



## Hour without preselection - LCD 24 x 48 - CTR24 CTR24 non-backlit model Part number 87622162



- Display : 8-digit LCD, height 8 mm
- Built-in module for voltage inputs 10 →260 VAC/DC (2224-2324)
- 4 timing ranges : 99,999.99 hrs - 99,999.59 hrs - 999,999.9 s - 9,999 hrs 59 min 59 s
- Powered by a lithium battery, service life 8 years
- Reset on panel or external with inhibition option
- Backlit model (2323-2333-2324)
- Accessories for 50 x 25 mm cut-out

### Part numbers

	Type	Type	Functions
87622162	CTR24 non-backlit model	2233	Hour counter, solid state input NPN

### Specifications

#### Physical details and protection

Consumption	Backlighting : 24 VDC± 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 →+60
Temperature limits stored (°C)	-20 →+70
Breakdown voltage	EN 610110-1 : 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	Hour counter
Display	8-digit LCD
Height digits (mm)	8
Time ranges	0 →99 999.99 h 0 →99 999.59 h 0 →9 999 999.9 s 0 →9 999 h 59 min 59 s
Time base : Crystal controlled (Accuracy ± 100)	•

#### Input 2223-2323

Start/stop input	by PNP or dry contact (terminals 2-6)
Low level	0 →0,7 VDC
High level	4 →30 VDC PNP
Min time closed	> 100 ms
Input impedance	100 kΩ PNP

#### Input 2233-2333

Start/stop input	by PNP or dry contact (terminals 2-6)
Low level	0 →0,7 VDC
High level	3 →30 VDC
Minimum time closed	> 100 ms
Input impedance	1 MΩ

#### Reset to zero - External 2223-2323 & 2233-2333

Volt-free contact or open collector (terminals 3-6)	•
Minimum time closed	50 ms

#### Input 2224-2324

One start/stop input Two voltage levels (terminals 3-6)	•
Voltage - Terminals 1-2	10 →260 VAC/DC
Input impedance	160 kΩ
Minimum pulse time DC	100 ms
Minimum pulse time AC	100 ms
Low level	0 →2 VAC/DC
High level	10 →260 VAC/DC

#### Reset to zero - External 2224-2324

Voltage - Terminals 2-3	•
Minimum pulse time	16 ms
Low level	0 →2 VAC/DC
High level	10 →260 VAC/DC

**Reset to zero - Panel**

Reset via	Inhibited : Terminals 4-6 not connected Active : Terminals 4-6 connected
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**Supply**

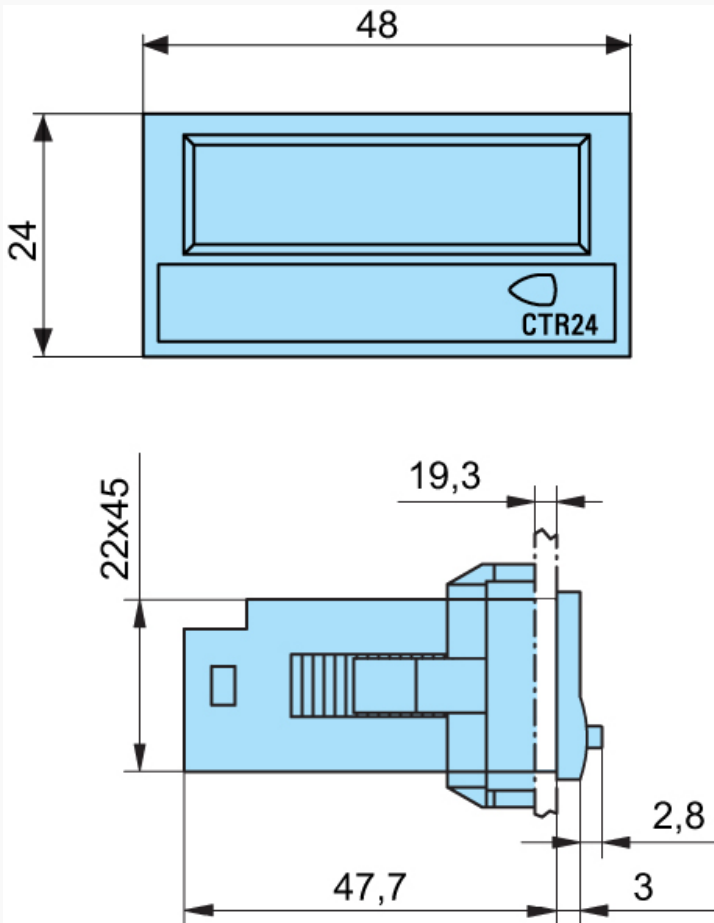
1 lithium battery - Life (years)	8
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**Accessories**

