

Timers

True Delay on Release

Type EBF



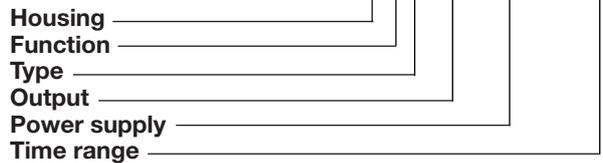
- Time range 1 s to 10 m
- Knob-adjustable time setting
- Oscillator-controlled time circuit
- Output: 5 A SPDT
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 22.5 mm housing
- LED-indication for power supply ON

Product Description

Mono-function, delay on release time relays up to 10 min. covering 3 individual time ranges. Often used in applications where a second motor has to remain turned on for a certain period of time after the first motor has been turned off.

Ordering Key

EBF C 230 10M



Type Selection

Mounting	Output	Time range	Supply: 24 VAC/DC	Supply: 115 - 230 VAC
For DIN-rail	SPDT	1 s - 10 s	EBF C C24 10S	EBF C 230 10S
	SPDT	0.1 m - 1 m	EBF C C24 1M	EBF C 230 1M
	SPDT	1 m - 10 m	EBF C C24 10M	EBF C 230 10M

Time Specifications

Time ranges	
Type 10 S	1 s - 10 s
Type 1 M	0.1 m - 1 m
Type 10 M	1 m - 10 m
Repeat accuracy	≤ 0.2 %
Time range accuracy	
Type 10 S	-1/+4 s
Type 1 M/10 M	± 20% on max. min. actual time ≤ min. set time
Temperature drift	≤ 0.2%/°C (≤ 0.11%/°F)
Reset	Power supply interruption ≥ 60 s

Output Specifications

Output	SPDT relay
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	≥ 10 ⁷ operations
Electrical life	≥ 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 μs)



Supply Specifications

Power supply	Overvoltage cat. III (IEC 664) (IEC 38)
Rated operational voltage through term. A1 & A2 C24	24 VAC/DC, -10/+15%
230	115-230 VAC, -10/+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	
C24	60 mA (may be up to 300 mA for 10 s)
230	20 mA (may be up to 500 mA for 1 s)

General Specifications

EMC	Electromagnetic Compatibility
Immunity	Acc. to IEC 801-4 Acc. to IEC 801-5
Power ON delay	≤ 200 ms
Indication for Power supply ON	LED, green
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	125 g
Screw terminals	
Tightening torque	Max. 0.5 Nm acc. to IEC 947
Approvals	UL, CSA

Mode of Operation

The relay operates immediately when power supply is applied.

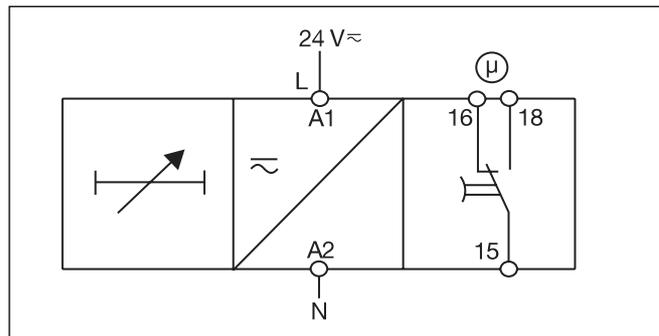
When power supply is interrupted, the time period starts, and at expiration of the set time period the relay releases.

If power supply is reapplied before the relay has released, the time is reset

and the relay remains ON. For safe charging of the built-in capacitor, the power supply must be applied for min. 20 s or 1 time period + 1 s (whichever is less).

For safe reset of the relay (after time-out), the power supply must be interrupted for at least 60 s.

Wiring Diagram



Time Setting

Knob-adjustable on absolute scale.

Operation Diagram

