

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 $\overline{\text{DC}}$) 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

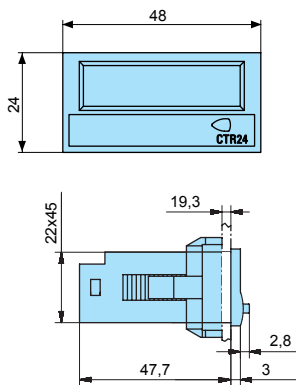
General characteristics

Environmental characteristics	
Consumption	Backlighting: 24 V $\overline{\text{DC}}$ \pm 20% 50 mA
Connection by 8 screw terminals at rear of casing	✓
Connection capacity	1.5 mm ²
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	According to 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 $\overline{\text{DC}}$
Low level	0 \rightarrow 0.7 V $\overline{\text{DC}}$
High level	4 \rightarrow 30 V $\overline{\text{DC}}$ PNP
High-speed counting	12 KHz max. 42 μ s PNP
Input impedance	100 K Ω 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 $\overline{\text{DC}}$
Low level	0 \rightarrow 0.7 V $\overline{\text{DC}}$
High level	3 \rightarrow 30 V $\overline{\text{DC}}$
High-speed counting	7 KHz max. 70 μ s NPN
Input impedance	1 M Ω

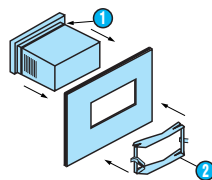
Reset - External 2241-2341 & 2251-2351	
Volt-free contact or open collector (terminals 3-6)	✓
Inputs 2242-2342	
1 input for slow counting 2 voltage levels	✓
Voltage - Terminals 1-2	10 → 260 V $\tilde{}$
Input impedance (k Ω)	160
Slow counting	30 Hz
Minimum pulse time	16 ms
Low level	0 → 2 V $\tilde{}$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

Dimensions (mm)

CTR24

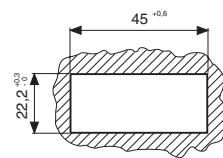


Fixing strip with clip-on yoke

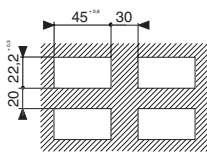


- 1 Seal
- 2 Fixing yoke

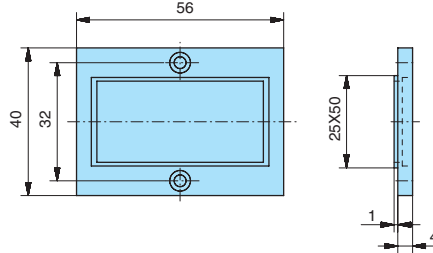
Panel cut-out



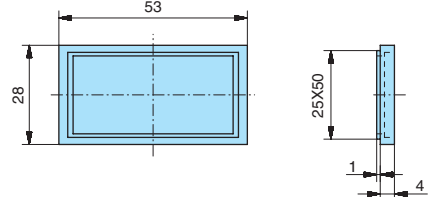
4 appliances



26546843 - Adaptor for 50 x 25 mm cut-out - Fixed with screws

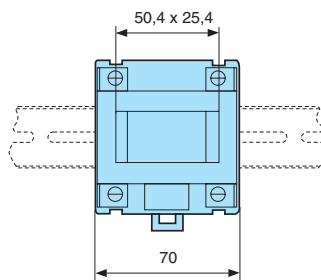
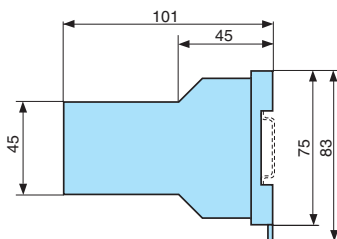


26546844 - Adaptor for 50 x 25 mm cut-out - Fixed with clips



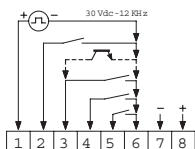
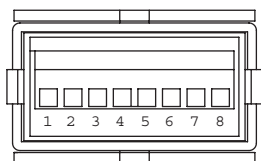
Accessory supplied with the counter

26546840 - DIN rail adaptor



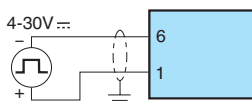
Connections

2241-2341



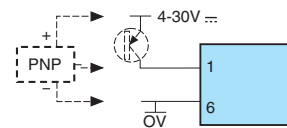
- 1 Fast count
- 2 Slow count
- 3 Reset input 12 ms
- 4 Enable panel reset
- 5 Mode count direction
- 6 0 V common/ (BL- only 23xx)
- 7 Backlighting option (only 2341)
- 8 Backlighting option + 24 V $\overline{\text{DC}}$ (only 2341)