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

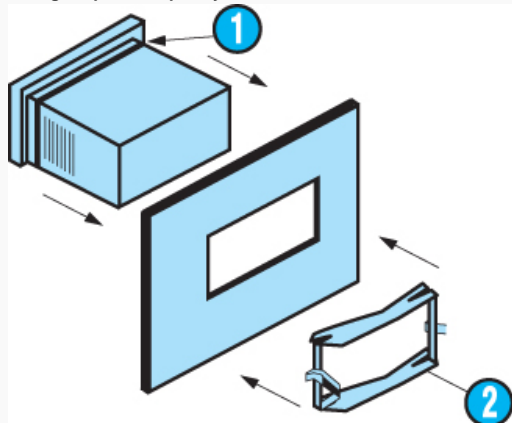
**Dimensions (mm)**

CTR24



**Dimensions (mm)**

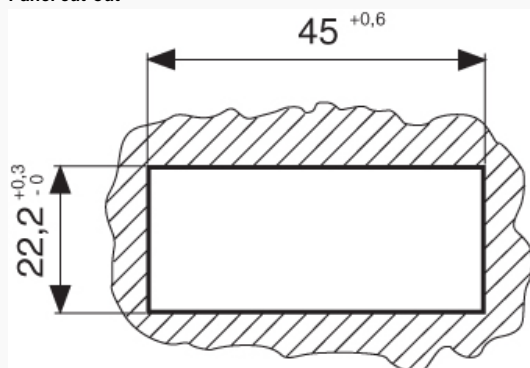
Fixing strip with clip-on yoke



N°	Legend
①	Seal
②	Fixing yoke

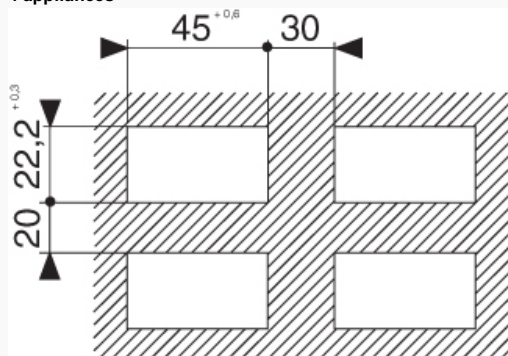
**Dimensions (mm)**

Panel cut-out



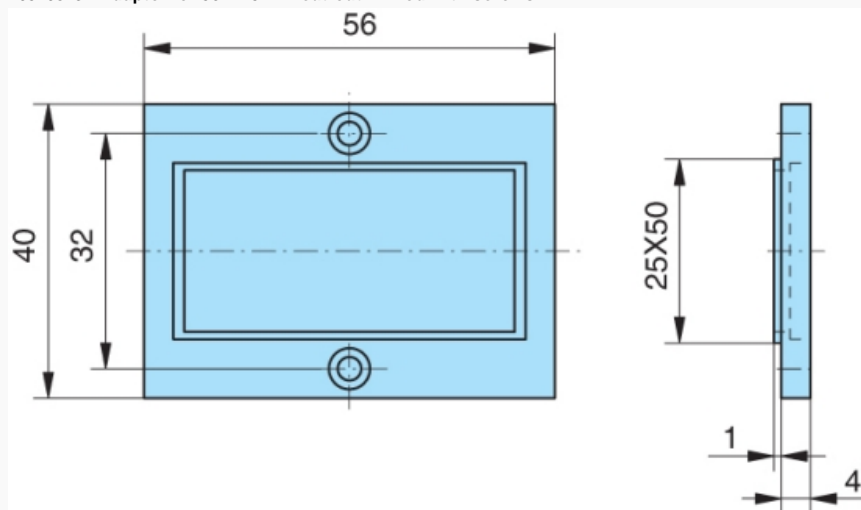
**Dimensions (mm)**

4 appliances



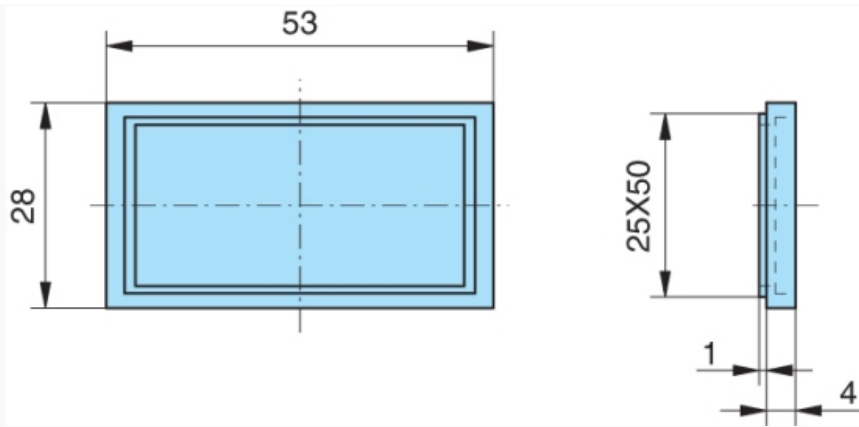
**Dimensions (mm)**

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



**Dimensions (mm)**

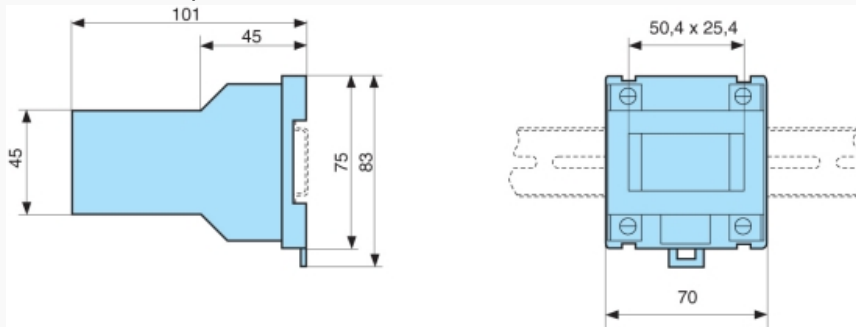
