

# Timers Interval, Delay on Release Type EBE

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- Time range 0.1 s to 10 h
- Pulse start
- Knob-adjustable time setting
- Knob selection of time range
- Oscillator-controlled time circuit
- Repeat accuracy:  $\leq 0.2\%$
- Output: 5 A SPDT or 5 A DPDT
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 22.5 mm housing
- LED-indication for relay and power supply ON
- Combined AC and DC power supply

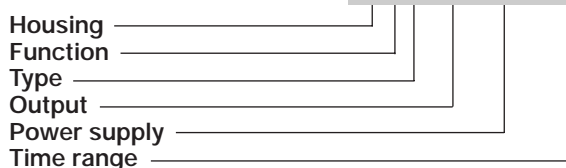
## Product Description

Mono-function, pulse controlled interval timer with 3 selectable time ranges with in 0.1 s to 1 m or 1 m to 10 h. For mounting on DIN-rail.

Often used in applications such as flushing systems, dosing plants, lighting systems, etc.

## Ordering Key

**EBE C T23 1M**



## Type Selection

Mounting	Output	Time range	Supply: 24 VAC/DC & 115-230 VAC	Supply: 24 VAC/DC	Supply: 115 VAC	Supply: 230 VAC
For DIN-rail	SPDT	0.1 s - 1 m	<b>EBE C T23 1M</b>	<b>EBE D 024 1M</b> <b>EBE D 024 10H</b>	<b>EBE D 115 1M</b> <b>EBE D 115 10H</b>	<b>EBE D 230 1M</b> <b>EBE D 230 10H</b>
	SPDT	1 m - 10 h				
	DPDT	0.1 s - 1 m				
	DPDT	1 m - 10 h				
	DPDT	0.1 s - 1 m				
	DPDT	1 m - 10 h				
	DPDT	0.1 s - 1 m				
	DPDT	1 m - 10 h				

## Time Specifications

<b>Time ranges</b>	
Type 1 M Selectable by rotary switch	0.1 s - 1 s 1 s - 10 s 0.1 m - 1 m
Type 10 H Selectable by rotary switch	1 m - 10 m 0.1 h - 1 h 1 h - 10 h
<b>Repeat accuracy</b>	$\leq 0.2\%$
<b>Time range accuracy</b>	$\pm 10\%$ on max. min. actual time $\leq$ min. set time Min. time $\leq 0.15$ s
Range 1 s	
<b>Temperature drift</b>	$\leq 0.2\%/^{\circ}\text{C}$ ( $\leq 0.11\%/^{\circ}\text{F}$ )
<b>Reset</b>	Power supply interruption $\geq 200$ ms Interconnect terminals A1 & Y1 Reaction time: $\leq 100$ ms

## Output Specifications

<b>Output</b>	Type C Type D	SPDT relay DPDT relay
<b>Rated insulation voltage</b>		250 VAC (contact/elect.)
<b>Contact ratings (AgCdO)</b>		$\mu$ (micro gap)
Resistive loads	AC 1 DC 1	5 A, 250 VAC 5 A, 24 VDC
Small inductive loads	AC 15 DC 13	2 A, 250 VAC 3 A, 24 VDC
<b>Mechanical life</b>		$\geq 40 \times 10^5$ operations
<b>Electrical life</b>		$\geq 10^5$ operations (at max. load)
<b>Operating frequency</b>		$\leq 7200$ operations/h
<b>Dielectric strength</b>		
Dielectric voltage		2 kVAC (rms)
Rated impulse withstand volt.		4 kV (1.2/50 $\mu\text{s}$ )



