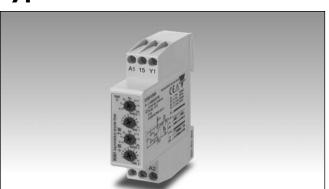
# Timers Asymmetrical Recycler Type DCB51





- 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 V1 Individual selection of the time ranges from 0.1 s to 100 h. For mounting on DIN-rail.

Ordering key	DCB 51 C M24
Housing —	
Function —	
Type ————	
Item number ———	
Output —	
Power Supply ————	

#### **Type Selection**

Mounting	Output	Housing	Supply: 24 VDC and 24 to 240 VAC
For DIN-rail	1 x SPDT	Mini-D	DCB 51 C M24

#### **Time Specifications**

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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 (AgSnO <sub>2</sub> ) Resistive Loads AC 1 DC 12 Small inductive loads AC 15 DC 13	μ 5 A @ 250 VAC 5 A @ 24 VDC 2.5 A @ 250 VAC 2.5 A @ 24 VDC
Mechanical life	≥ 30 x 10 <sup>6</sup> operations
Electrical life	$\geq$ 10 <sup>5</sup> operations (at 5 A, 250 V, cos $\varphi$ = 1)
Operating frequency	< 7200 operations/h
Dielectric strength Dielectric voltage Rated impulse withstand voltage	2 kVAC (RMS) 2.5 kV (1.2/50 μs)

# **Supply Specifications**

Power Supply Rated operational voltage trough 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



#### **General Specifications**

Power ON delay	≤ 150 ms
Power OFF delay	≤ 200 ms
Indication for	
Power supply ON	LED, green
Output relays ON	LED, yellow
Environment	(EN 60529)
Degree of protection	IP 20
Pollution degree	2 (IEC 60664)
Operating temperature	-20 to +60 °C, R:H: < 95%
Storage temperature	-30 to +80 °C, R:H: < 95%
	,

Housing Dimensions Material	17.5 x 81 x 67.2 mm PA66
Weight	Approx 100 g
Screw terminals Tightening torque	Max. 0.5 Nm according to IEC EN 60947
Approval	UL, CSA
CE Marking	Yes
EMC Immunity Emission	Electromagnectic Compatibility According to EN 61000-6-2 According to EN 61000-6-3

#### **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.

#### **Function/Range/Time Setting**

#### **Setting of function:**

No connection between terminals A1 and Y1:

Aa - asymmetrical recycler (ON first)

Connection between terminals A1 and Y1:
Ab - asymmetrical recycler (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.

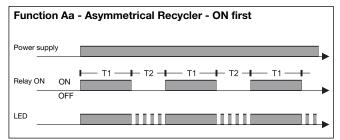
#### Centre bottom knob:

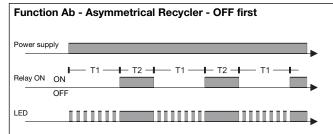
Setting of T2 time range.

#### Lower knob:

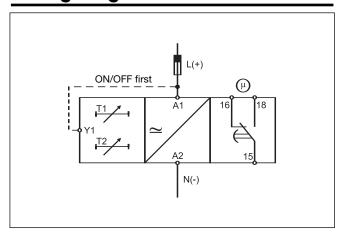
Time T2 setting on relative scale: 1 to 10 with respect to the chosen range.

# **Operation Diagrams**





# **Wiring Diagram**



#### **Dimensions**