26546844 - Adaptor for 50 x 25 mm cut-out - Fixed with clips



Accessory supplied with the counter

#### Dimensions (mm)

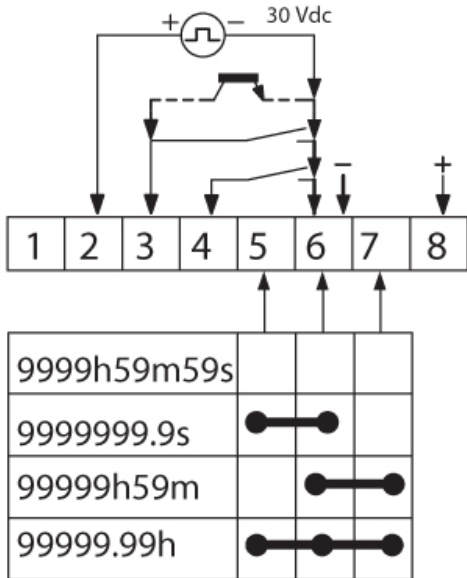
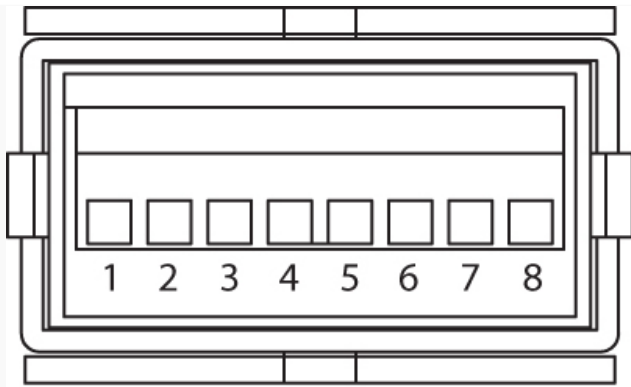
##### 26546840 - DIN rail adaptor



Accessory supplied with the counter

#### Connections

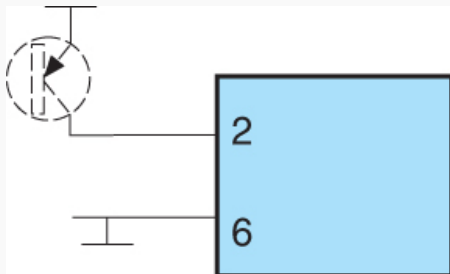
##### 2223-2323



N°	Legend
1	NC
2	Start/Stop input
3	Reset input 100 ms
4	Enable panel reset
5	Mode 1 (Time selection)
6	0 V common/ (BL- only 23xx)
7	Mode 2 (Time selection)
8	Backlighting option + 24 VDC (only 2323)

