

Timers

Asymmetrical Recycler

Type DCB51

CARLO GAVAZZI



- 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

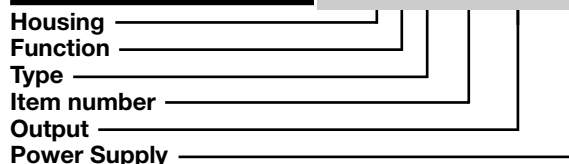
Product Description

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 |



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 | 17.5 x 81 x 67.2 mm |
| Material | 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 | Electromagnetic Compatibility According to EN 61000-6-2 |
| Emission | 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.

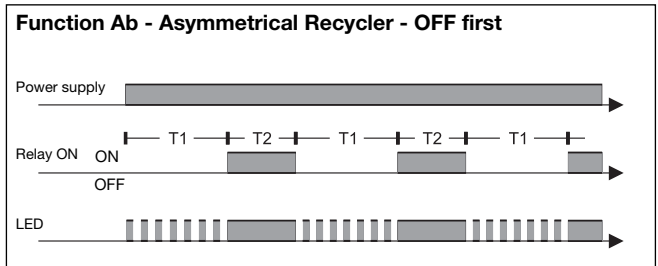
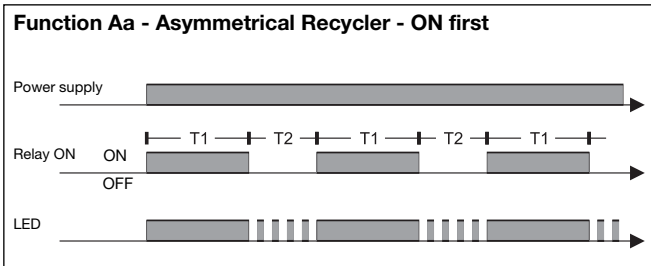
Centre bottom knob:

Setting of T2 time range.

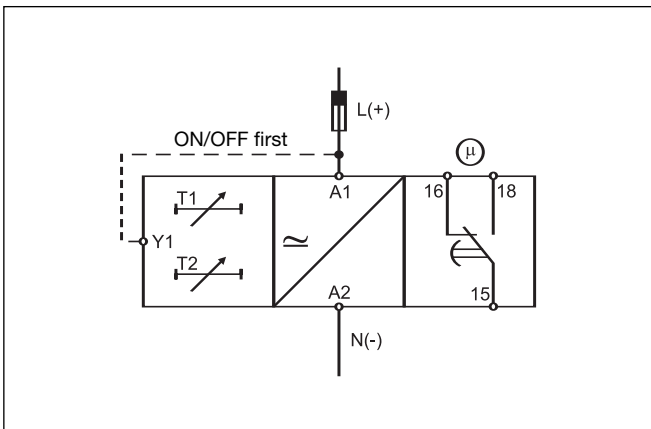
Lower knob:

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

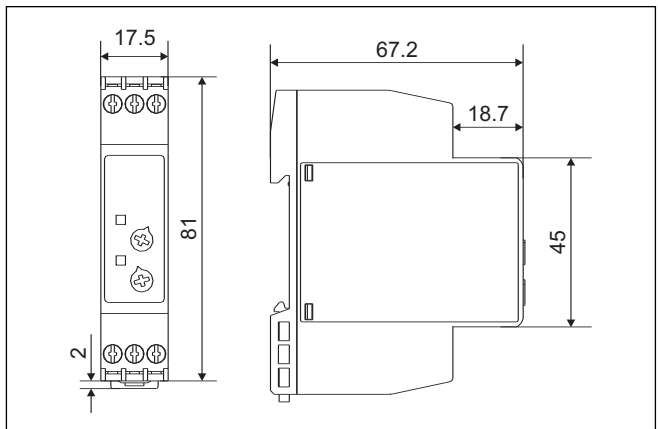
Operation Diagrams



Wiring Diagram



Dimensions



Mouser Electronics

Authorized Distributor

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