

# Electronic counters without preselection

## → Totalizers without preselection - LCD 24 x 48 - CTR24

- Display: 8-digit LCD, height 8 mm
- Powered by a lithium battery
- Counter inputs: solid state (4-30 V $\overline{\text{---}}$ ) or voltage (10  $\rightarrow$  260 V $\sim$ )
- Reset on panel or external with inhibition option
- Backlit model (2341-2351-2342)
- Counting directions can be selected with input (2241-2341/2251-2351)
- Accessories for 50 x 25 mm cut-out



### Part numbers

Type	Type	Functions	Code
CTR24 non-backlit model	2241	Solid state input, lithium battery PNP/NPN	87622061
	2251	Solid state input, lithium battery NPN/NPN	87622062
	2242	Voltage input, lithium battery	87622070
CTR24 model with orange backlighting	2341	Solid state input, lithium battery PNP/NPN	87622081
	2351	Solid state input, lithium battery NPN/NPN	87622082
	2342	Voltage input, lithium battery	87622090

### Accessories

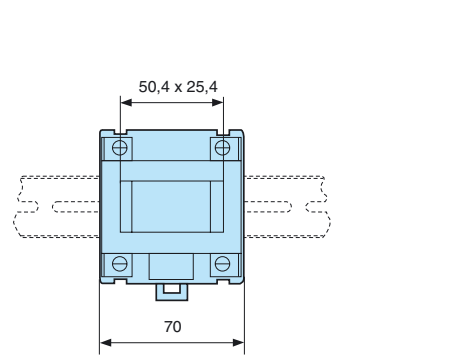
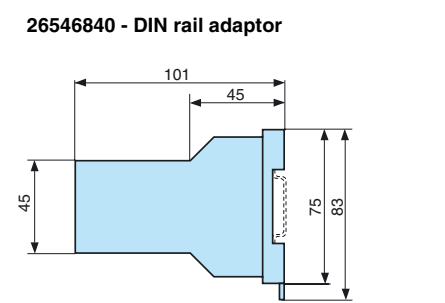
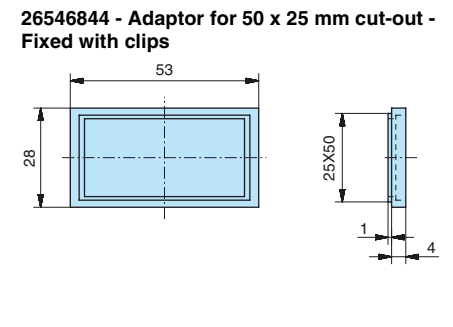
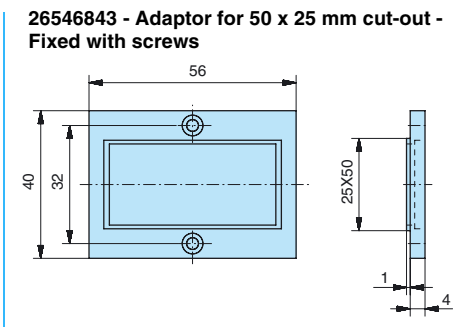
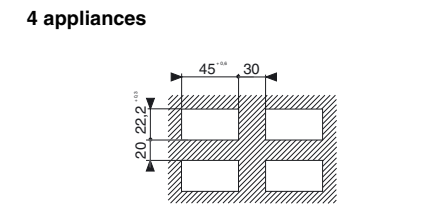
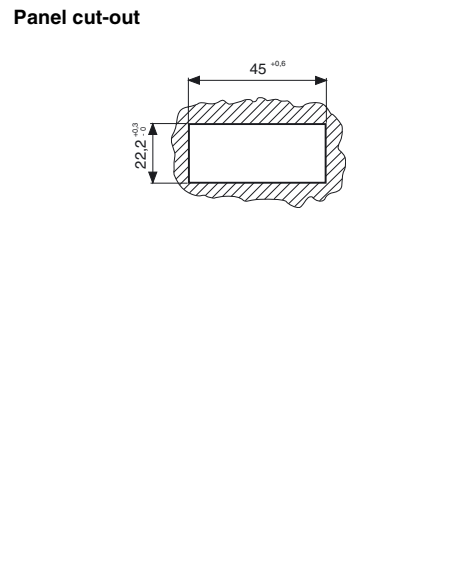
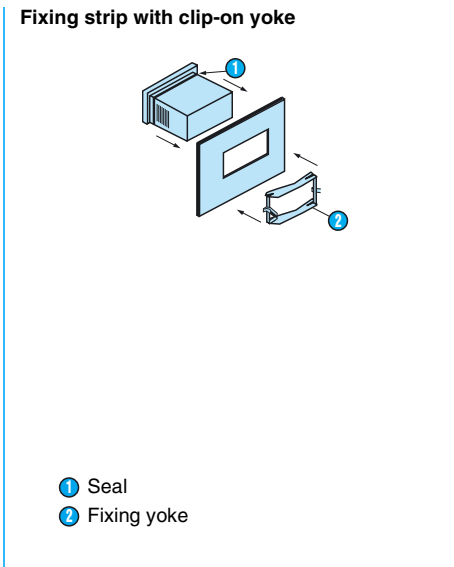
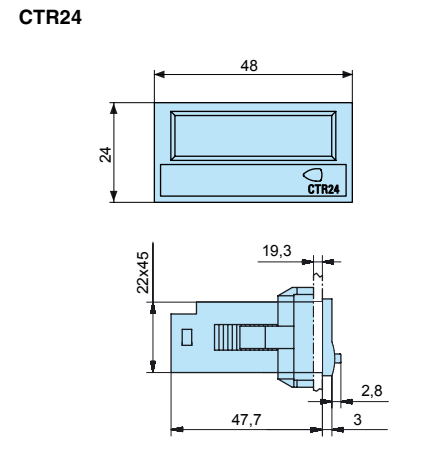
Description	Code
Adaptor for 50 x 25 mm cut-out - Fixed with screws	26546843
Adaptor for 50 x 25 mm cut-out - Fixed with clips	26546844
DIN rail adaptor	26546840
Clip-fixing kit (supplied with the product)	26546848

