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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

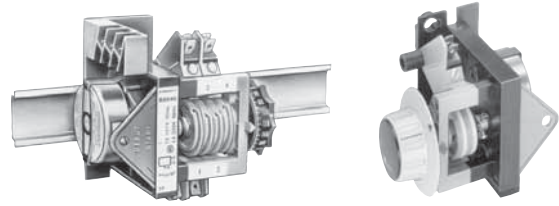
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# Cam timers 88 646 from 2 and 4 circuits



## Characteristics

### Drive device

Type of standard gearmotor	82 344 0	82 334 5>12 rpm
Max voltage variation	+ 10 - 15 % of Un	+ 10 - 15 % of Un
Absorbed power	3 W	3.5 W
cos φ	0.8	0.7
Transition time	0.7 s	0.4 s
Single direction	1	1
Stopping performance - No. of rotor revs.	1/5	1/5
Number of off-load starts	10 x 10 <sup>6</sup>	2 x 10 <sup>6</sup>
Mechanical strength of gearbox	5 cm. daN	5 cm. daN
Method of gearmotor coupling (to cams)	External friction	External friction

### Program storage medium

Cams	adjustable, with strikers or precut
Minimum space or pulse (electrical)	12° (1/30 cycle duration)
Min. peak between two spaces (electrical)	12° (1/30 cycle duration)
Max. number of spaces per cam	adjustable : 1 with strikers or precut - 15
Max. switching rate in rotation	30 rpm

### Accuracy

Precision limit error	Adjustable cam ± 6° Precut cam ± 3.5°
Repeat accuracy	Adjustable cam ± 1° Precut cam ± 0.5°
Selection precision	1° (6° for cam with strikers)

### Output specification

Protected microswitch type	83 160 3
Rating	Nominal 10 A - 250 V Thermal 15 A -250 V
Mechanical life	10 <sup>7</sup> operations
Resistive torque per circuit	To trip 3 cm.N Tripped 0.5 cm.N

### General specifications

Permitted voltage variation at 55 °C maximum temperature is in accordance with IEC 255-1-00 (NFC 45250)	
Duty factor	100 %
Temperature limits	Use -5 + 60 °C Stored -40 + 80 °C
Test voltages under IEC 255-5, VDE 0435/2021, IEC 536 class 1 (protection against electric shocks)	Voltages ≤ 60 V = 1000 V - Voltages > 60 V = 2000 V
Environmental protection	Tropicalised to IEC 68-2.10 standard
Operating position	Any
Protection IEC 529	IP 10
<i>The installer must ensure adequate guarding (&lt; IP 20)</i>	
Conformity to standards NFC 45 250, IEC 255-1-00, VDE 0435/2021	
Connection	Motors : to terminal strip Microswitches :
Approvals	W3 blade (6.35) Bureau véritas Bureau véritas - * produced on request - * CSA - * UL * CSA - * UL
Mounting	By 2 screws M4 Fond d'armoire Façade
	on Rn 50022 35 mm symmetrical J L DIN rail
Weight	See table page 279

Standard cycle duration

2 s - 24 h

### Types/Features

Number of standard circuits	2 4	88 646 0 88 646 2	88 646 0 88 646 2
Mounting (see dimension)		Base-mounted (1) —	— Panel-mounted (2)

### Program storage medium

Standard To special order To special order



Adjustable cam



Precut cam (with no selector knob)  
On request



Striker cam (strikers supplied with unit)

All 3 types of cam can be fitted to the same timer

### Standard cycle duration

Cycle duration	Gearbox output speed	Cycle duration	Gearbox output speed	Cycle duration	Gearbox output speed
* 2 s	30 rpm	90 s	2/3 rpm	** 1 h	1 rph
* 3 s	20 rpm	2 min	1/2 rpm	** 1 h 30	2/3 rph
* 4 s	15 rpm	3 min	1/3 rpm	** 2 h	1/2 rph
* 6 s	10 rpm	4 min	1/4 rpm	** 3 h	1/3 rph
* 7.5 s	8 rpm	5 min	1/5 rpm	** 4 h	1/4 rph
* 10 s	6 rpm	6 min	1/6 rpm	** 6 h	1/6 rph
* 12 s	5 rpm	10 min	1/10 rpm	** 12 h	1/12 rph
* 15 s	4 rpm	12 min	1/12 rpm	** 24 h	1/24 rph
* 20 s	3 rpm	15 min	1/15 rpm		
30 s	2 rpm	20 min	1/20 rpm		
60 s	1 rpm	30 min	1/30 rpm		

\* For stepping operation please enquire

\*\* At these speeds, allowance must be made for bounce and transition time.

