to max. 3 decimal places.

Function of the output:
Adding:
Relay is active , when actual value $\geq$ preset
Subtracting:
Relay is active , when actual value $\leq$ 0
When the relay is active a colon will appear at the bottom left of the display

Operating the counter:
Setting or resetting.
Press the red SET button or apply a pulse to the reset input to set the counter to zero in the adding mode or to the preset in the subtracting mode.

Presetting:
The preset value is indicated on the lower row of digits. To set it, use the 6 presetting buttons assigned to each decade. The set value will be accepted with the next set or reset operation.

Overflow and underflow:
In the adding mode the overflow is 999 999 to 0; in the subtracting mode it is 0 to 999 999. The output signal remains unaffected.

Lo-Bat-indicator:
When the battery charge is too low, **Lo-bat** appears in the lower display. This flashes on a two second cycle. When lo-bat is indicated, the battery should be changed as soon as possible.

Changing the battery:
Push the battery cover back and remove the batteries, making certain that polarity is correct. (observe "–" terminal on PCB)
**Note:** Changing the battery should not take longer than 2 min. otherwise, the count and preset values as well as the parameters will get lost and therefore must be set again.
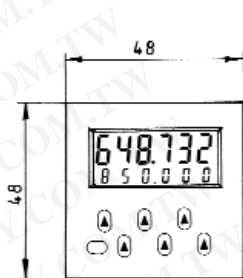
Preset counter

Preset counter electronical

Kübler

Terminal block:

Example of connection:
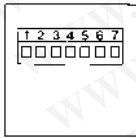
Pin	
1	+3 V DC for terminal 2
2	keyboard lock-input
3	Relay contact
4	Relay contact
5	AC/DC optocoupler count input
6	AC/DC optocoupler reset input
7	common AC/DC input for terminal 6 and 5
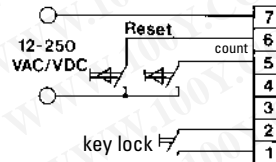
Dimensions:

901
Panel cut-out 45 x 45 mm
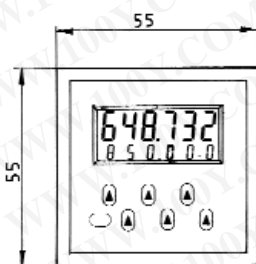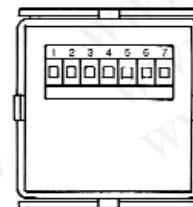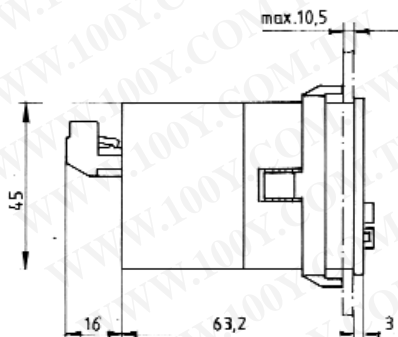
901 with front bezel No. 2
Panel cut-out 50 x 50 mm
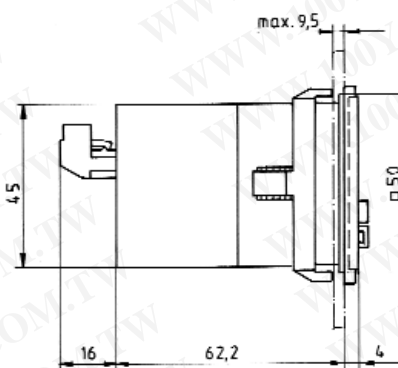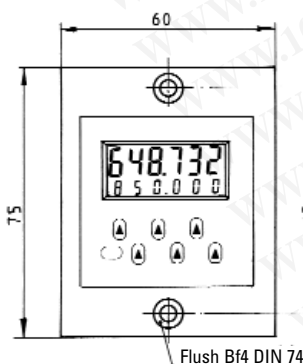
901 with front bezel No. 3
Panel cut-out 50 x 50 mm
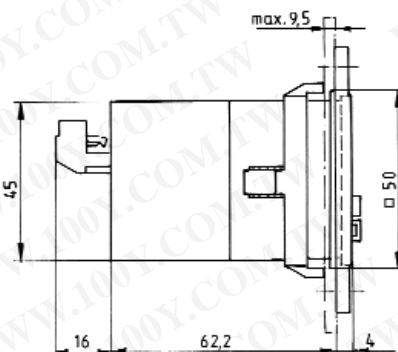
Delivery specification::
Counter 901
2 lithium batteries
1 Screw terminal
1 Front frame for screw mounting
   Panel cut-out 50 x 50 mm
1 Front frame for spring clip mount
   Panel cut-out 50 x 50 mm
1 Spring clip
1 Template for panel cut-out
1 Operating instruction

Order Code: 6.901.010.800