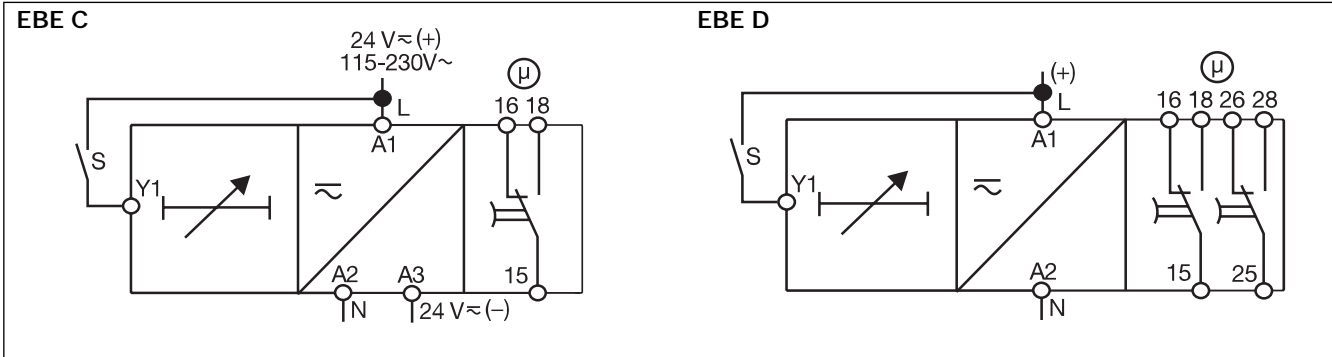
## Supply Specifications

<b>Power supply</b>	Overvoltage cat. III (IEC 60664) (IEC 60038)
Rated operational voltage through term. A1 & A2 T23	115-230 VAC, -10/+15%
frequency	50/60 Hz, -5/+5 Hz
through term. A1 & A3 T23	24 VAC/DC, -10/+15%
frequency	50/60 Hz, -5/+5 Hz
through term. A1 & A2 024	24 VAC/DC, -10/+15%
frequency	50/60 Hz, -5/+5 Hz
through term. A1 & A2 115	115 VAC, -15/+15%
frequency	50/60 Hz, -5/+5 Hz
through term. A1 & A2 230	230 VAC, -15/+15%
frequency	50/60 Hz, -5/+5 Hz
Voltage interruption	≤ 40 ms
Dielectric voltage	None
Rated impulse withstand voltage	4 kV (1.2/50 μs)
<b>Rated operational current</b>	
EBE C	25 mA @ 24 VDC 40 mA @ 24 VAC 30 mA @ 115 VAC 50 mA @ 230 VAC
EBE D	30 mA @ 24 VDC 50 mA @ 24 VAC 30 mA @ 115 VAC 40 mA @ 230 VAC

## General Specifications

<b>EMC</b>	Electromagnetic Compatibility
Immunity	Acc. to IEC 60801-4 Acc. to IEC 60801-5
<b>Power ON delay</b>	< 200 ms
<b>Power OFF delay</b>	≥ 200 ms
<b>Indication for</b>	
Power supply ON	LED, green
Output ON	LED, yellow
<b>Environment</b>	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20° to +50°C (-4° to +122°F)
Storage temperature	-50° to +85°C (-58° to +185°F)
<b>Weight</b>	170 g
<b>Screw terminals</b>	
Tightening torque	Max. 0.5 Nm acc. to IEC60947
<b>Approvals</b>	UL, CSA
<b>CE-marking</b>	Yes

## Wiring Diagrams



## Mode of Operation

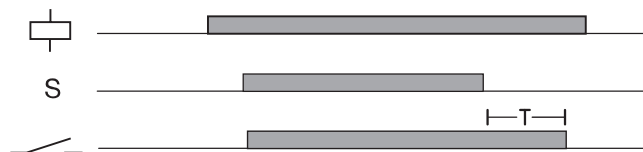
Power supply must be constantly applied.

When terminals A1 & Y1 are interconnected, the relay operates, and when A1 & Y1 are disconnected, the time period starts.

When the time has expired, the relay releases, and the relay is ready for a new sequence.

When interconnecting A1 & Y1 before the relay has released the time period is reset, and a new time period starts when disconnecting A1 & Y1.

## Operation Diagram



## Time Setting

**Selection of time ranges**  
Upper knob:  
3-position rotary switch.

**Time setting**  
Lower knob:  
Knob-adjustable on relative scale 1-10.