### General characteristics

Environmental characteristics	
Consumption	Backlighting: 24 V $\overline{\text{---}}$ $\pm$ 20% 50 mA
Connection by 8 screw terminals at rear of casing	✓
Connection capacity	1.5 mm <sup>2</sup>
Fixed using bracket	✓
Degree of protection front face	IP 65
Temperature limits use (°C)	-10 $\rightarrow$ +60
Temperature limits stored (°C)	-20 $\rightarrow$ +70
Breakdown voltage	Selon EN 61010-1: 2000 V / 50 Hz / 1 min
Conformity to standards	EN 61000-6-2 - EN 55011 class B
Altitude	2000 m
Certifications	UL - cULus (pending) - CE
Weight (g)	50
Operating characteristics	
Function	Impulse counter
Display	8-digit LCD
Height digits (mm)	8
Counting capacity	-9.999.999 $\rightarrow$ 99.999.999 with elimination of zeros
Inputs 2241-2341	
1 slow counting input for contact closure on NPN open-collector transistor input (terminals 2-6)	✓
1 input for high speed counting signal from voltage level (terminals 1-6)	4 $\rightarrow$ 30 V $\overline{\text{---}}$
Low level	0 $\rightarrow$ 0.7 V $\overline{\text{---}}$
High level	4 $\rightarrow$ 30 V $\overline{\text{---}}$ PNP
High-speed counting	12 KHz max. 42 $\mu$ s PNP
Input impedance	100 K $\Omega$ PNP
Inputs 2251-2351	
1 slow counting input for contact closure on NPN open-collector transistor input (terminals 2-6)	✓
1 input for high speed counting signal from voltage level (terminals 1-6)	3 $\rightarrow$ 30 V $\overline{\text{---}}$
Low level	0 $\rightarrow$ 0.7 V $\overline{\text{---}}$
High level	3 $\rightarrow$ 30 V $\overline{\text{---}}$
High-speed counting	7 KHz max. 70 $\mu$ s NPN
Input impedance	1 M $\Omega$

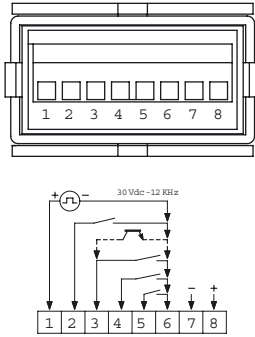
<b>Reset - External 2241-2341 &amp; 2251-2351</b>	
Volt-free contact or open collector (terminals 3-6)	✓
<b>Inputs 2242-2342</b>	
1 input for slow counting 2 voltage levels	✓
Voltage - Terminals 1-2	10 → 260 V $\overline{\sim}$
Input impedance (k $\Omega$ )	160
Slow counting	30 Hz
Minimum pulse time	16 ms
Low level	0 → 2 V $\overline{\sim}$
High level	10 → 260 V $\overline{\sim}$
<b>Reset - External 2242-2342</b>	
Voltage - Terminals 2-3	✓
Minimum pulse time	16 ms
Low level	0 → 2 V $\overline{\sim}$
High level	10 → 260 V $\overline{\sim}$
<b>Reset to zero - Panel</b>	
Reset via	Inhibited: Terminals 4-6 not connected Active: Terminals 4-6 connected
<b>Supply</b>	
1 lithium battery - Life (years)	8