### Direction of rotation

1 or 2 directions (Motor type depends on the number of circuits and the speed, and is selected by the factory)

### Supply voltage

Standard	1 direction - dual-voltage 127 / 220 V 50 Hz 2 directions - single voltage 220 V - 50 Hz
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### Accessories

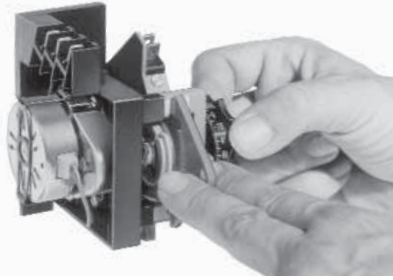
Striker cam	79 222 640
Packet of extra strikers	79 222 641
Inverter for DC supply (for a 50 Hz AC motor of the same voltage)	12 V = 24 • 48 V = 110 • 127 V =
Output power max. of 10 VA	84 861 502 84 861 501 84 861 503

### Other information

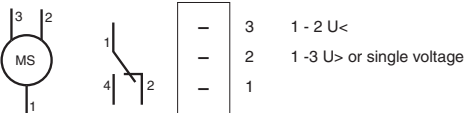
Timers classed as Standard Products are only available from our distributors. For other voltages and frequencies and DC, please consult us. Basic concepts see page 271. For some typical circuits, see page 284.

## Features

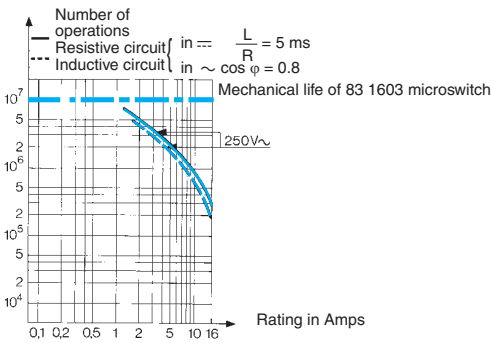
- Motor connections to terminal strip
- Easy adjustment with knob or tool (see page 271)
- Akulon insulation
- Mounting on DIN rail  $\perp$  35 mm symmetrical (EN 50022)



### Internal layout

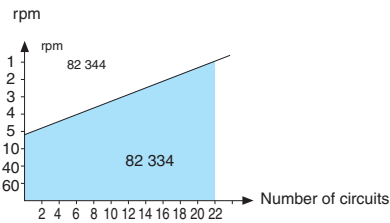


### Microswitch operating curve



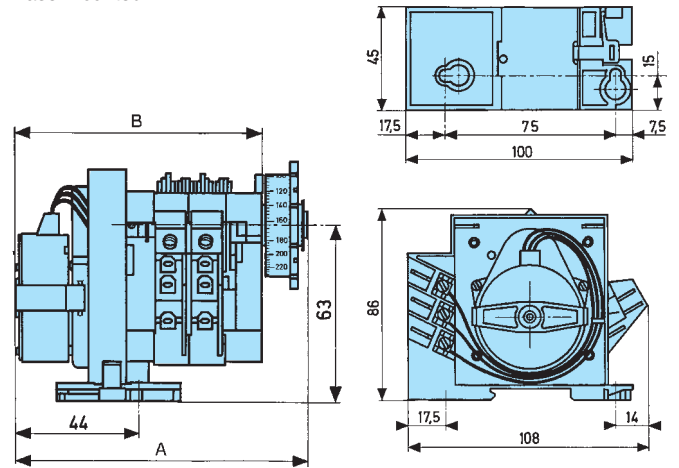
### Diagram

#### Gearmotor options



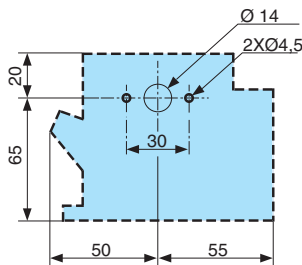
## Dimensions

### Base-mounted



### Fixing from front

#### Details of cut-out and transverse dimensions



Types	Circuits	Dimension L1		Dimension L1		Weight (g)
		(1)	(2)	(1)	(2)	
<b>88 646 0</b>	2	80	80	95	108	250
<b>88 646 2</b>	4	93	93	108	136	300

## To order, specify:

- 1 Type
- 2 Program storage medium
- 3 Cycle duration
- 4 Direction of rotation
- 5 Supply voltage
- 6 Accessory

Standard products,  
non stocked

Example : Cam timer with external knob 88 645 0 - 7 circuits - Adjustable cams - 60 s - 1 rpm - 127/240 V - 50 Hz - Packet of extra strikers 79 222 641