**Connections**

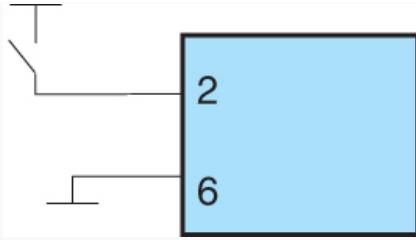
2223-2323



Start/Stop input Transistor PNP

**Connections**

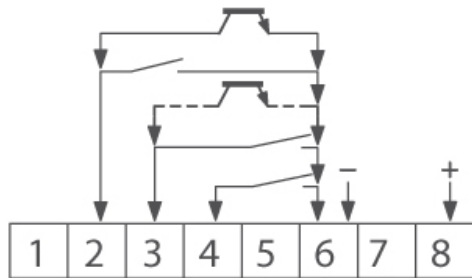
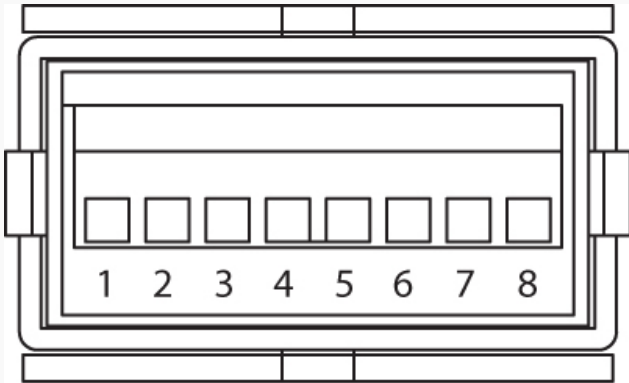
2223-2323



Start/Stop input PNP

**Connections**

2233-2333



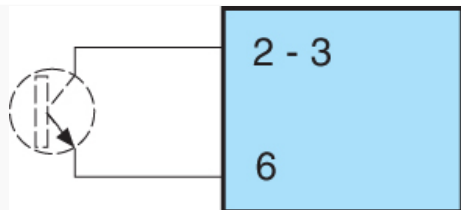
9999h59m59s			
9999999.9s	●	●	
99999h59m		●	●
99999.99h	●	●	●

Start/Stop input PNP

N°	Legend
1	NC
2	Start/Stop input
3	Reset input 100 ms
4	Enable panel reset
5	Mode 1 (Time selection)
6	0 V common/ (BL- only 23xx)
7	Mode 2 (Time selection)
8	Backlighting option + 24 VDC (only 2333)

**Connections**

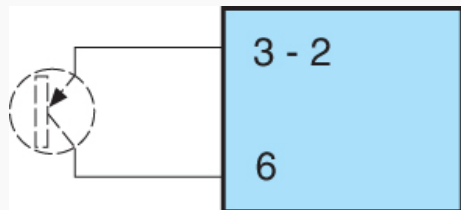
2233-2333



Start/Stop or reset input NPN - Transistor

**Connections**

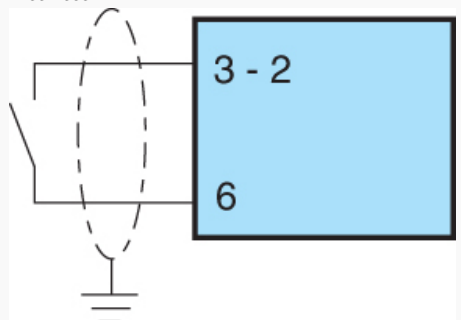
2233-2333



Start/Stop or reset input PNP - Transistor

**Connections**

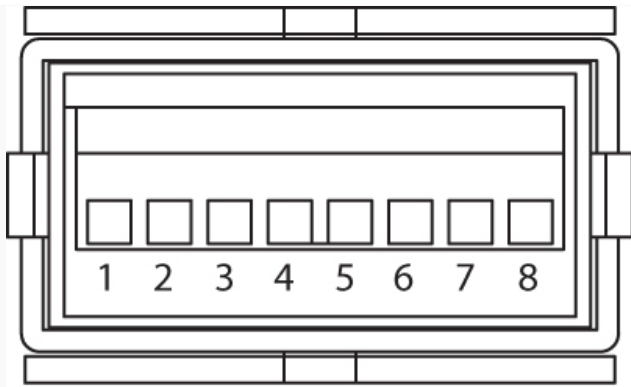
2233-2333



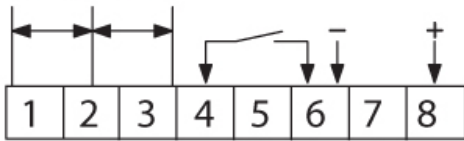
Start/Stop or reset input NPN - Transistor

