

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

Housing _____
Function _____
Type _____
Output _____
Power supply _____
Time range _____

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	EBE C T23 1M EBE C T23 10H	EBE D 024 1M EBE D 024 10H	EBE D 115 1M EBE D 115 10H	EBE D 230 1M EBE D 230 10H
	SPDT	1 m - 10 h				
	DPDT	0.1 s - 1 m				
	DPDT	1 m - 10 h				
	DPDT	0.1 s - 1 m		EBE D 115 1M EBE D 115 10H	EBE D 230 1M EBE D 230 10H	EBE D 230 1M EBE D 230 10H
	DPDT	1 m - 10 h				
	DPDT	0.1 s - 1 m				
	DPDT	1 m - 10 h				

Time Specifications

Time ranges	
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
Repeat accuracy	$\leq 0.2\%$
Time range accuracy	$\pm 10\%$ on max. min. actual time $\leq$ min. set time Min. time ≤ 0.15 s
Temperature drift	$\leq 0.2\%/^{\circ}\text{C}$ ($\leq 0.11\%/^{\circ}\text{F}$)
Reset	Power supply interruption ≥ 200 ms Interconnect terminals A1 & Y1 Reaction time: ≤ 100 ms

Output Specifications

Output	SPDT relay DPDT relay
Type C Type D	
Rated insulation voltage	250 VAC (contact/elect.)
Contact ratings (AgCdO)	μ (micro gap)
Resistive loads	AC 1 5 A, 250 VAC DC 1 5 A, 24 VDC
Small inductive loads	AC 15 2 A, 250 VAC DC 13 3 A, 24 VDC
Mechanical life	$\geq 40 \times 10^6$ operations
Electrical life	$\geq 10^5$ operations (at max. load)
Operating frequency	≤ 7200 operations/h
Dielectric strength	
Dielectric voltage	2 kVAC (rms)
Rated impulse withstand volt.	4 kV (1.2/50 μ s)



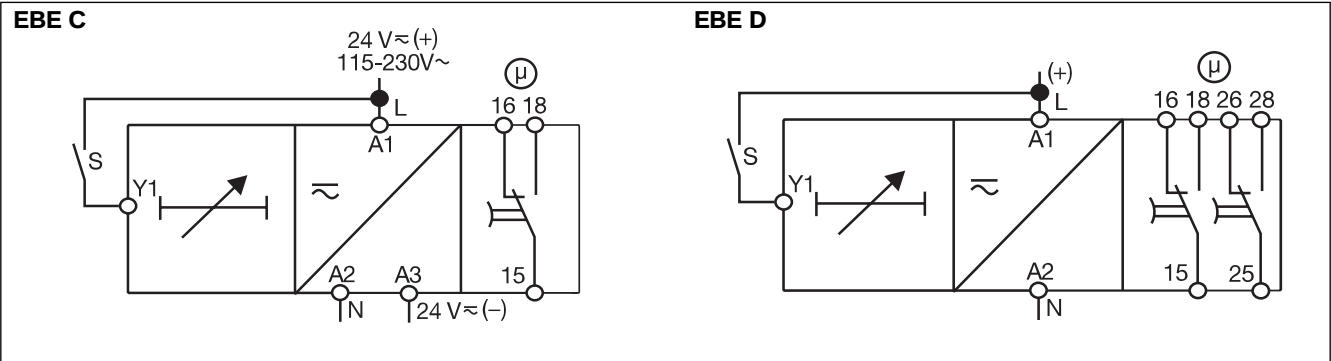
Supply Specifications

Power supply	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)
Rated operational current	
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

EMC	Electromagnetic Compatibility
Immunity	Acc. to IEC 60801-4 Acc. to IEC 60801-5
Power ON delay	< 200 ms
Power OFF delay	≥ 200 ms
Indication for	
Power supply ON	LED, green
Output ON	LED, yellow
Environment	
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)
Weight	170 g
Screw terminals	
Tightening torque	Max. 0.5 Nm acc. to IEC60947
Approvals	UL, CSA
CE-marking	Yes

Wiring Diagrams



Mode of Operation

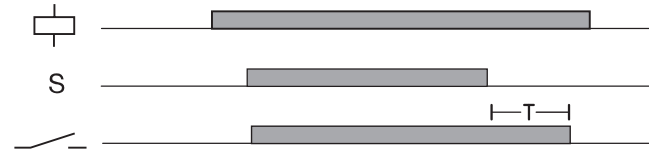
Power supply must be constantly applied.

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 time period 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.