**Dimensions (mm)**



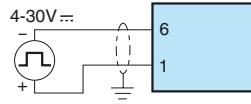
Accessory supplied with the counter

2241-2341



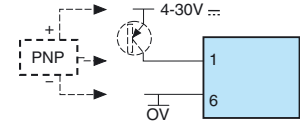
- 1 Fast count
- 2 Slow count
- 3 Reset input 12 ms
- 4 Enable panel reset
- 5 Mode count direction
- 6 0 V common/ (BL- only 23xx)
- 7 Backlighting option (only 2341)
- 8 Backlighting option + 24 V $\overline{\text{---}}$  (only 2341)

2241-2341



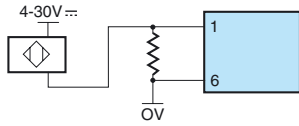
PNP fast count input - Voltage

2241-2341



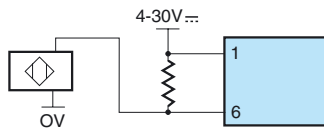
PNP fast count input Transistor or 3-wire PNP proximity sensor (for leakage current detector  $\leq 1$  mA)

2241-2341



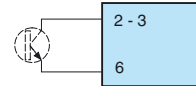
2-wire proximity sensor fast count input

2241-2341



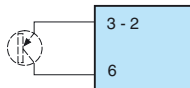
2-wire proximity sensor fast count input

2241-2341



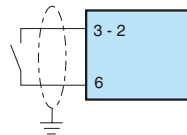
Slow count input (2) or reset input (3)

2241-2341



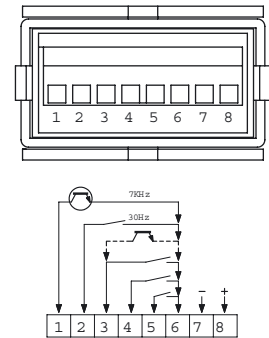
Slow count input (2) or reset input (3)

2241-2341



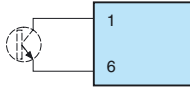
Slow count input (2) or reset input (3) - Contact not supplied with power

2251-2351



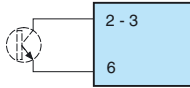
- 1 Fast count
- 2 Slow count
- 3 Reset input 12 ms
- 4 Enable panel reset
- 5 Mode count direction
- 6 0 V common/ (BL- only 23xx)
- 7 Backlighting option + (only 2351)
- 8 Backlighting option + 24 V $\overline{\text{---}}$  (only 2351)

2251-2351



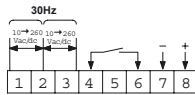
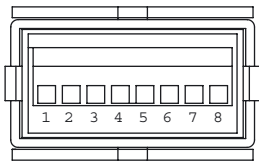
Fast count input NPN - Voltage

2251-2351



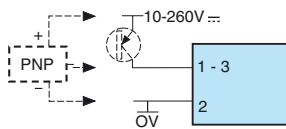
Slow count input (2) or reset input (3)

2242-2342



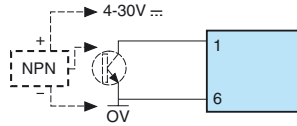
- 1 Fast count
- 2 AC/DC common
- 3 Reset input 12 ms
- 4 Enable panel reset
- 5 count direction
- 6 0 V common/ (BL- only 23xx)
- 7 Backlighting option - (only 2342)
- 8 Backlighting option + 24 V $\ddot{=}$  (only 2342)

2242-2342



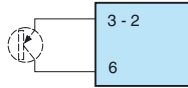
Counter or reset input PNP Transistor or 3-wire PNP proximity sensor (for leakage current detector < 1 mA)

2251-2351



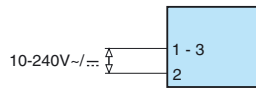
Fast count input NPN Transistor or 3-wire PNP proximity sensor (for leakage current detector  $\leq$  1 mA)

2251-2351



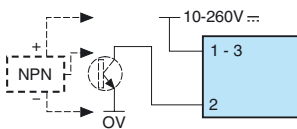
Slow count input (2) or reset input (3)

2242-2342



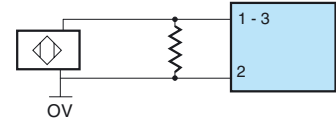
Counter or reset input - Voltage

2242-2342



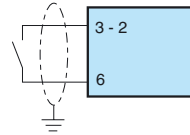
Counter or reset input NPN Transistor or 3-wire PNP proximity sensor (for leakage current detector < 1 mA)

2251-2351



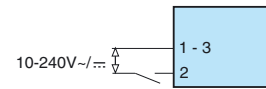
2-wire proximity sensor fast count input

2251-2351



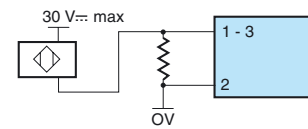
Slow count input (2) or reset input (3)  
Contact not supplied with power

2242-2342



Counter or reset input -  
Contact supplied with power

2242-2342



Start/Stop or reset input: 2-wire proximity sensor  $R=470 \Omega/2 W$  for 2-wire leakage current detector  $\leq$  1 mA