**Connections**

2224-2324



10→260 10→260  
Vac/dc Vac/dc



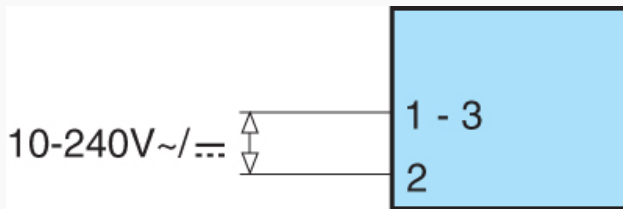
9999h59m59s			
9999999.9s	●	●	
99999h59m		●	●
99999.99h	●	●	●

Start/Stop or reset input NPN - Transistor

N°	Legend
1	Start/Stop input
2	AC/DC common
3	Reset input
4	Enable panel reset
5	Mode 1 (Time selection)
6	0 V common/ (BL- only 23xx)
7	Mode 2 (Time selection)
8	Backlighting option +24 VDC (only 2324)

Connections

2224-2324

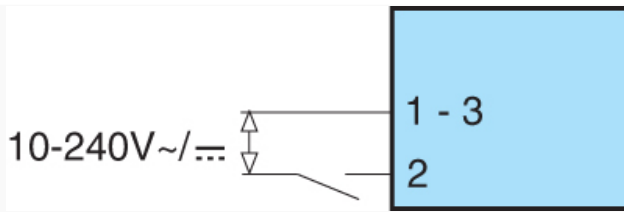


Start/Stop or reset input - Contact supplied with power

Connections

2224-2324

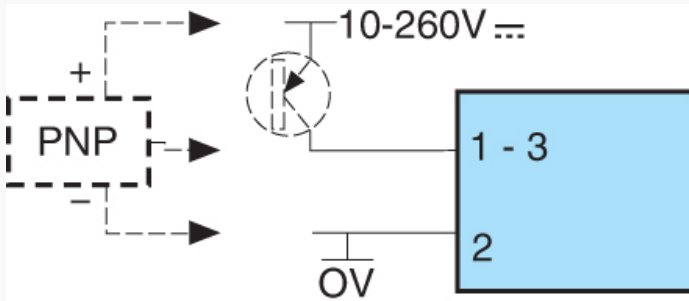




Start/Stop or reset input PNP Transistor or 3-wire PNP proximity sensor for leakage current detector < 1 mA

**Connections**

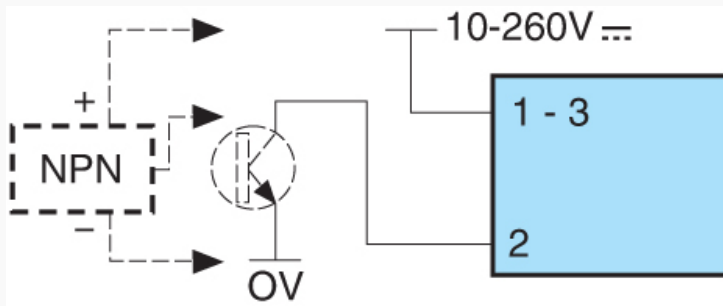
2224-2324



Start/Stop or reset input NPN Transistor or 3-wire NPN proximity sensor for leakage current detector < 1 mA

**Connections**

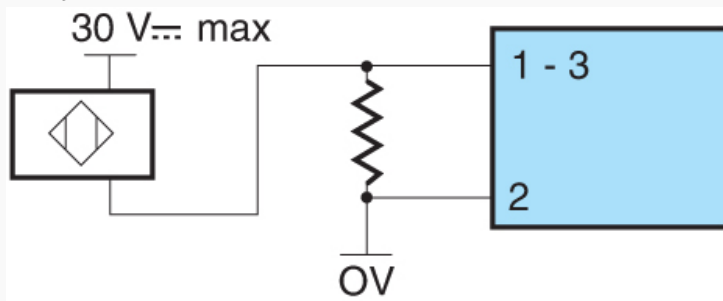
2224-2324



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

**Connections**

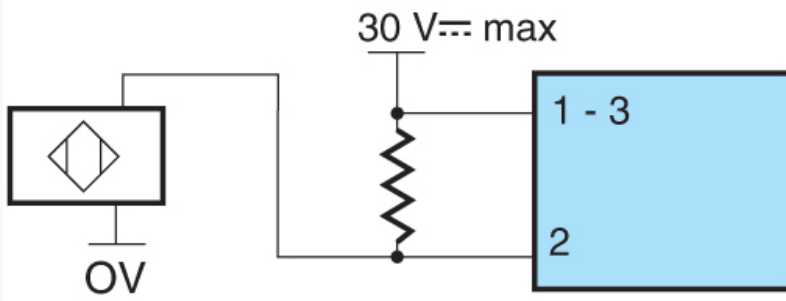
2224-2324



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

**Connections**

2224-2324



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