2241-2341



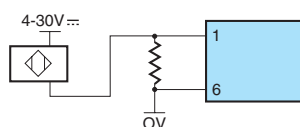
PNP fast count input - Voltage

2241-2341



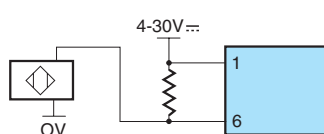
PNP fast count input Transistor or 3-wire PNP proximity sensor (for leakage current detector ≤ 1 mA)

2241-2341



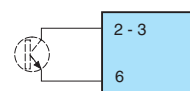
2-wire proximity sensor fast count input

2241-2341



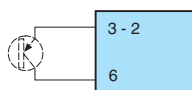
2-wire proximity sensor fast count input

2241-2341



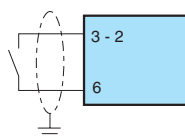
Slow count input (2) or reset input (3)

2241-2341



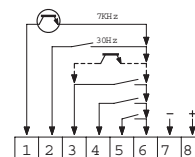
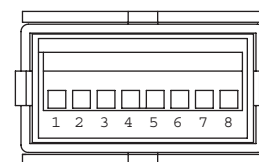
Slow count input (2) or reset input (3)

2241-2341



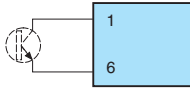
Slow count input (2) or reset input (3) - Contact not supplied with power

2251-2351



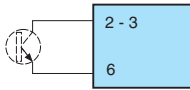
- 1 Fast count
- 2 Slow count
- 3 Reset input 12 ms
- 4 Enable panel reset
- 5 Mode count direction
- 6 0 V common/ (BL- only 23xx)
- 7 Backlighting option + (only 2351)
- 8 Backlighting option + 24 V $\overline{\text{DC}}$ (only 2351)

2251-2351



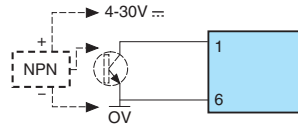
Fast count input NPN - Voltage

2251-2351



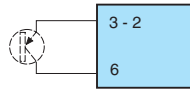
Slow count input (2) or reset input (3)

2251-2351



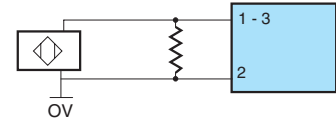
Fast count input NPN Transistor or 3-wire PNP proximity sensor (for leakage current detector ≤ 1 mA)

2251-2351



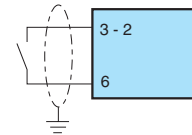
Slow count input (2) or reset input (3)

2251-2351



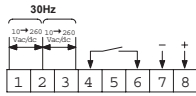
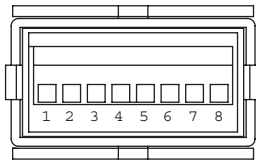
2-wire proximity sensor fast count input

2251-2351



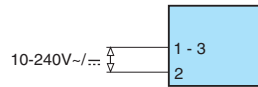
Slow count input (2) or reset input (3)
Contact not supplied with power

2242-2342



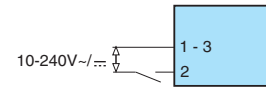
- 1 Fast count
- 2 AC/DC common
- 3 Reset input 12 ms
- 4 Enable panel reset
- 5 count direction
- 6 0 V common/ (BL- only 23xx)
- 7 Backlighting option - (only 2342)
- 8 Backlighting option + 24 V $\overline{\text{AC}}$ (only 2342)

2242-2342



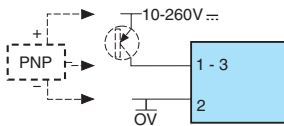
Counter or reset input - Voltage

2242-2342



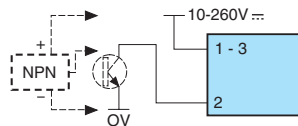
Counter or reset input -
Contact supplied with power

2242-2342



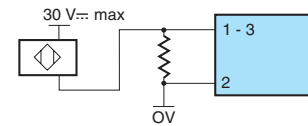
Counter or reset input PNP Transistor or 3-wire PNP proximity sensor (for leakage current detector < 1 mA)

2242-2342



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

2242-2342



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