

Timers

Asymmetrical Recycler

Type DCB51

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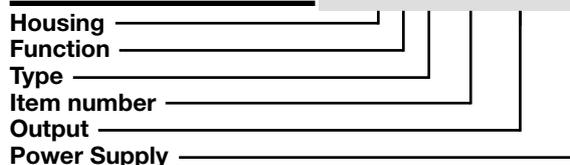
- Time range 0.1 s to 100h
- 2 selectable functions
 - Aa - Asymmetrical recycler ON first
 - Ab - Asymmetrical recycler OFF first
- Selection of time range by front knobs
- Knob adjustable time setting
- Automatic start
- Output: 1 x SPDT relay
- For mounting on DIN rail in accordance with DIN/EN 50 022
- 17.5 mm DIN-rail housing
- Combined AC and DC power supply voltage
- LED indication for relay status and power supply ON

Product Description

Combined function timer with asymmetrical recycler ON or OFF first selectable by connection between pins A1 and Y1. Individual selection of the time ranges from 0.1 s to 100 h. For mounting on DIN-rail.

Ordering key

DCB 51 C M24



Type Selection

Mounting	Output	Housing
For DIN-rail	1 x SPDT	Mini-D

Supply: 24 VDC and 24 to 240 VAC

DCB 51 C M24

Time Specifications

Time ranges Knob selectable	0.1 to 1 s 1 to 10 s 6 to 60 s 60 to 600 s 0.1 to 1 h 1 to 10 h 10 to 100 h
Setting accuracy	≤ 5%
Repeatability	≤ 0.2%
Time variation Within rated power supply Within ambient temperature	(with respect to full scale value) ≤ 0.2% - whole range ≤ 500 ppm/°C
Reset Power supply interruption	≥ 200 ms

Output Specifications

Output	1 x SPDT relay
Rated insulation voltage	250 VAC (RMS)
Contact Ratings (AgSnO₂)	μ
Resistive Loads AC 1	5 A @ 250 VAC
DC 12	5 A @ 24 VDC
Small inductive loads AC 15	2.5 A @ 250 VAC
DC 13	2.5 A @ 24 VDC
Mechanical life	≥ 30 x 10 ⁶ operations
Electrical life	≥ 10 ⁵ operations (at 5 A, 250 V, cos φ = 1)
Operating frequency	< 7200 operations/h
Dielectric strength	
Dielectric voltage	2 kVAC (RMS)
Rated impulse withstand voltage	2.5 kV (1.2/50 μs)



Supply Specifications

Power Supply Rated operational voltage through terminals A1, A2:	Overvoltage cat. II (IEC 60664, IEC 60038) 24 VDC +10% -15% and 24 to 240 VAC +10% -15% 45 to 65 Hz
Voltage interruption	≤ 10 ms
Rated operational power	1.5 W

Function/Range/Time Setting

Setting of function: No connection between terminals A1 and Y1: Aa - asymmetrical recy- cler (ON first) Connection between ter- minals A1 and Y1: Ab - asymmetrical recy- cler (OFF first)	Upper knob: T1 time range setting Setting of T1 time range. Centre top knob: Time T1 setting on relative scale: 1 to 10 with respect to the chosen range. Centre bottom knob: Setting of T2 time range. Lower knob: Time T2 setting on relative scale: 1 to 10 with respect to the chosen range.
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Mode of Operation

Function Aa - Asymmetrical Recycler ON-time period first

The relay operates and the ON-time period (T1) begins as soon as the power supply is connected. After the ON-time period the relay releases for the OFF-time period (T2). This sequence continues until the power supply is interrupted for at least 200 ms.

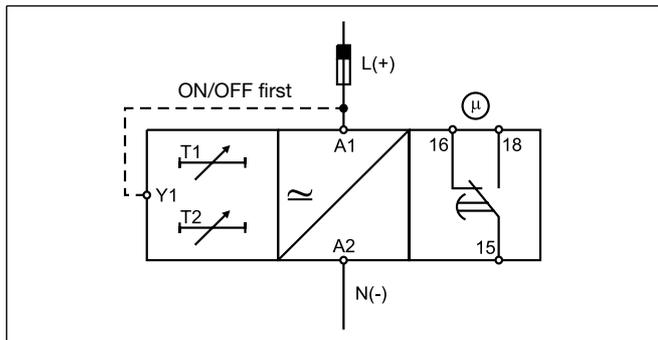
Function Ab - Asymmetrical Recycler OFF-time period first

The OFF-time period (T1) begins as soon as the power supply is connected. After the OFF-time period the relay operates for the ON-time period (T2). This sequence continues until the power supply is interrupted for at least 200 ms.

General Specifications

Power ON delay	≤ 150 ms
Power OFF delay	≤ 200 ms
Indication for Power supply status Output status	LED, green LED, yellow
Environment Degree of protection Pollution degree Operating temperature Storage temperature	(EN 60529) IP 20 2 (IEC 60664) -20 to +60 °C, R:H: < 95% -30 to +80 °C, R:H: < 95%
Weight	Approx 100 g
Screw terminals Tightening torque	Max. 0.5 Nm according to IEC EN 60947
EMC Immunity Emission	Electromagnetic Compatibility According to EN 61000-6-2 According to EN 50081-1
Approval	UL
CE Marking	Yes

Wiring Diagram



Operation Diagrams

