

# Timers

## Symmetrical Recycler

### Type ECS

CARLO GAVAZZI



- Fail-safe two-wire connection
- Low-cost
- Multi-voltage: 24-230 VAC
- 2 types: Recycler (Start OFF)  
Recycler (Start ON)
- Time range: 0.5 s - 10 m
- Knob-adjustable time setting
- Output: SCR 10-500 mA
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 22.5 mm small Euronorm housing

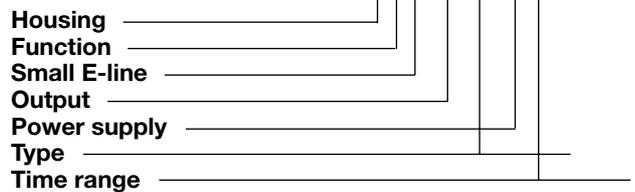
## Product Description

Small, low cost monofunction timer with adjustable time setting. 2-wire connection for easy and fail-safe use (see diagram). For mounting

on DIN-rail or directly on surface by screw. The timer is used e.g. with industrial relays or 3-phase contactors.

## Ordering Key

**ECS S M23 A 10S**



## Type Selection

Mounting	Output	Time range
For DIN-rail or for screw	SCR	0.5 - 10 s
	SCR	0.1 - 1 m
	SCR	1 - 10 m

Supply: 24 - 230 VAC

- ECS S M23 A 10S (OFF)
- ECS S M23 B 10S (ON)
- ECS S M23 A 1M (OFF)
- ECS S M23 B 1M (ON)
- ECS S M23 A 10M (OFF)
- ECS S M23 B 10M (ON)

## Time Specifications

<b>Time ranges</b>	
10 S	0.5 - 10 s
1 M	0.1 - 1 m
10 M	1 - 10 m
<b>Time range accuracy</b>	Max. setting: actual time $\geq$ max. set time min. setting: actual time $\leq$ min. set time
<b>Repeat accuracy</b>	$\leq 0.2\%$
<b>Time variation</b>	
Within rated power supply and ambient temperature	$\leq 0.1\%/V$ $\leq 0.2\%/^{\circ}C$
<b>Ratio <math>T_{OFF}/T_{ON}</math></b>	$1 \leq \frac{T_{OFF}}{T_{ON}} \leq 1.1$
<b>Reset</b>	
Time and output	Power supply interruption $\geq 200$ ms

## Output Specifications

<b>Output</b>	SCR
<b>Output current</b>	
Maximum load current	500 mArms
Minimum load current	10 mArms
<b>Leakage current</b>	$\leq 3.5$ mArms @ 230VACrms typ.: 2 mArms
<b>Voltage drop</b>	$\leq 8$ VACrms typ.: 5 VACrms @ 50 mArms

## Supply Specifications

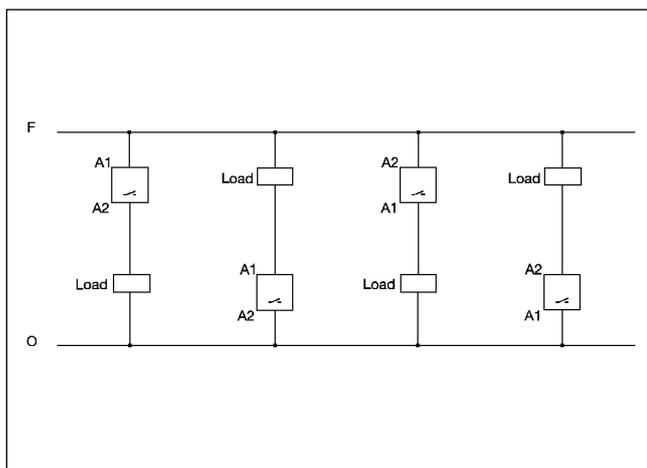
<b>Power supply</b>	Overvoltage cat. III (IEC 60664)
Rated operational voltage	(IEC 60038) 24-230 VAC, -10/+15%
Rated insulation voltage	None



## General Specifications

<b>EMC</b>	Electromagnetic Compatibility
Immunity	Acc. to IEC 60801-4 Acc. to IEC 60801-5
<b>Power ON delay</b>	≤ 100 ms
<b>Power OFF delay</b>	≥ 200 ms
<b>Environment</b>	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20° to +50°C (-4° to +122°F)
Storage temperature	-30° to +80°C (-22° to +176°F)
<b>Weight</b>	50 g
<b>Dimensions</b>	49 x 22.5 x 56 mm (L x W x H)
<b>Approvals</b>	UL, CSA
<b>CE-marking</b>	Yes

## Wiring Diagram



## Operation Diagram

